

Audit of the implementation of the cloud strategy

Federal Chancellery – Digital Transformation and ICT Steering Sector, Federal Office of Information Technology, Systems and Telecommunication

Key facts

Cloud computing is a key element of the Federal Administration's digital transformation. It should allow it to carry out innovative projects more rapidly, in a more agile manner and at lower cost. With this in mind, in 2020 the Federal Council adopted a cloud computing strategy. This sets out the possible details for service provision, specifically the Confederation's internal service providers' private clouds, external suppliers' external clouds and combined (hybrid) clouds. In particular, it underscores the new option of public clouds. Finally, it proposes an organisational model which describes the roles of the different stakeholders as regards governance, intermediaries (cloud service broker, CSB) and cloud operation. The Federal Chancellery's Digital Transformation and ICT Steering Sector (DTI) is responsible for implementing this strategy.

The Swiss Federal Audit Office (SFAO) audited the implementation of this strategy. It found that the majority of milestones had been reached, but that some points remained outstanding. In particular, the levels model needs to be refined and a framework developed for the use of software as a service (solutions hosted in the cloud). A process governing improvements to tools and better opportunities for stakeholders to exchange experiences also need to be put in place.

The milestones for implementation have been defined, but work is not yet finished

The cloud computing strategy defines eight milestones up to 2025, as well as the details of the products to be supplied. The majority of these products have been designed, some of them with a delay, and some others still need to be finalised. As particularly important findings, the SFAO noted among other things that framework contracts had been concluded with five public cloud service providers for a total of CHF 110 million. The DTI Sector has also drawn up different basic documents, especially a legal framework and the principles for using public cloud computing services. Various examples and a first-generation decision-making support tool have also been created.

The specifications for the CSB and the clarification of the appeals procedure (currently being validated), as well as the update of the strategy for the network of computer centres, were still outstanding at the time of the audit. The implementation of the target organisational model is ongoing. The Federal Office of Information Technology, Systems and Telecommunication (FOITT), in its role as CSB, continues to extend its range of public cloud guides and implementation aids aimed at service recipients.

The levels model and the principles need to be completed; the risks and opportunities have been defined overall

The currently applicable model describes four cloud computing levels (two for the public cloud, and two for the private cloud) and one level representing classical operation in the federal computer centres. Designed as an orientation aid, it does not clearly delineate the levels, nor does it clearly define all the criteria for choosing a level. The Federal Council has already requested the DTI Sector to clarify the model, and it is in the process of being expanded.

The SFAO found that the principles cover infrastructure as a service (IaaS) and platform as a service (PaaS), but not software as a service (SaaS), although the latter was included in the strategy. The SFAO has requested the DTI Sector to draw up a framework for the use of SaaS.

A detailed risk/reward analysis exists only for the public cloud in general, rather than for each level of the model. However, these elements form a sufficient working basis for the activities – assessment of the legal basis, risks and profitability – which the service recipients must continue to carry out within their cloud projects. In addition, the DTI Sector constantly monitors technological developments and the legal aspects of using cloud computing.

The stakeholders are sufficiently involved, but it must be made easier for them to exchange experiences

The stakeholders in the implementation process for the cloud computing strategy, and their roles, have been defined. They were sufficiently involved in the compilation of results. These results have been validated by the DTI delegate.

By contrast, there is no platform for exchanging the lessons learnt from cloud computing implementation projects. The learning curve is steep and the stakeholders have differing levels of maturity in using these technologies. The SFAO has requested the FOITT, together with the DTI Sector, to set up such an exchange platform. The aim is to share good practice and avoid certain errors being repeated in the projects.

The first generation of work tools should be completed and a process for managing work priorities should be put in place

The DTI Sector and the FOITT have implemented a first generation of decision-making aids (guides, processes, assessment grids, etc.) for using cloud computing services. This offering is regularly updated. However, access to documents is not always easy. Moreover, there is a lack of models or work tools for certain stages recommended in the principles.

The SFAO noted that some concepts for determining the appropriate cloud level are still unclear. In addition, the Federal Council still has to provide clarification on the question of digital sovereignty. Finally, developments in technologies and legal aspects, as well as the increasing skills of the stakeholders, will require new tools. A dedicated process needs to be put in place in order to prioritise implementation of the most useful tools and improvements.

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