# Functional requirements

## Election preparation

### Create voter's list

### Create candidate/options list

### Set election options (opening time, closing time, results date)

### Set voting rules and counting method

### Recover election settings from another smart contract

### Confirm election creation (if not recovered automatically)

## Vote processing

### Election opening

### Vote collection

#### Voter logs in

#### Voter chooses candidates/options

#### Voter confirms vote

### Election closure

## Election results

### Publish log (date, organisers, list of authorized voters, errors detected)

### Publish election results (vote count for each candidate/option, voter turnout rate, list of voters public IDs)

### Return election results for reutilisation in other smart contracts

# System constraints

## Accessibility

### The voting system is accessible via any browser or OS

### Voter have access to documentation and guides

### The voter can modify its choice before election ends

## Neutrality

### The system's interface guarantees neutrality in the candidates/options presentation

### Blank and black votes can be cast if allowed by voting rules

## Voter identification

### Voters are identified before they can vote

### Voter's login information is known only to the voter and organizers

### Voter's password is known only to the voter

## Vote uniqueness

### Votes are immediately recorded after confirmation by the voter

### Vote validation is provided to the voter after the vote has been received

### Voter turnout and vote count is immediately updated

### Voter turnout can be individually published

## Vote secrecy

### Votes can be linked by no means to the voters' identities

### All communications with the servers are encrypted

### Encryption keys are known only to the voters

### Vote results are not displayed in chronological order

### No information is published before election ends

## System security

### The entire process is protected from any unauthorized manipulation

### Every event is recorded on a log published after the election ends

### The log does not include any voter identity nor vote contents

### The log detects dysfunctions and abnormal behaviors

## Vote count

### No vote can be erased

### No vote can be added if not by a voter who haven't already voted

### Vote count can be verified manually by any person

### Voters can verify their own vote integrity

### Results can be obtained as soon as the vote is over (or at a later date if authorized by election settings)

## System scalability

### Elections can be organized using different voting procedures, ballots, and/or counting methods

### System components (election preparation, vote processing, election results)can be modified without affecting the rest of the system

### System inputs (list of voters, list of candidates, election settings) can be entered automatically using external smart contracts

### System outputs (election results and logs) can be entered automatically into other smart contracts

Highlighted requirements are mandatory.