

E-voting

Electronic vote casting for Switzerland

As a modern and innovative country with direct democracy, Switzerland is ideally placed to enable its citizens – both at home and abroad – to cast their votes electronically. In 2023, the Federal Council granted the cantons of Basel-Stadt, St. Gallen, Thurgau and Graubünden initial authorization to recommence trials of Swiss Post's e-voting system. This allows Swiss citizens resident abroad to participate electronically in votes and elections. In the Canton of Basel-Stadt and in various pilot municipalities in the cantons of St. Gallen and Graubünden, this option is also available for people with disabilities. The cantons and the Federal Chancellery have a favourable view of the system's use in votes and elections to date. By creating the e-voting system, Swiss Post has performed pioneering work and developed a system with complete verifiability.

E-voting offers numerous advantages for the cantons, for municipalities and for voters: for example, votes can be cast wherever and whenever it is convenient. This is particularly beneficial to Swiss citizens resident abroad. E-voting also makes it easier for people with disabilities to cast votes in elections and referendums without the help of third parties. The opportunity to cast invalid votes is eliminated, and the results can be determined quickly.

Swiss Post believes that e-voting meets the requirements of Swiss voters. The company aims to help ensure that e-voting can become an instrument of political participation in a modern Switzerland. That's why it has developed the first e-voting system with complete verifiability for Switzerland. Through its e-voting endeavours, Swiss Post is digitizing a concept that is already part of its core competence: the secure transport of confidential information. E-voting is one of Swiss Post's services for a digital society, which is a key part of the "Swiss Post of tomorrow" strategy.

Swiss Post develops its system based on the Confederation's legal framework. The cantons will decide if and when they want to provide their voters with the option of voting electronically in a trial operation.

The Federal Council has granted initial authorization, has a positive view of the system's previous use

In 2019, the Federal Council decided to stop and redesign the trial operation of e-voting. Discussions were held with the research community, the Swiss Confederation and the cantons. The results of this dialogue were fed into the redesign process. The new legal basis for the first stage of the electronic voting trial operation came into force on 1 July 2022.

Swiss Post developed a secure e-voting system for Switzerland at its cryptography center in Neuchâtel. In 2021, Swiss Post disclosed its e-voting system to experts from around the world. Since then, the system and its operation have been reviewed and continuously improved by independent experts on behalf of the Confederation and by ethical hackers as part of a bug bounty programme and a public intrusion test. On 3 March

2023, the Federal Council granted the cantons of Basel-Stadt, St. Gallen and Thurgau initial authorization to resume trials with electronic voting. Swiss Post's e-voting system made its successful debut during the vote on 18 June 2023. At the National Council elections on 22 October 2023, fully verifiable voting was possible for the first time thanks to Swiss Post's e-voting system. The cantons and the Federal Chancellery have given a favourable assessment of the system's use to date.

On 22 November 2023, the Federal Council granted the Canton of Graubünden initial authorization for the trial operation. In the Canton of Graubünden, the system was used for the first time in the vote on 3 March 2024. Further cantons will follow. E-voting will be continuously improved and reviewed in the future. Experiences with practical usage of the system will be harnessed for this purpose. The need for action identified in the various reviews has been set out in a catalogue of measures drawn up by the Confederation, the cantons involved and Swiss Post. Swiss Post will continuously develop the system in accordance with the areas of action outlined in the catalogue of measures.

In e-voting, there are two main methods for verifying that the overall process of the electronic vote/election has been carried out correctly. Firstly, voters can check for themselves that their vote has been registered in the electronic ballot box as they cast it (individual verifiability). To do so, voters can use the choice return codes that they received from the canton with the voting documents.

Secondly, the validators employed by the canton can check the entire electronic ballot and identify any manipulation attempts (universal verifiability). The electoral commission uses verification software for this purpose.

Swiss Post's e-voting system enables both verification levels and, in turn, provides complete verifiability. Under the Confederation's new legal framework, only fully verifiable systems can be used for e-voting in Switzerland.



The following issues are important to Swiss Post

– Swiss Post fully supports the goals and strategic approach of the redesign

In Swiss Post's view, the revised ordinances provide a solid foundation for a smooth e-voting trial operation.

The extensive, transparent dialogue with experts in the fields of IT, cryptography and political science during the creation of the proposals was valuable and essential for fostering trust in e-voting over the long term. Trust and security have always been top priorities for Swiss Post with respect to the transmission of sensitive data, such as data subject to electoral or voting secrecy.

– Transparency is increased, and the inclusion of the public is promoted

Swiss Post already pursues a systematic transparency strategy and has disclosed its fully verifiable e-voting system in stages as part of a [community programme](#). Since 2021, Swiss Post has allowed expert groups and hackers to test its new e-voting system. With a view to transparency, Swiss Post continually provides information regarding the next steps and the results, including on its [e-voting blog](#). Swiss Post is also making significant parts of its e-voting system available under an open-source licence, including cryptographic components of the system and the separate verification software. This means that Swiss Post is exceeding the requirements of the partially revised Ordinance on Political Rights (PoRO) and the completely revised Federal Chancellery Ordinance on Electronic Voting (OEV) in terms of transparency and openness.

– Security is strengthened

Security is the key to acceptance of the system among the Swiss public. In accordance with the legal requirements, only systems that provide complete verifiability are permitted. This is a significant change compared to the previous e-voting trial operation and the most important measure in terms of increasing security.

– The limitation of the electorate for the relaunch is transparent but restrictive

There was a limitation in the previous trial operation, but only for systems with individual verifiability. As only systems with complete verifiability are to be used in future, which means that significantly higher security requirements apply, the limit of 30 percent at cantonal level and 10 percent at national level seems restrictive in our view. Swiss Post believes that this limit hampers the expansion of e-voting in the cantons, as it has an impact on the cantons' willingness to provide e-voting.

Complete verifiability

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Swiss Post's position

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[E-voting](#)

[Online voting and elections](#)

