

# DIGITAL TECHNOLOGIES IN ELECTIONS

Questions, lessons learned, perspectives

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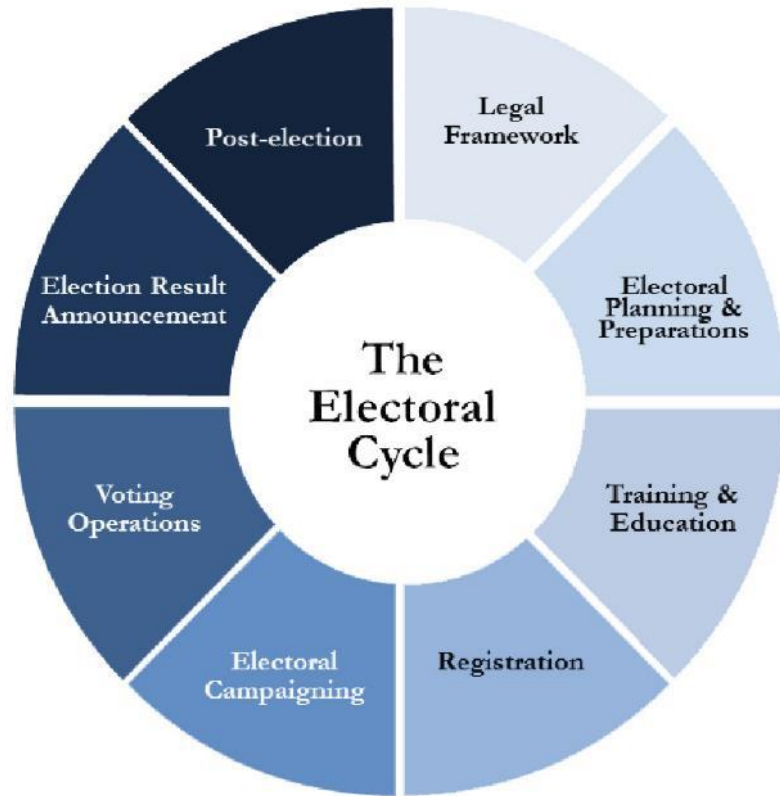
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# Overview of digital technologies used in the electoral cycle

(Council of Europe/CDDG study)



# Overview of digital technologies



- «election cycle» vs. «specific digital solution»
  - Regulating the use of digital technologies in elections from an «electoral cycle» perspective
  - Use of digital technologies at some point in the process/cycle may affect its other elements
  - Some important issues are transversal: data protection, cybersecurity, cooperation with private sector
  - Knowledge and capacity building: CEC staff, Parliament...



# Overview of digital technologies

- Digitization of documents and processes
  - e-registering, e-identification of voters, e-voting, e-counting, statistics...
  - Issues: constitutional conformity; security; achieving objectives vs. achieving formal equality
- Biometry
  - Unique identification and prevention of multiple voting
  - Issues: how unique and permanent are biometric characteristics; are they easy and fast to collect and use; is such use accepted by voters; is it secure?
- Blockchain
  - Decentralised, transparent and immutable electoral data and processes
  - Issues: vote secrecy, non-publication of intermediary results, security, usability, respect for 'one voter-one principle'



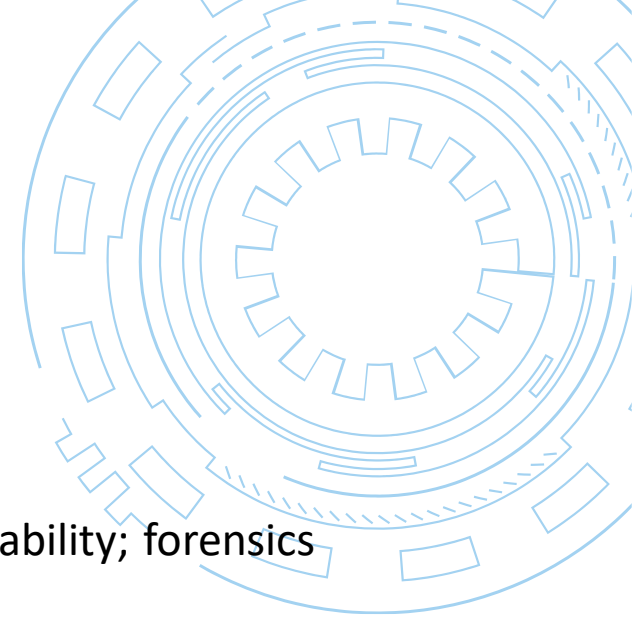
# Overview of digital technologies

- Cloud computing

- Transferring election related IT to the cloud?
- Issues: security; secret suffrage; accountability; interoperability; forensics

- Artificial intelligence

- Direct and indirect use of AI in elections? Training, education, retrieve information?
- Issues: availability and quality of training data; (un)explainability of some AI vs. transparency of democratic decision making; accountability; AI may be used to attack and/or protect connected systems



## Examples of digitised services or processes

BEFORE VOTING DAY



Finding or changing polling station

📍 Hungary



Registration for voting abroad

📍 Spain



Application for postal voting

📍 Latvia



Signature collection for new parties wishing to stand for elections

📍 Denmark



Check and changes to the electoral details

📍 Ireland



Signature collection for national or local referenda

📍 France

DURING VOTING DAY



E-poll books



Electronic journal with all important figures and events

📍 Latvia



Transmission of provisional and/or final voting results from manual counting at polling stations to central entities

📍 Austria, Azerbaijan, Croatia, Cyprus, Czech Republic, Denmark, Estonia etc.



Software assisting with ballot box recording and accounts

📍 Ireland, Scotland, Malta



Electronic data exchange amongst polling stations

📍 Latvia



Seat allocation software

📍 the Netherlands, Norway, etc.

AFTER VOTING DAY



Applications identifying arithmetical errors regarding the data written down on the paper-based election protocols

📍 Romania



Statistical audit methods for checking the plausibility of results

📍 some cantons of Switzerland



Final scrutiny of results

📍 Spain



Registration and publication of data on voter turnout, statistics and information

📍 Croatia, Finland

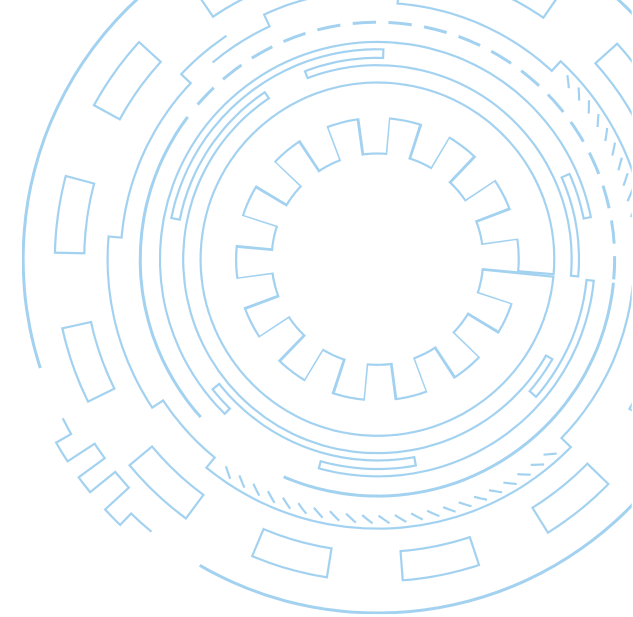
Developing a regulatory framework  
for digital technologies  
used in the electoral cycle

(Council of Europe study, Kyiv)



## Regulatory framework

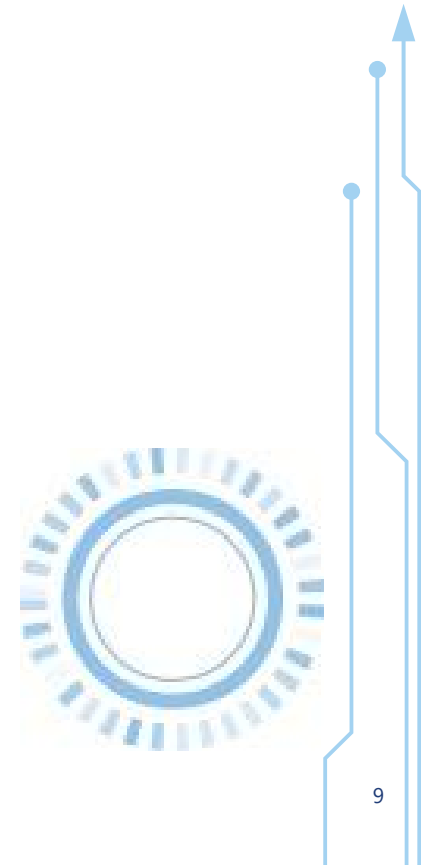
- International legal standards for elections
  - UDHR, ICCPR, ECHR, EU Charter of Fundamental Rights
  - Authoritative interpretations, case law, political commitments
  - Soft law such as Venice Commission Code of Good Practice on Electoral Matters; Council of Europe Recommendation CM/Rec(2017)5 on standards for e-voting; studies and evaluations of existing regulations (e.g. OSCE and Venice Commission joint documents)
- International legal standards for new technologies
  - Council of Europe Convention 108+, EU GDPR, Council of Europe Budapest Convention on Cybercrime
  - Soft law guiding instruments and collections of good practices targeting elections





# Regulatory framework

- Questions for the regulator
  - Problem identification
  - Goals and objectives
  - Benefits and downsides
  - Electoral-cycle approach
  - Multidisciplinary approach
  - A sovereign decision
  - Necessity, form and level of regulation
  - Content of regulation



## Regulatory framework

- A few conclusions
  - Detailed provisions that translate constitutional principles into requirements for digital technologies
  - Identify the problem and set goals and objectives that are «solution neutral»
  - Understand and periodically evaluate benefits and downsides of technology
  - Foresee adequate frameworks, resources and time for genuine multidisciplinary work
  - Regulate transversal issues like data protection, cybersecurity, transparency, private sector order's
  - Understandability and usability of solutions influence their security; transparency is a part of security measures
  - Trust is a precondition for introducing digital solutions.  
It is based on transparency of solutions and independent verification of results



*Council of Europe publication " Digital technologies in elections: questions, lessons learned, perspectives presented on 26 May 2020 during the meeting of the Working group on introduction of new information technologies in electoral process at national and local elections, established under the Central Election Commission of Ukraine, with the support of the Council of Europe project on " Support to transparency, inclusiveness and integrity of electoral practice in Ukraine implemented within the framework of the Council of Europe Action Plan for Ukraine 2018 – 2021.*

