

skyguide

beyond horizons

Annual report 2021



Key figures 2021

89 491

Military flights

263 755

IFR landings/departures

690 275

IFR flights

99.2%

Flights without delay

1359.9

Personnel (in FTEs)

3.2 Sek.

En-route ATFM delay per flight

+ 37.3%

IFR transit flights

+ 29.7%

IFR traffic growth

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A new normality of greater flexibility and stronger customer focus

Dear reader,

The coronavirus pandemic continued to afflict the Swiss aviation sector – and thus Skyguide, too – in 2021. First-half traffic volumes were well below the norm. Only from early summer onwards was any recovery seen in the commercial air transport that is so crucial to Skyguide's financial results. For the year as a whole, total traffic volume amounted to around 53 per cent of that of 2019 (although this was still a 29.7-per-cent improvement on 2020). Importantly, Skyguide's safety and punctuality performance remained consistently sound, and our company was well able to perform its legal mandate and mission throughout.

Despite recording a further loss for the year, our financial results for 2021 make moderately optimistic reading, given the once-in-a-century crisis within which they were achieved. Easy to say when the support of the Swiss Confederation is always available if required? Not at all. We are thankful to Switzerland's parliament and authorities for the security they give us to perform our public service mandate. But we are also well aware of our duties and obligations towards the Swiss taxpayer. So we are not simply hoping that air traffic volumes will recover soon: we are taking actions to reduce our costs in the 2020–2024 period by a cumulative CHF 120 million, and are pursuing further projects such as the Virtual Centre and our corporate

transformation that will improve our cost structures in the longer term. In view of these endeavours, we can be confident of repaying the loans we have been granted during these crisis times as soon as more normal conditions prevail.

Is the crisis now coming to an end, or was this just the beginning? Will our generation experience further such pandemics? We just do not know. What we do know is that it would be negligent of us to return unthinkingly to the old normality. Aviation is highly sensitive to economic fluctuations and the political situation. And had it not been clear before, the extreme experiences in the present pandemic have shown once and for all that the present model for financing Europe's air navigation services is not fit for purpose in a crisis of this kind.

The service concept, the technological foundations, the organisation of airspace areas and of the entities that manage them, the due consideration of ecological parameters, the funding of services and innovations: all these elements show a distinct lack of flexibility in the current overall system. It is time for a rethink.

When it comes to remedial action, the most promising solutions lie not with the individual air navigation service providers or with their parent states. What we are dealing with here is a European and even a global network. So it is at the level of international collaborations that we must most meaningfully begin. The entire aviation sector must devise joint solutions, and must put these into practice, too. The European Commission can support such endeavours through the tool of its Performance Plans – such as by appropriately valuing investments in approaches like the Virtual Centre which strengthen



the network and will make air navigation services more flexible, more efficient and more sustainable overall.

That Skyguide should assume responsibility, show initiative and take on a leadership role in this process is self-evident to us.

Over the course of this crisis, we have been cultivating dialogue with our partners and our customers more intensively than ever. We appreciate that, faced with a still volatile market, they need greater flexibility from their air navigation service providers. The strategic thrusts that have derived from such consultations have further strengthened our Skyguide vision and strategy. For years now, our company has been working on a paradigm shift for air navigation services that should bring more resilience to the system – to the benefit of our customers and owners alike.

With all the focus on the present pandemic, the fact that 2021 was an anniversary year for our company went somewhat unnoticed. It was 20 years before that Switzerland's civil and military air navigation services had been amalgamated into a single organisation. Ever since, Skyguide has been managing and monitoring all Swiss airspace for →

“Importantly, Skyguide’s safety and punctuality performance remained consistently sound, and our company was well able to perform its legal mandate and mission.”

“It would be negligent of us to return unthinkingly to the old normality.”

both civil and military flights. This integrated air traffic management approach was unique in Europe at the time, and remains so today. We regard it not as a curiosity, though, but as a forward-looking matter of course. Our close relations with both the airlines and the Swiss Air Force have clearly benefited the services we provide and the safety and security we assure for all airspace users. This closeness to our customers and partners is written into our DNA, which is of particular value both in times of crisis and as we build our way towards a new normality.

We look forward to celebrating a further jubilee in 2022: the centenary of Swiss air navigation services. That aviation has evolved to become the safest means of transport of all is due in no small part to

the specialists at its air navigation service providers who work tirelessly to ensure that passengers and crews arrive safely and promptly at their destinations. All our employees are proud to make their own key contribution to aviation's lasting and sustainable success.

The anniversary year will be marked by our working towards the new normality. As we do so, we will have the privilege of counting on a staunch owner, a dedicated regulator, ambitious customers and partners and motivated employees. And to all of these we offer our sincere thanks. •



Walter T. Vogel
Chairman of the Board



Alex Bristol
CEO



Flying safely again

During the traffic slump caused by the coronavirus pandemic, it was not an overstraining of the system but the underoccupation and the loss of routine for the persons running it that posed one of the greatest risks. The threat was countered through targeted training activities:

Air traffic volumes showed signs of gradual recovery in 2021. Skyguide's operational personnel were rostered longer and more frequent shifts and assignments again. Awareness was high that a certain amount of routine might have been lost, for the company and its individual employees. And this risk was duly addressed by putting a particular emphasis on avoiding possible errors or work overloads.

As traffic volumes increase once again, so does the statistical risk that certain incidents may occur. Despite this, though, cases of separation minima violations declined once again in proportion to flight movement numbers.

Technology for safety – security for technology

That air traffic services safety is presently in good health is also confirmed by indicators which are not directly related to air traffic volumes, such as the number and length of any technical malfunctions of civil air traffic management equipment for which Skyguide is responsible. This key indicator has been steadily improved over the past few years, and is now at a firmly favourable level.

In parallel to the safety levels of the air navigation services it provides, Skyguide also keeps a keen eye on the security of its facilities against accidental or wilful damage. A physical or a virtual attack on these could compromise the safety of systems or employees and ultimately of aircraft, passengers and crews. Of special note here in 2021 were the encouraging progress made in establishing a

“That air traffic services safety is presently in good health is confirmed by indicators which are not directly related to air traffic volumes.”

cybersecurity centre and the steady improvements effected to the company's information security management system.

Safe as a drone in Switzerland's skies

Skyguide's Special Flight Office trialled and adopted a new tool in the course of 2021 which facilitates the processing of requests for drone flights requiring approvals and other special flights. The numbers of such drone flight requests increased steeply as a result, and the new digital flight planning and airspace approval service can already be considered a success.

Supporting a reporting culture

The reporting of incidents and observations is an extremely important worktool for aviation and other safety-sensitive sectors. Skyguide has been making huge efforts to maintain the highest possible →

“That surveys on the company’s safety culture are not just of interest but are highly useful, too, is confirmed by the progress Skyguide has made on the basis of this tool.”

reporting culture for many years now. 2021 saw the company improve its RMIS in-house technical platform to simplify the reporting of safety-relevant observations and ensure the quality thereof. The portal permits users to submit any safety-related input they wish, on operational, technical or more general issues. A series of explanations guides the user through the reporting process, while the system may also request additional information to ensure that the case or incident is optimally understood.

Learning from surveys

Skyguide conducted another survey on its safety culture in 2021. This latest poll was the first to be jointly conducted with Austro Control. Austria’s air navigation service provider manages an airspace that is similar to Skyguide’s in size, and also adopts a comparable approach to all safety matters. In view of this, the two partners resolved to pool their knowledge, their experience and their resources for this latest safety survey. The partners were keen to see how well their safety cultures were performing – particularly in the context of the COVID pandemic – and where they should best direct their future energies and resources.

The survey’s key findings revealed a positive attitude to the safety culture, especially in terms of respondents’ sense of personal responsibility and their reporting of any safety-relevant concerns. On

the physical and information security fronts, too, respondents showed a strong individual awareness of the issues and responsibilities involved, even if there is potential for further improvement here through appropriate training.

Instead of being analysed in detail by a specialist entity, the survey data are being used to launch a companywide learning process. The online questionnaire has been supplemented by innovative online workshops. All the information gleaned should now be used to further develop and refine the company’s safety culture, together with its workforce and in line with the particular needs of its various organisational units.

That surveys of this kind on the company’s safety culture are not just of interest but are highly useful, too, is confirmed by the progress Skyguide has made on the basis of this tool since the previous such poll was conducted. In addition to numerous smaller improvements, the company has modified various processes to strengthen the collaboration between its technical and its safety and security units and to integrate its technical system monitoring and steering more closely into its change processes. The procedures for reporting safety and security-relevant incidents or observations have also been selectively further refined on the basis of these previous poll findings.

A Just Culture is a safety culture

Skyguide has also made progress on the safety culture front in ‘Just Culture’ terms. A Just Culture is one in which employees feel free to report any safety-relevant incident or observation, even if the error behind it is their own. In doing so, they can have every confidence that their report will be used to identify and rectify the underlying problem, and that they will not be penalised if they have made an ‘honest mistake’, i.e. that they have done so despite acting to the best of their knowledge and belief.



The Canton Zurich Superior Court's acquittal in 2021 of an air traffic controller who had been held responsible for an incident dating from 2012 has strengthened the Just Culture philosophy. But as long as this remains unenshrined in law, air traffic controllers will continue to be somewhat sparing in their reporting in content terms, restricting themselves to a minimum out of fear of criminal prosecution.

At the Swiss federal level, a proposal is currently at the interdepartmental consultation stage which will consider how the Just Culture approach should be accommodated into Swiss criminal law. A Just Culture can make a key contribution to promoting safety and security in many safety-sensitive sectors: mobility, energy, healthcare and more. That the

impetus for it has come primarily from air navigation services and from aviation in general is seen by Skyguide as a further indication that our industry maintains a high-quality safety culture. •

Key events in 2021

January

Conventional navigation infrastructure replacement approved

The FOCA approves a transition plan submitted by Skyguide to replace its conventional ground-based navigation infrastructures with performance-based navigation procedures which use satellite resources and offer greater flexibility. The existing network of robust radio beacons with distance measuring equipment is to be improved to serve as a fallback facility.

February

Air traffic controller acquitted by Zurich Superior Court

The Canton Zurich Superior Court acquits a Skyguide air traffic controller who had been deemed responsible for an incident which occurred at Zurich Airport on 22 August 2012. In doing so, the court overturns a previous judgment by the Bülach District Court. The Superior Court confirms in its ruling that the controller was neither negligent nor wilful in his actions at the time. Skyguide and the entire Swiss aviation community note the ruling with relief.

March

Swiss Air Force tests Zurich Airport approaches

To complete its round-the-clock aerial policing capability, the Swiss Air Force performs a series of test approaches to Zurich Airport with F/A-18 fighter aircraft. The exercise is overseen for the first time not by Skyguide's civil air traffic controllers but by their military counterparts working from the Air Defence & Direction Centre in Dübendorf. The exceptional procedures confirm that the interceptor jets could be efficiently managed from the ground in the event of a diversionary landing.

May

Changes on the Skyguide Board of Directors

The Skyguide Annual General Meeting newly elects Aldo C. Schellenberg to the company's Board of Directors. He succeeds Bernhard Müller, who has been Deputy Chairman of the Board for the previous 12 years and has served for the maximum tenure permitted. The new Deputy Chairwoman is existing Board member Anne Bobillier.



June

Volatile restart

After more than a year, average air traffic volumes remain at around a third of their pre-coronavirus crisis levels. They are also subject to substantial short-term fluctuations. As a result, air navigation service providers must constantly re-adapt while still retaining their capacity to temporarily handle traffic volumes at their previous full levels during peak periods, such as the start of the summer holiday season.

July

Belgium's ANSP skeyes relies on Skyguide's CNS drone

Belgium's air navigation service provider skeyes opts to rely in future on a drone developed by Skyguide's engineers to verify the performance and calibration of its ground-based navigation aids. The drone, which is used to supplement manned calibration flights, helps to enhance measurement procedures, lower maintenance costs and reduce both noise and carbon dioxide emissions.

ENAIRe implements Skyguide CPDLC cockpit solution

CPDLC is a two-way datalink system that enables messages to be transmitted from air traffic control to aircraft cockpits. Avoiding time-consuming and error-prone voice exchanges, CPDLC ensures that data for non-urgent communications are delivered directly from system to system. Skyguide is a pioneer in this promising technology. Spain's air navigation service provider ENAIRe decides to install a monitoring system developed by Skyguide to record all CPDLC data exchanges and identify any weaknesses or sources of error. The innovative turnkey Skyguide solution meets all international requirements.

August

Progress with drones

Following an introductory phase in Geneva, Lugano, Dübendorf and Zurich, Skyguide conducts a nationwide rollout of its digital flight planning and airspace authorization service for drones and other special flights. The online system facilitates Skyguide's processing of requests for such flights in controlled airspace. The new service, which is part of the Swiss U-Space strategy, coincides with the establishment of a drone operators register and a nationwide voluntary remote identification system that enables drone operators to easily exchange information about their flights with other operators, the authorities and the public.

October

Still an energy and climate model

The 'Exemplary Energy and Climate' initiative of the Swiss Confederation is to continue following a successful initial phase from 2013 to 2020. Skyguide and 14 further participants declare their intention to further raise their energy efficiency and expand their use of renewable energy sources. Ambitious new goals and improvements are set for the initiative's second phase, which will run from 2021 to 2030. The actions specific to Skyguide also accord with the European aviation sector's commitment to being fully carbon-neutral by 2050.

December

A setback for air transport

The new Omicron variant of the coronavirus spreads rapidly worldwide. The more drastic actions initially taken in response such as cancelling all flights to and from particular destinations or imposing preventive quarantines are soon rescinded. But the measures that remain still have an adverse impact on travel activity, which would normally be high towards the end of the year. •

Tentative revenue recovery, rigorous cost control

Missing revenues continued to burden Skyguide's finances in 2021. But the loan granted by the Swiss Confederation and proactive cost control measures secured the company's financial stability.

When air traffic volumes had collapsed almost entirely in 2020 in the face of the COVID-19 pandemic, Skyguide had taken immediate action to stabilise its financial situation, including adopting short-time working, reducing outstanding overtime and vacation, restricting salary developments and rescheduling planned investments. In doing so, the company had taken particular care to ensure that such actions had no adverse impact on the quality of the services which it had to continue to provide. So when air traffic volumes began to recover to some extent in summer and autumn 2021, Skyguide could continue to unfailingly perform its mandated mission. However, traffic volumes and thus Skyguide's revenues remained substantially below those which had been recorded before the health crisis began.

COVID pandemic continues to depress revenues

The Category I en-route and Zurich and Geneva approach/departure services that Skyguide provides are the company's prime revenue source. In 2021, the revenues from these activities were at least a 17% improvement on the previous year. But such revenues were still 40% below the levels they had been at in 2019.

At the same time, the revenues deriving from the services Skyguide provides for the Swiss Air Force increased by the latter's new round-the-clock aerial policing mandate. Revenues from Category II regional civil aerodrome services remained broadly at their prior-year level. In 2021, all regional aerodromes paid air navigation services on a quarterly basis from the federal mineral oil tax contributions. Revenues from Skyguide's non-regulated commer-

cial business were higher than in 2020. Since, in normal times, all the revenues not deriving from the company's en-route or Category I airport services account for only some 20% of total revenues, Skyguide's financial situation remained precarious throughout the year.

The supporting actions taken by the Swiss Confederation and the cost economies effected within the company enabled Skyguide to overcome its liquidity shortage. But with commercial air traffic showing only a tentative recovery and with repeated further setbacks as the pandemic progressed, the company committed itself to the ambitious goal of saving CHF 120 million compared to budgeted projections over five years, instead of the CHF 90-100 million originally envisaged. Some cost economies have a lasting structural impact. As a result, costs for 2021 remained below those projected in the original savings plan.

Despite all these endeavours, as a result of the tangible revenue shortfall and a higher fixed-cost share, Skyguide reported a loss of CHF 119.7 million for the 2021 financial year, which was at least a 27.3% improvement on the prior-year result.

Confederation supports Skyguide's public service mandate

In its budgeting for 2021 the Swiss Parliament had approved an additional CHF 250 million to support the country's air navigation services with liquidity, if required. In June 2021, in view of the still-challenging public health situation and the company's still-difficult financial state, the Swiss Federal Council decided to assign this full budgeted amount.

to Skyguide to enable it – as a critical national infrastructure – to continue to safely and reliably provide all its civil and military air navigation services.

While its assistance (as Skyguide's majority shareholder) in 2020 had been in the form of a capital increase, the Swiss Confederation's support for the company in 2021 took the form of a loan. The loan amount will be repaid by Skyguide over the longer term, based on future traffic trends and depending on the payments it receives from the airlines for uncovered costs in 2020 and 2021 deriving from the traffic declines.

The European Performance Plan for the third reference period (RP3) envisages that the airlines will effectively compensate the air navigation service providers for their revenue shortfalls in 2020 and 2021 via corresponding increases in air traffic services charges between 2023 and 2029. In the past, under the same principle, the air navigation service providers had returned a large part of the surplus revenues they had earned from higher traffic volumes to their airline customers. As a result, they had only been able to accumulate limited reserves to face a crisis such as this, to offset losses or to finance the investments needed to modernise their systems.

“The Swiss Confederation has been decisive in supporting our sector during the present pandemic. In doing so, it is underlining the vital role that aviation plays in Switzerland's economy and supply chains, in crisis times more than ever.”

“The beneficiaries of public funds take on a responsibility towards the taxpayer.”

The Swiss federal budget for 2022 has earmarked a further exceptional CHF 100 million to support Skyguide if required. Whether these funds will be utilised will primarily depend on how air traffic volumes develop in comparison with the European reference scenario, which provides the basis for budgeting projections.

Public funds commit

Aviation is an industry that traditionally largely finances itself. But the Swiss Confederation has been decisive in supporting the sector during the present pandemic. In doing so, it is underlining the vital role that aviation plays in Switzerland's economy and supply chains, in crisis times more than ever.

The beneficiaries of such public funds take on a responsibility towards the taxpayer. Skyguide is assuming this by improving its efficiency and by committing to repaying the loans it has been granted as part of its broader financial recovery. Over the course of 2021, the company continued to consistently pursue the actions initiated the previous year to achieve its ambitious cost objectives. These focused in particular on personnel costs, which were reduced CHF 31.0 million from their original budgeted level.

Continuing with such permanent cost controls will help further stabilise Skyguide's financial situation. At the same time, to meet its longer-term challenges, the company must continue to invest in modernising its operations and technologies. This is why it continues to work towards creating its →

Virtual Centre, a major project which was launched several years ago.

The Skyguide Virtual Centre is recognised internationally as a pioneering development, and not only in terms of its innovative technological approach. With the paradigm shift that such virtualisation will bring, air navigation services will be less expensive, more adaptable to air traffic volatility and more resilient to cyberattacks, and should make a greater contribution to achieving environmental objectives. So the efficiency gains secured will deliver truly lasting benefits.

Most of these efficiency enhancement goals are already an integral part of the strategic objectives of the Swiss Confederation. But they are also – and above all – part of Skyguide's vision, too.

The crisis confirms the vision

The COVID-19 crisis has posed (and continues to pose) huge challenges for air navigation services and aviation alike. The ramifications of this once-in-a-century event will have a lasting impact on the entire industry. While they may be the main short-term problem, though, it is not the financial losses that should be the prime focus today, but the opportunities the situation offers for a change of course. After all, the present industry structures have clearly been devised solely for a stable situation.

“While they may be the main short-term problem, it is not the financial losses that should be the prime focus today, but the opportunities the situation offers for a change of course.”

On the air navigation services front, such a change of course should include in particular redefining the present European regulations to reward providers' investments in new and more efficient digital technologies. Digital and automated technologies on open-architecture systems will offer greater degrees of upgradability and flexibility, which will in turn permit the more effective management of market volatilities. It is an approach that Skyguide has been pursuing for years. The COVID-19 crisis has not challenged this vision: it has only further emphasised the need.

Skyguide is supporting its industry to enable Swiss aviation to recover. For 2022, based on the latest more optimistic Eurocontrol forecasts and thanks to its cost savings plan, the company has lowered its en-route charges and limited the increase in its Zurich and Geneva approach charges, even though air traffic volumes are expected to still be below their pre-COVID levels. Skyguide must be confident for its customers, even if the fifth COVID wave has shown that the future is still anything but certain. Air traffic activity will remain sensitive to external factors such as the pandemic's further development, the European Commission's financial targets for the next Performance Plan and the regulatory framework for financing bought-in services and investments in innovations.

Responsible remuneration

The remuneration for the members of the Skyguide Executive Team for the 2021 financial year was set by the Board of Directors. The salary structure here is based on the Swiss Federal Council's resolution of 23 December 2016, under which the variable salary component may not exceed 50% and any additional benefits may not exceed 10% of the fixed annual salary. The remuneration for the Chairman and the further members of the Board of Directors is determined in accordance with the Swiss federal resolution of 2007.

The Skyguide Ordinary General Meeting of 14 May 2020 set the maximum aggregate remuneration for 2021 for the (seven-member) Skyguide Executive Team at CHF 3 950 000. (For 2020, the corresponding maximum had been set at CHF 4 235 000 for the then eight-member Skyguide Executive Team.) The Meeting kept the corresponding maxima for

the Board of Directors unchanged from the previous year at CHF 140 000 for the Chairman and CHF 310 000 for the six further members combined.

The remuneration actually paid in 2021 and including pension fund contributions to the Chairman of the Board amounted to CHF 137 979 (2020: CHF 137 892), CHF 296 270 (2020: CHF 285 684) to the further Board members combined and CHF 3 547 222 (2020: CHF 3 645 003) to the seven-member Executive Team combined. The deviations from the maxima specified and from the prior-year amounts are largely attributable to the actions taken in response to the coronavirus situation. The remuneration amounts paid were thus substantially below the maxima approved. •

Corporate governance process

Skyguide has adopted a process to ensure the company's full compliance with the Swiss Confederation's Corporate Governance requirements for independent entities. This process includes the due monitoring of possible conflicts of interest and the guarantee of specific training and further education for all members of its Board of Directors.



The Board of Directors



Walter T. Vogel since 2015

is Chairman of the Skyguide Board of Directors, chair of its Compensation & Nominations Committee and a member of its Finance & Audit Committee. He served for eight years as CEO and later as Chairman of the Board of the Aebi Schmidt Group. He holds a degree in mechanical engineering from ETH Zurich and business administration qualifications from the University of St. Gallen and INSEAD Fontainebleau. Further mandates held: Chairman of the Board of St. Gallisch-Appenzellische Kraftwerke AG; member of the Central Committee of the Aero Club of Switzerland; member of the D-MAVT Industrial Advisory Board at ETH Zurich; member of the Foundation for Aviation Competence Advisory Board.



Anne Bobillier since 2014

is Deputy Chairwoman of the Skyguide Board of Directors, chair of its Projects Committee and a member of its Safety & Security Committee. She was Corporate Project Manager at Bechtel Management AG until the end of 2020, and prior to this had served in further executive functions at a number of well-known companies. She holds a master's degree in computer sciences from the University of Geneva. Further mandates held: Chairwoman of the Board of SkySoft ATM, Deputy Chairwoman of the Board of Romande Energie Holding and Romande Energie SA, member of the Boards of Rolex SA and Rolex Holding, member of the Board of LonHea and member of the Committees of the Franco-Swiss Chamber of Commerce & Industry and the SwissBoardForum. She has also been an Associate of the Académie des Administrateurs (ACAD) since October 2021.



Dominik Hänggi since 2015.

is the employees' representative on the Skyguide Board of Directors and a member of the Board's Projects and Safety & Security committees. He joined Switzerland's air navigation service provider in 1988, and currently serves as a Geneva-based air traffic controller/watch supervisor. He has also served as Deputy President of the APTC union.



Bernhard Müller 2009 to May 2021.

was, until his retirement, Deputy Chairman of the Skyguide Board of Directors, chair of its Safety Committee and a member of its Projects Committee. He was Commander of the Swiss Air Force with the rank of Major General, and had previously served in various further senior Swiss Air Force capacities. He is a graduate of Wetztingen Teacher Training College and of the Faculty of Arts & Social Sciences at the University of Zurich.



Doris Barnert since 2020

is chair of the Board's Finance & Audit Committee. She is CFO & Head of Corporate Services and a member of the Executive Board of Swissgrid, Switzerland's national grid company. Prior to this she served as Director of Finance and a member of the Executive Board of Solothurner Spitäler AG and held various functions with SBB AG, the Swiss Federal Railways. She holds an architect's diploma from ETH Zurich, an executive MBA from the University of St. Gallen (HSG) and a Master of Advanced Studies in corporate finance from the Institute of Financial Services (IFZ) of the University of Lucerne. Further mandates held in her Swissgrid capacity: member of the Supervisory Board of TSCNET Services GmbH; member of the Boards of Directors of procedural companies AET NE1 SA, ALENA Aletsch Energie Netz AG, Alpiq Netz AG Gösgen/Aarau, Alpiq Réseau SA Lausanne/Aarau, BKW Übertragungsnetz AG, CKW Grid AG, EGL Grid AG, ewb Übertragungsnetz AG, ewz Übertragungsnetz AG, FMV Réseau SA, Kraftwerke Hinterrhein Netz AG, LENA Lonza Energie Netz AG, Nordostschweizerische Kraftwerke Grid AG, Ofible Rete SA, Ofima Rete SA, Repower Transportnetz AG, SN Übertragungsnetz AG and Übertragungsnetz Basel/Aarau AG.



Cristina Feistmann since 2015

chairs the Board's Safety & Security Committee and is a member of its Compensation & Nominations Committee. She is Company Secretary at the Swiss Reinsurance Company Ltd. She is also well familiar with the aviation world, having joined the Swissair Group in 1998 and subsequently served with Swissport as its General Counsel & Secretary. She is an attorney at law, and holds an executive M.B.L. from the University of St. Gallen. Further mandates held: member of the Board of Trustees of the Swissair Staff Foundation for Children in Need.



Aldo C. Schellenberg since 2021

is a member of the Board's Compensation & Nomination and Finance & Audit committees. He held various functions in the Swiss Army, most latterly as Lieutenant General, Deputy Chief of the Armed Forces and Chief of Joint Operations Command before his ordinary retirement at the end of 2020. He is also active as a business consultant. He holds a doctorate in economics from the University of Zurich and an LL.M. in commercial law from the University of Bern.



Res Schmid since 2017

is a member of the Board's Safety & Security and Projects committees. He has been a Government Councillor of Canton Nidwalden since 2010. He spent more than 30 years serving as a military and a qualified test pilot with the Swiss Air Force and with Armasuisse, rising to Chief Test Pilot and head of the flight evaluations for the partial replacement of the F5-E Tiger. Further mandates held: Chairman of the Board of Bergbahnen Beckenried-Emmetten AG and of INSILVA AG; President of the ch-x Swiss Federal Surveys of Adolescents Committee; trustee of the Schindler Arts Foundation and of the Winkelried House Foundation.

The Executive Team



Alex Bristol

(CEO) has headed the Skyguide Executive Team since 2017. A Swiss-British dual national, he joined the UK's air navigation service provider NATS in 1992 as an air traffic controller, and went on to serve there in various executive functions including Head of Operations and Head of Development & Investment Strategy. He joined Skyguide in 2011 as Chief Operating Officer and a member of the Executive Team. He holds a bachelor's degree from the University of Exeter and has completed the Advanced Management Programme of INSEAD Fontainebleau and Singapore.



Klaus Meier

(Engineering & Technology) has been Skyguide's Chief Technology Officer (CTO) and a member of the Executive Team since 2014 and Deputy CEO since the beginning of 2020. He previously served as CIO Americas for the Schindler corporation, based in the USA. He is also well familiar with the aviation world through his years with Swissair, where he promoted process enhancements and technological innovation in various executive capacities. He holds a doctorate in electrical engineering from ETH Zurich.



Hans Bracher

(Human Resources) has been a member of the Executive Team since 2015. He joined Skyguide as Head of Human Resources in 2012. Prior to this he had been Head of Corporate Human Resources and a member of the Group Executive Board of RUAG Holding AG. He also held various functions during many years with Ascom, ultimately serving as Head of Corporate Human Resources and a member of the Extended Executive Board. He is an attorney at law.



Peter Dietrich

(Legal) has been Skyguide's General Counsel and Head of Legal & Compliance since 2019. He previously held various functions at law courts, with the cantonal authorities and in industry. He spent ten years as CEO of Swissmem, Switzerland's umbrella industries' association, and followed this with two years at a management consultancy advising companies and their executives on change processes. He is an attorney at law, and holds an LL.M. in international economic law.



Myriam Käser

(Communications, Public Affairs & Environment) has been Chief Communications & Public Affairs Officer and a member of the Executive Team since 2018. She previously served as a public affairs, PR and branding consultant and a member of the management board of a reputed communications agency; and from 2015 onwards she was Head of Communications and a member of the Extended Management Board of the NZZ Media Group. She studied political sciences, international law and Arabic language and culture in Switzerland, the USA, the UK, France and Egypt, and holds a master's degree from the University of Zurich.



Klaus Affholderbach

(Safety, Security, Quality) has been a member of the Executive Team since 2018. He has held various functions at Skyguide since joining the company in 2001, including Head of Air Traffic Management Geneva, Head of International Airports (Zurich and Geneva) and most latterly Head of the Virtual Centre with responsibility for all upper airspace. A Doctor of Science, he previously worked in and conducted research into high-energy physics at CERN.



Götz Ardey

(Business Development) has been Chief Business Development Officer on the Skyguide Executive Team since 2019. He has been with the company since 2012, and previously served as Head of Communications, Navigation & Surveillance. Prior to Skyguide he spent ten years with the Lufthansa Group in various capacities. He holds a doctorate in engineering and an MBA.



Urs Lauener

(Operations) has been Chief Operating Officer and a member of the Executive Team since 2017. He trained as an air traffic controller and went on to serve as a Skyguide procedural expert before moving to the Swiss Federal Office of Civil Aviation as an air navigation services specialist. He returned to Skyguide in 2003 and subsequently performed a number of executive roles in both military and civil air traffic management. He holds an executive MBA and an Advanced Certificate in Aerospace & Aviation from HEC Paris.



Nicole Leyre

(Finance & Services) has been Skyguide's Chief Financial Officer and a member of its Executive Team since 2018. She spent 19 years with Schneider Electric in various management capacities. She then served for more than ten years as Chief Financial Officer and a member of the Executive Board of KBA-NotaSys, where she also bore responsibility for IT, human resources and facility management. She holds a master's degree in international finance and an MBA.

Traffic figures in a slow climb

2021 was another year of low overall air traffic volumes. Any planning also faced the added challenge of high volatilities. But Skyguide still consistently delivered the services required.

After the coronavirus reached Europe in March 2020, civil aviation in the airspace above Switzerland and the adjacent areas of neighbouring countries delegated to Skyguide's control came almost to a standstill at times. 2021 saw traffic volumes recover slightly with every easing of actions taken in response to the COVID pandemic and also in the holiday periods. But there were frequent relapses, too.

Slow recovery in traffic levels

Skyguide managed and monitored a total of 690 275 instrument flight rules (IFR) flights in 2021. While this volume was a 29.7% increase on the previous year, it was still a substantial 47.1% below the comparable value for 2019 (with first-half volume as much as 67.8% down on the corresponding 2019 period).

Vaccinations, internationally coordinated certificates and resulting modifications to the precautionary measures taken in response to the pandemic kept changing the overall situation throughout the year. And with every step in easing the COVID restrictions in Switzerland and beyond, traffic volumes showed a slight recovery.

	2021	2020	Change
Total IFR flights	690 275	532 031	+29.7%
Of which transit	435 362	317 048	+37.3%

Volumes still volatile

Despite the slight improvement overall, traffic volumes were highly volatile in 2021. Driven by the schedules of Skyguide's airline customers, the

year saw daily peaks that reached pre-coronavirus heights along with numerous slumps. The trends posed major challenges for the industry's operations, and the entire aviation system – air navigation services included – had to demonstrate maximum flexibility.

Flight movements by market segment showed very disparate developments¹:

- Scheduled flights
 - Traditional airlines +23.9%
(-57.8% on 2019)
 - Low-cost airlines +37.2%
(-56.2% on 2019)
- Charter flights +73.8%
(-3.3% on 2019)
- Business aviation +39.9%
(+5.2% on 2019)
- Cargo flights +15.2%
(+16.4% on 2019)

Skyguide's two area control centres were busier than in 2020, but their activities also remained well below 2019 levels. (For the flight movements shown, it should be borne in mind that a single flight will generate multiple flight movements if it is handled by multiple control centres along its route):

	2021	2020	Change
Geneva	378 549	288 823	+31.1%
Dübendorf	450 372	344 782	+30.6%



Only **0.8%** of all flights are **delayed**

0.25 %

of the flights with more than 15 minutes delay

While Switzerland's two major international airports saw only partial recoveries in their scheduled traffic levels, traffic volumes at the country's regional civil aerodromes remained broadly stable despite the COVID pandemic, and Skyguide was able to provide all the services required:

IFR landings/takeoffs	2021	2020	Change
Bern Belp	9961	8465	+17.7%
Buochs	2508	1736	+44.5%
Donaueschingen ²	1869	1449	+29.0%
Friedrichshafen ²	5956	6291	-5.3%
Geneva	91466	78734	+16.2%
Grenchen	3924	3663	+7.1%
Les Eplatures	2348	2222	+5.7%
Lugano Agno	6012	4758	+26.4%
Sion	6329	5438	+16.4%
St.Gallen-Altenrhein	7720	6450	+19.7%
Zurich	125662	105361	+19.3%
Total	263755	224567	+17.5%

According to Eurocontrol's core forecasts, civil aviation in Switzerland is unlikely to recover to its 2019 levels before 2025.

¹ The figures are for the Swiss flight information region (FIR), i.e. the airspace area for which Switzerland is required to provide air navigation services under international provisions. Segment details for the entire airspace managed and monitored by Skyguide, i.e. including the foreign airspace areas delegated to its control, are not available.

² Donaueschingen and Friedrichshafen aerodromes are in Germany but are located in Skyguide-controlled airspace, and therefore have their approach services provided by Skyguide.

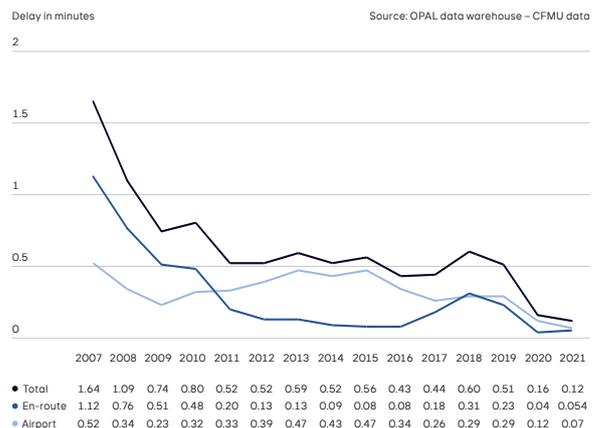
Service quality

The Swiss Air Force was able to conduct all its training and missions with Skyguide without disruption throughout the year. Skyguide was also able to fully ensure the safety of the entire airspace under its control all year through.

After an exceptionally quiet 2020 in traffic volume terms, Skyguide's punctuality performance remained very good in 2021, too. Some 99.2% (first half: 99.7%) of all flights managed by Skyguide were punctual as defined by the corresponding air traffic management parameters.

En-route delays attributable to air traffic management averaged a mere 3.2 seconds per flight in 2021 (prior year: 2.2 seconds per flight). This is a negligible amount in statistical terms. Flights →

Average ATFM delay per flight – airport / en-route (Skyguide airspace)

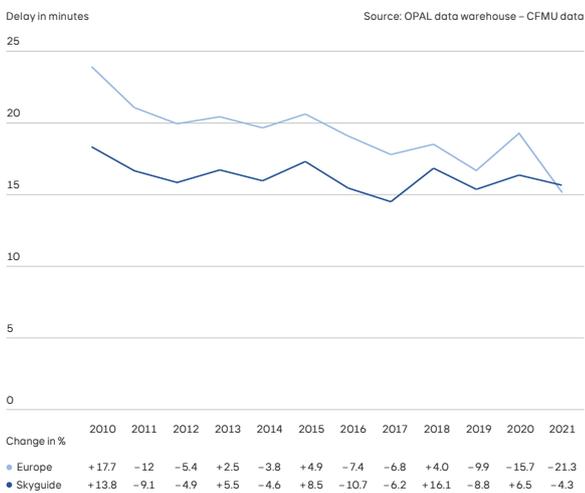


Fluctuation of traffic 2021



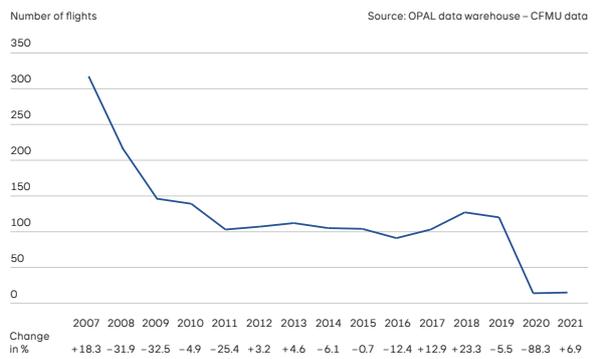
that are delayed by more than 15 minutes for air traffic management reasons, by contrast, can prompt substantial further delays with concrete consequences for airlines and their passengers, and are therefore separately shown. For 2021 such delayed flights amounted to 0.25% of all flights handled (2020: 0.3%).

Average ATFM delay per delayed flight (Europe and Skyguide airspace)

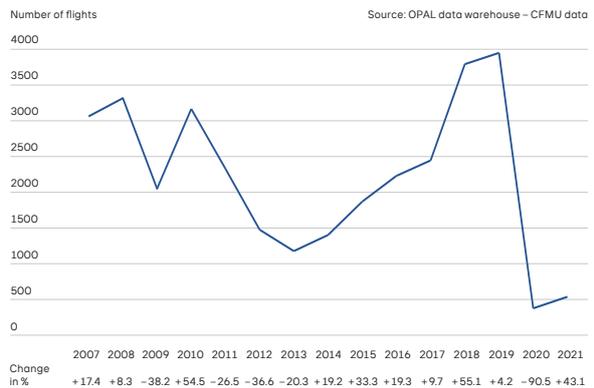


Still-weak overall traffic volumes with substantial periodic fluctuations posed major challenges for Skyguide's customers and partners in 2021, too. An air navigation service provider must adjust without delay to the latest current needs. And this is what Skyguide is doing, because its partners' demands of the company – in terms of punctuality and also of further performance indicators such as safety, security, service quality, value for money and sustainability – all remain rightly high. •

Average delayed flights per day (Skyguide airspace)



Average delayed flights per day (Europe)



Leading and working in uncertain times

The acute epidemic-driven crisis evolved into a somewhat less extreme but still exceptional situation in 2021. The fact that the aviation sector will still take some years to find renewed stability must not let us lapse into a sense of permanent crisis. If air transport is to gradually recover, competence and motivation must both be kept high.

Skyguide's employees have shown an impressive resilience and flexibility throughout these crisis times. They have adjusted constantly to the changing circumstances in both their work and their personal lives.

Contemporary conditions and extensive motivation

Not only have Skyguide's people kept the company's daily operations flawlessly functioning; they have also enabled progress to be made as planned on the long-term transformation projects that are vital to the company.

In consultation with their staff associations, all employee groups made their contributions to the savings measures required. A plan was also submitted by the end of the year for raising of the retirement age for air traffic controllers.

"Confidence and trust in employees' abilities and good intentions are better than rigorous control."

Management and empowerment

More flexible shift and duty hours, increased working from home, virtualised teams and remote training all call for a new management culture. Here Skyguide can build on a principle that the company has been cultivating for years: empowerment. Confidence and trust in employees' abilities and good intentions are better than rigorous control. And in this spirit,

Skyguide's managers set clear and goal-based tasks and support their subordinates in performing them with appropriate coaching and due appreciation of the results achieved. Skyguide's managers also act with sizeable autonomy and accountability, and are judged by the same.

43 % female ratio in the Board of Directors

This long-pursued cultural shift is accompanied by a responsible healthcare policy that offers a wide range of assistance and support. In challenging times more than ever, it is vitally important to keep a firm focus on employees' well-being. For 2021 Skyguide put a particular emphasis here on maintaining an open dialogue and on highlighting mental health – both from the conviction that organisations must create and cultivate a climate in which mental health issues can be promptly addressed and openly discussed.

Equal opportunities and diversity: a benefit for all

At Skyguide, equal pay for equal work is not just a worthy wish: it is a reality, as is confirmed by the company's 'Fair on Pay' certification. Skyguide is equally convinced that diversity strengthens an organisation. Working on its experiences of the past, Skyguide has created a new Diversity & Inclusion Team and has taken concrete actions to raise awareness and appreciation of these issues companywide. •

Contributing to sustainable aviation



Environmental care begins at home, even if the contribution can seem insignificant, given the scale of the challenges involved. Partnerships are crucial, too. Skyguide is firmly committed to greater sustainability, and works towards this at every level: internally, nationally and internationally.

Swiss aviation is oriented towards the climate policy objectives of the Paris Agreement and the Swiss Federal Council's Long-Term Climate Strategy, which aims to achieve net-zero emissions by 2050. The technologies required for this (such as sustainable aviation fuels and alternative power technologies) are in some cases still being developed. Until these are mature enough to permit mass production and their gradual adoption, the greatest progress will only be achieved by improving the ways today's aircraft fleets are operated. And here air navigation services play a central role.

What is also required are actions to decarbonise infrastructure on the ground, particularly Skyguide's own.

Skyguide still exemplary

Skyguide has been a partner in the Swiss Confederation's 'Exemplary Energy and Climate' initiative since 2013. The participants involved seek to show by good and practicable example how the goal of a climate-neutral Switzerland can be achieved.

The first phase of the initiative has now been concluded. It has seen Skyguide implement numerous improvements on the renewable energy, facility management, mobility and green IT fronts. As a result of these, the company's energy efficiency at the end of 2020 was an improvement of no less than 52.4% on its reference benchmark of 2006. It should also be borne in mind that ecological measures can have an economic impact, too – and often a positive one. Thanks to its falling energy costs, Skyguide has saved itself some CHF 1.9 million in this first initiative phase.

In addition to the actions it has already taken, Skyguide seeks to further reduce its own environmental footprint. To this end, the company has committed with conviction to the second phase of the 'Exemplary Energy and Climate' initiative, which was launched in 2021 with a total of 15 participants. Skyguide has already initiated or planned numerous actions here, some with partners and others specific to the company, such as for its own renewable energy production.

Less is better

However important they may be, Skyguide's in-house actions alone will not be sufficient to meet the environmental challenges confronting society today. Air navigation service providers must and can play a vital role in ensuring the drastic reduction that is needed in the carbon dioxide emissions of the

“Skyguide puts at the heart of its work an air traffic management that is not only safe and efficient but is ecofriendly, too.”

aviation sector. This is why Skyguide puts at the heart of its work an air traffic management that is not only safe and efficient but is ecofriendly, too. Concrete contributions to this include:

- shorter taxis at airports
- optimised approach management with minimal holding patterns
- continuous descents using minimum thrust
- routings which are as direct as possible.

Shortened routings play a key part in reducing fuel consumption. Skyguide was able to enhance its contribution to this in 2021 by taking a further step forward in the 'Free Route Airspace' programme. The difference between the most direct routes between the points of entering and leaving Swiss airspace and the routes actually flown may now be less than one per cent. But pre-planning these fuel-saving routes can still be further improved, to enable the airlines to carry less fuel on the flights concerned. What is also becoming clear, however, is that air traffic management optimisations which are focused solely on Switzerland can have only a limited overall effect.

Aviation and protecting the environment are both international affairs

Aviation is a means of transportation of international dimensions. And the actions which are taken within the industry on the ecological and the climate protection fronts must be similarly coordinated beyond national borders. Skyguide is an active participant in the corresponding European research, development and implementation of the measures concerned.

The air navigation service providers of FABEC suspended over 300 actions in Central Europe in 2021 which had previously served to manage and monitor traffic flows at times of high airspace demand. In doing so, they enabled airspace users to take advantage of such times of lower flight volumes by flying more direct routes and planning more efficient vertical flight profiles, and thereby lastingly lowering their fuel consumption. For these actions and for a previous lifting of numerous further restrictions, FABEC was named among the finalists for the 2021 World ATM Congress's Sustainability Award.

“Ecological measures can have an economic impact, too – and often a positive one.”

To discuss the further expectations and challenges that air navigation service providers aim to meet and master on the environmental protection front, over 100 specialists and further delegates attended the first FABEC Environmental Day in Geneva in July 2021, an event that Skyguide had initiated and jointly staged with the Swiss Federal Office of Civil Aviation. All of FABEC's members have committed to further reducing aviation's environmental footprint and to supporting the European Union's Green Deal environmental objectives. The Geneva event's participants also concluded that, while science's understanding of the environmental impact of aviation continues to grow, more key data and metrics are needed if further improvements are to be systematically pursued. So here, too, there is still major work ahead (see also the Environmental Report 2021).

Switzerland as an innovation hub

Skyguide continues to garner ever broader support for its vision and for its Virtual Centre, the centre-piece of its innovation strategy. What began as a concept for bringing greater efficiency to Swiss air navigation services is now a cornerstone of a paradigm shift in Europe that will soon become reality. Skyguide's Virtual Centre programme marked a number of technological milestones in 2021. The programme's projected efficiencies have proven true, and its third and final phase focusing on its operational implementation is now under way.

It all began with a problem that is typical of the air navigation services sector: Skyguide was managing and monitoring its upper airspace from two separate control centres at two different locations and with substantially different and separate technical systems and operational processes. This was not an efficient state of affairs. Concentrating all these activities at one physical site proved not to be a viable option. Instead, a 'One System – One Sky' approach was adopted: regarding all the airspace concerned as a single virtual entity and managing it from both the existing locations using the same standardised and modernised technology.

Technological modernisation

Ten years on from the programme's launch, Europe's air navigation services community has also come to acknowledge and appreciate the innovative approach and the sizeable potential of this Virtual Centre, which is also fully aligned to the European Commission's research and development activities.

Skyguide reached the key milestones in the second of the three tranches of the Virtual Centre programme in 2021. As a result, the first elements of the gradually modernised air traffic management system have been operable since the end of the year. Improved traffic flow data, further interaction automations (especially of flight clearances and

handovers) and more dynamic use of airspace are all key benefits that the modernisation has delivered.

The actions here have been primarily concerned with modernising the system architecture. The third phase of the programme, known internally as 'VC Touchdown', will be devoted to the operational application of the new technology. In view of this, it will also be led by the company's Operations Division, and will be putting a particular emphasis on involving Skyguide's air traffic controllers – the system's future users – early in the process.

Operational implementation begins

The new leaders of the third programme phase began their work in 2021 and will now pursue and promote the harmonisation and simplification of the operational processes involved. With its optimised air traffic management and airspace configuration, the new system will enable operations to be rapidly realigned to fluctuations in air traffic volumes, and will permit capacities to be raised or reduced in response to demand.

As of 2027, the new Virtual Centre will enable Skyguide to manage and monitor the upper airspace of Switzerland and delegated adjacent areas from either of its two physical locations,

"The first elements of the gradually modernised air traffic management system have been operable since the end of 2021."



with enhanced traffic forecasting and with services that are optimally tailored to the latest user needs.

This makes the Virtual Centre much more than a technical programme. In harnessing the latest technologies, Skyguide is changing the entire operational processes by which airspace is managed. From Skyguide's perspective, though, human operators still have a central role here. First, their incomparable abilities will still be needed and used in tomorrow's air navigation services. And secondly, the paradigm shift that the Virtual Centre brings is essentially linked with a cultural shift, too.

From flexibilisation to efficiency enhancement

The business case on which the Virtual Centre is based has proved to be robust. With their prime focus on operational benefits such as bringing greater flexibility to the volumes of services required, the improvements that the Virtual Centre will offer will deliver greater efficiencies and thus a lower cost base. Skyguide will be able to better tailor its work to its customers' current needs and, thanks to optimised rostering, increase its overall productivity. Further benefits will derive from greater automation, which in turn will enhance personnel management – another key issue, given the continued shortages of specialist staff.

The new approach also offers enhanced financial efficiencies by virtue of its technology: its open

**“The result for the customer:
leaner and more flexible services
at a lower price.”**

architecture makes the system more dynamic and competitive. This in turn facilitates standardisation, economies of scale and a firm alignment to a service-based philosophy. Unit costs and maintenance costs will decline. And the system's operators can make full and fruitful use of data services, instead of having to constantly invest in more infrastructure of their own. The greatest benefit of the new system, though, lies in its operational application of the new technologies. The result for the customer: leaner and more flexible services at a lower price.

The innovative virtualisation of Skyguide's control centres has therefore become a core element in the company's overall strategy. And it is now deemed to hold the potential for harmonising Europe's presently fragmented air navigation services just as it is currently doing in Switzerland. As a result, the approach is gaining more and more European support. It is even being championed within the SESAR programme's Airspace Architecture Study, which is intended to show the way forward for Europe's air navigation services. •

A reliable and innovative partnership

Switzerland's civil and military air navigation services were amalgamated into a single organisation on 1 January 2001. 'Skyguide' was the new entity's name; and 20 years on, what began as a European novelty has proved as stable as it is dynamic.

Skyguide provides military air traffic control services on the Swiss Air Force's behalf. The company was able to do so for all military flight operations in 2021 from its Air Defence & Direction Centre and Switzerland's air force bases. Once again, the COVID pandemic had no impact on the Swiss Air Force's training flights and missions or on the functional capabilities of the country's military air traffic control.

A partnership for efficient missions

Mission effectiveness is one of the key performance indicators for military air traffic control. It remained high again in 2021.

Total military aircraft movements handled in 2021 amounted to 89 491, a 2.5% decline from the 91 803 of the previous year. Skyguide also conducted 219 live or hot missions and 1958 tactical missions for the Swiss Air Force in the course of the year (compared to 305 and 2285 respectively in 2020). A live mission is a routine check of an aircraft declared foreign; a hot mission is a similar verification which additionally foresees immediate intervention if, for example, the foreign aircraft concerned were to enter a declared no-fly zone.

A partnership around the clock

The Swiss Air Force must be able to count on reliable partners to perform its mandate and mission. The swiftest responsiveness is essential, particularly for the round-the-clock aerial policing duties with which it has been tasked since 2021. It is to test such preparedness under realistic conditions that 'quick reaction alerts' or QRAs are conducted. In response

to such an alert, two of the F/A-18 Hornet aircraft stationed at Payerne Air Force Base must take off within 15 minutes and reach a predefined zone within a specified time. The Swiss military conducted its first unannounced QRA on 29 April 2021. After this first year of such QRAs, the results to date have been favourable. The personnel situation remains challenging, however. Skyguide is responding to this with countrywide recruitment campaigns and by intensifying its training activities.



A partnership for special assignments

For the first time in its more than 30-year history, the annual World Economic Forum in Davos could not be held in 2021 as a result of the coronavirus situation. But the Swiss Air Force and Skyguide, which play a key part in ensuring the safe, secure and efficient staging of the annual WEF event, were still required to perform a similar role for a number of high-profile international meetings in Geneva, such as a summit between the US and Russian presidents and the World Trade Organization's 12th Ministerial Conference (which also had to be cancelled at the last minute).

Events of this kind make the highest demands on airspace safety and security. For particularly sensitive zones, the Swiss Federal Council imposes temporary restrictions or bans access entirely to such 'restricted airspace'. Aerial policing and airspace monitoring are intensified, too. For Skyguide and its air force partners, this entails extremely brief assignments that demand particularly intensive coordination between the military Air Defence & Direction Centre and civil air traffic management.

For international conferences in Geneva, additional military air traffic controllers will be stationed in the Geneva Airport control tower. This ensures not only the safe and secure staging of such diplomatically sensitive events, but also the unimpeded continued performance of civil flight operations to and from the international airport.

More air traffic controllers are also posted to Switzerland's air force bases for special events of this kind: at such times, the Swiss Air Force must be able to specify both a main and an alternate operating base, and must keep both of these fully functional throughout. It is at times such as these that the benefits of maintaining integrated civil and military air navigation services are particularly felt.

An industry partnership

Skyguide and the Swiss Air Force work together daily to maintain and ensure Swiss airspace sovereignty. But Skyguide is a key industry partner for the Swiss Air Force, too – as is evidenced by projects such as the Low Flight Network or LFN, a route network for helicopters that the two partners have been steadily developing since 2014 in collaboration with the Rega air rescue service.

“The benefits of maintaining integrated civil and military air navigation services are particularly felt during special assignments for events such as high-profile international meetings.”

Given Switzerland's challenging natural terrain and the country's busy airspace, helicopter missions – life-saving in some cases – had not always been possible in the past in all weather conditions. The LFN is designed to rectify this. Skyguide's role in it has been to develop low-flight routes between key points (such as hospitals) along with the totally new satellite-based flying procedures which such routes require, and to integrate these into Switzerland's existing air traffic system.

The LFN has proved highly valuable in the last few years – especially during the COVID-19 pandemic, when some patients have had to be transported to hospitals with more available capacities. In view of this, the LFN was also declared a national infrastructure for blue-light organisations and the Swiss Air Force in 2021. This infrastructure will now be further developed and refined under the overall aegis of the Swiss Federal Office of Civil Aviation in accordance with the needs of the Swiss Air Force and the cantonal health services. Skyguide, for its part, will continue to expand it and add further hospitals and military landing sites. The project has also helped Skyguide's own specialists to further develop their expertise and to acquire experience which should also prove valuable in other contexts and connections. •

Satisfied customers today, new services tomorrow

The coronavirus pandemic has increased the transformational pressures on the air navigation services sector. It has shown, too, that Skyguide has been on the right track for years with its corporate strategy.

The air navigation services sector has traditionally been slow to evolve. The reasons for this are structural: its high regulation, its small market size, investment-unfriendly financing provisions and more. The sector's customers, by contrast, act and react far more swiftly and above all more flexibly in response to political pressures and market trends.

A new industry paradigm

Had it not been clear before, the coronavirus crisis has further confirmed that today's air navigation service providers simply cannot continue as before with their high basic costs and their low adaptability. Skyguide came to appreciate years before the present crisis that the sector needs a paradigm shift, which will make it more efficient, more resilient and more sustainable to face the challenges ahead.

"The air navigation services sector needs a paradigm shift which will make it more efficient, more resilient and more sustainable to face the challenges ahead."

The company was correspondingly consistent in further pursuing its transformational endeavours throughout 2021 – through further digitalisation, automation and virtualisation of its systems (as with the Virtual Centre) and, at the organisational level, through its Target Operating Model or TOM transformation programme, which entered its next development phase. A stronger focus on individual units and their business models should provide greater transparency and assign more responsibility for leading future developments in line with overall Skyguide strategy. This in turn should allow business decisions to be taken that are based on product-specific market needs and customer-relevant demands. The prime driver in all these activities remains the company's customers. And in their annual consultations, Skyguide's customers again confirmed their appreciation of their close involvement in all the company's endeavours and of its customer-centric attitude and approach.

Customer alignment: a principle in practice

One example of the success of such consistent customer alignment is provided by the CNS solutions that Skyguide offers on the free market. 2021 proved particularly fruitful here in winning new customers and in launching new projects with existing ones. Communications, navigation and surveillance – the three components of CNS – are the basic functions of the infrastructure of any air traffic management: every aircraft must be located, identified and then guided via data exchange.

Air transport is performed in a dynamic environment. And the demands on the infrastructures that air navigation services require are in corresponding flux. One particular problem is interference with

electromagnetic signals, which can compromise the displays on air traffic controllers' screens. The signals concerned may be deflected by temporary obstacles (such as construction cranes) or by more permanent ones (such as buildings or wind farms), or may be otherwise disrupted by other systems with electromagnetic emissions. Skyguide's specialists have developed specific methods here not only to predict the likely impact of such interference but also to filter it out within the systems affected.

Satellite-based navigation infrastructures and procedures are slowly succeeding conventional ground-based alternatives in numerous locations. Elsewhere, the two systems are coming to be advantageously used side by side. The new solutions are more cost-effective and more versatile in their application. Skyguide has already completed a number of challenging projects in this field and, in doing so, has accumulated outstanding expertise, especially in verifying signal and system performance, developing the requisite infrastructure (such as multilateration) and devising and refining new instrument flight rules procedures.

Ground-based equipment continues to be operated. These installations are also subject to strict quality regulations, and must therefore be regularly

“The CNS drone developed by Skyguide is being increasingly used at airports outside Switzerland, too.”

calibrated and inspected. The survey aircraft used to do so at Geneva and Zurich airports have been assisted in this work since 2018 through the particularly cost- and environment-friendly deployment of a multicopter drone. The drone, which was developed by Skyguide's own engineers, is being increasingly used at airports outside Switzerland, too. From 2022 onwards, the use of this CNS drone will permit a 50% reduction – approved by the civil and military regulatory authorities – in such inspection flights, with corresponding annual savings in carbon dioxide emissions of some 200 tonnes.

Safety and effectiveness are the traditional watchwords of air navigation services. But for Skyguide, customers' demands and expectations in terms of costs, sustainability and flexibility are also high priorities. Which is why, in close collaboration with its customers, the company continues to devise, develop and refine new and ever-better solutions. •





A year with European highs and lows

The COVID crisis, Switzerland's FABEC presidency and the breakdown of negotiations on a Swiss/EU framework agreement meant new opportunities for Skyguide at the European level but new risks, too.

What had already been predicted before the coronavirus pandemic was confirmed in 2021: the present RP3 European regulatory framework is not fit for crisis times. Europe's Performance Plan incorporates a mechanism under which, in response to fluctuations in air traffic volumes, the continent's air navigation service providers will return part of their profits to users in busier traffic times and can, in return, debit on part of their losses in times of leaner traffic volumes. At present, however, following the collapse of their business in the face of the pandemic, the airlines are in no position to bear part of the revenue shortfalls being suffered by the continent's air navigation service providers as is envisaged under the Performance Plan. The European Commission has now resolved that the airlines should offset such lost revenues more gradually, over a period of five to seven years.

The COVID pandemic has at least exposed the systemic weakness in the current financing of air navigation services, and has also raised the willingness to revise the present regulatory framework for future reference periods. Skyguide strongly favours such reform – particularly because, with its disadvantageous accounting of investments, the present system does not provide adequate innovation incentives, a weakness which must be corrected as a top priority.

On course for Europe

As an innovation leader and a country in the heart of Europe, Skyguide and Switzerland made positive use of their dual chairship of Functional Airspace Block Europe Central (FABEC) in 2021. FABEC, in which 55% of Europe's entire air traffic is handled, unites Belgium, France, Germany, Luxembourg, the

“Only as a network will Europe’s air navigation service providers be able to find lasting solutions – and put these into promising practice, too.”

Netherlands and Switzerland at the state level. The FABEC Council of government representatives was chaired for the year by Marcel Zuckschwerdt, Deputy Director General of the FOCA.

At the air navigation service provider level Skyguide collaborates closely with its national FABEC partners via the ANSP Strategic Board. These partners are Skyguide’s counterparts of Belgium, DSNA of France, DFS of Germany, ANA of Luxembourg and LVNL of the Netherlands, along with Eurocontrol’s Maastricht centre. The ANSP Strategic Board was chaired by Skyguide CEO Alex Bristol in 2021.

FABEC’s year under Swiss chairship was strongly coloured by the ramifications of the coronavirus pandemic. But key emphases could still be set in the environmental and innovation fields, and collaborations could still be intensified both within FABEC and with its sister functional airspace blocks. This in turn substantially strengthens the overall endeavours to create a Single European Sky. The focus within this international grouping will continue to be placed on steadily further improving the provision of safe, secure and robust critical infrastructures for airspace users, passengers and the broader public.

No airspace isolationism

This long-standing and increasingly closer collaboration stood in marked contrast in 2021 to the breakdown in negotiations on a framework agreement between Switzerland and the European Union. The resulting suspension of the Horizon Europe

research programme will have a particularly adverse impact on Skyguide’s collaborations within SESAR, the European programme to further develop air navigation services technology.

The full extent of the damage caused by the breakdown in the Swiss/EU negotiations is yet to be seen. For air navigation services, though, it remains as true as ever that Switzerland’s isolation from the rest of Europe is not a viable option. Focusing on themselves is something that has often cost the continent’s air navigation service providers (and thus also their customers) dearly in the past. Daily cross-border cooperations with its neighbouring organisations and intensified collaborations within Europe have proved a dynamo of progress for Skyguide. And if the challenge of today is to meet airspace users’ current demands such as for greater flexibility and for services that are closely tailored to customer needs in both quality and quantity terms, no provider in Europe can master the brief alone – not to mention the greater social challenges which must also be tackled on the mobility and the environmental fronts. Only in concert and as a well-functioning network will Europe’s air navigation service providers be able to find lasting solutions – and put these into promising practice, too. •

“The COVID pandemic has exposed the systemic weakness in the current financing of air navigation services and has raised the willingness to revise the present regulatory framework.”

Glossary of abbreviations

ADDC	Air Defence & Direction Centre
ANA	Administration de la navigation aérienne (Luxembourg's ANSP)
ANSP	air navigation service provider
AOT	administrative, operational and technical personnel
ATFM	air traffic flow management
ATM	air traffic management
CERN	the European nuclear research organisation
CNS	communications, navigation and surveillance
CPDLC	Controller-Pilot Data Link Communications
DDPS	Swiss Federal Department of Defence, Civil Protection and Sport
DFS	Deutsche Flugsicherung (Germany's ANSP)
DME	distance measuring equipment
DSNA	Direction des Services de la Navigation Aérienne (France's ANSP)
ETH	Swiss Federal Institute of Technology
FABEC	Functional Airspace Block Europe Central
FIR	flight information region
FOCA	Federal Office of Civil Aviation
HEC	Haute Ecole Commerciale
IFR	instrument flight rules
LFN	Low Flight Network
LVNL	Luchtverkeersleiding Nederland (the Netherlands' ANSP)
QRA	quick reaction alert
RMIS	risk management information system
RP	reference period (for EU Performance Plans)
SES	Single European Sky
SESAR	Single European Sky ATM Research
TOM	Target Operating Model
U-Space	an operating system for drones
WEF	World Economic Forum

Financial Report 2021

Consolidated financial statements

Consolidated income statement for the years ended 31 December 2021 and 2020

in KCHF	Note	2021	2020 (restated)
Air navigation services revenue		319 748	259 414
Other operating revenue*		19 788	12 831
Net revenue from disposal of assets		42	15
(Under-) / over-recovery balance carried over	10	19 256	22 734
(Under-) / over-recovery balance carry forward	11	-9 975	-14 633
Total operating revenues	1	348 859	280 361
Total personnel expenses	2	304 555	294 091
Eurocontrol contribution	3	10 901	9 978
Meteorological services contribution		13 706	13 702
Other external air navigation services		1 342	1 359
Leased communication lines		1 776	1 955
Material, supplies, maintenance		25 954	17 600
Property-related expenses		9 129	7 484
Energy		2 201	2 128
Administrative expenses	4	31 452	25 272
Allowance for bad debt	5	-2 030	3 293
Unplanned depreciation	6	1 777	276
Depreciation*		61 043	62 164
Total other operating expenses		157 251	145 211
Total operating expenses		461 806	439 302
Operating result		-112 947	-158 941
Financial income	7	220	107
Financial expenses	8	6 794	5 590
Financial result		-6 574	-5 483
Result of an associated entity		113	155
Loss before tax		-119 408	-164 269
Taxes	9	286	340
Loss for the period		-119 694	-164 609

* Restated amounts, see section "Investment with co-financing".

Consolidated balance sheet as at 31.12.2021 and 2020

in KCHF	Note	31.12.2021	31.12.2020 (restated)
Assets			
Current assets			
Cash and short-term cash deposit below 90 days	12	102 142	135 291
Receivables and advances	13	48 888	81 001
Prepaid expenses	14	29 566	17 968
Total current assets		180 596	234 260
Non-current assets			
Long-term advances and other long-term assets	15	3 097	6 276
Property, plant and equipment*	16	263 905	266 198
Securities and investment in associate		2 173	2 032
Intangible assets*	17	109 480	134 622
Total non-current assets		378 656	409 128
Total assets		559 252	643 387
Liabilities			
Current liabilities			
Trade and other payables		7 671	8 671
Short-term debt	21a	0	199 070
Advances and other short-term liabilities *	18	5 689	5 741
Accrued liabilities	19	89 222	68 872
Short-term provisions	20	9 781	10 242
Total current liabilities		112 363	292 596
Non-current liabilities			
Long-term debt	21b	250 000	0
Other long-term liabilities *	22	10 365	44 251
Total non-current liabilities		260 365	44 251
Total liabilities		372 728	336 847
Shareholder's equity			
Share capital	23	141 120	141 120
Treasury share	24	-25	-25
Legal reserves from retained earnings		19 706	19 706
Legal reserves from capital		50 880	148 880
Other reserves		253 932	155 775
Translation reserve		0	-354
Retained earnings / (accumulated deficit) brought forward		-159 394	6 047
Loss for the year		-119 694	-164 609
Total shareholder's equity		186 525	306 540
Total liabilities and shareholder's equity		559 252	643 387

* Restated amounts, see section "Investment with co-financing".

Consolidated cash flow statements for the years ended 31 December 2021 and 2020

in KCHF	2021	2020 (restated)
Operating activities		
Loss for the period	-119 694	-164 609
Depreciation*	62 820	62 439
Financial income	-219	-107
Financial expenses	4 151	5 160
Dividends received	-931	-187
Taxes	286	340
Gains and other changes on property, plant and equipment and intangible assets*	-42	118
Fair value change on available for sale securities and associated entity	-141	-78
Change in long-term deferred revenues and advances received*	-34 420	-4 810
Change in advances and other short-term receivables	34 144	-10 091
Change in prepaid expenses, long-term advances and other long term assets	-8 954	9 929
Change in trade and other payables	-1 000	2 750
Change in advances and other short-term liabilities *	-53	-4 037
Change in accrued liabilities	20 500	-3 731
Change in provisions	-2 492	2 653
Cash flow from operating activities	-46 045	-104 260
Cash flow from operating activities	-286	-340
Interest paid	-3 992	-5 018
Interest received	123	107
Net cash flow from operational activities	-50 200	-109 511

in KCHF	2021	2020 (restated)
Investing activities		
Investment in property, plant and equipment *	-34 316	-35 869
Proceeds from sale of property, plant and equipment	42	15
Investment in intangible assets *	-1 071	-15 690
Inflows from disposal (selling) of financial assets	534	307
Dividends received	931	187
Net cash used from investing activities	-33 880	-51 051
Financing activities		
Share capital increase	0	1 120
Reserves from premiums	0	148 880
Reimbursement of short term debt	-200 000	0
Long-term loan received	250 000	0
Change in cost of hedging instruments	930	1 162
Net cash used in financing activities	50 930	151 162
Difference on foreign currency conversion	0	-8
Change in cash and cash equivalents	-33 149	-9 409
Cash and cash equivalents at January 1	135 291	144 700
Cash and cash equivalents at December 31	102 142	135 291
Change in cash and cash equivalents	-33 149	-9 409

* Restated amounts, see section "Investment with co-financing".

Consolidated statement of changes in shareholders' equity, for the years ended 31 December 2021 and 2020

in KCHF	Share capital	Treasury share	Legal reserves from retained earnings	Legal reserves from capital
Shareholders' equity at January 1, 2020	140 000	-25	19 706	0
Currency translation difference	0	0	0	0
Allocation to reserves	0	0	0	0
Capital increase	1 120	0	0	148 880
Net result for the year	0	0	0	0
Shareholders' equity at December 31, 2020	141 120	-25	19 706	148 880
Perimeter change	0	0	0	0
Allocation to reserves	0	0	0	-98 000
Net result for the year	0	0	0	0
Shareholders' equity at December 31, 2021	141 120	-25	19 706	50 880

The headings in the consolidated statement of changes in shareholders' equity have been adapted to be as close as possible to current terminology.

Other reserves	Translation reserve	Retained earnings/ (accumulated deficit) brought forward	Loss for the year	Loss for the year
161 322	-346	4 959	-4 459	321 157
0	-8	0	0	-8
-5 547	0	1 088	4 459	0
0	0	0	0	150 000
0	0	0	-164 609	-164 609
155 775	-354	6 047	-164 609	306 540
158	354	-832	0	-320
98 000	0	-164 609	164 609	0
0	0	0	-119 694	-119 694
253 932	0	-159 394	-119 694	186 525

Notes to the consolidated accounts as at 31 December 2021

General information

Skyguide, Swiss civil and military air navigation services ltd (hereafter "Skyguide"), operates under a mandate given by the Swiss Confederation. This mandate is governed by the Federal Aviation Act and the associated ordinances. The company is domiciled at 15-17 route de Pre-Bois, in Meyrin (Switzerland).

Relations with the Swiss Confederation

The Swiss Confederation is the majority shareholder in Skyguide. The Federal Aviation Act provides that the majority of the capital belongs to the Swiss Confederation. The bylaws of the company state that this holding must be at least 51%. A reduction in the holding of the Swiss Confederation would necessitate a modification of the law by the Federal Chambers, and such a decision, under certain circumstances, might be subject to a referendum. As the majority shareholder, the Swiss Confederation has the power to control all the decisions taken at the company's general meetings, including the election of the members of the Board of Directors.

Transactions with the Swiss Confederation

Skyguide maintains various business relationships with the Swiss Confederation or other companies in which it is the majority shareholder. These transactions include the payment by the Swiss Confederation of exempted flights. These transactions are conducted under the usual market conditions.

Basis for the establishment of the consolidated accounts

The consolidated financial statements have been prepared in full compliance with the Swiss GAAP ARR accounting standards and in accordance with the specific rules in force in our industry.

In accordance with the specific rules in force in this industry, Skyguide applies the European Commission's "Principles for establishing the basis of assessment of route air navigation services and principles for calculating unit rates", as well as the Swiss Ordinance on Air Navigation Services.

The treatment of over- and under-recoveries is based on these texts (see Skyguide's business model). The accounts have been prepared on a historical cost basis, with the exception of the items "derivative financial instruments", which are valued at fair value. The accounting periods are delineated according to the accrual basis of accounting. All companies included in the scope of consolidation close their accounts on December 31.

Estimates and judgements

The preparation of consolidated financial statements in accordance with Swiss GAAP ARR requires certain estimates and judgements to be made in terms of the accounting. These affect the assets and liabilities, expenses and income as well as the contingent liabilities. These estimates and judgements are reviewed continuously and are based on experience and other factors, particularly expectations of future events that it is reasonable to assume might occur in the circumstances. Actual results could differ from these estimates. The Group's management continuously monitors and revises, where necessary, the estimates and underlying assumptions. Any changes are recorded in the period in which the estimate is revised.

Key facts

2021 was again marked by the COVID-19 pandemic, which continued to affect the air transport sector. In the first half of the year, the volume of traffic was significantly lower than the pre-pandemic level. Nevertheless, in the early summer and with the gradual lifting of the health restrictions, the commercial air traffic that determines the financial result improved slightly. Over the whole year, traffic amounted to around 53% compared to 2019, but still increased by 29.7% compared to 2020.

- Air navigation services revenue (note 1): 320 million CHF as at 31 December, 2021 (2020: 259 million CHF), representing an increase of 23% compared to previous year.
- Personnel expenses (note 2): Skyguide has pursued the measures it implemented to reduce personnel expenses, such as short-time working, particularly for air traffic controllers, reducing the balance of vacation hours and the conversion of certain salary components into vacation hours. The compensation received for the reduction in working hours amounts to 8.4 million CHF (2020: 8.2 million CHF).
- Property, plant and equipment: Despite the health crisis, it was not necessary to write down assets because the business model (see description below) is not called into question and Skyguide will continue to generate sufficient cash flows to finance its operating activities and the necessary investments. Indeed, the losses of 2020 and 2021 in connection with the decline in traffic will in time be charged to the airline companies in accordance with the emergency plan of the European Commission for 2020 and 2021. In addition, as highlighted by the European Economic and Social Committee, air navigation services are a critical element for air transport and funding solutions must be found in order to ensure its sustainability.
- Receivables and advances (note 13): The net amount of receivables related to charges as at 31 December 2021 decreased by 71% compared with 31 December 2020 to 6 million CHF, despite the increase in air traffic. The decline in receivables is due, on the one hand, to the payment of the 2020 invoices, for which Skyguide had deferred the payment deadline to help the airlines to get through the crisis in 2020, and, on the other hand, the work done together with FOCA and regional aerodromes to ensure the payment of services per quarter. The receivables from regional airports decreased from 25.8 million CHF in 2020 to 5.4 million CHF in 2021. Work on the valuation of receivables resulted in Skyguide recording an allowance for bad debt of 1.4 million CHF in the 2021 financial year.
- Advances and other long-term assets (note 15): The revenue due in relation to under-recovery in 2021 (151 million CHF) is recorded as a decrease in “advances and other long-term assets” and not through profit or loss. In view of the scale of the COVID-19 crisis, the European Commission has published an emergency plan for 2020 and 2021, whose recovery periods are exceptionally long and whose terms and conditions are still being defined. In order to reflect the uncertainty resulting from the situation, Skyguide has decided to specify revenue recognition criteria as follows: under-recoveries are recognised through profit or loss only if the methods and recovery periods are in accordance with customary practice, clearly defined and agreed by all parties.
- Liquidity (note 12): At the end of December 2021, the level of liquidity remains lower than at the beginning of the year (–33.1 million CHF), but allows the operational activity to be secured.

Going concern

The measures taken by governments to combat the COVID-19 pandemic have resulted in an unprecedented decline in air traffic and, as a consequence, in the charges invoiced to users. This has generated a high level of uncertainty in the short term and led Skyguide's management to stop recognising the under-recoveries in a year as unbilled revenue. On the other hand, the business model of Skyguide remains sustainable and management is confident in the company's ability to generate the necessary cash flows to finance its activities and future investments.

Indeed, the emergency plan of the European Commission anticipates that the shortfall in earnings in the 2020 and 2021 financial years will be recharged to the airlines starting in 2023. Additionally, Skyguide, is a provider of air navigation services and thus a critical element for the air transport industry. As such, the funding of the company is enshrined in the

Federal Civil Aviation Act (article 40d). As a result, the Swiss Parliament granted a subordinated loan of 250 million CHF to Skyguide on 18 October 2021 with a 10-year maturity. In addition, in December 2021, the Swiss Parliament agreed to an additional budget of 100 million CHF in the course of the vote on the 2022 budget of the Swiss Confederation.

These various elements allow for the conclusion that Skyguide's ability to continue as a going concern is not at risk.

Perimeter and consolidation method

The consolidated annual accounts include the accounts of Skyguide and of its subsidiaries listed in the scope of consolidation.

Skynav SA, a 100%-owned subsidiary of Skyguide, was liquidated as of 22 December 2021. The other entities within the scope of the consolidation scope are the same as in 2020.

Skyguide subsidiaries included in the scope of consolidation

Name of subsidiary	Activity	Country	2021	2021	2020	2020
			% held % controlled	Paid in nominal capital by Skyguide (KCHF)	% held % controlled	Paid in nominal capital by Skyguide (KCHF)
SkySoft-ATM SA	Software development	Switzerland	100	95	100	95
Skynav SA (deleted)	Holding	Belgium	0	0	100	96
Swisscontrol SA	Dormant	Switzerland	100	50	100	50

Skyguide fully consolidates subsidiaries in which it has a holding of more than 50% or exercises exclusive control, either directly or indirectly.

The assets and liabilities of its subsidiaries, together with the expenses and income, are included in full in the annual consolidated accounts. The book values of the affiliates' investments, plus the shareholders' equity, are eliminated. Any minority shareholdings in the net equity and the result appear separately in the balance sheet and the consolidated income statement. Under the unity principle, the minority interest is included in the shareholders' equity. Intercompany balances, expenses, income and profits are eliminated upon consolidation.

Conversion into Swiss francs

The consolidated accounts are prepared in Swiss francs (CHF) and presented in thousands of Swiss francs (KCHF). The subsidiaries of the Group express their financial statements in local currency. The conversion of the income statement of the foreign subsidiary (Skynav SA) is carried out at the average exchange rate for the year, while the balance sheet is converted at the year-end rate, at the rates published by the federal tax administration. The translation difference resulting from the conversion of the balance sheet items is allocated to the shareholders' equity along with the translation differences on the income statement arising from the difference of the average and the year-end exchange rate. Since Skynav was liquidated in 2021, there was no need to make any conversion.

Consolidation of the capital

The book value of the investments is eliminated with the share of the net assets at the time of the acquisition or foundation using the purchase method.

Authorisation of the annual accounts

The annual accounts were authorised for publication by the Board of Directors in its meeting of 25 February 2022 and must still be approved by the general shareholders' meeting of May 5, 2022.

Accounting rules

The accounting rules of SkySoft-ATM SA and Swisscontrol SA follow the rules described for Skyguide. Skynav SA follows the Belgian accounting rules. The accounts of Skynav SA are adjusted to the Skyguide accounting principles. The main accounting rules used in the preparation of Skyguide's consolidated financial statements are described below.

Foreign currencies

Functional currency

The elements included in the financial statements of Skyguide are measured in the currency that best reflects the economic reality of the transaction. The accounts are presented in Swiss francs (CHF), which is the functional currency of Skyguide.

Transactions in foreign currencies

Transactions in foreign currencies are converted to the functional currency at the closing rate of the prior month. The exchange losses and gains arising from the settlement of these transactions and from the valuation of the balance sheet items expressed in foreign currencies as at the balance sheet date are posted to the statement of income, unless the transactions qualify as "cash flow hedge" – in which case the exchange difference is posted to shareholders' equity.

Cash and short-term cash deposit below 90 days

This item represents assets in current accounts as well as short-term cash deposit below 90 days. These transactions are recorded at the exchange rate prevailing at the time of the transaction. These items are revalued at year-end at closing rate.

Receivables

Receivables are recorded at the amount originally billed. A provision for bad debts is established on the basis of a review of the open items at the end of the period, when there is high probability that the amounts will not be recovered by the company. Amounts which are definitely unrecoverable are written off.

Prepaid expenses

This caption includes the prepaid expenses relating to the following accounting period, as well as accrued income, including under-recoveries (see note 14).

Securities and associate

The securities are presented as non-current assets. They are valued at market rate at the closing date. Re-evaluations and losses and gains on the sales of such securities are accounted for under financial income or expense.

An associated organisation is an investment in which a decisive influence can be realised.

A significant influence can be assumed if the share of the voting rights is at least 20 percent but less than 50 percent and control cannot be exercised. An associated organisation is recognised using the equity method. The result of the associated organisation is disclosed separately in the consolidated income statement.

Property, plant and equipment

Property, plant and equipment are recorded at historical cost, less accumulated depreciation. Depreciation method is straight-line and based on the following useful lives, by category of assets. Depreciation terms are estimated according to the following guidelines:

Nature of the assets	Depreciation term (years)
Buildings: shell	40
Buildings: internal and external layout	10 to 15
Land	No depreciation
Fixed assets under construction	No depreciation
Building infrastructure	Based on the residual lifetime of the underlying equipment
Vehicles	5 to 8
Air navigation facilities (ANF): buildings	40
Air navigation facilities (ANF): technical installations	15 to 20
Furniture and equipment	3 to 10
Computer equipment (without ANF)	3 to 8
Measuring devices	3 to 15
Instruction and simulation equipment: Software and hardware	4 to 8
Instruction and simulation equipment: Technical equipment for simulation	3 to 15
Instruction and simulation equipment: Simulation facilities	10

Write-offs of fixed assets are posted to the statement of income, under "Unplanned depreciation". When applicable, the interest on loans used to finance the acquisition of tangible assets is posted to the statement of income under "Financial expenses". Expenses for repairs and maintenance are posted to the statement of income under "Material, repairs and maintenance". Expenses for major renovation are capitalised and amortised over the life of the element replaced, but never beyond the remaining useful life of the underlying asset. Exchange losses and gains on transactions specifically attributable to a tangible asset are added to the value of the respective asset. In accordance with the standard, any research costs (e.g. expenditure incurred in the pre-project phases or in connection with feasibility studies) are not capitalised but recognised as of the date that they are incurred.

In 2021, Skyguide adapted the method to capitalise costs to the new iterative IT development approaches and, consequently, reduced the amounts recorded on the assets side.

Intangible assets

Intangible assets are included at their historical value, reduced by depreciation. Depreciation method is straight-line and based on a standard useful life of generally between 3 and 8 years.

Intangible assets created by the company (mainly software linked to air navigation) are capitalised under "Software", when launched into production. As of 2019, new software development is recorded under intangible assets if development started in 2019. Development commenced earlier is still recorded under "fixed assets under construction" as part of property, plant and equipment.

Intangible assets acquired by the company are included under this heading at their historical value, reduced by depreciation.

Impairment of assets

The company assesses each asset at the balance sheet date. An estimate of the net realisable value of the asset concerned is made if there are indications of a permanent impairment in value. The net realisable value corresponds to the value in use.

When the net realisable value of an asset cannot be determined, Skyguide makes an estimate at the level of the smallest cash-generating unit to which the asset concerned belongs. If the book value of an asset is higher than the value in use, an impairment loss is recognised and recorded in the income statement.

Nevertheless, the qualitative analysis of a potential indication of impairment takes into account specific contextual factors directly related to Skyguide's mandate. The following clarifications are made regarding the method for calculating the value of use of assets:

- According to Skyguide's business model, airlines finance the company's operational costs, including the amortisation of fixed assets. In the event of fluctuations in traffic, the European regulations comprise a risk-sharing system that allows Skyguide to invoice the airlines 'a posteriori' for any costs not covered. This system was confirmed by the European Commission in the context of the COVID-19 pandemic crisis.
- Where an activity is not financially autonomous, the Swiss Confederation takes the place of the end users in order to finance the services that Skyguide must provide to ensure the safety of air navigation in Switzerland, such as the regional aerodromes, adjacent airspace areas which have been delegated to its control and exempted flights.

Goodwill

The goodwill depreciation period is established on acquisition. The current term is 5 years.

Financial debts

All debts are recorded at their net proceeds received on the date the funds are received.

The long-term debt is initially recorded at the net proceeds received and then recognised in accordance with the amortised cost method.

Accrued liabilities

This item includes expenses payable relating to the current period, which will only be paid in the following period, as well as short- and long-term deferred income (see note 21).

Provisions

A provision is recorded when the company has a probable obligation that is based on a past event and its amount and/or its due date is uncertain but can be estimated.

This obligation gives rise to a liability.

Revenue

Revenue is recognised when the service is delivered.

The amounts are posted to the statement of income, net of taxes.

Investment with co-financing

In order to streamline the balance sheet and present revenues and expenses in a way that is more in line with our service provider business model, management decided to change the accounting principle for co-financed projects by dividing them into 3 categories:

- **Deferred revenue:** For contracts containing an obligation for Skyguide to provide a service, the amount of co-financing is deferred and revenue is recognised periodically according to the service rendered.
- **Immediate revenue:** Contracts that do not contain an obligation for Skyguide to provide a service are recognised immediately as revenue.
- **Reduction of assets:** Contracts related to a government grant or partnership without a service obligation are treated as an asset reduction. The presentation of net assets requires switching from the gross book value method to the net book value method. In order to comply with the principle of consistency in measurement and presentation, the 2020 financial statements were restated using the net book value method. The restatement has no impact on the reported result in 2020.

The changes in methodology applied to co-financed projects require the restatement on the impacted items in opening balances at 01.01.2020 and the closing balances at 31.12.2020 as well as in the consolidated cash flow statement. The details of this change in method are set out below:

in KCHF	Note	01.01.2020 before restatement	Restated amounts «Opening balance»	01.01.2020 after restatement	31.12.2020 before restatement	Amounts restated 2020	31.12.2020 after restatement
Consolidated balance sheet							
Property, plant and equipment	16	293 874	-2 892	290 982	270 108	-3 910	266 198
Intangible assets	17	128 251	-7 401	120 850	141 212	-6 590	134 622
Advances and other short-term liabilities	18	9 893	-114	9 779	5 874	-133	5 741
Other long-term liabilities	22	58 901	-10 179	48 722	54 617	-10 368	44 250
Consolidated income statement							
Other operating revenue	1				12 964	-133	12 831
Depreciation					62 297	-133	62 164
Consolidated cashflow statement							
Depreciation					62 572	-133	62 439
Change in advances and other short-term liabilities					-4 019	-18	-4 037
Change in long-term and long term liabilities					-4 622	-188	-4 810
Investment in property, plant and equipment					-36 887	1 018	-35 869
Investment in intangible assets					-14 879	-811	-15 690
Gains and other changes in PPE and intangible assets					-15	133	118

Business model

The business model of Skyguide comprises two main categories: regulated and non-regulated services. The regulated services are financed primarily by charges that are billed to the users (en-route, approach category I) or by contractually agreed charges (approach category II, military), while the non-regulated services are financed by winning tenders on the open market.



Route and approach category I

General

En-route and Category I approach activities (Geneva and Zurich airports) are governed by the European Commission Implementing Regulation No. 2019/317, by Eurocontrol's "Principles for the establishment of the cost-base for en-route air navigation services and principles for the calculation of unit rates" as well as by the Ordinance on Air Navigation Services.

The modalities of this economic regulation system are fixed for a period called "reference period" (RP). For each reference period, a performance plan agreed at national and European level frames the en-route and category 1 approach charges. The current reference period covers the years 2020–2024.

The main modalities of the economic regulation system are the following:

A cost base (1) and a traffic forecast (2) are determined in advance and included in the performance plan for each year of the reference period:

1. The amount of costs foreseen annually to finance air navigation services is composed of the costs of Skyguide, the costs of MeteoSwiss, the costs of the Federal Office for Civil Aviation and the costs of Eurocontrol. All these costs are referred to as "determined costs". Any difference between the actual costs and the determined costs is entered in Skyguide's profit and loss account, thus generating a profit or loss. However, a number of cost adjustments are made for inflation and so-called uncontrollable costs (e.g. Eurocontrol costs). The inflation adjustment is carried forward to year n + 2. Depending on its nature, the adjustment for uncontrollable costs is carried forward either to year n + 2, or to one or more years of the following reference period, or to the two following reference periods.
2. The traffic forecast is made for each year of the performance plan on the basis of the information provided by Eurocontrol at the time the plan is drawn up. This forecast is the basis for calculating the unit rate charged to users of air navigation services. The difference between actual and forecast traffic generates a surplus or shortfall of revenue to cover the determined costs. To counterbalance the financial impact of traffic variations, a risk-sharing mechanism has been put in place which is applicable only to the costs determined by Skyguide.

The first two percent of the variation is entirely for Skyguide's account, as is 30% of the variation in traffic between (+/-) 2% and (+/-) 10%. The other 70%, as well as variations above (+/-) 10%, are passed on to the users in year n + 2. Thus, the maximum loss or profit that Skyguide can make from traffic fluctuations is 4.4%: $2\% + 8\% * 30\%$. Example: if the actual traffic is 6% lower than the performance plan, Skyguide would bear 3.2% (the first two percent and 30% of the variation between 2% and 6%) of the traffic reduction and the users 2.8% (70% of the variation between 2% and 6%).

The other components of the defined costs (MétéoSuisse, FOCA, Eurocontrol, carry forwards from previous years) are not subject to traffic risk sharing. This means that the over- or under-coverage due to traffic generated on these cost elements is fully offset through a carry forward to users in year n + 2.

Provisions for the carry forwards mentioned above relating to the costs or the variation in revenues are created in the year in which they occur (creating carry forwards).

- A positive carry forward represents an under-recovery of costs and results in an increase in the net result. The counterpart on the balance sheet is recognised in "advances and other long-term assets".
- A negative carry forward represents an over-recovery of costs and results in a decrease in the net result. The counterpart on the balance sheet is recognised in "other long-term liabilities".

The carry forwards will be integrated in the calculation of the rates for the year to which they are carried forward. Thus, they increase or decrease the annual revenues concerned through an increase or decrease in the unit rate. As the change in revenues is recognised in the year in which it is generated, its impact on the net result of the year in question is neutralised through the carry forwards line item.

In view of the exceptional circumstances related to the impact of the health crisis, the criteria for the recognition of under-recoveries in the income statement have been specified according to the description in the section on "Key facts".

Approach category I (National airports)

Since 2015, the same economic regulation system and the same reference period as for the route have been in place.

Approach category II (Regional civil aerodromes)

Category II comprises the aerodromes of Berne-Belp, Buochs, Grenchen, La Chaux-de-Fonds-Les Eplatures, Lugano-Agno, Sion and St Gall-Altenrhein.

Since 2017, the responsibility for financing the air navigation services has been transferred to the regional civil aerodromes. Each aerodrome constitutes a specific tariff zone and sets the charges relating to air navigation. Skyguide invoices them for its services.

Military activities

The services that Skyguide provides to the Swiss Air Force are governed by the full-cost recovery principle. A quarterly lump-sum compensation paid by the Swiss Air Force to Skyguide is fixed by a service agreement. A financial statement is prepared at year-end with regard to the military activities. In principle, a provision is created for the balance between the income and the cost of the activity in the year ended and reversed the following year in favour of the Air Force or in favour of Skyguide.

Financial and derivative instruments

Skyguide uses derivatives to hedge its exchange and interest rate risk, which are related to the normal course of its activities. These instruments are recorded on the basis of the "trade date". Derivative financial instruments can consist of forward exchange contracts, currency options, cross-monetary swaps, interest rates swaps and swaptions.

Fair value hedging includes derivatives used to hedge the exchange risk and/or the interest rate risk. The gain or loss resulting from the revaluation of derivatives is recognised through profit or loss or in equity. The cash flows that generate an exchange rate risk primarily concern the revenue from route services and equipment purchases in foreign currency. Interest rate derivatives are

essentially long-term loans underwritten by Skyguide. The unrealised gain or loss on the revaluation to fair value of derivatives used to hedge cash flows is recorded in equity if the hedging is efficient; if necessary, hedging efficiency must be verified.

If hedging is deemed not to be efficient, the cumulative gain or loss from revaluation to fair value is recognised immediately through profit or loss.

If the hedged item is a fixed asset, the cumulative gain or loss of the hedging instrument previously recorded in equity is charged to the acquisition cost of the fixed asset. If the hedged item is a financial instrument, the cumulative gain or loss of the hedging instrument is included in the amount of the loan and amortised over the term of the loan.

Pension plan

The Group covers the costs relating to the professional pension of all its workers, as well as their assignees, under the legal prescriptions. All the pension plans are covered by Swiss law. The pension obligations and the plan assets are managed by a legally independent pension fund. The organisation, the management and the financing of the pension plans are governed by the law (LPP), together with the deed of foundation and the regulations applicable to pensions in force.

Transactions with related parties

Under Swiss GAAP ARR 15, transactions with the Swiss Confederation, including departments and other companies in which it is the majority shareholder, are not considered as related parties. In 2021, Skyguide has a loan of 2782 KCHF (2020: 3155 KCHF) to FCS (Flight Calibration Services) in which it holds an indirect 25% stake. The terms of this loan were made under market conditions.

Risk management policy

Risk assessment

To achieve the goals set up by the company, Skyguide introduced a systematic and complete risk management framework. The enterprise risk management (ERM) that started as a corporate governance tool enhances the transparency and provides an adequate risk assessment when taking a decision. All the strategic, financial, operational and compliance risks are identified and quantified based on their probability of likelihood and impact. These risks are then categorised and classified in a risk matrix. The key risks are regularly reviewed and actions are taken if needed. The board of directors formally reviews the key risks twice a year.

Management of exchange risk exposure

The Swiss franc is the functional currency of the Group. Skyguide receives a significant part of its revenue in Euros. Most expenses are in Swiss francs and Euros. Exchange rate fluctuations versus the Swiss franc may have a significant impact on the company's result. To reduce this risk, the company enters into certain instruments (options, forward exchange, swaps, etc.) on the currency market, within the limits of the rules set out by the Board of Directors.

The main objective of this risk management is:

- c) to avoid significant exchange losses on exposure to the functional currency; and
- d) to limit revenue volatility related to fluctuations in the exchange rate of foreign currencies.

Management of interest rate risk exposure

Skyguide mainly intends to protect itself against significant increases in net interest expenditure due to market fluctuations in interest rates. Given its position of net borrower, the interest rate risk is mainly addressed by managing the ratio of the fixed rate to the floating rate of the net debt. To limit the negative effects on the result of net interest expenditure linked to the potential rise in market interest rates, Skyguide keeps at least 50% of the net debt at fixed interest rates.

Management of liquidity risk

Skyguide is exposed to this risk in the event of default of certain counterparts or a refinancing problem. The liquidity of the group is proactively supervised to ensure that the company can cover its obligations at all times.

Market risk

The company is exposed to market risk, primarily vis-à-vis the airlines, its major clients. This risk is mainly linked to the dependence toward the national carrier Swiss and Ryanair which represent almost 23% of the total revenue of Skyguide (2020: almost 24% between Swiss and Lufthansa). The 15 largest customers represent almost 78% of the route facility income (2020: almost 61%). A decrease of the activity for these clients would have negative consequences on the company's revenue.

Notes to the consolidated financial statements as at 31 December 2021

1. Operating revenue – segment analysis

in KCHF	2021	2020
Route charges (RC)	142 588	118 015
Approach charges (AC)	78 385	70 515
Air Force compensation	45 210	40 779
Contribution from the Confederation	42 089	17 601
Other air navigation services revenue	11 475	12 504
Total air navigation services revenues	319 748	259 414
(Under) / over-recovery balance brought forward	19 256	22 734
Under / (over)-recovery balance carried forward	-9 975	-14 633
Total carried forward	9 281	8 100
Total air navigation services revenues, net carried forward	329 030	267 515
Other operating revenue *	19 788	12 831
Net revenue from disposal of assets	42	15
Total other operating revenue	19 830	12 846
Total operating revenue – net	348 859	280 361

* Restated amounts, see section "Investment with co-financing".

The segment analysis of the air traffic is composed as follows:

- overflight traffic (route charges, RC);
- traffic from and to Swiss airports (approach charges, AC);
- for the Swiss Air Force Skyguide provides services that are essential to maintaining the sovereignty of Swiss airspace.

The geographical airspace region managed by Skyguide overlaps the national borders and extends to France, Italy, Austria and Germany.

The item "Other air navigation services revenue" includes revenue from maintenance and repair contracts, instruction, training and technical consulting.

2. Personnel expenses

in KCHF	2021	2020
Salaries and social benefits	218 087	217 723
Other benefits	11 871	10 553
Social charges	72 861	74 616
Other staff costs	10 966	9 581
Internal hours capitalised	-9 230	-18 382
Total personnel expenses	304 555	294 091

Bonuses and allowances are mainly attributable to work conducted outside regular hours.

The social charges include the employer's contributions in respect of pension benefits as indicated in the table below:

in KCHF	2021	2020
Employer's contribution	49 615	51 628

The average number of personnel, including personnel under training, was 1478 in 2021, versus 1533 in 2020.

3. Eurocontrol contribution

As a state member of Eurocontrol, the Swiss Confederation was bearing this contribution until the end of 2010. Since then, Skyguide bears these costs, considering the new contribution received from the Swiss Confederation (see note 1).

4. Administrative expenses

The administrative expenses include subcontracting costs as well as purchase costs for material sold amounting to 1184 KCHF (2020: 1045 KCHF).

5. Net allowance for bad debt

in KCHF	2021	2020
Allowance for bad debt (RC)	60	154
Allowance for bad debt (AC)	381	-133
Allowance for bad debt (other)	-2 471	3 272
Total allowance for bad debt	-2 030	3 293

The decrease in the net allowance for bad debt in 2021 reflects the lower risk of the regional airports as a result of the quarterly billing and payment for air navigation services.

6. Unplanned depreciation

Unplanned depreciation amounting to 1777 KCHF were recorded in 2021 (2020: 276 KCHF).

7. Financial income

in KCHF	2021	2020
Interest Income	123	107
Other financial revenue	97	0
Total financial income	220	107

8. Financial expenses

in KCHF	2021	2020
Interest expenses	3 992	5 024
Foreign exchange transaction gains/losses - net loss	2 643	430
Expenses on foreign exchange instruments	0	5
Other financial expenses	159	131
Total financial expenses	6 794	5 590

9. Taxes

According to article 40e of the Federal Act of 21 December 1948 on Air Navigation, Skyguide is exempted of all federal, cantonal and communal taxes, except for value-added tax and withholding tax.

The other companies are subject to taxes in their respective countries.

10. (Under-) / over-recovery balance brought forward

For route services, like approach services in category I, the balance brought forward relates to the over-recovery generated in the year n-2.

11. Under- / (over)-recovery balance carried forward

This item represents the carry forwards to subsequent years of any over- and/or under-recovery of charges for route services and approach services in category I recorded in year n. The over-/under-recoveries in connection with the traffic and inflation is transferred to users in the year n+2. The over-/under-recoveries in connection with unavoidable costs will be carried forward to the subsequent reference period.

In 2021, the deferral of under-recoveries of 151 million CHF (2020 145 million CHF) is recorded as a reduction of "advances and other long-term assets", in line with the clarification of the income recognition criteria (see "Key facts").

This position was previously presented after income after tax and is now reclassified in the "operating income" section due to the direct link to the operating activity.

12. Cash and short-term cash deposit below 90 days

in KCHF	2021	2020
Cash and cash equivalents	102 142	95 291
Short-term cash deposit below 90 days	0	40 000
Total cash and cash equivalents	102 142	135 291
Average interest rate on short-term deposits (%)	-0.42	-0.42
Average duration of short-term deposits (days)	119	136

13. Receivables and advances

in KCHF	2021	2020
Receivables from collecting organisations	6 043	20 661
Other recivables	25 146	35 009
Personnel related receivable	20 066	29 058
VAT receivable	2 129	2 202
Allowance for bad debt	-4 496	-5 929
Total receivable and advances	48 888	81 001

14. Prepaid expenses

in KCHF	2021	2020
Accrued income: other	22 461	12 779
Prepaid expenses	7 105	5 189
Total prepaid expenses	29 566	17 968

15. Long-term advances and other long-term assets

in KCHF	2021	2020
Gross long-term advances and other long-term assets	296 191	144 903
Deferral of under-recovery balances	-296 191	-144 903
Other	3 097	6 276
Total long-term advances and other long-term assets	3 097	6 276

“Gross long-term advances and other long-term assets” comprise the accrued revenue related to the under-recovery generated in 2021 amounting to 151 million CHF in 2020 amounting to 145 million CHF. Indeed, from 2023 on, Skyguide will include these under-recoveries in the invoiced unit rate to airlines according to the implementing rules yet to be defined (see ‘Key facts’).

“Other” comprises mainly a loan in the amount of 2782 KCHF (2020: 3155 KCHF) granted to a company in which Skyguide has a 25% holding, and guarantee deposits.

17. Property, plant and equipment

in KCHF	Buildings	Land	Total land and building	Total land and building	Building infrastructure
Acquisition Value					
Status as at January 1, 2020	271 307	2 227	273 534	73 659	44 778
Impacts from co-financing on acquisition value*	0	0	0	-1 810	0
Additions	164	0	164	30 728	428
Impacts from co-financing on additions*	0	0	0	-1 132	0
Reclassifications	2 579	0	2 579	-47 634	5 531
Disposals	-49	0	-49	-218	0
Status as at December 31, 2020	274 001	2 227	276 228	53 593	50 737
Depreciation					
Accumulated depreciation as at January 1, 2020	-170 651	0	-170 651	0	-23 770
Impacts from co-financing on opening balances*	0	0	0	0	0
Impacts from co-financing on cumulated depreciation*	0	0	0	0	0
Depreciation	-7 738	0	-7 738	0	-2 417
Impacts from co-financing on depreciation*	0	0	0	0	0
Unplanned depreciation	0	0	0	-218	0
Accumulated depreciation of reclassifications	0	0	0	218	0
Accumulated depreciation of disposals	49	0	49	0	0
Accumulated depreciation as at December 31, 2020	-178 340	0	-178 340	0	-26 187
Net book value as at December 31, 2020	95 661	2 227	97 888	53 593	24 550
Acquisition Value					
Status as at January 1, 2021	274 001	2 227	276 228	53 593	50 737
Additions	10	0	10	30 068	2 491
Reclassifications	8 577	0	8 577	-23 862	-94
Disposals	-4 150	0	-4 150	0	-1 467
Status as at December 31, 2021	278 438	2 227	280 665	59 799	51 667
Depreciation					
Accumulated depreciation as at January 1, 2021	-178 340	0	-178 340	0	-26 187
Depreciation	-7 178	0	-7 178	0	-3 056
Unplanned depreciation	-135	0	-135	-1 431	-137
Accumulated depreciation of reclassifications	-7 054	0	-7 054	0	6 909
Accumulated depreciation of disposals	4 150	0	4 150	0	1 467
Accumulated depreciation as at December 31, 2021	-188 557	0	-188 557	-1 431	-21 004
Net book value as at December 31, 2021	89 882	2 227	92 109	58 368	30 663

* Restated amounts, see section "Investment with co-financing".

	Vehicules	Air navigation facilities (ANF)	Furniture and equipment	IT facilities (excl. ANF)	Measuring devices	Instrument and simulation facilities	Total property, plant and equipment excl. land and building	Total
	1 782	263 267	19 899	5 707	9 164	6 483	424 739	698 273
	0	-1 197	0	0	0	0	-3 007	-3 007
	64	4 601	176	654	0	72	36 723	36 887
	0	114	0	0	0	0	-1 018	-1 018
	0	5 391	1 796	6	0	56	-34 854	-32 275
	-30	0	-13	-76	0	0	-337	-386
	1 816	272 177	21 858	6 291	9 164	6 611	422 247	698 475
	-1 361	-173 326	-18 703	-3 265	-8 528	-4 795	-233 748	-404 399
	0	-133	0	0	0	0	-133	-133
	0	114	0	0	0	0	114	114
	-137	-15 670	-495	-996	-142	-516	-20 372	-28 111
	0	115	0	0	0	0	115	115
	0	0	0	-32	0	0	-250	-250
	0	0	0	0	0	0	218	218
	30	0	13	76	0	0	119	168
	-1 468	-188 899	-19 185	-4 217	-8 670	-5 311	-253 937	-432 277
	348	83 278	2 673	2 074	494	1 300	168 310	266 198
	1 816	272 177	21 858	6 291	9 164	6 611	422 247	698 475
	43	529	395	731	13	36	34 306	34 316
	0	10 051	-3 000	204	865	113	-15 725	-7 148
	-71	-59 217	-7 294	-655	-7 675	-1 294	-77 672	-81 822
	1 788	223 540	11 959	6 571	2 367	5 465	363 155	643 821
	-1 468	-188 899	-19 185	-4 217	-8 670	-5 311	-253 937	-432 277
	-114	-15 208	-533	-849	-332	-432	-20 524	-27 701
	-5	-45	0	0	0	-4	-1 621	-1 757
	0	-3 176	3 277	41	0	0	7 052	-2
	71	59 217	7 294	655	7 675	1 294	77 672	81 822
	-1 516	-148 110	-9 147	-4 370	-1 327	-4 453	-191 359	-379 915
	272	75 430	2 812	2 201	1 040	1 012	171 797	263 905

17. Intangible assets

in KCHF	Software under development	Software under development	Goodwill	Other	Total
Acquisition Value					
Status as at January 1, 2020	1 787	385 725	1 721	14	389 247
Impacts from co-financing on acquisition values *	-344	-7 057	0	0	-7 401
Additions	2 508	12 371	0	0	14 879
Impacts from co-financing on additions *	-90	901	0	0	811
Reclassifications	-287	32 562	0	0	32 275
Disposals	0	-61	0	0	-61
Status as at December 31, 2020	3 574	424 441	1 721	14	429 751
Depreciation					
Accumulated depreciation as at January 1, 2020	0	-259 814	-1 168	-14	-260 996
Depreciation	0	-34 045	-123	0	-34 168
Unplanned depreciation	0	-26	0	0	-26
Accumulated depreciation of reclassifications	0	61	0	0	61
Accumulated depreciation of disposals	0	0	0	0	0
Accumulated depreciation as at December 31, 2020	0	-293 824	-1 291	-14	-295 129
Net book value as at December 31, 2020	3 574	130 617	430	0	134 622
Acquisition Value					
Status as at January 1, 2021	3 574	424 441	1 721	14	429 750
Additions	889	183	0	0	1 071
Reclassifications	-1 624	8 772	0	0	7 148
Disposals	0	-170 393	0	0	-170 393
Status as at December 31, 2021	2 839	263 002	1 721	14	267 576
Depreciation					
Accumulated depreciation as at January 1, 2021	0	-293 824	-1 291	-14	-295 129
Depreciation	0	-33 219	-123	0	-33 342
Unplanned depreciation	0	-21	0	0	-21
Accumulated depreciation of reclassifications	0	2	0	0	2
Accumulated depreciation of disposals	0	170 394	0	0	170 394
Accumulated depreciation as at December 31, 2021	0	-156 668	-1 414	-14	-158 096
Net book value as at December 31, 2021	2 839	106 334	307	0	109 480

* Restated amounts, see section "Investment with co-financing".

As of 2019, software development is recorded under intangible assets if development started in 2019. Development commenced earlier is still recorded under "fixed assets under construction" as part of property, plant and equipment.

The amount of commitments as at 31 December 2021 with suppliers for the acquisition of tangible and intangible assets is 8534 KCHF (31 December 2020: 10454 KCHF).

18. Advances and other short-term liabilities

in KCHF	2021	2020
Other personnel related liabilities	1 230	1 075
VAT payable	4 458	2 948
Accrued liabilities *	0	1 718
Total advances and other short-term liabilities	5 689	5 741

* Restated amounts, see section "Investment with co-financing".

19. Accrued liabilities

in KCHF	2021	2020
Deferred revenue: over-recovery AC	34 631	1 842
Deferred revenue: over-recovery RC	5 154	17 415
Deferred revenue: other	18 575	20 003
Charges to pay	30 861	29 612
Total accrued liabilities	89 222	68 872

Some deferred revenue is refundable in case Skyguide would be unable to meet its contractual obligations.

20. Short-term provisions

in KCHF	Litigation	Personnel related	Other	Total short-term provisions
At January 1, 2020	180	5 780	4 922	10 882
Additional provisions	23	5 421	250	5 694
Utilised during the year	-23	-2 763	-1 876	-4 661
Unused provisions reversed	0	-1 224	-449	-1 673
At December 31 2020	180	7 215	2 847	10 242
At January 1, 2021	180	7 215	2 847	10 242
Additional provisions	89	2 435	250	2 773
Utilised during the year	-53	-2 379	-2	-2 434
Unused provisions reversed	0	-551	-250	-801
At December 31, 2021	215	6 720	2 845	9 781

21a. Short-term debt

in KCHF	2021	2020
Borrowing from financial institutions	0	200 000
Interest rate swap settlement	0	-930
Total short-term debt	0	199 070

The loan entered on the balance sheet as short-term borrowing as at 31.12.2020 was repaid in full.

21b. Long-term debt

in KCHF	2021	2020
Long-term debt	250 000	0
Borrowing from financial institutions	0	0
Interest rate swap settlement	250 000	0
Total long-term debt		

The long-term loan concluded on 22.07.2021 with the Swiss Confederation is the subject of a subordination agreement to all other debts of the company in the event of a loss of capital. This agreement entered into force on 22.07.2021 at the same time as the loan and is valid for the duration of the loan, i.e. until 18.10.2031. Nevertheless, the subordination agreement was not activated as of 31 December 2021, as the company's financial solidity was sufficient.

21c. Financial debts

in KCHF	2021	2020
Maturity of debt		
Within one year	0	200 000
In the second year	0	0
In the third to the fifth year inclusive	0	0
After the fifth year	250 000	0
Total	250 000	200 000

in %		
Weighted average interest rate	1.7558	2.2312

in KCHF		
Interest rate structure of borrowings		
Fixed interest rate debt	250 000	200 000
Total	250 000	200 000

in KCHF		
Grant date	18.10.2021	19.10.2011
Date of reimbursement	18.10.2031	19.10.2021
Amount in CHF	250 000 000	200 000 000
Interest rate	0.27%	1.65%

The fair value of the financial debts is not significantly different from their book value. No guarantee or pledging of assets has been issued in relation to the financials debts.

Covenants linked to the long-term loan

In case of the total loss of the mandate as defined in the Ordinance on the provision of air navigation services (OSNA) on the article 2, paragraph 2, this could lead to an immediate cancelation of the ongoing loan.

Covenants linked to specific credit lines

Some credit lines obtained by the company are linked to covenants which, if not met, could lead to the cancelation of those credit lines, respectively to the cancelation of the open loan in relation with those credit lines.

These covenants are:

- direct participation by the Swiss Confederation in the borrower's capital of a minimum of 51% and the preservation of the majority of the voting rights;
- minimum ratio of shareholders' equity (share capital, reserves, retained earnings) representing 30% of the total Skyguide statutory balance sheet.

22. Other long-term liabilities

This amount includes over-recoveries that will be repaid in the long-term totalling 9967 KCHF (2020: 39.776 KCHF).

23. Share capital

The Swiss Confederation holds 99.94% of the company. The share capital is 141 120 000 CHF (2020: 141 120 000 CHF) and is divided into 14 112 000 (2020: 14 112 000) registered fully paid-up shares, with a par value of CHF 10 each.

A capital increase of 1 112 000 CHF was carried out in 2020 through the issue of 112'000 registered shares with a nominal value of CHF 10 each. The issue price amounted to 1339.29 CHF per share, i.e. a capital contribution of 150 000 480 CHF. The difference (agio) between the amount of the capital

contribution and the increase in share capital is allocated to the statutory capital reserves (148 880 480 CHF).

In August 2021 the General Assembly voted to transfer an amount of 98 000 000 CHF from the legal reserve to the free reserve. The Federal Aviation Act specifies that the majority of the capital belongs to the Swiss Confederation. The company's articles of association stipulate that the Swiss Confederation holds the majority of the capital and votes.

No dividend was paid in 2021 and 2020.

24. Treasury shares

The Company owns 2500 treasury shares. There were no transactions in 2021 and 2020.

25. Contingent liabilities

a) Guarantee deposits

in KCHF	2021	2020
Swiss customs and excise authority: provisional customs duties	160	160
Zurich and Geneva Chamber of Commerce and Industry: ATA booklets	63	63
Geneva cantonal employment office	50	50
Total	273	273

The deposits have been made at the Cantonal Bank of Bern.

b) Other guarantee deposits

in KCHF	2021	2020
Rent guarantees in favor of employees	126	135
Guarantees deposited on installments received	1	1
Pledged collateral	200	200
Total	328	336

The deposits have been made at the Cantonal Banks of Bern and Geneva, at the Crédit Suisse in Geneva and the UBS in Geneva.

26. Other commitments not included in the balance sheet

Leasing

Maturity pattern of future lease payments are as follows:

in KCHF	2021	2020
Within one year	6 783	3 738
In the second to the fifth year inclusive	18 147	7 637
After the fifth year	8 099	8 184
Total	33 029	19 559

This table summarises Skyguide's commitments in respect of lease agreements (rental of premises), building rights and operational leases (rental of photocopiers, servers and programs for business information systems). The commitments are calculated on the basis of the contracts in force, for the agreed contractual term, provided that they cannot be terminated within twelve months of the balance sheet date.

In addition to the above information, a letter of agreement has been signed with HelvetiCA (Swiss Controllers Association), in which Skyguide commits to contributing to a transition plan related to the increase of the retirement age of air traffic controllers. In accordance with the letter of agreement, the costs associated with this transition plan will be in the range of 25 million CHF. Nevertheless, this letter of agreement does not constitute a constructive obligation according to Swiss GAAP ARR 23 as it still has to be validated by Skyguide's Board of Directors, the Skycare pension fund and HelvetiCA's subsidiaries. In addition, the form of the various measures must also be defined. Consequently, this is considered in the accounts as an off-balance sheet commitment according to Swiss GAAP ARR 5.

27. Pension fund

The patrimonial and financial position of Skycare, the Skyguide pension fund is as follows according to its annual accounts (2021 – estimates):

in KCHF	2021 (estimated)	2020
Assets at fair value (net assets) *	1 835 339	1 750 146
Pension obligations (liabilities)	1 615 000	1 637 181
Surplus cover	220 339	112 965
Degree of coverage % (according to article 44 OPO 2) **	113.6%	106.9%

* The employer contribution reserves (ECR) in the amount of 73 million CHF (78 million CHF as at 31.12.2020) is deducted from this amount.

** The degree of coverage would be 117.2% (110.3% in 2020) including the ECR

By agreement, Skyguide waives the use of the ECR in the amount of 53 million CHF provided before 2020 if the degree of coverage is less than 100%. The additional 20 million CHF attributed to the ECR in 2021 represents an advance on its contributions in 2022.

Professional pension care applies in principle to all staff subject to compulsory insurance as per the LPP (Law on occupational pension scheme) benefiting from an unlimited-term employment contract or a contract of over 3 months or a training or apprenticeship contract. The aim of the Foundation is to provide professional pension care in the framework of the LPP and its implementing ordinances, and to protect the staff of Skyguide and, as appropriate, the staff of the companies linked to it economically or financially, as well as in favour of their families and their survivors, against the economic consequences of ageing, decease, invalidity and an early retirement linked to the profession. The calculation of the pension obligations is made annually, based on the financial statements of Skycare which are prepared in accordance with Swiss GAAP ARR 26. There are no free reserves. No economic benefits or commitments exist at year-end.

In addition, an off-balance sheet commitment was made by Skyguide in accordance with the letter of agreement signed with HelvetiCA, which is detailed in Note 26 - Other commitments not included in the balance sheet.

Contributions due to the pension plan

There are no regulatory contributions due to the pension plan.

28. Audit and additional fees

PricewaterhouseCoopers SA invoiced Skyguide during the 2021 financial year 180 770 CHF (2020: 177 000 CHF) for services related to the audit of the statutory accounts and the consolidated accounts.

Report of the group auditors

Report of the statutory auditor

to the General Meeting of SKYGUIDE, Société Anonyme Suisse pour les Services de la Navigation Aérienne civils et militaires

Meyrin

Report of the statutory auditor on the consolidated financial statements

As statutory auditor, we have audited the consolidated financial statements of SKYGUIDE, Société Anonyme Suisse pour les Services de la Navigation Aérienne civils et militaires, which comprise the consolidated balance sheet, consolidated income statement, consolidated cash flow statement, statement of changes in shareholders' equity and notes (pages 33 to 61), for the year ended 31 December 2021.

Board of Directors' responsibility

The Board of Directors is responsible for the preparation of the consolidated financial statements in accordance with Swiss GAAP FER and the requirements of Swiss law. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

Auditor's responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with Swiss law and Swiss Auditing Standards. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the entity's preparation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control system. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements for the year ended 31 December 2021 give a true and fair view of the financial position, the results of operations and the cash flows in accordance with Swiss GAAP FER and comply with Swiss law.

PricewaterhouseCoopers SA, avenue C.-F. Ramuz 45, case postale, CH-1001 Lausanne, Switzerland
Téléphone: +41 58 792 81 00, Téléfax: +41 58 792 81 10, www.pwc.ch

PricewaterhouseCoopers SA is a member of the global PricewaterhouseCoopers network of firms, each of which is a separate and independent legal entity.

Report on other legal requirements

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AOA) and independence (article 728 CO) and that there are no circumstances incompatible with our independence.

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists which has been designed for the preparation of consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

PricewaterhouseCoopers SA



Yves Cerutti
Audit expert
Auditor in charge



Guillaume Antin

Lausanne, 25 February 2022

Statutory accounts

Income statement for the years ended 31 December 2021 and 2020.

in KCHF	2021	2020
Air navigation services revenue	319 748	259 414
Other operating revenue	17 697	10 914
Net revenue from disposal of assets	42	14
(Under) / over-recovery balance brought forward	19 256	22 734
Under / (over-)recovery balance carried forward	-9 975	-14 633
Total operating revenue	346 768	278 442
Total personnel expenses	299 536	289 619
Eurocontrol contribution	10 901	9 978
Meteorological services contribution	13 706	13 702
Other external air navigation services	1 342	1 359
Leased communication lines	1 776	1 955
Material and supplies, maintenance	27 284	18 899
Property-related expenses	9 129	7 484
Energy	2 201	2 128
Administrative expenses	33 645	25 685
Allowance for bad debt	-1 998	3 008
Unplanned depreciation	1 777	218
Depreciation	63 239	64 608
Total other operating expenses	163 002	149 024
Total operating expenses	462 538	438 643
Operating result	-115 770	-160 200
Financial income	2 142	138
Financial expenses	8 623	5 445
Financial result	-6 481	-5 307
Loss for the period	-122 252	-165 507

Balance sheet as at 31 December 2021 and 2020

in KCHF	31.12.2021	31.12.2020
Assets		
Current assets		
Cash and short-term cash deposit below 90 days	86 806	120 439
Intercompany receivables	51	3
Receivables and advances	46 691	79 766
Prepaid expenses	28 882	17 350
Total current assets	162 430	217 558
Non-current assets		
Long-term advances and other long-term assets	3 097	6 276
Property, plant and equipment	263 286	269 988
Investments in affiliates	2 021	2 117
Securities and investment in associate	711	683
Intangible assets	119 096	151 412
Total non-current assets	388 211	430 476
Total assets	550 641	648 034
Liabilities		
Current liabilities		
Trade and other payables	7 616	8 603
Short-term debt	0	199 070
Intercompany payables	241	188
Advances and other short-term liabilities	5 405	5 651
Accrued liabilities	85 503	66 109
Short-term provisions	9 781	10 242
Total current liabilities	108 545	289 863
Non-current liabilities		
Subordinated long-term debt	250 000	0
Other long-term liabilities	10 365	54 188
Total non-current liabilities	260 365	54 188
Total liabilities	368 910	344 051
Shareholder's equity		
Share capital	141 120	141 120
Treasury share	-25	-25
Legal reserves from retained earnings	19 689	19 689
Legal reserves from capital	50 880	148 880
Other reserves	256 696	158 696
Retained earnings / (accumulated deficit) brought forward	-164 377	1 130
Loss for the year	-122 252	-165 507
Total shareholder's equity	181 731	303 983
Total liabilities and shareholder's equity	550 641	648 034

Notes to the statutory accounts as at 31 December 2021

Skyguide, Swiss civil and military air navigation services Ltd (hereinafter "Skyguide"), operates under a mandate given by the Swiss Confederation.

This mandate is governed by the Federal Aviation Act and the associated ordinances. The company is domiciled at 15-17 route de Pre-Bois, in Meyrin (Switzerland).

Basis for the establishment of the accounts

These financial statements have been prepared in accordance with the provisions of commercial accounting as set out in the Swiss Code of Obligations (art. 957 to 963b CO). The accounting principles applied are in line with those described in the consolidated financial statements for the year ended 31 December 2021.

Key facts

2021 was again marked by the COVID-19 pandemic, which continued to affect the air transport sector. In the first half of the year, the volume of traffic was significantly lower than the pre-pandemic level. Nevertheless, in the early summer and with the gradual lifting of the health restrictions, the commercial air traffic that determines the financial result improved slightly. Over the whole year, traffic amounted to around 53% compared to 2019, but still increased by 29.7% compared to 2020.

- Air navigation services revenue: 320 million CHF as at December 31, 2021 (2020: 259 million CHF), representing an increase of 23% compared to previous year.
- Personnel expenses: Skyguide has pursued the measures it implemented to reduce personnel expenses, such as short-time working, particularly for air traffic controllers, reducing the balance of vacation hours and the conversion of certain salary components into vacation hours. The compensation received for the reduction in working hours amounts to 8.4 million CHF (2020: 8.2 million CHF).

- Property, plant and equipment: Despite the health crisis, it was not necessary to write down assets because the business model (see description below) is not called into question and Skyguide will continue to generate sufficient cash flows to finance its operating activities and the necessary investments. Indeed, the losses of 2020 and 2021 in connection with the decline in traffic will in time be charged to the airline companies in accordance with the emergency plan of the European Commission for 2020 and 2021. In addition, as highlighted by the European Economic and Social Committee, air navigation services are a critical element for air transport and funding solutions must be found in order to ensure its sustainability.

- Receivables and advances: The net amount of receivables related to charges as at 31 December 2021 decreased by 71% compared with 31 December 2020 to 6 million CHF, despite the increase in air traffic. The decline in receivables is due, on the one hand, to the payment of the 2020 invoices, for which Skyguide had deferred the payment deadline to help the airlines to get through the crisis in 2020, and, on the other hand, the work done together with FOCA and regional aerodromes to ensure the payment of services per quarter. The receivables from regional airports decreased from 25.8 million CHF in 2020 to 5.4 million CHF in 2021. Work on the valuation of receivables resulted in Skyguide recording an allowance for bad debt of 1.4 million CHF in the 2021 financial year.

- Advances and other long-term assets: The revenue due in relation to under-recovery in 2021 (151 million CHF) is recorded as a decrease in "advances and other long-term assets" and not through profit or loss. In view of the scale of the COVID-19 crisis, the European Commission has published an emergency plan for 2020 and 2021, whose recovery periods are exceptionally long and whose terms and conditions are still being defined. In order to reflect the uncertainty resulting from the situation, Skyguide has

decided to specify revenue recognition criteria as follows: under-recoveries are recognised through profit or loss only if the methods and recovery periods are in accordance with customary practice, clearly defined and agreed by all parties.

- Liquidity: At the end of December 2021, the level of liquidity remains lower than at the beginning of the year (–33.1 million CHF) but allows the operational activity to be secured.

Going concern

The measures taken by governments to combat the COVID-19 pandemic have resulted in an unprecedented decline in air traffic and, as a consequence, in the charges invoiced to users. This has generated a high level of uncertainty in the short-time and led Skyguide's management to stop recognising the under-recoveries in a year as unbilled revenue. On the other hand, the business model of Skyguide remains sustainable and management is confident in the company's ability to generate the necessary cash flows to finance its activities and future investments.

Indeed, the emergency plan of the European Commission anticipates that the shortfall in earnings in the 2020 and 2021 financial years be recharged to the airlines starting in 2023. Additionally, Skyguide, is a provider of air navigation services and thus a critical element for the air transport industry. As such, the funding of the company is enshrined in the Federal Civil Aviation Act (article 40d). As a result, the Swiss Parliament granted a subordinated loan of 250 million CHF to Skyguide on October 18, 2021 with a 10-year maturity. In addition, in December 2021, the Swiss Parliament agreed to an additional budget of 100 million CHF in the course of the vote on the 2022 budget of the Swiss Confederation.

These various elements allow for the conclusion that Skyguide's ability to continue as a going concern is not at risk.

Receivables and advances

in KCHF	2021	2020
Receivables from collecting organisations	6 043	20 661
Other receivable	22 837	33 583
Personnel related receivable	20 066	29 058
VAT receivable	1 988	2 107
Allowance for bad debt	–4 243	–5 643
Total receivable and advances	46 691	79 766

Long-term advances and other long-term assets
This position includes a loan made in 2019 of 3417 KCHF to a company in which we hold an indirect 25% stake. The terms of this loan were made under market conditions. As of December 31, 2021, the net amount amounts to 2782 KCHF (2020: 3155 KCHF).

Contingent liabilities

a) Guarantee deposits

in KCHF	2021	2020
Swiss customs and excise authority: provisional customs duties	160	160
Zurich and Geneva Chamber of Commerce and Industry: ATA booklets	63	63
Geneva cantonal employment office	50	50
Total	273	273

The deposits have been made at the Cantonal Bank of Bern.

b) Other guarantee deposits

	2021	2020
Rent guarantees in favor of employees		
Guarantees deposited on installments received	126	128
Pledged collateral	1	1
Total	200	200
Total	327	330

The deposits have been made at the Cantonal Banks of Bern and Geneva, at the Cr dit Suisse in Geneva and the UBS in Geneva.

Short and long-term loan

	2021	2020
Grant date	18.10.2021	19.10.2011
Date of reimbursement	18.10.2031	19.10.2021
Amount in CHF	250 000 000	200 000 000
Interest rate	0.27%	1.65%

Covenants linked to specific credit lines

- Confirmed credit lines require compliance with certain financial criteria (covenants). If these criteria are not met, the credit lines may be rescinded by the company.

These covenants are:

- direct participation by the Swiss Confederation in the borrower's capital of a minimum of 51% and the preservation of the majority of the voting rights.
- minimum ratio of shareholders' equity (share capital, reserves, retained earnings) representing 30% of the total Skyguide statutory balance sheet.

Other commitments not included in the balance sheet

Leasing

Maturity pattern of future lease payments are as follows:

in KCHF	2021	2020
Within one year	6 783	3 738
In the second to the fifth year inclusive	18 147	7 637
After the fifth year	8 099	8 184
Total	33 029	19 559

The table summarises the company's commitments concerning leases (leasing of premises), surface rights as well as operating leases (lease of copiers, servers and programs for management information system). Commitments are calculated based on current contracts, for the agreed contractual term if they cannot be cancelled within a year.

Investment with co-financing

In order to streamline the balance sheet and present revenues and expenses in a way that is more in line with our service provider business model, management decided to change the accounting principle for co-financed projects by dividing them into 3 categories:

- **Deferred revenue:** For contracts containing an obligation for Skyguide to provide a service, the amount of co-financing is deferred and revenue is recognised periodically according to the service rendered.
- **Immediate revenue:** Contracts that do not contain an obligation for Skyguide to provide a service are recognised immediately as revenue.
- **Reduction of assets:** Contracts related to a government grant or partnership without a service obligation are treated as an asset reduction. The presentation of net assets requires switching from the gross book value method to the net book value method. In order to comply with the principle of consistency in measurement and presentation.

Skyguide subsidiaries

Name of the subsidiary	Activity	Country	2021		2021	2020		2020
			% held	% controlled	Paid in nominal capital by Skyguide (KCHF)	% held	% controlled	Paid in nominal capital by Skyguide (KCHF)
SkySoft-ATM SA	Software development	Switzerland	100	100	95	100	100	95
Skynav SA (deleted)	Holding	Belgium	0	0	0	100	100	96
Swisscontrol SA	Dormant	Switzerland	100	100	50	100	100	50

The total of 2021 KCHF (2020: 2117 KCHF) in the balance sheet includes 50 KCHF of capital not paid up in favour of Swisscontrol SA.

Share capital

The Swiss Confederation holds 99.94% of the company. The share capital is 141 120 000 CHF (2020: 140 000 000 CHF) and is divided into 14 112 000 (2020: 14 000 000) registered fully paid-up shares, with a par value of CHF 10 each.

A capital increase of 1 112 000 CHF was carried out in 2020 through the issue of 112 000 registered shares with a nominal value of CHF 10 each. The issue price amounted to 1339.29 CHF per share, i.e. a capital contribution of 150 000 480 CHF. The difference (agio) between the amount of the capital contribution and the increase in share capital is allocated to the statutory capital reserves (148 880 480 CHF).

The Federal Civil Aviation Act specifies that the majority of the capital belongs to the Swiss Confederation. The company's articles of association stipulate that the Swiss Confederation holds the majority of the capital and the voting rights.

No dividend was paid in 2021 and 2020.

Treasury shares

The Company owns 2500 treasury shares. There were no transactions in 2021 and 2020.

Business model

The business model of Skyguide comprises two main categories: regulated and non-regulated services. The regulated services are financed primarily by charges that are billed to the users (en-route, approach category I) or by contractually agreed charges (approach category II, military), while the non-regulated services are financed by winning tenders on the open market.



Route and approach category I

General

En-route and Category I approach activities (Geneva and Zurich airports) are governed by the European Commission Implementing Regulation No. 2019/317, by Eurocontrol's "Principles for the establishment of the cost-base for en-route air navigation services and principles for the calculation of unit rates" as well as by the Ordinance on Air Navigation Services.

The modalities of this economic regulation system are fixed for a period called "reference period" (RP). For each reference period, a performance plan agreed at national and European level frames the route and category 1 approach charges. The current reference period covers the years 2020–2024.

The main modalities of the economic regulation system are the following:

A cost base (1) and a traffic forecast (2) are determined in advance and included in the performance plan for each year of the reference period:

1. The amount of costs foreseen annually to finance air navigation services is composed of the costs of Skyguide, the costs of MeteoSwiss, the costs of the Federal Office for Civil Aviation and the costs of Eurocontrol. All these costs are referred to as "determined costs". Any difference between the actual costs and the determined costs is entered in Skyguide's profit and loss account, thus generating a profit or loss. However, a number of cost adjustments are made for inflation and so-called uncontrollable costs (e.g. Eurocontrol costs). The inflation adjustment is carried forward to year n + 2. Depending on its nature, the adjustment for uncontrollable costs is carried forward either to year n + 2, or to one or more years of the following reference period, or to the two following reference periods.
2. The traffic forecast is made for each year of the performance plan on the basis of the information provided by Eurocontrol at the time the plan is drawn up. This forecast is the basis for calculating the unit rate charged to users of air navigation

services. The difference between actual and forecast traffic generates a surplus or shortfall of revenue to cover the determined costs. To counterbalance the financial impact of traffic variations, a risk-sharing mechanism has been put in place which is applicable only to the costs determined by Skyguide.

The first two percent of the variation is entirely for Skyguide's account, as is 30% of the variation in traffic between (+/-) 2% and (+/-) 10%. The other 70%, as well as variations above (+/-) 10%, are passed on to the users in year n + 2. Thus, the maximum loss or profit that Skyguide can make from traffic fluctuations is 4.4%: 2% + 8% * 30%. Example: if the actual traffic is 6% lower than the performance plan, Skyguide would bear 3.2% (the first two percent and 30% of the variation between 2% and 6%) of the traffic reduction and the users 2.8% (70% of the variation between 2% and 6%).

The other components of the defined costs (MétéoSuisse, FOCA, Eurocontrol, carry forwards from previous years) are not subject to traffic risk sharing. This means that the over- or under-coverage due to traffic generated on these cost elements is fully offset through a carry forward to users in year n + 2.

Provisions for the carry forwards mentioned above relating to the costs or the variation in revenues are created in the year in which they occur (creating carry forwards).

- A positive carry forward represents an under-recovery of costs and results in an increase in the net result. The counterpart on the balance sheet is recognised in "advances and other long-term assets".
- A negative carry forward represents an over-recovery of costs and results in a decrease in the net result. The counterpart on the balance sheet is recognised in "other long-term liabilities".

The carry forwards will be integrated in the calculation of the rates for the year to which they are carried forward. Thus, they increase or decrease the annual revenues concerned through an increase or decrease in the unit rate. As the change in revenues is recognised in the year in which it is generated, its impact on the net result of the year in question is neutralised through the carry forwards line item.

In view of the exceptional circumstances related to the impact of the health crisis, the criteria for the recognition of under-recoveries in the income statement have been specified according to the description in the section on "Key facts".

[Approach category I \(National airports\)](#)

Since 2015, the same economic regulation system and the same reference period as for the route have been in place.

Approach category II (Regional civil aerodromes)

Category II comprises the aerodromes of Berne-Belp, Buochs, Grenchen, La Chaux-de-Fonds-Les Eplatures, Lugano-Agno, Sion and St Gall-Altenrhein.

Since 2017, the responsibility for financing the air navigation services has been transferred to the regional civil aerodromes. Each aerodrome constitutes a specific tariff zone and sets the charges relating to air navigation. Skyguide invoices them for its services.

Military activities

The services that Skyguide provides to the Swiss Air Force are governed by the full-cost recovery principle. A quarterly lump-sum compensation paid by the Swiss Air Force to Skyguide is fixed by a service agreement. A financial statement is prepared at year-end with regard to the military activities. In principle, a provision is created for the balance between the income and the cost of the activity in the year ended and reversed the following year in favour of the Air Force or in favour of Skyguide.

Proposal of the Board of Directors

Proposal of the Board of Directors for the appropriation of cumulated earnings

	Proposal of the Board of Directors	Resolution of the annual general meeting
in KCHF	2021	2020
Retained earnings brought forward	-164 377	1 130
Result for the year	-122 252	-165 507
Balance sheet loss	-286 629	-164 377

	2020	2019
in KCHF		
Appropriations to legal reserves from retained earnings	0	0
Appropriations to other reserves	0	0
Transferred from other reserves	256 696	0
Retained earnings to be carried forward	-286 629	-164 377
Balance sheet loss	-29 933	-164 377

Report of the statutory auditors

Report of the statutory auditor

to the General Meeting of SKYGUIDE, Société Anonyme Suisse pour les Services de la Navigation Aérienne civils et militaires

Meyrin

Report of the statutory auditor on the financial statements

As statutory auditor, we have audited the financial statements of SKYGUIDE, Société Anonyme Suisse pour les Services de la Navigation Aérienne civils et militaires, which comprise the balance sheet, income statement and notes (pages 64 to 72), for the year ended 31 December 2021.

Board of Directors' responsibility

The Board of Directors is responsible for the preparation of the financial statements in accordance with the requirements of Swiss law and the company's articles of incorporation. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation of financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Swiss law and Swiss Auditing Standards. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the entity's preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control system. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements for the year ended 31 December 2021 comply with Swiss law and the company's articles of incorporation.

PricewaterhouseCoopers SA, avenue C.-F. Ramuz 45, case postale, CH-1001 Lausanne, Switzerland
Téléphone: +41 58 792 81 00, Téléfax: +41 58 792 81 10, www.pwc.ch

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Report on other legal requirements

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AOA) and independence (article 728 CO) and that there are no circumstances incompatible with our independence.

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists which has been designed for the preparation of financial statements according to the instructions of the Board of Directors.

We further confirm that the proposed appropriation of cumulated earnings complies with Swiss law and the company's articles of incorporation. We recommend that the financial statements submitted to you be approved.

PricewaterhouseCoopers SA

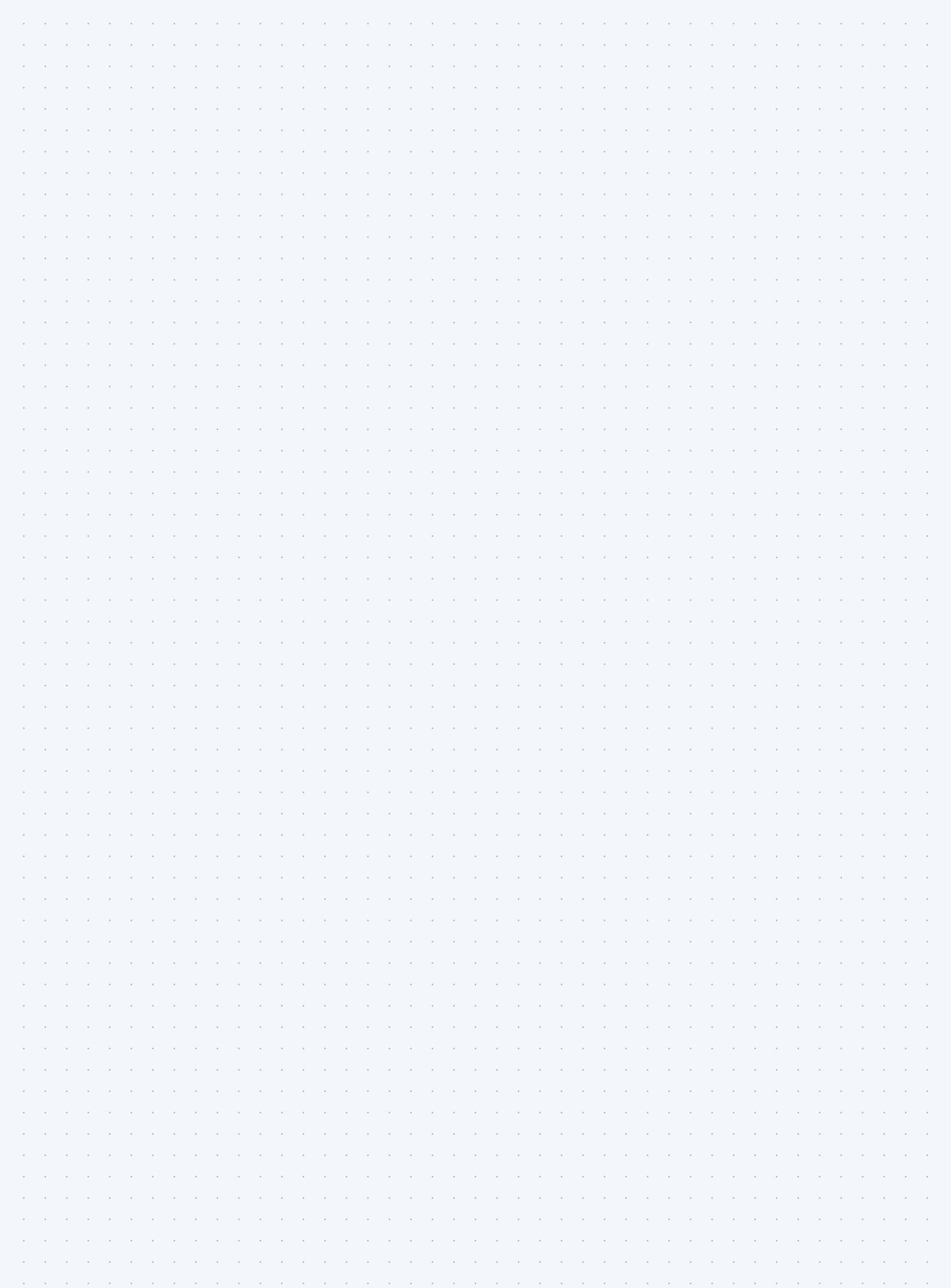


Yves Cerutti
Audit expert
Auditor in charge



Guillaume Antin

Lausanne, 25 February 2022



Contact

skyguide.ch

Skyguide
Swiss Air Navigation Services Ltd
P.O. Box 796
CH-1215 Geneva 15
T +41 22 417 41 11

Impressum

Media Relations
T +41 22 417 40 08
presse@skyguide.ch

The annual report consists of two parts:
Business Report – The authoritative original report is published in German. Translations are available in French and English.
Financial Report – The authoritative original report is published in French. Translations are available in German and English.

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