



Public Intrusion Test

Fact sheet produced by the Federal Chancellery

25 February 2019

Initial situation

- In the almost 20-year history of electronic voting a further important step in terms of transparency and security is imminent: the introduction of completely verifiable systems.
- E-voting was first used in federal votes in 2004 and since then voters have voted electronically around 850,000 times in federal ballots.
- E-voting forms part of Switzerland's eGovernment strategy: voters should be given the possibility of barrier-free, mobile and verifiable votes.
- According to the 2017 National eGovernment study, 67% of the population would like to make use of e-voting.
- E-voting guides voters through the process of casting their votes in elections and ballots, thereby preventing invalid votes. The process of counting votes is also improved.

Milestones

- The current trial phase is based on Art. 8a of the Federal Act on Political Rights (SR 161.1). Today trials are being conducted in 10 cantons, which are limited to 30% of the cantonal electorate. Legal bases for these trials exist both at federal and cantonal level.
- There have been no security-related issues in over 300 successful ballots held in 15 cantons.
- During this time, detailed regulation setting out high security requirements for e-voting have been incorporated into the Ordinance on Political Rights (SR 161.11) and the Federal Chancellery Ordinance of 13 December 2013 on Electronic Voting (SR 161.116).
- The procedure is being carried out on a gradual basis following the principle of security before speed. The risks associated with e-voting are well known and this is reflected in the security requirements.
- In terms of security measures, verifiability is key. It ensures the reproducibility of the vote and of how the results were reached. Voter secrecy is assured at all times.

- In 2015, systems with individual verifiability were introduced. Under such systems, and in contrast to other voting channels, voters can trace that their votes have been registered in the system unaltered.
- The Federal Council has delivered 3 reports to Parliament on the trial phase; these reports have been published. In the course of almost 20 years there have been numerous procedural requests calling for the more rapid introduction of e-voting to a total halt to the trials.

First completely verifiable system

- Swiss Post is presenting the public with a completely verifiable system for the first time.
- According to the revision of the Electronic Voting Ordinance in 2018, the source code must be released before such a system can be used for the first time. Furthermore, the Confederation and the cantons also agreed on the need to run a public intrusion test (PIT).
- The publication of the source code and the PIT are responses to political demands made in 2014.

PIT in a nutshell

- The PIT stands under the principle of 'security before speed'. It is part of a series of measures to ensure the security of e-voting.
- The implementation of the federal government's high security requirements has already been assessed as part of various certifications. These must be continually renewed. The PIT is an additional measure.
- Interested parties from around the world will be allowed to attack the e-voting system developed by Swiss Post for four weeks, without making themselves liable to prosecution. Under the PIT it is permissible to manipulate votes and to read them. To date over 2,000 people have registered to take part.
- The PIT should generate additional findings in terms of security by allowing as many people as possible to test the system.
- The PIT promotes transparency. It gives independent experts an opportunity to scrutinise e-voting. Their findings will contribute to the public debate.
- The PIT does not guarantee the security of the system, nor does it decide whether the system will be introduced. The Federal Council and the Federal Chancellery will decide whether to issue a general licence and authorisation once a canton has submitted a corresponding request.

Next steps

- The introduction of completely verifiability is a further important milestone in the field of electronic voting.
- In December 2018, the Federal Council opened the consultation on a partial revision of the Political Rights Act. Under the revised act e-voting would shift from trial operation to regular operation, becoming the third voting channel. Even under regular operation the introduction of e-voting would remain in the responsibility of the cantons. The consultation on the partial revision of the Political Rights Act runs until the end of April 2019. The Federal Chancellery will then submit a consultation report to the Federal Council.

Chronology

2000	Launch of Vote électronique project with three pilot cantons (GE, NE, ZH)
2002	1st Federal Council report on Vote électronique
2003	Partial revision of the Political Rights Act and Ordinance to allow e-voting trials
2004	First e-voting trials for federal votes
2006	2nd Federal Council report on Vote électronique
2010	Trials in 12 cantons using three different systems: NE system, Consortium system (ZH, AG, FR, GR, SH, SG, SO, TG) and GE system (GE, BS, LU)
2011	First trials in four cantons (BS, AG, GR, SG) at National Council elections
2013	3rd Federal Council report on Vote électronique
2014	Entry into force of new legal basis (partial revision of Political Rights Ordinance, entry into force of Electronic Voting Ordinance) with new security requirements in particular implementation of complete verifiability and certification
2015	First use of system with individual verifiability, trials in 14 cantons, National Council elections in four cantons, consortium dissolved
2016	First use of Swiss Post system (with individual verifiability)
2017	New planning instrument for Confederation and cantons, Federal Council decree on work to transfer e-voting from trial phase to regular operation.
2018	Final report of Vote électronique Expert Group, partial revision of Electronic Voting Ordinance (publication of source code), Federal Council decree to open consultation on revision of Political Rights Act
Q 1 2019	Publication of source code for Swiss Post's completely verifiable e-voting system, opening of registration platform for public intrusion test, running of public intrusion test
Q 2/3 2019	Publication of results of public intrusions test, consultation report / Federal Council decision on next steps

Current trials

- Over 300 e-voting trials have been carried out in 15 cantons since 2004 as part of federal votes and elections.
- Voters have voted electronically around 850,000 times at federal votes and elections.
- According to national e-government studies, a majority of the population is in favour of the introduction of e-voting. User figures from the respective ballots also show that there is a demand for e-voting on the part of voters, and that there is trust in this additional voting channel.
- E-voting is currently available in 10 cantons.
- System providers: Canton of Geneva* (BE, LU, AG, SG, VD, GE) and Swiss Post (FR, NE, BS, TG)

* In November 2018 the Canton of Geneva notified that it would no longer continue to develop its system and that it would cease to operate its own system from 2020.

Joint project on the part of the Confederation and the cantons

Since 2000 the Confederation and the cantons have been working together on electronic voting. The Confederation regulates the exercise of political rights in federal matters (Art. 39 Federal Constitution). The cantons are responsible for running federal ballots and issue the necessary regulations. The Federal Council and the Federal Chancellery decide on the use of electronic voting in federal ballots. Only systems which fulfil the high security standards set out in federal law will be authorised.

Information on the security of e-voting



Information from the Federal Chancellery on the security of e-voting and corresponding measures can be found here:

www.bk.admin.ch > [Political Rights](#) > [E-Voting](#)

Further information on e-voting and the public intrusion test can be found here:

www.bk.admin.ch > [Political Rights](#) > [E-Voting](#) > [Public Intrusion Test](#)