

Geopolitical Competition in Standards-setting: Implications and Strategic Response of the Republic of Korea

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01 Changing Landscape of Global Competition and Strategic Role of Standards

Increasing complexity of global competition

- **Intensifying in critical and emerging technologies (CETs)**
 - CETs (i.e., 5G, AI, quantum technologies): ‘general purpose technologies (GPTs)’
 - Fundamental technologies apply across various fields but also possess the potential for militarization
 - Influence industries, economies, and security on both national and global levels
- **Unfolding across multiple dimensions**
 - **Past:** Focused on narrow security objectives related to physical resources and territory
 - **Present:** Shifting toward broader aspects of national security, including global leadership and influence in technology, industry, economics and ideology

01 Changing Landscape of Global Competition and Strategic Role of Standards

Evolving concepts of geopolitics

- **Contemporary challenges**
 - Decline of Western dominance and rise of non-Western states
 - Erosion of traditional territorial boundaries due to rapid technological advances
 - Emergence of new security threats (e.g., cyberwarfare)

- **Reassessment of traditional geopolitical approaches**
 - **Traditional focus:** Territorial control, military power
 - **Contemporary focus:** Technological, economic and security factors

01 Changing Landscape of Global Competition and Strategic Role of Standards

Growing importance of standards in geopolitical strategy

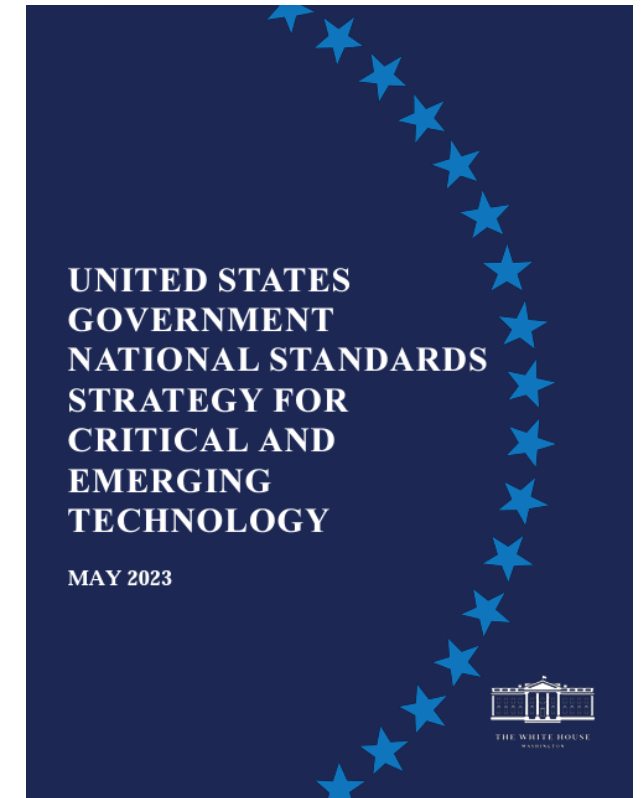
- **Standards as *a key factor of geopolitical strategy***
 - Many countries recognize the strategic value of controlling and influencing technical standards to enhance their economic and political influence on a global scale
 - Taking the dominance in standardization in CETs is important for ensuring economic prosperity and protecting national security
 - The growing involvement of national entities in standards-related issues—such as incorporating standards into national strategies and policies—highlights their significance as a key element of geopolitical strategy

“Who sets the standards, sets the future”

02 Strategic approaches of major countries

United States

- **U.S. Government National Standards Strategy for Critical and Emerging Technology (USG NSSCET)**
(May 2023)
 - Global leadership in standards for CETs
 - Promote private sector-led, government-supported standardization
 - Counter the rise of China in international standardization



02 Strategic approaches of major countries

U.S. GOVERNMENT NATIONAL
STANDARDS STRATEGY FOR CRITICAL
AND EMERGING TECHNOLOGIES
(USG NSSCET):

IMPLEMENTATION ROADMAP

United States

■ Implementation Roadmap (July 2024)

U.S. Leadership and Engagement in International Standards

- Expand U.S. participation in international standards organizations
- Strengthen joint standard proposals with allied and like-minded countries

Support for Pre-Standardization R&D

- Promote research that integrates standardization from the early stages of technology development

Education and Workforce Development

- Invest in training programs to develop a pipeline of standards professionals

Public-Private Collaboration and Coordination

- Establish robust collaboration mechanisms among NIST, industry, academia, and trade associations
- Enhance interagency coordination on national standards strategies

02 Strategic approaches of major countries

European Union

- **An EU Strategy on Standardization – Setting global standards in support of a resilient, green and digital EU single market** (February 2022)
 - Promote EU values and democratic principles through global standards
 - Ensure the **resilience of supply chains and digital infrastructure**
 - Strengthen EU leadership in **green and digital transformation**

Green Deal

- Sustainable products
- Circular economy
- Environmental performance

Digital

- AI Act
- Cybersecurity
- Data governance

ESG & Carbon Regulation

- CBAM
- Non-financial reporting
- Social compliance

02 Strategic approaches of major countries

European Union

EU's Strategy for Standards Leadership

Legislation-Driven Standard Export

- GDPR, AI Act, CBAM as global models
- Internal rules shape external norms

Institutional Coordination

- EU Excellence Hub on Standard – Chief Standardization Officer
 - Member States & Industry alignment

Strategic Instruments

- Harmonized standards (ENs)
- Public procurement leverage

External Engagement

- Standards in trade agreements
- Diplomacy in global standards-setting organizations

02 Strategic approaches of major countries

China

China's Standards Strategy: Core Characteristics

- **China Standards 2035**
 - Aims to lead international standards-setting in strategic tech sectors
 - Closely aligned with **Made in China 2035** and **national development goals**
- **Standards as a key instrument of national strategy**
 - Embedded in a **series of Five-Year Plans**
 - State-led coordination under SAC (Standardization Administration of China)
- **Standards export through infrastructure diplomacy**
 - Integration of Chinese standards into **Belt and Road Initiative (BRI)** projects
 - Especially in energy, transportation, telecommunications, smart cities
- **Digital Silk Road**
 - Export of surveillance-capable technologies with accompanying technical standards
 - Raises concerns about digital authoritarianism and values-driven competition

02 Strategic approaches of major countries

China

China's Standards Strategy: Institutional and diplomatic tools

- **Aggressive participation in international standards bodies**
 - ISO, IEC, ITU – more chairs, secretariats, and working group leads
 - Strategic use of technical voting blocs and proposal submissions
- **Bilateral & Regional standardization agreements**
 - MoUs with BRI participants
 - Co-development of standards in BRI-linked sectors (e.g., smart infrastructure)
- **Modernization of domestic standardization infrastructure**
 - Digitization of standards databases
 - Coordination between tech R&D and standards development
- **Standardization as part of geopolitical influence strategy**
 - Tied to broader ambitions of reshaping global governance in China's image
 - Blurring lines between technical norms and political values

03 Implications for South Korea

Korea's Opportunities and Challenges in Standards-setting

✓ Opportunities

- **Technical leadership** in ICT
- Strong reputation for **quality, transparency, and safety**
- Normative alignment with **democratic and rule-based frameworks**
- Positioned to act as a **'bridge'** between East and West in standards diplomacy

✓ Challenges

- Still **limited leadership** in international standards bodies
- **Divided domestic governance** across ministries and sectors
- **Geopolitical pressure** in navigating U.S.-China rivalry
- Often takes **a reactive approach to global standardization**

04 What would South Korea's response be?

Strategic Response: Domestic

❑ **Establish a National Standards Strategy Control Tower**

- Create a centralized, high-level coordination body (e.g., under the Prime Minister's Office)
- Ensuring strategic alignment across trade, tech, industry, and diplomacy

❑ **Strengthen public-private collaboration mechanisms**

- Establish formalized working groups between ministries, industry leaders, and academia
- Promoting joint participation in international standards development

❑ **Enhance Korea's presence in international standards bodies**

- Train and dispatch more experts to international standards bodies
- Support Korean leadership bids in technical committees

❑ **Link R&D policy and industrial innovation to standardization goals**

- Require standards consideration in national R&D project design and evaluation
- Develop "standardization roadmaps" for key sectors

04 What should South Korea's response be?

Strategic Response: International Engagement & Standards Diplomacy

❖ **Deepen standards-focused partnerships with trusted allies**

- Institutionalize cooperation with the U.S., EU, and Japan, etc.
- Align standards in critical and emerging technology sectors (ex. AI ethics)

❖ **Engage emerging markets through tailored standardization diplomacy**

- Launch bi- or multi-lateral standards cooperation programs with India, ASEAN, and Latin American partners
- Offer technical support and co-develop standards aligned with Korean strengths

❖ **Export Korea's regulatory frameworks and technical models**

- Promote Korean-developed standards
- Build Korean-led multi-stakeholder platforms

05 Conclusion

1. Standards as geopolitical tools

- They shape markets, influence values, and define the rules of future technologies

2. Strategic approaches of major powers

- **U.S.:** Alliance-driven leadership
- **EU :** Norm-based regulation export
- **China :** Infrastructure-linked standard diffusion

3. Korea's Challenges and Opportunities

- Strong technological base, but under-leveraged influence
- Geopolitical pressure requires strategic balancing
- Reactive posture must shift to proactive leadership

4. Strategic response must be systemic and multi-layered

- National coordination, international partnerships, and standards-oriented innovation policy



Q&A