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# Foreword by Roland Hengartner President of the SAC and CEO of Aerolite AG

Dear members of the Swiss Aerospace Cluster, Dear aerospace enthusiasts,

The aerospace industry plays an important role worldwide. With our organization Swiss Aerospace Cluster (SAC), we support the network for the Swiss aerospace industry in Switzerland and abroad.

Last year, we were not able to implement everything in our favor due to the pandemic. If we have learned one thing, it is that we as an organization, and certainly all of you in your environment, have to react quickly. Due to the rapidly changing requirements, influences and guidelines, we are challenged to act quickly and flexibly. I am convinced that time has brought us all together more, despite the difficult conditions in communication and processing of national and international business. However, in September 2021 we were able to finally experience live encounters again, at the Symposium Air Mobility in Lucerne, and are now looking forward to many more on-site events during the next year.

It is important that we as SAC bring together the requirements from the whole industry such as Drones & UAS, Space technologies, Helicopters as well as Production and Maintenance. To create foundations for an exchange among specialists and thus also to arouse curiosity to create something that may not immediately be shown on the platter. The curiosity in each of us can open a window, offer an opportunity to enter into new business relationships as well.

In the future, the SAC wants to support, accompany and organize more events not only in Switzerland but also abroad, so that our curiosity is aroused. If we have aroused your curiosity about the SAC, then visit our website with the annual calendar for 2022. The annual calendar 2022/2023 shows something for everyone interested, whether in the field of Space, Drones, Rotor or Supply Chain, etc...

Having reached the milestone of over 170 company members, the Swiss Aerospace Cluster can look back on a fruitful and exciting history.

A good basis has been proven so that we can all continue to develop the Swiss Aerospace Industry with strength and vision into the future and realize it together with you.

A big thank you to all members for their trust and to the authorities, cantons and partners worldwide. At this point, I wish all of you a successful 2022, undiminished curiosity and strength to master the upcoming challenges.

Yours sincerely,

Roland Hengartner



# Foreword by Massimo Fiorin Director Business Park, swiss aeropole SA



Dear members of the Swiss Aerospace Cluster, Dear aerospace enthusiasts,

After the sharp fall in output observed during the first few months of the COVID crisis, the economic recovery that started in the second half of 2020 and gathered momentum in 2021 has been met with a general sense of relief. However, these broad trends hide a great variety of situations, as the turbulences caused by COVID to health and the economy across the globe have had very different consequences on individual persons, businesses, and industries.

The promise of more efficient and sustainable forms of air mobility continued to direct investment towards innovative projects, while the slow recovery of total air passenger numbers left many established players along the whole value chain struggling with excess capacity. The business aviation and digital aviation sectors were among the clear winners of 2021, as they benefited from the acceleration of underlying trends, and the same is true for the new space economy. Across industries, businesses applied lessons learned in 2020 to navigate a complex environment and build resilience. The realization that things would not just switch back to the way they were was the first, necessary step towards imagining and building a different future.

In these circumstances, the SAC and its motto – Better Together – are more relevant than ever. By providing members with platforms to share knowledge and experiences, the cluster helps them turn challenges into opportunities. At swiss aeropole, a technology park dedicated to the aerospace industry, companies' eagerness to come together and collaborate resulted in the strongest growth by far in our short history, with a community now approaching 30 aerospace businesses. In Q3 2021, with COVID restrictions gradually easing, in-person events started drawing larger crowds.

A few weeks into 2022, we are already reminded that the world never runs out of surprises to throw at us. And once again, our willingness to stick together will help

us deal with these new challenges. We look forward to continuing our cooperation with the SAC and our fellow members across all different regions and languages.

Yours sincerely,

Massimo Fiorin



## Portrait of the Network



Organisation: Association Swiss Aerospace Cluster

Cluster Office: Swiss Aerospace Cluster

c/o CFAC-HSG Dufourstrasse 40a CH-9000 St.Gallen

**Contact:** Dr. René Puls **Phone:** +41 71 224 73 46

**E-Mail:** info@swiss-aerospace-cluster.ch

Founded: 02.07.2010 in the Swiss Museum of Transport, Lucerne

#### **Focal Points**

One of the cluster's key goals is building and maintaining a national and international network. The Swiss Aerospace Cluster cooperates with the Swiss government, cantons as well as international and other cluster organizations and facilitates an active exchange of information and knowledge between all partners. It serves as an enabling factor for innovation and technology transfer between research institutions and companies. Regularly, national and international events and trade fairs are promoted and organized to retain existing and open new markets.

#### **Our Vision**

As the leading Swiss aerospace network, we open up worldwide business opportunities for our members and partners.

#### References

- Realization of various industry projects with member organizations and external partners
- Realization of a Swiss Aerospace Directory
- Presence at domestic and foreign trade fairs with an own concept the Swiss Aerospace Cluster Lounge
- Trade fair consulting with prime partners S-GE, T-LINK and AFAC
- Organization of events and congresses in Switzerland and abroad
- Co-organization of the Bodensee Aerospace Meeting (BAM)
- Working Groups with practice partners from the services and the industry for goal-oriented treatment of various relevant issues
- Legal advice in Aerospace (liability and contractual law) with prime partner

### Memberships and Partners

- Aerosuisse
- Aviation Research Center Switzerland (ARCS)
- CFAC-HSG Center for Aviation Competence, University of St.Gallen, (Patron)
- EACP European Aerospace Cluster Partnership, Hamburg
- ESA BIC, Zurich (Business Incubation Center of the ESA in Switzerland)
- Forum Luft- und Raumfahrt Baden-Württemberg Stuttgart
- Swissmem
- Swiss Space Association (SSO/SRV), Yverdon
- Switzerland Global Enterprise (S-GE), Zurich

# Bodies of the Swiss Aerospace Cluster

The committee is particularly happy that all organs of the Swiss Aerospace Cluster continued their work in 2021. The SAC board remained unchanged in its previous composition and has once more successfully led the Cluster trough the difficulties of the ongoing pandemic. As for the departure of Christopher Siegrist the committee would like to thank him for his excellent service to the cluster and wishes him all the best.

The board wishes to thank the members of the advisory board for their continuing commitment and support. In the following you will find the list of the members of the board and the advisory board.

#### **Board President**



Roland Hengartner
President of the Board
Aerolite AG, Ennetbürgen (NW)
www.aerolite.ch

#### **Vice-President & Finances**



**Dr. Andreas Wittmer**CFAC-HSG, Center for Aviation Competence
University of St.Gallen
www.cfac.ch

### **Board Members**



Joel Hencks Managing Director & Founder AEROEX GmbH, Buchs (SG) www.aeroex.eu



Ronny Schreiter Managing Director Interfast AG, Steinhausen (ZG) www.interfast.ch



**Dr. Maurizio Scaramuzza** Team Leader CNS Expert Team Skyguide, Wangen b. Dübendorf (ZH) www.skyguide.ch



Anton Bischofberger
Managing Director & CEO
Knoepfel AG, Walzenhausen (AR)
www.knoepfel.ch

# Advisory Board of the Swiss Aerospace Cluster



**Advisory Board** 



Prof. Dr. Marcel Egli
Head of Center for Competence in
Aerospace Biomedical Science &
Technology, Space Biology Group,
University of Applied Sciences Lucerne, www.hslu.ch



Prof. Dr. Michel Guillaume
Head of Center for Aviation ZAV
ZHAW Winterthur
www.zhaw.ch



Cluster Office

Dr. René Puls

Managing Director Swiss Aerospace
Cluster and Deputy Director,
CFAC-HSG, Center for Aviation
Competence, University of St.Gallen
www.cfac.ch



Prof. Dr. iur. Roland Müller Co-Owner of ME Advocat Attorneys at Law, Staad (SG) www.advocat.ch



Diana Hartz
Head of Business Development
Canton Nidwalden
www.nw.ch



Adrian Müller
Cluster Manager Swiss Aerospace
Cluster and Doctoral Student,
CFAC-HSG, Center for Aviation
Competence, University of St.Gallen
www.cfac.ch



Brigadier Peter Soller Commander of the Luftwaffenausbildungs- und -trainingsbrigade Swiss Air Force, Payerne (VD) www.luftwaffe.ch



Carl Ziegler
Chief Executive Officer
T-Link Management AG, Zurich
www.t-link.ch



Nicole Denk
Assistant
CFAC-HSG, Center for Aviation
Competence, University of St.Gallen
www.cfac.ch



Roland Bücheler
Owner and Managing Director
RBcomm Buecheler, Widnau (SG)
www.rb-comm.ch

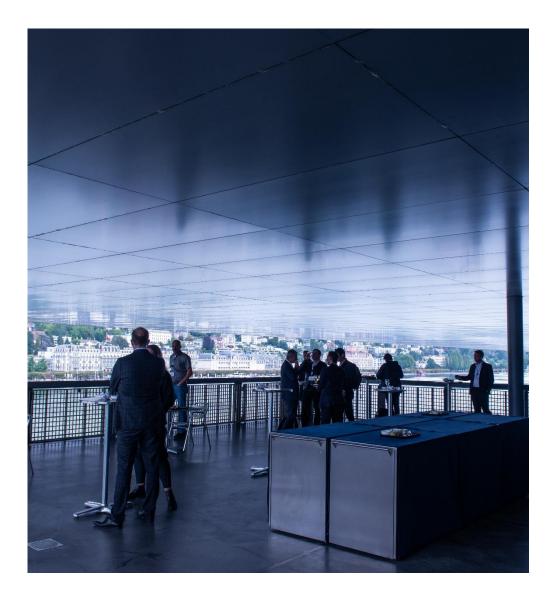


Colin Kübler
Cluster Manager Swiss Aerospace
Cluster and Research Assistant
CFAC-HSG, Center for Aviation
Competence, University of St.Gallen
www.cfac.ch

# Financial Report SAC 2021 By Dr. Andreas Wittmer

Despite the turbulences that the Covid-19 pandemic has brought along, the Swiss Aerospace Cluster was able to conclude the year 2021 with a balanced financial result. Throughout the year, we were able to increase the membership base by an impressive 34 new members. This leads to an increase in membership fees and provides financial security for the organisation of the Cluster.

According to the fiscal budget, the Cluster Office was led in a cost-effective manner by the Center for Aviation Competence (CFAC-HSG), which positively contributed to the results. The annual general meeting was held online for the second time, which resulted in lower costs compared to a conventional on-site meeting. Furthermore, the fact that many events and exhibitions were cancelled or held online further reduced the costs facing the Cluster. However, the effect is double-edged as it translated into less income for the Cluster. Luckily, it was possible to hold the Symposium Air Mobility (SAM) on-site in Lucerne, which was financially successful. The full effect of the pandemic on the long-term financial results are yet to be seen. Nevertheless, the Swiss Aerospace Cluster, backed by its strong membership base, is in a financially advantageous position to face a bright post-pandemic future.



# Members - Directory



Since its foundation in 2010, the Swiss Aerospace Cluster has been able to increase the number of members every year. As by the end of the year 2021, the cluster counted more than 170 members. During the year, the cluster won 34 new members. The coming year promises a further rise of members due a strategic reorganisation and strengthening of the working groups, opportunities to connect with members to form strong partnerships as aviation recovers from the pandemic, as well as through activities to topically diversify and internationalise the Cluster.

#### **Membership Structure**

The Swiss Aerospace Cluster consists of the following member categories:

- Producing suppliers, such as aircraft cabin outfitters, lightweight construction, surface technology and process engineering to avionics
- Universities, universities of applied sciences, R&D institutions
- Service providers in the Aerospace industry, such as lawyers, insurance companies, consulting and engineering, (further) education and certification, trade and charter brokers
- Cantonal administrations, public services and export promotion organisations
- Other associations and networks

It is a declared goal of the cluster to enable advanced cooperation among our members. With an increasing number of members, we pave the way to more possibilities to cooperate. With this goal in mind, our focus still lies on continuously acquiring more members, particularly in the aerospace production and service industry.

We thus encourage our members to actively spread the word about our organisation to increase the cluster's reach. Experience has shown that word-of-mouth recommendation by our members is the best publicity for our network.

#### Membership Benefits

- Network of manufacturers, service providers, universities, universities of applied sciences, federations, public institutions, with an emphasis on SMEs
- Exclusive access to networking/input/knowledge sharing events with national and international participants from economy, research and politics
- Support in new markets, market segments or customers in cooperation with swiss federal offices, international organisations (e.g. ESA, EACP), cantons (e.g. Zurich, Nidwalden), and interdisciplinary institutions
- Free Silver Membership with Switzerland Global Enterprise
- Transfer of know-how and technological skills in the sector of aerospace and satellite navigation through cooperation with research institutions and universities
- Active exchange of information and knowledge between all partners
- Fostering of the aerospace and satellite navigation industry in general
- Cross clustering with other clusters such as EACP or LRBW
- International cooperation in projects



#### Become a member



## **Members**





8tree Konstanz, Germany www.8-tree.com



AeroFEM GmbH Ennetbürgen, NW www.aerofem.com



AirWork & Heliseilerei GmbH (A&H) Immensee, SZ www.air-work.swiss



9T Labs AG Zürich, ZH www.9tlabs.com



Aerolite AG Ennetbürgen, NW www.aerolite.ch



Alabama Department of Commerce – European Office Kornwestheim, Germany www.madeinalabama.com



ABS Broker Service AG Sachseln, OW www.absaero.ch



AeroVisto Interior Services AG Staad, SG www.aerovisto.com



alphacam swiss GmbH Winterthur, ZH www.alphacam.ch



Adventure SAS Coignières, France www.adventuredrones.com



afac - Agency for Aviation Communication AG Zug, ZG www.afac.aero



AMROS Group Kloten, ZH www.amrosgroup.aero



Aegerter Swiss Technology AG Heimberg, BE www.aegerterag.ch



Aircraft Solutions Maastricht, Netherlands www.aircraftsolutions.be



ANAVIA | A CONNOVA Company Villmergen, AG www.anavia.eu



aero+ (part of Jörimann Stahl AG) Walenstadt, SG www.aero-plus.ch



Aircraft-System-Enineering-Service Scheidegg, Germany www.aircraft-system.com



Assaia International AG Zurich, ZH assaia.com



AEROEX GmbH Buchs, SG www.aeroex.eu



Airial Robotics GmbH Hamburg, Germany www.airialrobotics.com



Aurora Swiss Aerospace GmbH Luzern, LU www.aurora-aero.ch





Aviation Valley Rzeszow, Poland www.dolinalotnicza.pl



AWA Amt für Wirtschaft und Arbeit des Kantons Zürich Zürich, ZH www.awa.zh.ch



Axalp Technologies AG Luzern, LU www.axalptech.com



Axis Flight Training Systems GmbH Zurich, ZH www.axis-simulation.com



Batt Suisse GmbH Glattbrugg, ZH www.batt-gmbh.com



Widnau, SG www.berhalter.com

Berhalter AG



Berns Engineering Consulting GmbH Fribourg, FR www.bernsengineers.com



BGI Bertil Grimme AG Zug, ZG www.bgi.ag



BIBUS METALS AG Fehraltorf, ZH www.bibusmetals.ch



BINC Industries SA Commugny, VD www.bincindustries.com



Bucher Leichtbau AG Fällanden, ZH www.bucher-group.com



BWB - Holding AG Stans-Oberdorf, NW www.bwb-group.com



Centaurium Aviation Ltd. Grenchen, SO www.centauriumaviation.com



CH Aerospace Aach, Germany www.ch-aerospace.de



Cosylab Switzerland GmbH Villigen, AG www.cosylab.com



CRAB Analytics GmbH Kastanienbaum, LU www.crabanalytics.ch



Daedalean AG Zurich, ZH www.daedalean.ai



DESAPRO AG Thayngen, SH www.desapro.com



Destinus Payerne, VD www.destinus.ch



Dietze Group Maienfeld. GR www.dietzegroup.com



DMD Solutions Luzern, LU www.dmd.solutions





Dpendent – Drone Independent System Sàrl Cully, VD www.dpendent.ch



EBIRD AG Kloten, ZH www.e-bird.ch



FLARM Cham, ZG www.flarm.com



Dreyfus Aviatik GmbH Ebikon, LU



Eidg. Dept. Für Verteidigung, Bevölkerungsschutz und Sport VBS Payerne, VD www.vbs.admin.ch



Flükiger und Co. AG Oberburg, BE www.fluekiger.ch



Drone Harmony AG Luzern, LU www.droneharmony.com



Electra.Aero Schweiz GmbH Bleienbach, BE www.electra.aero



Forum Luft- und Raumfahrt Baden- Württemberg e.V.
Ostfildern, Germany
www.lrbw.de



Dufour Aerospace Visp, VS dufour.aero



ESA BIC Switzerland Zurich, ZH www.esabic.ch



Franke Industries
Aarburg, AG
www.frankeindustries.com



DYCONEX AG Bassersdorf, ZH www.mst.com/dyconex



ETH Zürich Autonomous Systems Lab Zurich, ZH asl.ethz.ch



G-NIUS Switzerland Inc. Eysins, VD www.g-niusltd.com



e. Luterbach AG Hildisrieden, LU www.luterbach-ag.ch



ETH Zürich
Institut für Geodäsie und
Photogrammetrie
Zürich, ZH
www.igp.ethz.ch



Galvano Helbling AG Biel, BE www.galvanohelbling.ch



EACP European Aerospace Cluster Partnership Hamburg, Germany www.eacp-aero.eu



Fixposition AG Schlieren, ZH www.fixposition.com



generativ GmbH Zurich, ZH www.generativ.ch





Glarus Nord Niederurnen, GL www.glarus-nord.ch



GRITEC AG Kriens, LU gritec.ch



Gunnar International Altstätten, SG www.gunnar-int.com



Hedinger Wattwil, SG www.hedinger.com



Heli and Co Grâce-Hollogne, Belgium www.heliandco.com



HELI AVIATION.CH Zermatt, VS www.heli-aviation.ch



Hensoldt Sensors GmbH Immenstaad, Germany www.hensoldt.net



Hochschule Luzern Technik & Architektur
Horw, LU
www.hslu.ch/de-ch/technikarchitektur



Center for Aviation Competence University of St.Gallen St. Gallen, SG www.cfac.ch



Hugentobler Spezialleuchten AG
Weinfelden, TG
www.spezialleuchten.ch



IBOR AG Ettiswil, LU www.ibor.ch



Idee Suisse Zurich, ZH www.idee-suisse.ch



iET SA
Zürich, ZH
www.iet.ch/de



IGOL Lufingen, ZH www.igol.ch



Imbach Nebikon, LU www.imbach.com



IMITec GmbH Meilen, ZH www.imitec.ch



INTERFAST AG Zug, ZG www.interfast.ch



IST Inox-Steel-Technology Gwatt (Thun), BE www.istinox.ch



ITZ InnovationsTransfer Zentralschweiz Horw, LU www.itz.ch



KEEPEARS GmbH Allschwil, BL www.keepears.com



KIFA AG Aadorf, TG www.kifa.ch





Knöpfel AG Walzenhausen, AR www.knoepfel.ch



Marenco AG Pfäffikon, ZH www.maernco.ch



Mollis Airport AG Glarus Nord, GL www.mollisairport.ch



Kontaktstelle für Wirtschaft Kanton Glarus Glarus, GL www.glarus.ch/wirtschaft



ME Advocat AG Staad, SG http://www.advocat.ch



Murzilli Consulting Bern, BE www.murzilliconsulting.com



Kopter Group AG Wetzikon, ZH www.koptergroup.com



Mecaplex, AG Grenchen, SO www.mecaplex.ch



Next Generation Flight Training Cham, ZG www.ngft.com



KSU / A-Technik AG Wohlen, AG www.ksu.ch



MF-Mechanik AG Wilen bei Wollerau, SZ www.mf-mechanik.ch



NEXT SA
Zug, ZG
www.next.rocks



Kuehne + Nagel AG Glattbrugg, ZH ch.kuehne-nagel.com



MME Legal Ltd Zürich, ZH www.mme.ch



Orbit Management Services St. Gallen, SG www.orbit.ms



Kuerzi Aviation Lommis, TG www.kuerzi.com



Mobilitätsakademie AG Bern, BE www.mobilityacademy.ch



Paoluzzo AG Ipsach, BE www.paoluzzo.ch



Manta Aircraft SA Lugano, TI www.mantaaircraft.com



MobLab Bellinzona, TI www.moblab.swiss



Plastika Balumag AG Hochdorf, LU www.plastikabalumag.ch





Proceq SA Schwerzenbach, ZH www.proceq.com



Proventavia GmbH Schindellegi, SZ www.proventavia.ch



QBT SAGL Chiasso, TI www.qbt.ch



QCM Design GmbH Belp, BE www.qcm.ch



Quality Control NDT S.A. Forel (Lavaux), VD www.qualitycontrol.ch



Radiate Engineering & Design AG
Zürich, ZH
www.radiate.ch



RBcomm Buecheler Widnau, SG www.rb-comm.ch



Resource Consulting AG Steinhausen, ZG www.resourcegroup.ch



REWaG Feinmechanik AG Waldkirch, SG www.rewag.ch



Rösler Schweiz AG Kirchleerau, AG www.rosler.com



RUAG AG Emmen, LU www.ruag.ch



Sauter, Bachmann AG Netstal, GL www.sauterbachmann.ch



Schenker Schweiz AG Pfungen, ZH www.dbschenkeraeroparts.com



Scheurer Swiss GmbH Volketswil, ZH scheurer.swiss



Schweizerische Mobiliar Versicherungsgesellschaft AG Zürich, ZH www.mobiliar.ch



Schweizerische Vereingung für Qualitäts- und Managementsysteme Zollikofen, BE www.sqs.ch



Scobamat AG Dettighofen, TG www.scobamat.ch



Skyguide Wangen b. Dübendorf, ZH www.skyguide.ch



SOLENIX GmbH Kappel, SO www.solenix.ch



SRV - SWISS SPACE AS-SOCIATION Burgdorf, BE www.srv-ch.org



Start-up Project incluas Wil, SG www.incluas.ch





studairQS Hinwil, ZH www.studairqs.ch



Swiss Hydraulic and Pneumatic Hardware SA Nyon, VD www.swisshydraulic.ch



THOMMEN AIRCRAFT EQUIPMENT AG Muttenz, BL www.thommen.aero



Suisse Technology Partners Ltd. Neuhausen, SH www.werkstoffexperten.ch



Swiss Quality Broker Partner AG Sargans, SG www.0817.ch



Toray Advanced Composites Nijverdal, Netherlands www.toraytac.com



swiss aeropole Payerne, VD www.swissaeropole.com



SwissRE Corporate Solutions Zurich, ZH www.swissre.com/ corporate\_solutions



TSS Innovationsprojekte Roveredo, GR www.tssinnovationsprojekte.ch



Swiss Aviation Group AG Cham, ZG www.satgroup.ch



Switzerland Global Enterprise Zurich, ZH www.s-ge.com



TXT e-Solutions Sagl Chiasso, TI www.txtgroup.com



Swiss Business Council Abu Dhabi, UAE www.swissbcuae.com



Switzerland Innovation Park Biel Biel, BE www.sipbb.ch



u-blox AG Thalwil, ZH www.u-blox.com



Swiss Drones Operating AG Buchs, SG www.swissdrones.com



T - LINK Management AG Freienbach, SZ www.t-link.ch



UASystems Payerne, VD www.uasystems.com



Swiss Federation of Civil Drones Bern, BE www.drohnenverband.ch



Tata Consultancy Services Switzerland Ltd Zürich Oerlikon, ZH www.tcs.com



UAVOS GmbH Steinhausen, ZG www.uavos.ch





UMS Skeldar AG Möhlin, AG www.umsskeldar.aero



VRMotion AG Schaffhausen, SH www.yrm-switzerland.ch



Universität Zürich – UZH Space Hub Zürich, ZH www.spacehub.uzh.ch



Wijp Swiss Technik GmbH Therwil, BL www.wijp.ch



Urartu Systems SA Payerne, VD www.urartu.aero



Wirtschaftsförderung Kanton Nidwalden Stans, NW www.economic development.nw.ch



v2sky GmbH Menziken, AG www.v2sky.ch



XL Catlin Services SE, Dublin, Ireland www.axaxl.com



Variosystems AG Steinach, SG www.variosystems.ch



Xovis AG Bern, BE www.xovis.com



Vira Drones SA Payerne, VD www.viradrones.com



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Zürich, ZH
www.zhaw.ch

Zürcher Hochschule für



Voliro AG Zurich, ZH www.voliro.com

Zürich, Switzerland. Zürich Tourismus Zurich, ZH www.zuerich.ch

# Working Groups



The Working Groups evolve continuously and deepen collaboration with the industry. The purpose of the Working Groups is for members to meet, discuss and exchange information on specific topics regularly. Several Working Groups regularly organize specialist events or participate in them. The heads of the Working Groups report about last year's activities and engagements in the following chapter.

The Working Groups are chaired by members of the board or the advisory board as well as by actively involved members. New members are always welcome. If you wish to participate in a Working Group of your interest, please contact the head of the group or the cluster office. After a re-organisation of the Working Groups, the Working Groups for the year 2021 were the following:

#### Production & Maintenance (Supply)

Chair: Yannick Willemin, Business Development, 9T Labs AG
Deputy: Robert Zehnder, Business Development, Hensoldt

### Helicopter

Chair: Christian Zehnder, Head of Business Development Canton Glarus
Deputy: Cecile Vion-Lanctuit, Head of Communications & Marketing Kop-

ter Group AG

#### **Drones & UAS**

Chair: Luca Santini, Head of Sales, SwissDrones

Deputy: Wolfgang Rieder, Switzerland Innovation Park Biel/Bienne

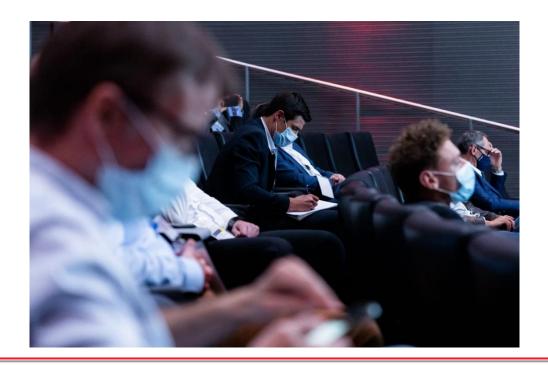
## **Space Technologies**

Chair (interim): Prof. em. Dr. Alain Geiger, Institut für Geodäsie und

Photogrametrie der ETH Zürich

### Goals of the Working Groups:

- Focus on the most important and recent topics in the Aerospace industry
- Working groups consist of heterogenous experts within the relative field
- Foster a regular exchange within the group to create a constructive dialogue
- Organisation of seminars, meetings and events to increase knowledge and innovation exchange
- Exchange across working groups in order to learn from each other and create cooperation opportunities across different sectors (both on a national and international level)
- Increase of the external visibility of the cluster and the Swiss aerospace industry in general



# Production & Maintenance (Supply) By Yannick Willemin & Robert Zehnder



The year 2021 was the second year under Covid 19 restrictions, therefore many planned events have been organized as online events. The first event online was the kick off event in January, followed by the announcement about the discovery mission to Oklahoma. The working group Production & Maintenance held the first working group meeting in March 2021. Also due to Covid the General Assembly was organized online, right after the GV the members participated in the Aviation & Space Symposium 2021. Travel restrictions have been slightly lifted over the summer period with a good outlook for the autumn events. The first onsite event was the fully sold out Air Mobility Symposium in Lucerne in September. In the same week many of the SAC members participated at the Bodensee Aerospace Meeting held in Augsburg combined with a factory tour at Premium Aerotec, the production of different fuselage parts for Airbus wide body aircraft was very impressive. Both events have been organized under strict hygiene measures, thanks to a strict adherence no incidents have been reported. In November several SAC members had a booth at the very well visited European Rotors in Cologne. The last event in 2021 was the working group meeting mid December, due to the worsening Pandemic the planned visit of 9T Labs and Dufour Aerospace had to be cancelled and an online meeting was held instead.



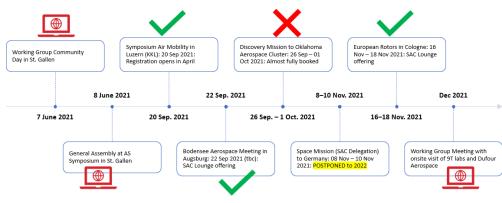






# TIME SWISS APOSPACE CUSTER

## SAC Event Calendar 2021



We will focus on trade shows & conferences from mid September onwards (AERO & AIX not in scope for 2021)

Interested in joining the Production & Maintenance (Supply) Working Group? Please contact Yannick Willemin (yannick.willemin@swissaerospacecluster.ch) or Robert Zehnder (robert.zehnder@swissaerospacecluster.ch).

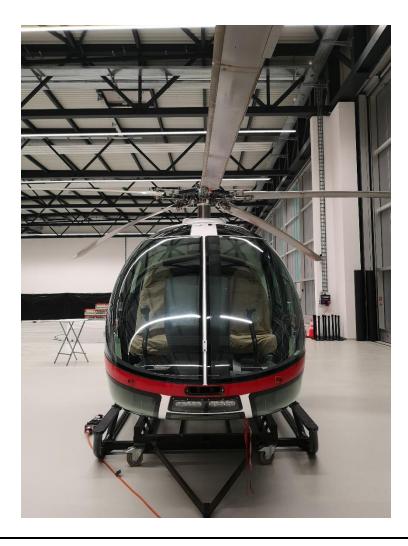
# Helicopter

# By Christian Zehnder & Cecile Vion-Lanctuit

The helicopter working group met three times during the year 2021: April 27, August 24 and December 3. The main topic of the virtual meetings was the preparation of #ROTORS22 on February 8 in Payerne. In addition, the heligroup was present at the working group community day on June 7 with a broadcasting contribution. At the end of 2021, about 50 members were registered in the helicopter working group, proving the dynamism and the growth perspective of this branch in Switzerland.







Interested in joining the Helicopter Working Group? Please contact Christian Zehnder (christian.zehnder@swissaerospacecluster.ch) or Cecile Vion-Lanctuit (cecile.vion-lanctuit@swissaerospacecluster.ch)

# Impressions from ROTORS22 in Payerne









# Drones & UAS By Luca Santini & Wolfgang Rieder

After having founded working group "Drones&UAS" in 2020 the year 2021 was still largely influenced by the pandedmic situation. Nevertheless, we were able to hold a number of interesting events in 2022.

#### March 25th Spring Meeting Online

With the feedback of our members, we decided to put our main focus on

- Commercial Applications
- Regulations
- · Value Chain & Supply Chain

Moreover, we had interesting presentations on *Regulation & Current Status in Switzerland* by BAZL and a *Market Study Drone Industry* by Kevin Sartori.

#### June 7th Summer Meeting St. Gallen Online

Exciting presentation from Andreas Hofmann on Drone Activities at SBB.

### September 20th SAM Luzern

We were very happy that in September 2021, SAM took place for the second time, at the unique location at KKL in Lucerne with a total of 220 participants and 80 exhibitors it was even bigger than in 2020.

# October 28th Working Group Meeting at Paoluzzo Ipsach / Switzerland Innovation Park Biel-Bienne

The event was perfectly well organized and took place at Paoluzzo in Ypsach. Besides interesting presentations from a Drone Test field in Baden Württemberg, there was a visit of Paoluzzo production site and Swiss Smart Factory/Industry 4.0 at Switzerland Innovation Park Biel-Bienne. Moreover, we started a cooperation with DIAS to join forces. The goal is to work together on specific topcis and as a first topic we identified Drone infrastructure.

Currently we have 51 members. End of 2021 Luca Santini handed over the chair to Wolfgang Rieder. Thanks Luca for your great engagement and the good cooperation!





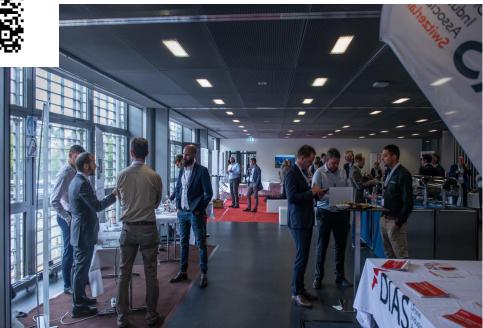
Interested in joining the Drones & UAS Working Group? Please contact Luca Santini (luca.santini@swissaerospacecluster.ch) or Wolfgang Rieder (wolfgang.rieder@swissaerospacecluster.ch)

# Impressions from the Symposium Air Mobility 2021









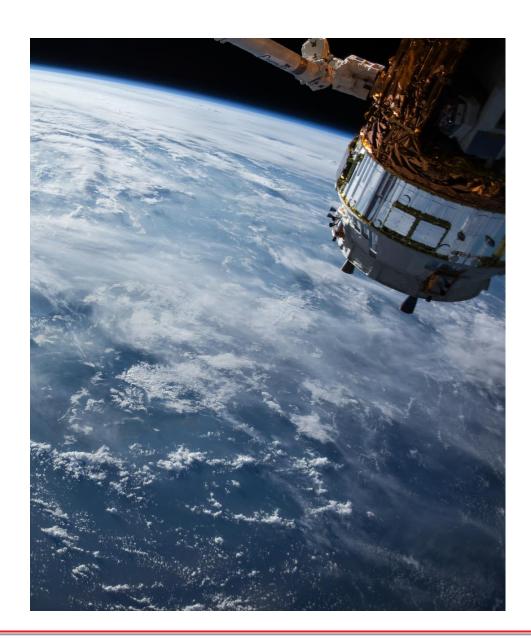
# Space Technologies By Alain Geiger and Maurizio Scaramuzza



The past year saw the major event of SAM 2021 where, among the large drone-related exhibition, a part was dedicated to space. Exhibitors were Destinus, Center for Aviation Competence (HSG), Franke Industries, UZH Space Hub, ARIS Space Project, AIRBUS Space, BOSSARD / Interfast, ETH Zürich Geodesy, Connova and RUAG Space. One complete session of presentations was dedicated to space technologies.

The relaunch of the working group has taken place in spring 2021. Two talks were given with a focus on exploration of opportunities in the Swiss market of space applications by Swiss Space Office (SSO) and the use and testing of off-the-shelf components for microsats by Geodesy-ETH Zürich.

Space awareness is not only growing among companies, also, younger people are attracted by fascination and opportunities in space as evidenced by the student group ARIS presentation of their rocket projects at SAM 21. Space related activities of educational institutions such as the SAC members UZH (space Hub), ETH, ZHAW will hopefully inspire the next generation to pursue their pathway to space fascination and hopefully to space industry.



Interested in joining the Space Technologies Working Group? Please contact Alain Geiger (alain.geiger@swissaerospacecluster.ch)

# Aerospace Innovation Days





The Swiss Aerospace Cluster and the Center for Aviation Competence (CFAC-HSG) are jointly organising a series of networking events between 2021 and 2024 with the support of Innosuisse. The events offer a wide array of opportunities and benefits for SAC members and participants in general:

- Exchange of innovative ideas and approaches
- B2B networking to build effective partnerships in the industry
- Connection between the industry and research/academia
- Exhibition opportunities for SAC members as a platform for brand and product development

The events will host different national and international partners promoting hightech and cutting-edge solutions in the fields of:

- UAS, drones and urban air mobility
- Space technologies
- Rotorwings
- Lightweight & composites
- Payload solutions
- Maintenance
- Operations

The events offer all-day conferences and exhibitions to give participants unrestricted access to the latest developments in aerospace. Additionally, breakout & meet-the-expert sessions, B2B networking platforms and innovation platforms promote exchange between participants to boost innovation. Keynote speakers and panel discussions offer the perfect chance to meet industry experts and gain a comprehensive insight into current topics surrounding the aerospace industry. To put it short: our members can expect a get-together of the aerospace industry & science community in Switzerland & beyond.

#### **Next Events:**



Aviation and Space Symposium
2 June 2022
OLMA Messen, St. Gallen, Switzerland



Symposium Air Mobility 12 September 2023 Lucerne, Switzerland

#### **ROTORS SWITZERLAND**

Date: tba Location: tba



## National and International Cooperation

The Swiss Aerospace Cluster is involved in establishing new contacts and maintaining existing partnerships with European and international Aerospace clusters. Most of these foreign Aerospace clusters are members of the EU supported EACP European Aerospace Cluster Partnership. The EACP organizes regular events on Aerospace topics all over Europe. There is still room for taking more advantage of the offers by EACP. We are in close contact or involved in joint projects with the following Aerospace clusters:





Aerospace Cluster Auvergne-Rhône-Alpes



Aerosuisse



Aviation Research Center Switzerland



Austrian Aeronautics Industries Group (AAI)



BavAlRia - Oberpfaffenhofen / München



Bodensee AlRea – Überlingen und Friedrichshafen



EACP European Aerospace Cluster Partnership - Hamburg



**ESA Business Incubation Centre Switzerland** 



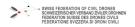
Forum Luft- und Raumfahrt Baden-Württemberg (LR BW)



Lombardia Aerospace Cluster



Oklahoma Department of Commerce



Schweizer Verband ziviler Drohnen (SVZD)



**SWISSMEM** 



Switzerland Global Enterprise (S-GE)



Swiss Helicopter Association (SHA)

# Sponsors, Donors and Supporters



The Swiss Aerospace Cluster is grateful for the valuable support both financially and ideationally. The cluster wishes to thank all its sponsors, donors and supporters.

While some of the sponsors in 2021 have been supporting specific events, others — with their repeated commitment and backing — have contributed substantially to the continuing improvement and development of the cluster, by providing us with meeting rooms, project funding and other forms of support.

Without this precious help, the cluster would not be the network it is now, after eight years of intensive and rewarding work by its board, the advisory committee and numerous actively participating members.

We thank all our sponsors, donors and supports for keeping up with our spirit and helping us foster the network in the Aerospace industry nationally and internationally.

Canton de Vaud



Innosuisse



Suisse Aeropole





