Audit of the key project new production systems (NEPRO)

Federal Office of Topography swisstopo

KEY FACTS

swisstopo is modernising its production platform with the programme "New production systems", or NEPRO. This will cost CHF 65 million and is essential, as the implemented ArcMap software version will reach the end of its life at end-March 2026. The entire production chain for geodata is due to be optimised at the same time. This ranges from aerial photography of Switzerland to the provision of geoproducts. This product range is very broad and includes printed maps and the digital equivalent in the form of a map viewer in the federal geodata portal.[7]

With a planned rollout time of ten years, at the time of the audit NEPRO had reached the halfway point and some of its projects were in the realisation phase. Such a large-scale programme took swisstopo into uncharted territory, and NEPRO got off to a slow start. This challenge and the associated weak points were already mentioned in the first audit by the Swiss Federal Audit Office (SFAO) back in 2022, which was critical of the situation.[8] swisstopo subsequently opted for a new implementation variant. The focus was to be placed on the technical migration, in order to fulfil the legal mandate. The production chain is only due to be optimised in a second programme phase, during live operation. These aspects were still being worked out at the time of the audit, and will not be available until October 2024.

In the SFAO's view, there is a significant need for action in two areas. First, the promised benefits of NEPRO and the programme goals should be given more definition and a binding quality; second, the impact of the new implementation variant has not been sufficiently assessed or addressed. The new programme head, who started in April 2024, has identified the key deficiencies in the programme setup. First positive results have been achieved, but they are not enough for the current status to be rated as satisfactory. The majority of the recommendations therefore remain open, as they concern the main basis for the programme.

Promised benefits too vague to justify the CHF 22 million for the second tranche of the guarantee credit

The variant evaluation underlying the dispatch favours the modernisation of the entire swisstopo production platform. This will require a total guarantee credit of CHF 37 million. This is around CHF 22 million more than a predominantly technical migration to the new software version would cost. This additional benefit is described in terms of programme targets, but these are not very clear. Without a clear promise on benefits and tangible programme goals, the state of the programme's implementation cannot be reliably ascertained. As a result, there is no assessment basis for the release of the second tranche of the guarantee credit, amounting to CHF 19.7 million. swisstopo plans to request this from the Federal Council at the end of 2025.

The stakeholder assessment commissioned by swisstopo revealed potential synergies which could be achieved across all production stages and federal levels. However, there is a lack of tangible business cases with which to fully implement this beneficial aspect of NEPRO. Such cases will be needed, however, if swisstopo also wants to address improvements outside its own production chain. NEPRO's programme goals, including those for the individual sub-projects, are not measurable enough. There is a general lack of consolidated overview and robust progress checks at the level of the programme.

[7] Available from the federal geoportal (www.geo.admin.ch)

[8] "Audit of the DTI key project new production systems" (PA 22157), available on the SFAO website (www.efk.admin.ch)

New implementation variant is appropriate, but impact has not been sufficiently considered

The new implementation variant involves a stepwise optimisation of the production platform during live operation. This will confront swisstopo with a further challenge, as the procedure is new for this office. The future interplay between the core organisation and the programme organisation has not been defined yet, and insufficient consideration has been given to the impact of the new variant. The new programme head has brought a different skillset to the table: project management knowhow rather than specialist geo-knowledge. The entire organisational approach for the second programme phase has yet to be defined.

The programme contains only an incomplete overview along the lines of a portfolio of all projects and involved applications. Moreover, there is only partial compliance with the specifications on the cockpit ICT. The implementation of the specifications on ICT portfolio management is set out in the 2024 service level agreement between swisstopo and the Federal Department of Defence, Civil Protection and Sport.

The budget plan for 2024 has been drawn up, and expenditure of CHF 45.2 million has been budgeted up to the end of the programme in 2029. The difference of CHF 20.4 million compared to the total financing requirement of CHF 65.6 million has not yet been recorded in detail in the programme's cost plan. With the new implementation variant, NEPRO will be divided into two programme phases, which is not yet reflected in the cost plan. As a result, the expenses for the technical migration and subsequent optimisation are not visible in the reporting. The new programme head is aware that a transparent breakdown of costs needs to be presented in order to request the second tranche of the guarantee credit, and for this reason the SFAO has decided to dispense with a recommendation in this regard.

The reports from the independent external quality and risk managers focus heavily on the current time window, i.e. the current programme contents. However, the risk landscape for the second programme phase has not yet been mapped and the impact of the new implementation variant has not been examined. This means that the programme owner does not have a comprehensive external assessment which would allow it to appropriately respond to challenges on the horizon.