

# Developing a Legal Framework for Remote Electronic Voting



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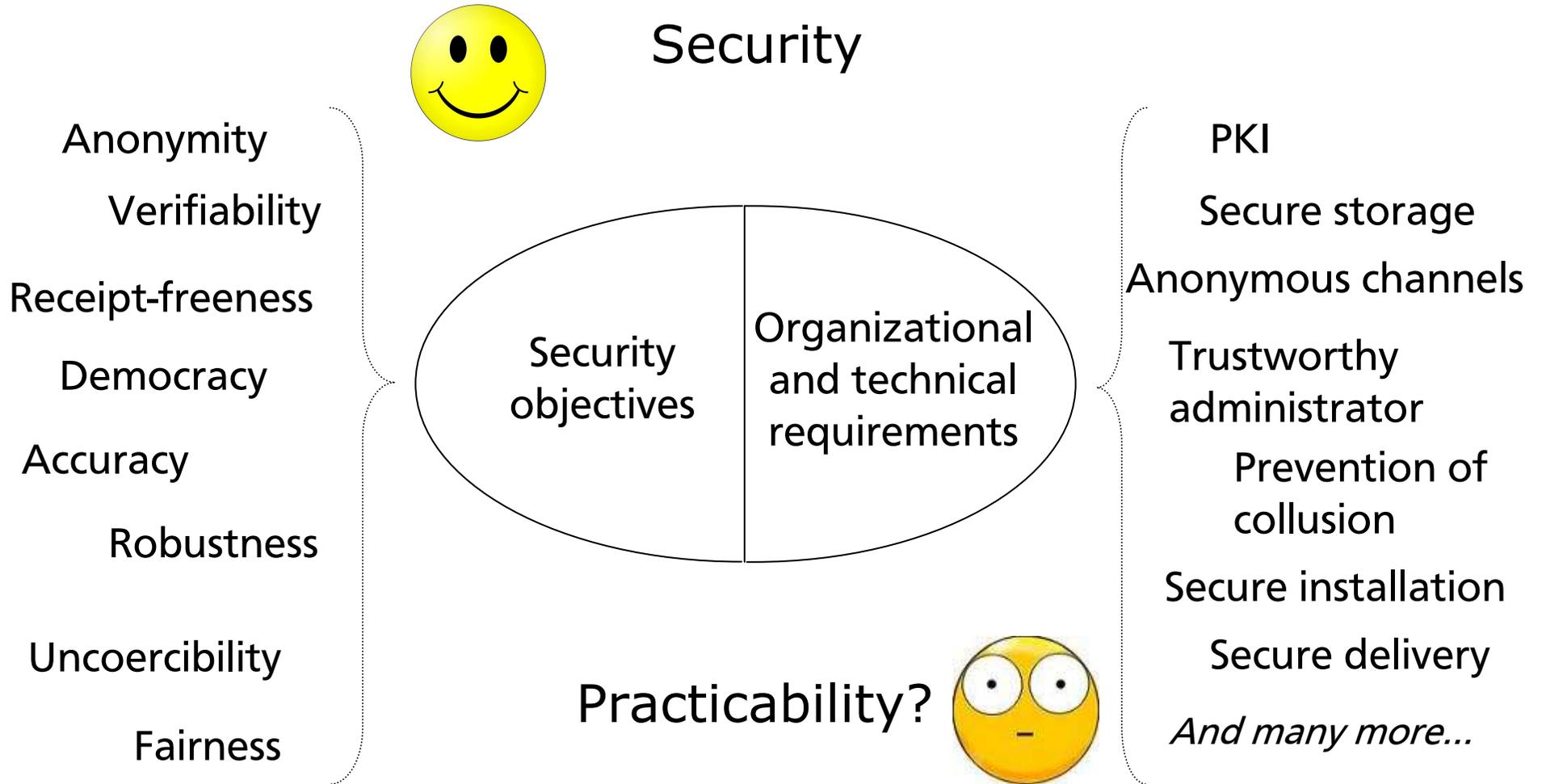
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# Outline

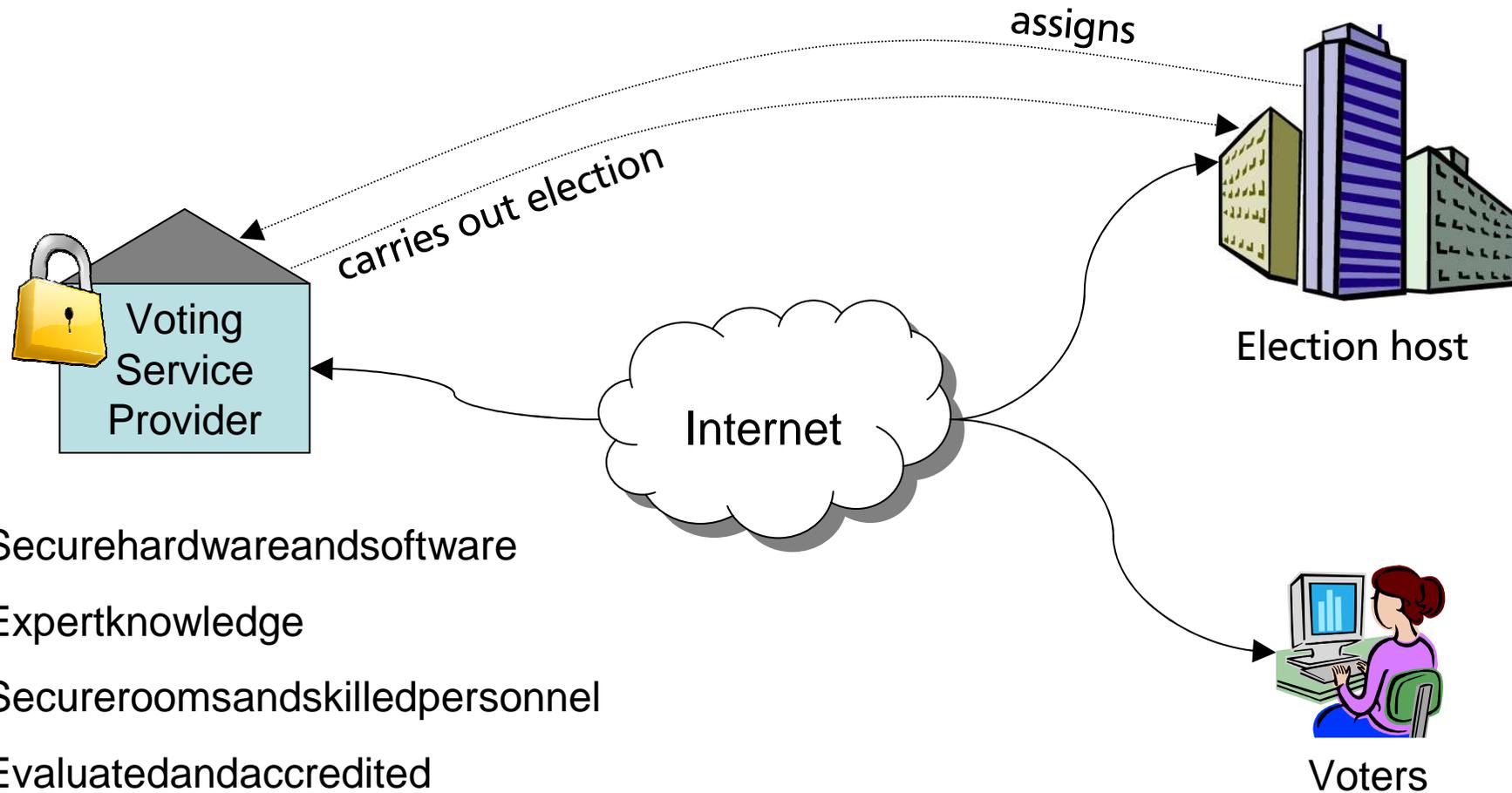


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- Motivation
  - Voting Service Provider
  - Trust concept
  - Legal framework
  - Outlook

# Motivation



# Voting Service Provider



Secure hardware and software

Expert knowledge

Secure rooms and skilled personnel

Evaluated and accredited

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# Voting Service Provider



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## Potential benefits:

The Voting Service Provider concept

- facilitates secure online elections
- reduces effort for election hosts
- reduces costs: one Voting Service Provider for many election hosts
- allows for easy evaluation and supervision
- potential business model

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# Voting Service Provider



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Similar approaches already exist:

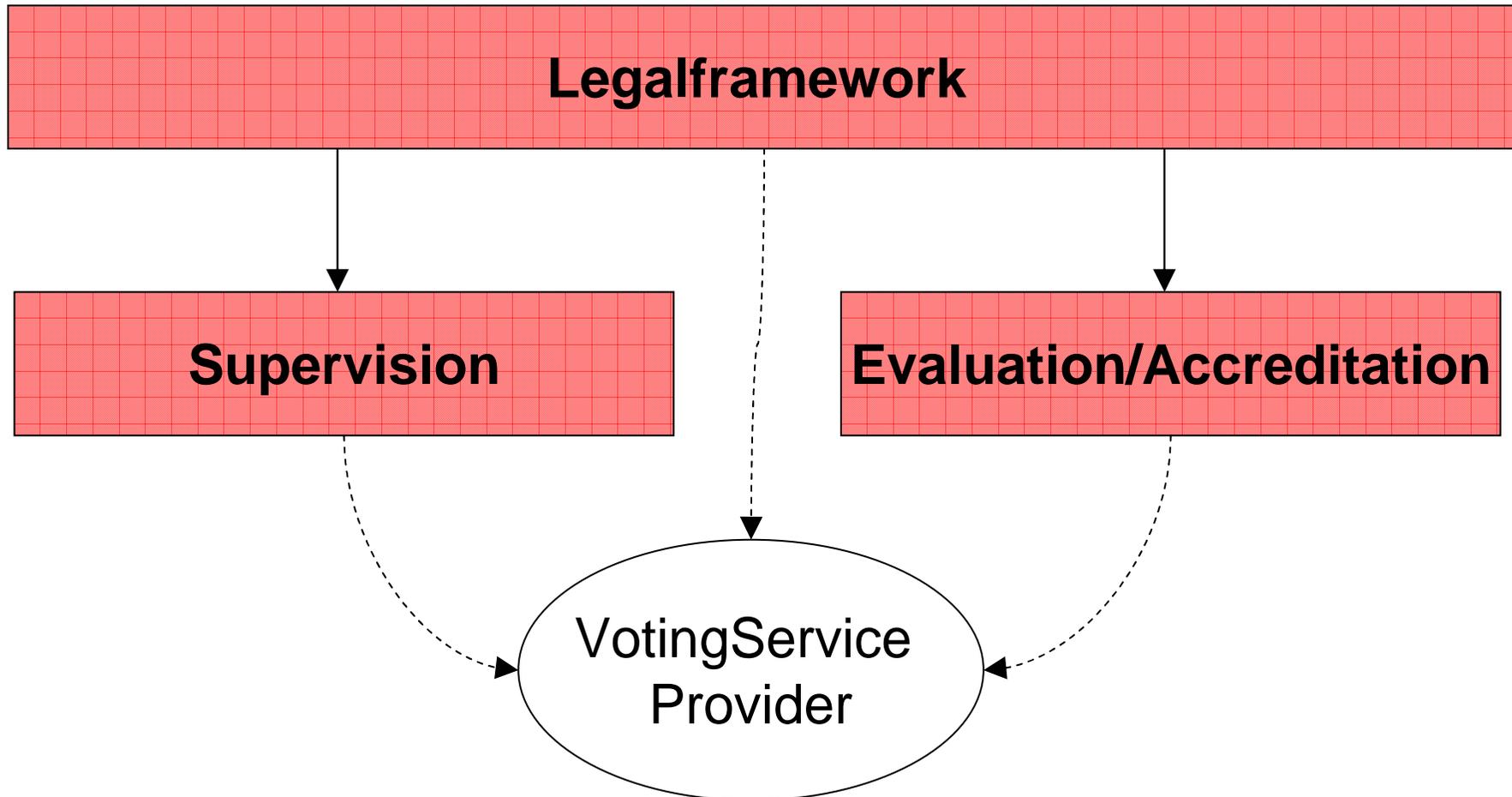
- Electronic elections
  - Companies provide e-voting software
  - Election host takes care of organization and operational environment
- Classic elections
  - Election authority organizes and operates elections

But: No superior regulation or supervision

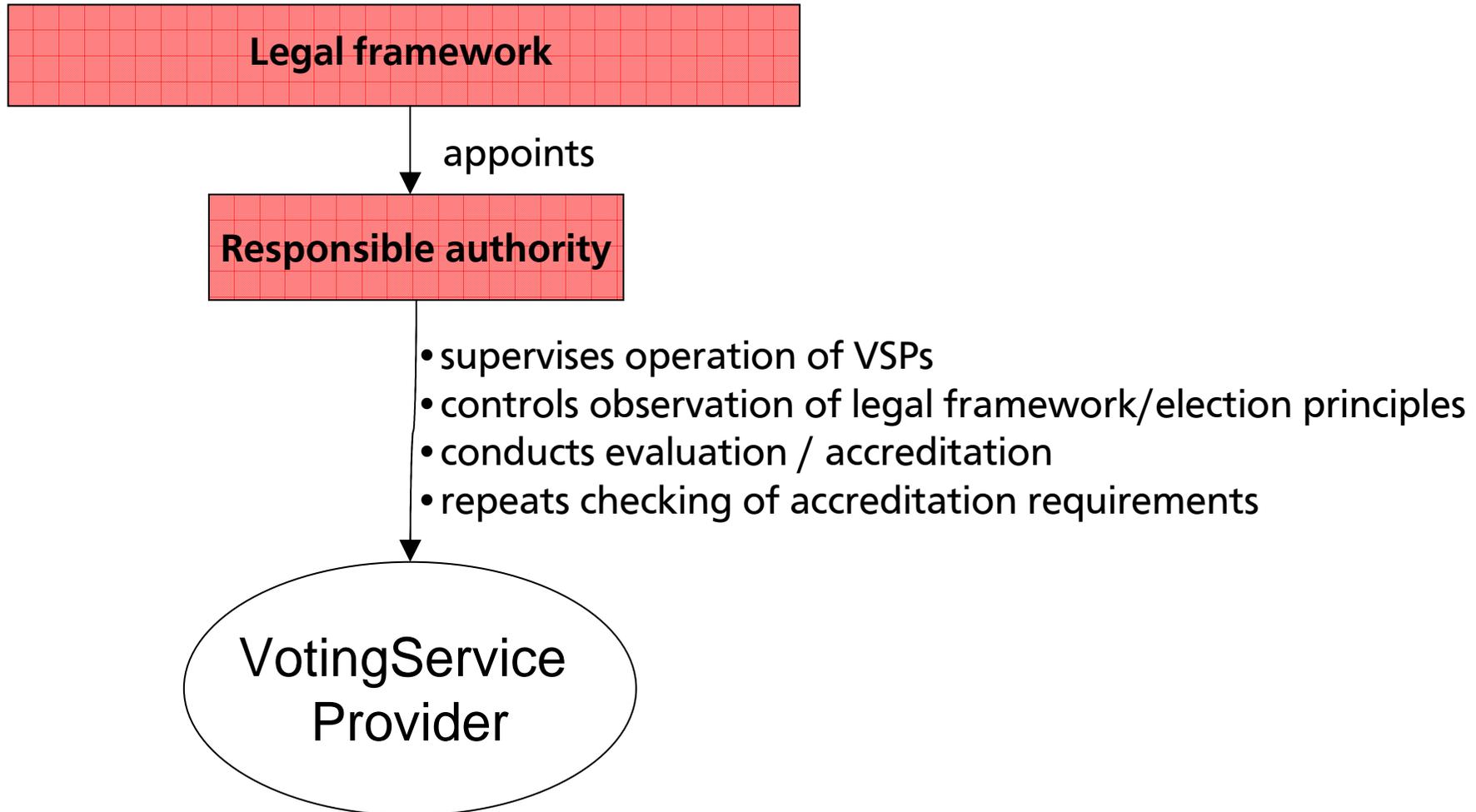
→ **Trust concept required:**

- ensures security and trustworthiness of the Voting Service Provider
- makes trustworthy outsourcing possible
- ensures legally compliant electronic elections

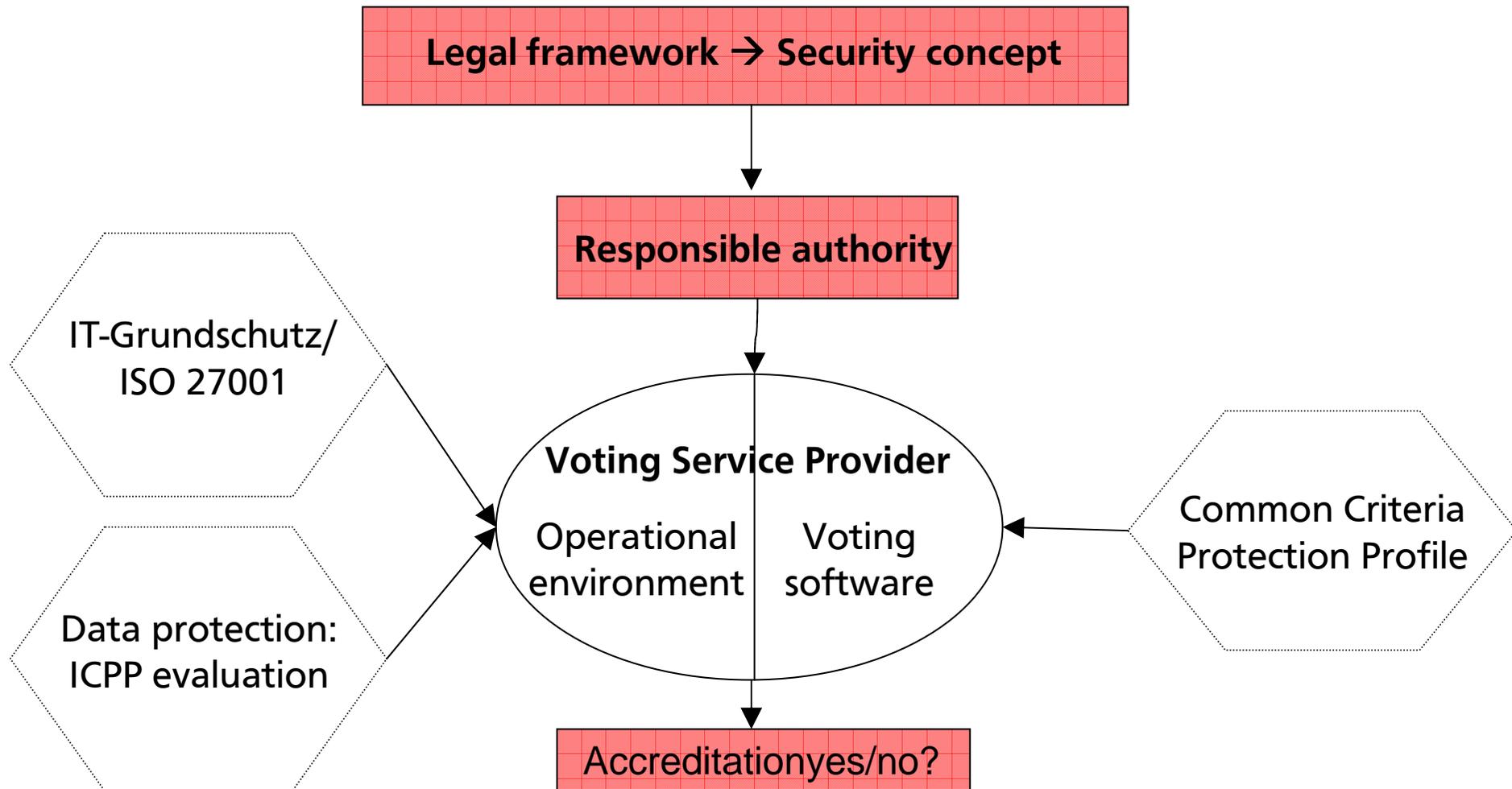
# Trust concept



# Trust concept: Supervision



# Trust concept: Evaluation / Accreditation



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# Legal Framework: Formalities



- Split regulation: Federal statute and ordinance
  - Statute passed by legislature, ordinance by executive
  - Common legal approach, purpose: Flexibility
  - Allows to adapt to technical/scientific developments
- Modeled after SigG
- When does it apply?
  - Voluntary accreditation
  - Certificate of trustworthiness if VSP meets specifications
  - Supervision by governmental agency
  - Certificate can be revoked, has to be renewed periodically

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# Legal Framework: Material Law

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## **Main prerequisites for accreditation**

- Qualified, reliable staff
- Proof of technical/organizational security concept
- Proof of data protection (privacy) compliance

## **Main obligations of VSPs**

- Performance of remote electronic elections
  - Election host remains in control of election
  - Responsible for technical/organizational implementation
  - Reliable identification of eligible voters
  - Brief voters on remaining security risks
- Verifiability of correct vote count
- Safeguard the election principles
- Documentation

# Judgment on Voting Computers (Bundesverfassungsgericht)



## Facts

- Voting computers were used in 2005 federal elections
- Voter could not examine how results are determined
- Ordinance: Licensing procedure for voting machines
- Hackers proved machines to be easily manipulatable

## Issues

- Constitutional requirements for voting machines in federal elections
- Constitutional requirements for vote count verifiability
- Can this approach replace public scrutiny?
- Was the use of the particular model unconstitutional?

## Holding

- Principle of the public nature of elections
- Verifiability without specialist knowledge
- Not by itself. Public scrutiny must remain possible.
- Yes, because there is no way to verify the individual calculation.

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# Principle of the Public Nature of Elections

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Unwritten - Contained in and derived from other principles:

- Democracy
- The Republic
- The Rule of Law

Contains

- All essential steps of an election are subject to public scrutiny unless other constitutional interests justify an exception
- Examination of voting and ascertainment of the election result must be possible without specialist knowledge
- This has a preventive effect against election fraud
- For e-voting, helps detect programming errors
- Creates trust in election results, legitimizes representatives

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# Distinguishing



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- Principle is based on public sovereignty
    - The less political the election, the less imperative the principles application
  - Not all elections are “political”
  - However, principle “radiates”
  - Different elections, different prerequisites and requirements
    - Exceptions already widely recognized (Federal Constitutional Court)
    - Examples: University elections, vote by letter...

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# Outlook



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## Technical development:

- Refine evaluation concept
- Prototype VSP driven election

## Legal regulation:

- Final draft of legal framework
- Pass legislative procedure

## Possible implementation:

- Institutions might prescribe use of accredited VSPs in their regulations

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# Thank you

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