Audit of the Virtual Centre project
Skyguide

Key facts

The Virtual Centre Programme is a key component of skyguide's strategy and is part of the ongoing developments in European airspace. Its aim is to create a harmonised Swiss air traffic management system between the two main sites in Wangen and Geneva, as well as a common technical platform. Initially budgeted at CHF 262 million, the programme is to be implemented in three stages between 2011 and 2024.

In its audit, the Swiss Federal Audit Office (SFAO) focused on stage 2 of the programme (VCT2). This lays the foundations for location-independent air traffic management and establishes new working methods. The second tranche, budgeted at CHF 122.5 million, began in 2016. The SFAO examined the steering and management of VCT2, as well as the relevance of its reporting and the reliability of its medium-term financial planning. Finally, it ensured that information security requirements were considered.

Many outcomes had already been implemented at the time of the audit. However, the programme is experiencing delays and cost overruns are to be expected. For this reason, the VCT2 programme management recommends, among other things, increasing the budget to CHF 133 million (+8%), completing the work in 2020 and reducing the scope of the programme.

Programme steering and management are generally adapted to the scale of the task...

VCT2 was correctly initiated and the prioritisation of the programme in skyguide's portfolio of activities was validated by management. The programme's organisation and the involvement of the governing bodies and federal offices concerned are adequate. The steering system, based on annual work stages, provides for a step-by-step commissioning process based on the results.

The basis for programme management is complex but appropriate. The SFAO noted in particular a multi-level planning and monitoring process and the use of agile working methods. The SFAO did not find any reason to doubt the relevance and validity of the conditions for monitoring work progress. Overall, the SFAO considers the organisation and the quality management process within the programme to be adequate.

... but changes are to be expected and financing uncertainties exist

The SFAO also considers the risk management process for VCT2 to be appropriate. However, the SFAO highlighted that the Programme Director is responsible for this process and that the independence of his role is not assured. The SFAO recommended correcting this.

During the audit, the greatest risks identified concerned the management of organisational change. Despite the efforts made in terms of communication, resistance to change is difficult to overcome. In order to facilitate change management, the SFAO recommended implementing measures to enhance the effectiveness of communication.

In its analysis of skyguide's financing capacity, the SFAO observed that 80% of the fees collected are regulated by the European Commission. This is based on a five-year performance plan which is submitted to Brussels for approval. During the audit, skyguide was preparing its plan for the period from 2020 onwards. Depending on the Commission's decision, the company could face financing difficulties in the medium term. The SFAO supports skyguide in its intention to plan alternative financing strategies from autumn 2019 in order to ensure the company's continued operation.

Transition to new development approaches under way

The SFAO noted that the transition towards new working methods, such as agility or short delivery cycles, is under way. Users can specify their requirements and prototypes are being produced. The tools and platforms implemented are well established. Nevertheless, several sensitive aspects need further refinement (e.g. the arrangements for approvals in short delivery cycles). The foundations for the architectural approach are defined, including the starting architectures, the target and the necessary annual transitions. However, the evaluation of the achievement of the annual transition milestones and their updating have not been systematic. The SFAO insists that this should be done from autumn 2019 as planned.

The tests are conducted professionally and users are actively involved. However, the SFAO expects information security requirements to be better integrated into the tests. Their results are incorporated into the validation processes prior to commissioning. Clear stages are defined and followed for the implementation of the functionality blocks. Skyguide specialists are actively involved in preparing for commissioning (training, support). Despite this, problems can occur after deployment. Appropriate measures are taken to deal with them.

Challenges in IT security and operation

In the SFAO's view, the programme does not take sufficient account of increased information security requirements. The instruments currently used do not allow for a concrete definition and rigorous monitoring of the objectives to be achieved in this area. In terms of protection and residual risks, the situation is not clearly represented. The steering bodies are therefore unable to deal with them accordingly. The SFAO recommended that skyguide remedy the situation.

The technical development of VCT2 and the relocation of some activities to Bulgaria are changing the role of IT operation. The SFAO observed friction in workflows and interfaces with external service providers. It recommends analysing and optimising these processes, as well as ensuring increased and systematic monitoring of privileged users' activities in the production systems.

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