

JEEADiS Policy Recommendation 2026

Redesigning the Infrastructure of Digital Democracy

A Policy Proposal for the Realization of Internet Voting in Japan

— A Phased, State-Responsibility-Based National Digital Election Infrastructure Starting with Overseas Voting —

Japan & Estonia EU Association for Digital Society (JEEADiS)
February 15, 2026

This proposal aims to initiate legislative design in the 2027 Ordinary Session of the National Diet of Japan.

1. Why Electoral Digitalization Is Necessary Now

Japan's electoral system has historically maintained a high level of procedural integrity and public trust. However, its structural design remains largely rooted in 20th-century administrative models:

- Decentralized voter registry management across approximately 1,700 municipalities
- Paper-based voting processes
- Physical polling station dependency
- Post-hoc duplicate vote detection
- Significant geographic and temporal constraints on overseas voters

Recent structural pressures have made reform imperative.

(1) Practical Barriers to Overseas Voting

Japanese citizens residing abroad depend on consular visits or postal voting, resulting in substantial limitations in effective access to suffrage.

(2) Vulnerability During Emergencies

Natural disasters, pandemics, and other crises pose risks to polling station operations. Democratic continuity must be institutionally guaranteed.

(3) Structural Decline in Youth Participation

A digitally native generation faces participation barriers in a system centered on in-person paper voting.

(4) Administrative Sustainability

Election administration imposes increasing financial and human resource burdens on municipalities. Registry maintenance and paper-based logistics are structurally inefficient.

Electoral digitalization is not a matter of convenience. It is a reform of democratic infrastructure to ensure long-term sustainability.

2. Fundamental Principles of the Proposal

This proposal does not advocate abrupt full-scale digitization. It is based on the following principles:

(1) State-Responsibility-Based Digital Infrastructure

A nationally integrated logical voter registry, referred to as **E-ERDB (Electronic Electoral Registry Database)**, will be established.

- Continuous synchronization with resident registry data
- Snapshot generation at legally defined cut-off dates
- Municipalities operate as registry users, not registry owners
- Centralized accountability at the national level

(2) Phased Introduction

Implementation begins with overseas voting, followed by proportional representation elections domestically, and eventual nationwide expansion.

(3) Institutionally Complemented Security Design

Security will not rely solely on technical measures. Institutional safeguards include:

- Re-voting mechanism (only the last vote counts)
- Possibility of in-person paper override
- Key distribution ceremonies with multi-party oversight

(4) Universal Verifiability

Through cryptographic protocols and a public bulletin board:

- Encrypted ballots are signed and submitted
- Duplicate votes are eliminated prior to decryption

- Signature separation and cryptographic mixing are performed
- Threshold cryptography governs decryption
- All eligible voters can verify election integrity

Universal verifiability is a core design objective.

3. What This Proposal Seeks to Achieve

① Establishment of E-ERDB

- Continuously updated nationwide logical voter registry
- Legal snapshot generation for each election
- Real-time duplicate vote prevention
- Audit trail preservation after elections

② Introduction of Internet Voting (Phased)

- Authentication via My Number Card (Japan's national ID card) and smartphone-based digital certificates
- Encrypted ballot submission with digital signatures
- Signature separation and cryptographic mixing after close of voting
- Threshold decryption with distributed key custody
- Public verification platform

③ Institutionalized Re-Voting

- Multiple votes permitted during voting period
- Only final vote counted
- Enhanced coercion and vote-buying resistance

④ Digital Public Notice and Open Data Reform

- Standardized candidate information publication
 - API-based public data access
 - Integrity-protected official digital announcements
-

4. Simultaneous Modernization of the Entire Electoral System

This proposal is not merely the addition of a new voting channel.

It includes:

(1) National Integration of Registry Governance

Reducing fragmentation and clarifying accountability.

(2) Structural Cost Reform

Transition from duplicated municipal operation to nationally coordinated infrastructure.

(3) Institutionalized Democratic Continuity (BCP)

Ensuring voting capability under emergency conditions.

(4) Accessibility Enhancement

Improved interfaces for elderly and disabled voters, and strengthened overseas voter inclusion.

The reform transforms a physically dependent electoral structure into a digitally resilient democratic system.

5. Implementation Timeline (Conceptual)

2027

- Legislative design begins
- Legal framework for E-ERDB established

2028

- Construction of E-ERDB
- Preparation for overseas voting pilot

2029

- Implementation of Internet voting for overseas voters
- Independent external audits and evaluation

2030 and beyond

- Expansion to domestic proportional representation
- Gradual nationwide rollout

Key Performance Indicators (KPIs)

- Zero major security incidents affecting final election outcomes
 - Defined Service Level Agreements (SLA) for minor incident response
 - Independent external audits conducted for each election
-

6. Conclusion

This proposal is not about making voting more convenient.

It aims to ensure:

- Democratic continuity
- Structural modernization of national governance infrastructure
- Alignment with international digital governance standards
- Restoration and strengthening of public trust

Japan's electoral system has preserved procedural integrity. It now faces the necessity of structural modernization. Beginning with overseas voting provides the most realistic, secure, and politically feasible pathway.

The realization of Internet voting in Japan is not the addition of a voting method.

It is the redesign of the national infrastructure of democracy.