National Cybersecurity Strategies

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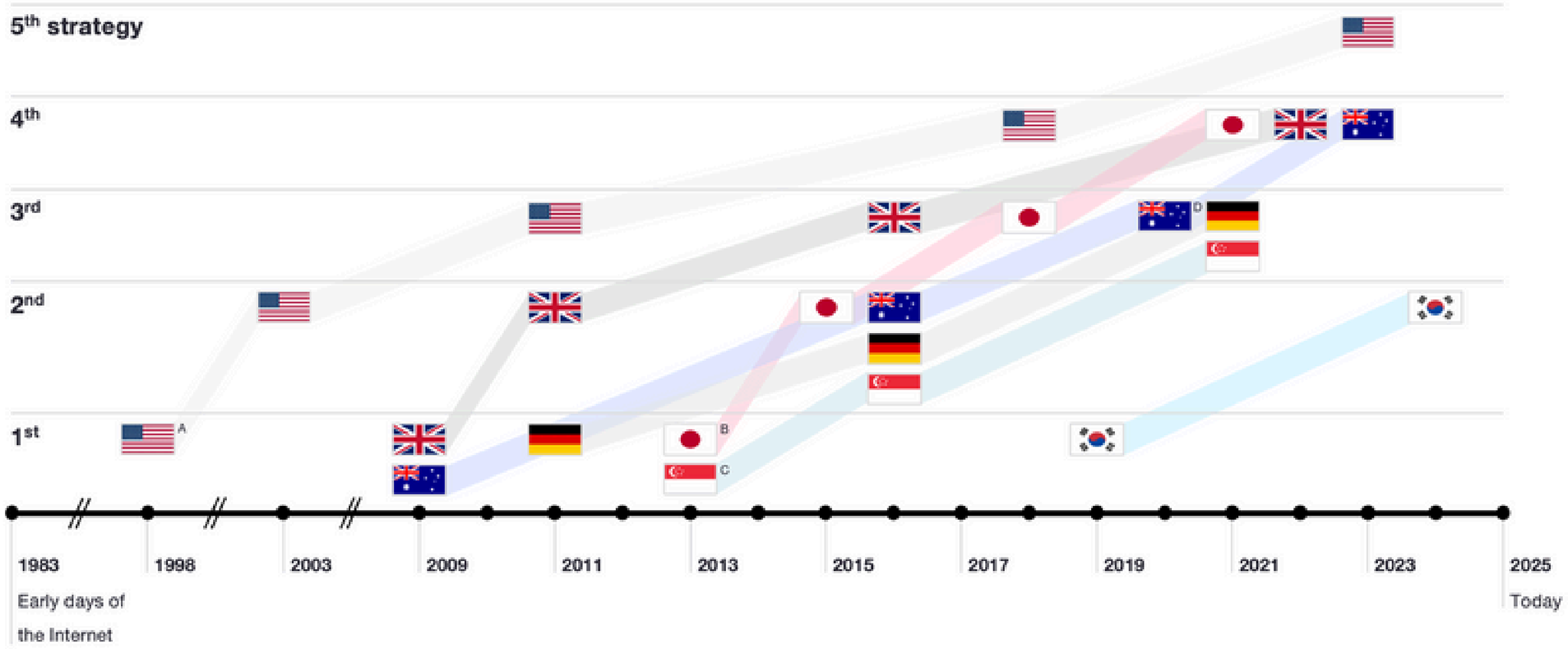
National Cybersecurity Strategies



Notes: A. Refers to PDD 63, the first U.S. national cyber document; B. Ignores earlier acts and policy documents on information security strategy in 2000, 2006, 2009 and 2010; C. Ignores earlier 'Infocomm Security Masterplans' from 2005 and 2008; D. Ignores International Cyber Engagement Strategy documents in intervening years

Why do we do this?

Do we know what we are doing?

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- What does a good cyber strategy entail?
- Who is the audience?
- Vision statement or practical policy guide?
- How technical should the strategy be?

Evaluating Cyber Strategy

intro - **method** - results - conclusion

Evaluating Cyber Strategy

- Various evaluation frameworks exist
  - NCSI, ITU, MIT
- Absolute vs relative scoring
- How to justify the scores?
- Can countries be scored in isolation?

Evaluating Cyber Strategy

Analysis

Evaluation Framework

- 268 criteria over 5 pillars

Interviews

- 35 leading cyber experts

Relative difference

- Update scores based on other countries' performance

Initial country selection

1. Strong cyber capabilities
2. Diversity (political, geographic, etc.)
3. Published after 2020
4. Publicly accessible + English

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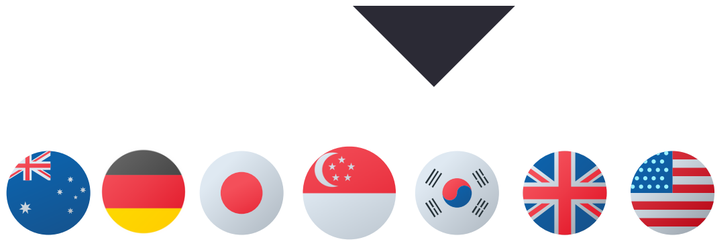

Evaluation Framework

Protecting People, and Infrastructure

- Government
- Critical Infra.
- Private orgs
- Citizens & data
- Forward defense

Generating Capacity

- Workforce
- Skills
- Market

Building Partnerships

- Domestic non-government
- Domestic government
- International cooperation

Codifying Responsibilities

- Government
- Private Sector
- Procedures
- Who is responsible for what?

Communicating Clear Policy

- Accessibility
- Comprehensiveness
- Accountability

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- Intra-gov
- International
- Industry & Research

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Results

intro - method - **results** - conclusion

Strengths across most countries

- **Developing technical workforce and encouraging entrepreneurship**
- Prioritizing critical infrastructure cybersecurity
- Establishing partnerships with industry
- Addressing emerging threats like AI
- Using easy-to-understand language

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Areas for improvement across most countries

- **Protecting vulnerable populations**
- Generating capability for non-technical cyber professionals
- Incentivizing private companies to prioritize cyber
- Including specific timelines, measurable outcomes

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Questions arising from our work

- **How to balance regulation, incentives, and recommendations?**
- What roles and powers should a modern cyber security agency have?
- What are the best multilateral approaches to fighting cybercrime?
- What are the best models for national-regional/local cyber cooperation?

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Results -
Country Specific Highlights

intro - method - **results** - conclusion

USA highlights

Strengths

- Shifting responsibility from users to private companies
- International cooperation and securing shared global resources

Areas for improvement

- Fragmented data privacy laws
- Protecting vulnerable populations

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UK highlights

Strengths

- Govt-industry collaboration (Industry 100, Cyber Reserve,..)
- The Cyber Essentials model for organizational security

Areas for improvement

- Incentivizing critical infrastructure providers to improve protection
- Forward defense and disruption

UK highlights

Strengths

- Govt-industry collaboration (Industry 100, Cyber Reserve,..)
- The Cyber Essentials model for organizational security

Areas for improvement

- Incentivizing critical infrastructure providers to improve protection
- Forward defense and disruption

Australia highlights

Strengths

- Separation of assistance (incident response) vs. law enforcement
- Harmonization of CI regulations
- Protecting vulnerable groups (Cyber Wardens, commun. grants)

Areas for improvement

- Partnering with local and regional governments
- Civil society / non-profit sector
- Non-technical cyber professionals

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Singapore highlights

Strengths

- Securing government through Zero Trust
- Centralization of authority
- Regional leadership (ASEAN)

Areas for improvement

- Accountable parties and deadlines ("The government will...")
- Counter-ransomware strategy

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Highlights from other countries

Strengths

- Intra-gvnmt. and regional partners.
- Gov. network modernization plan
- “Cybersec. for All”: vuln. pops. + SME
- Dismantling threat actors (DPRK)

Areas for improvement

- Workforce development
- Market development
- Protecting private organizations

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Conclusion

intro - method - results - **conclusion**

Takeaways

Common strengths

- Generating technical cyber competence
- Leveraging partnership

Common shortcomings

- Protecting vulnerable population groups and SMEs
- Private sector incentive alignment for cybersecurity
- Generating non-technical cyber competence

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Takeaways

Harvard Belfer Report: *https://www.belfercenter.org/research-analysis/cybersecurity-strategy-scorecard*

Future work:

- Evaluating national security risks of AI model infrastructure
- Evaluating national security risks of phishing and online fraud

Reach out if you're interested: fheiding@hks.harvard.edu

The End

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