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.

> "The programme can only be successful by introducing best-in-class IT practices"

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.