Skyguide is striving to reduce the current airspace complexity through the use of new technologies.

The digitisation process we are witnessing today gives us the opportunity to play an important role in the future of safe and efficient air traffic management in Switzerland and in Europe. For example, our innovative Virtual Centre programme offers new and more flexible solutions.

At present, 25 percent of skyguide’s employees are engineers, technicians or ICT experts. We will need a greater number of these professionals if we are to achieve our goals, as we rely on increasingly sophisticated technologies.

Join skyguide and help us to meet the challenge of the new realities by putting your technical expertise at the service of innovative programmes. Your skills are key to the success of skyguide’s future.

"Small, swift and agile, Switzerland can be at the forefront of change, and is embracing this opportunity."

KLAUS MEIER
Chief Information Officer

Help us to pave the way for new realities and innovation. Come on board with us and showcase your talent!
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Skyguide provides air navigation services for Switzerland and adjacent regions of neighbouring countries. With its 1500 employees at 14 locations in Switzerland, the company guides some 1.2 million civil and military flights a year, safely and efficiently, through Europe’s busiest airspace.

Skyguide is well integrated into the international air navigation services community and, with its innovative and customer-focused solutions, enhances Switzerland’s appeal as a place to live, work and do business. The company is majority-owned by the Swiss Confederation, and is headquartered in Geneva.

There are over 80 professions at skyguide which include, among others, over 300 engineers, technicians and ICT experts who are responsible for the development and maintenance of our complex technical installations and facilities.
Air navigation services is a highly specialised domain which depends directly on the motivation, commitment and excellence of its people.

“Our values: we are human, respectful, multicultural and entrepreneurial. These four values shape our organisational identity and corporate code of ethics.”
Air Traffic Safety Electronics Personnel (ATSEPs) are technical specialists who provide electronics and software support, and play a vital role in the aviation safety chain.

They include engineers, technicians and computer hardware and software specialists who are responsible for the specification, procurement, installation, calibration, maintenance, testing and certification of the ground-based electronic systems used to help control aircraft movements.

These complex systems, continuously updated, require broad theoretical and practical knowledge gained through years of experience in the field.

The provision of air navigation services relies heavily on technical capabilities. Therefore, ATSEPs work in close collaboration with internal and external stakeholders in the aviation safety chain.

ATSEPs perform the following activities on operating facilities, depending on their aptitude, training and qualifications:

- Developing hardware and software specifications
- Software integration and testing
- Preventive and corrective maintenance
- Compiling and revising documentation
- Installation and commissioning

Over 300 engineers, technicians and ICT experts
“ATSEPs make a major and ever-increasing contribution to ensuring the efficiency of air traffic, both in the air and on the ground.”
Air navigation services require the highest standards of safety and reliability. Skyguide’s technicians and engineers continuously develop, operate, maintain and upgrade key navigational and support equipment.

The work in air navigation technical services is varied and demanding. Air navigation services rely on an extensive technical infrastructure, with field stations that are often placed in highly exposed locations, at national and regional airports, and on military premises. Skyguide provides services whatever the weather conditions may be, 24 hours a day and every day of the year.

The increase in European air traffic can only be managed safely by using the latest navigation technology. Ever-more-complex services demand long-term investment in enhanced processes and procedures and up-to-date systems, and this means acquiring and integrating the latest technologies.

The technical systems used to ensure the safety of air traffic are divided into:
- Air Traffic Management (ATM)
- Communication, Navigation, Surveillance (CNS)

They extend to the following services and equipment:
- Meteorological instruments
- Radio and telecommunications
- Navigation and radar
- Networks
- Data processing and air traffic controllers’ workplace
“Skyguide puts strategic emphasis on innovation in all its technical developments.”
A pioneering programme

Skyguide is making an important contribution to the unification of Europe’s airspace through its pioneering work on the Virtual Centre – an undertaking which is intended to ensure that multiple physical air traffic management centres can function as a single entity from a technical and operational perspective.

The concept, which is now being adopted in Switzerland, takes skyguide into a new air traffic management dimension that is rapidly attracting interest throughout Europe.

This programme, which skyguide embarked on back in 2011, is intended to standardise and modernise the tools and methods used in all the airspace sectors handled by the control centres in Geneva and Dübendorf.

New realities require new abilities

Recruiting qualified specialists is therefore crucial to skyguide’s further development. And with the continued progress of the Virtual Centre programme, the demand for well-trained engineering and technical professionals is growing all the time.

“One sky by one system”
Interview with
Marco Sieber
Head of Data Services

Marco Sieber is responsible for implementing and operating the software components of skyguide’s core IT systems. His current challenge is to gradually transform the existing Air Traffic Control systems by implementing a new service-oriented architecture in the frame of the Virtual Centre programme, while assuring availability of the systems 24/7. Marco firmly believes that the programme can only be successful by introducing best-in-class IT practices into the company and improving IT development using the “Software Factory” paradigm.

What is an IT “Software Factory” and how does it work?
A Software Factory is not a physical factory, but rather a software engineering framework rooted in best-in-class approaches. This means defining principles for how we build, integrate, test and deploy software, as well as selecting appropriate methods and tools. It also helps us in managing innovative projects, such as the Virtual Centre, in addition to more traditional IT projects. Over the last 15 years, the software industry has been integrating key concepts from the manufacturing world, such as Agile Development and DevOps. These concepts help us to keep costs and planning stable, improve transparency and adaptability, and reduce risk. They also enable us to bring software components into production smoothly, efficiently and safely. Finally, they bridge the gap between the development and technical operations units by improving cooperation and communication, with integrated processes, tool-chains and increased automation.

Will the implementation of the Virtual Centre have an impact on the profiles needed for skyguide’s technical services?
The Virtual Centre programme will not only involve new software engineering methods, but will also implement a new ICT architecture style: we will move from vertical integration to horizontal integration. Today, engineers and technicians have an in-depth understanding of all the layers of an IT system, from the application layer down to the hardware or even the network layer. The core of the new architecture is a common integration platform hosted in a virtualised private cloud, on which the services are running. These changes in architecture and methodologies require new ways of working and new roles that require new skills.

How is skyguide preparing for this new reality?
We train the people involved in the Virtual Centre programme in new methodologies, procedures and technologies, and they are accompanied by technical experts. We have also begun to define the roles and skill-sets, which we need to operate and maintain the solutions delivered by the programme. This is the basis for defining the transition and training plans for that part of the organisation which is not directly involved in the programme, but will adopt the solutions arising from it. Based on these plans, we will then train our employees to operate and maintain the new systems in the same professional and safe way as they do today.

“The programme can only be successful by introducing best-in-class IT practices”
Our air navigation technicians, engineers and ICT experts have typically completed a technical training course at a university or higher institute of applied science, and then domain-specific postgraduate courses. These can be taken at domestic or foreign academic institutions.

Behind the air navigation service technologies, there are people with specialist knowledge and skills such as:

- College or university degree in applied sciences, education in an institute of technology or technical university
- Professional experience in a technical domain
- Further specialised technical training (in electrical technology, electronics, high-frequency technology, software programming, information and communications technologies or network technology).

In addition to the necessary technical expertise, project management skills are required.

Candidates must also demonstrate a high degree of self-discipline and flexibility, and be able to cope with significant physical and psychological demands. Working across linguistic and cultural borders also requires the ability to work in teams.
What we offer

• Exciting environment
• Innovative projects
• Fascinating industry
• Responsibility
• Development opportunities
• Continuous training

“Supporting a wide range of services within a highly demanding operational environment is our daily challenge. Beyond technology, providing efficient, top-quality and always-safer solutions relies on a priceless factor: the men and women working at skyguide.”

Arnaud Collet
Head of Network Integration

“The strong support and recognition given to internal mobility by the management is a great motivational factor, and leads to a win-win situation. Employees have opportunities to develop their skills, and the company can rely on highly qualified personnel.”

Marie-Laure Glassey
SESAR Technical Account Management

“As a team, we strive to get involved as early as possible and play an active integrating role from an air navigation perspective. Adequate communication, transparency and improved assessment accuracy are key to the success of our mission.”

Catherine Huguenin
Facilitation Manager Wind Energy

“Engineers at skyguide not only provide technical services, but more satisfyingly make a tangible contribution to improving the safety and efficiency of air navigation services. Skyguide provides enough support and leeway for us to develop and implement innovative solutions.”

Hervé Demule
Navigation Engineer
You will have the opportunity to work in a rapidly developing field with strong future prospects and perspectives.

We strive to offer an environment in which exceptional people can perform exceptional work. To this end, skyguide is committed to promoting the development of all its employees.

Our specialists work in a fascinating and exciting industry, where they have opportunities to follow a variety of career paths. As well as performing challenging technical duties, our technical personnel play a part in the development of interesting and innovative projects, where management skills play an important role.

Skyguide regards leadership as a cornerstone of its corporate culture, and defines empowerment, delegation and responsibility as prime characteristics.

With this in mind, our company provides continuous training that aims at promoting career development. Indeed, many of our air navigation service technicians and engineers move into management or specialist consulting positions. In these capacities, they may find themselves representing skyguide’s and Switzerland’s interests on international and supranational bodies.

“Are you looking to make your career move to the next level? Skyguide offers you the opportunity to leverage your skills in a dynamic and innovative environment.”
“Skyguide is constantly looking for engineers and ICT experts to keep up with the fast-moving realities of aviation and information technology.”
"We are looking for both change and stability."

KLAUS MEIER - Chief Information Officer

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