

Audit of investment planning and management with regard to prioritising maintenance

Swiss Federal Railways and Federal Office of Transport

Key facts

The Swiss rail network consists of normal, narrow and cogwheel routes, covering some 5,300km in total. The Swiss Federal Railways' Infrastructure division (SBB Infra) is the largest infrastructure operator, with a network share of around 3,265km. Like the other 34 infrastructure operators, it is responsible for the operation, maintenance and expansion of its railway infrastructure.

The Federal Office of Transport (FOT) supervises the construction and operation of the railway infrastructure, among other things. The FOT is responsible for planning the federal railway infrastructure fund (RIF), and thus for financing the uncovered costs of operation, maintenance and expansion. Using a four-year service level agreement, the FOT procures operating and maintenance services from SBB Infra in advance, e.g. structural maintenance for installations and equipment. For the period 2021 to 2024, the service level agreement amounts to CHF 7.6 billion. The FOT orders and finances the expansion projects via implementation agreements with SBB Infra and other infrastructure operators. For the 2035 expansion phase¹, Parliament has approved a total package of just under CHF 13 billion, most of which will go to the Swiss Federal Railways.

By law, the funds drawn down from the RIF must first be used to ensure the operation and maintenance of the railway infrastructure, and only then may they be used for expansion purposes. Against this background, the SFAO audited SBB Infra's long-term investment planning of railway infrastructure and the FOT's RIF planning.

The audit findings revealed a need for action. While SBB Infra has many planning tools which allow for a long-term and strategic approach, maintenance planning applies only a short- and medium-term perspective. SBB Infra has acknowledged this missing link and intends to develop its planning further.

The FOT currently plans the RIF primarily from a financial perspective and gives too little attention to the constraints in terms of construction feasibility, such as construction time slots in particular. As at 31 December 2021, SBB Infra reported a maintenance backlog amounting to over CHF 6 billion. The FOT considers this figure to be unreliable and sees no need for action. The RIF does not contain a planning dimension for the maintenance backlog, and this constitutes a financial risk.

Challenges of building alongside operation

The rail system has limited resources. Implementation of the timetable and construction activities alongside operation are competing for the available time windows. The main constraint is posed by the increasingly short and sometimes non-existent construction time

¹ The package for the 2035 expansion phase, which was approved by Parliament in 2019, is aimed at relieving bottlenecks in the rail network (including by increasing long-distance and local traffic).

slots, as well as the availability of construction and staff resources. This has given rise to a first round of corrections. For instance, the 2035 expansion phase will be executed a few years later than planned, which should free up the necessary capacity for maintenance in the short and medium term.

Feasibility of construction volume alongside operation must be more reliable

The implementation of maintenance and expansion work is largely dependent on the available capacity and resources alongside operation. In order to ascertain the extent to which the planned projects can be implemented in the available time slots and with the available resources, SBB Infra developed a "driveability line" based on historical values. As an early warning system, this shows what is achievable and how large the gap to the target is.

Since the estimation of the line is not sufficiently broad-based, the SFAO recommends that SBB Infra provide additional, reliable data for the line.

The reported volume of the maintenance backlog is not reliable and there is no reduction plan

The maintenance backlog reported voluntarily by SBB Infra in its network status report has been rising for some years now, and will continue to grow in the future, according to the plan. In the SFAO's view, the calculation of the backlog is not sufficiently reliable, and the FOT has questioned it. The SFAO is therefore recommending that SBB Infra quantify the backlog in a comprehensible way.

In addition, the SFAO recommends that SBB Infra draw up a plan to reduce the maintenance backlog and to show it in the existing SBB planning tools.

The potential maintenance backlog is not taken into account in the railway infrastructure fund

The FOT is primarily responsible for the financial operation of the RIF. At the time of the audit, SBB Infra was still in the process of defining the maximum feasible construction activity that could take place alongside operation. As a result, it is not yet possible to include this in the RIF planning.

The SFAO recommends that the FOT make a financial disclosure for all infrastructure operators indicating a maintenance backlog, and draw up a plan to reduce it. The results are to be included in the RIF planning.

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