Working session III 1) New voting technologies, voting procedures

- *Moderated by Siri Dolven, Head of Election Section, Deputy Director at The Norwegian Ministry of Local Government and Modernisation.*

-The Norwegian ministry has the overall responsibility for election legislation in both national and local elections. We own, develop and maintain the electronic system the municipalities and counties use to conduct the elections. From the first of January this year a new Election Directorate has taken over the responsibility for this system.

The topic for this working session is new voting technologies and voting procedures. As we have heard earlier in this conference that the EMBs meet many different challenges when the idea of new voting technologies are introduced. New voting technology can lead to improvements in efficiency and quality, and could contribute to cost reduction.

As an introduction to this session I would like to share some of the challenges we meet in Norway during the trials with internet voting in 2011 and 2013. I will also explain way these trails were discontinued in 2014.

The idea of voting via the Internet was introduced in Norway when the ministry established a working task group in 2004 to discuss future use of electronic voting in Norway.

In 2008 it was decided to carry out a pilot with internet voting. The reasons for this trial was that we wanted to increase accessibility for voters in general, but also for voters with disabilities. We were motivated by expectations from new generations of voters.

The central conditions for the trials was that the voters trust in the elections and the secrecy of the vote should not be compromised.

We hoped that it could increase turn-out, despite earlier research that showed that electronic voting does not affect turnout in any way.

The Norwegian election law has a provision witch gives us the opportunity to try out other ways to conduct elections than required by law, without making law amendments.

The election law will apply in trials, unless the special regulations states otherwise.

The trials in the local election in 2011 was carried out in 10 municipalities. In the national election in 2013 12 municipalities took part in the trials.

The key premises in designing the e-vote system was:

- Voting from standard computers
- Use of existing authentication infrastructure (IDporten) in Norway.
- A government owned and operated system
- Full transparency of process and solution

In order to maintain the principle of the secrecy of the vote and other standards:

- The Electronic voting should only be a supplement
- Internet voting was only possible in the advance period,
- A possibility for e-voters to vote again as many times as they wished (prevent undue influence and coercion)
- A valid paper vote would always override any electronic vote
- Identification and authentication solution (eID) based on a high level of security

- A technically safe and reliable system; it did not reveal any connection between the voter and his/her vote

The Norwegian e-voting system was a complex system:

It generated mathematical proofs for correctness and integrity that were generated by the counting process.

It was also checked and verified by a 3rd party.

Documentation as to how the system was constructed, how it worked, including detailed specifications and architecture documents, was available to the general public on the Ministry's website.

We had comprehensive research and evaluation projects both in 2011 and 2013

So, what was the learning points from the trials in Norway:

- It was a high level of trust in the technical solution
- It was popular with the voters, but it did not increase turn-out.
- It was also difficult to inform the public about the security mechanisms.

Way was Internet voting possible in Norway?

The legislation for piloting different voting methods was in place, we also have a very high trust in central election administration and elections in general.
There are a relatively low level of political conflict, or no history of electoral fraud.

We had the economical and academic resources to implement a secure Internet voting solution.

About 98% of the population have access to Internet from home, and a lot of public services are commonly available online.

There was heated political debate about the trials. Both times the majority in the Parliament initially wanted to stop the trials mainly based on the principle of a secret ballot and how to prevent undue influence. However, the Government wanted to try out e-voting and convinced the majority to conduct the trials.

In 2014 the Ministry decided to discontinue the trials. The reason behind this decision is that there has been political disagreement about the trials, and in Norway it is a goal to have political consensus on how elections are conducted. The Government also wanted to make sure that the voters' high confidence in the Norwegian election process was safeguarded. The lack of public knowledge of central security mechanisms was also an argument behind this decision.

We do not use technology in the voting process in Norway now, but we still use technology to conduct elections. The municipalities use the electronic administrative system called EVA we have developed to conduct the elections, about 200 municipalities use the solution for scanning the ballots. All tabulation and reporting of results are done using EVA. We also had trials with electronic mark of in the electoral roll in the last three elections. A few weeks ago we put a proposition before the Parliament to amend the election act so the municipalities themselves can choose to use this in future elections.

This was a short summarize of the Norwegian experience with new voting technology. It would be interesting to hear about other experiences and challenges when new voting technologies are discussed or introduced.

Questions:

What type of new voting technologies has the biggest potential for improving elections?

Voting machines?
Internet voting?
Voting technology for special groups? (citizens that live abroad…)
Administrative systems, scanning etc ?

What considerations should be made when considering to adopt new voting technologies?

- Voters experience?
- Accessibility?
- Safety and trust
- Efficient conduct of elections
- Cost reduction?

Do you see any potential disadvantages in using technology from third parties (private companies)

- Will that compromise safety and trust?
- How can we ensure openness and transparency when using private vendors??
- Who has de facto control over the conduct of elections?

In Norway we had a monopoly situation before the development of the electronic system and the trials. As a consequence the systems were expensive to use for the municipalities. We also experienced that the commercial system not always implemented changes in the election law, and that crucial knowledge on how elections were carried out was concentrated to a few persons in a private company.

- How can the election management bodies ensure that voters trust new voting technologies?

How can the adaptation of new voting technology affect the legislation?

- Should the law adapt to the technology or should technology adapt to the law – the laws are often passed without the use of new voting technologies in mind.

Certification of voting equipment - who should control and "approve" the systems and the machines used for voting?

- How do one ensure trust and transparency?

Are there any potential problems in depending on technological expertise?

- Should the election management bodies recruit personnel with such skills? Or is it ok to rely on consultants and collaboration with private companies?
- Do you have any experiences or advice on how to facilitate for a fruitful and efficient collaboration between different disciplines? Such as IT, Cryptology, social science and law.