Advancing infrastructure resilience

through good governance

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Supporting good governance for resilience

- The **High Level Risk Forum** brings governments together to find solutions to common challenges, develop global standards, share experiences and identify best practices to promote better policies for better lives.
- The **OECD Recommendation on the Governance of Critical Risks** champions a whole of society approach to multi-hazard risk management, supported by transparent and accountable risk management systems that learn continuously and systematically from experience and research.
- The **Policy Toolkit on Governance of Critical Infrastructure Resilience** proposes a structured approach ranging from multi-sector governance structures to addressing the transboundary dimension of infrastructure systems.

OECD Policy Toolkit on Governance of Critical Infrastructure Resilience

OECD Reviews of Risk Management Policies

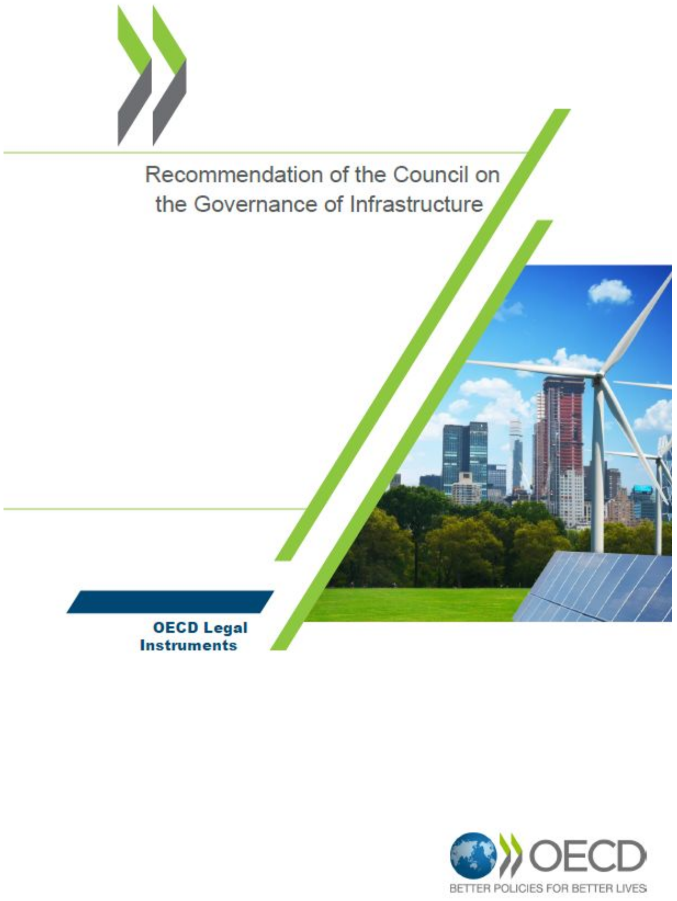
Good Governance for Critical Infrastructure Resilience

OECD

1. Create a multi-sector governance structure
2. Understand (inter-)dependencies and vulnerabilities
3. Establish trust and secure information-sharing
4. Build partnerships for common resilience vision
5. Define policy-mix, tools, incentives
6. Ensure accountability and monitoring
7. Address transboundary dimension

OECD (2019), OECD Reviews of Risk Management Policies: Good Governance for Critical Infrastructure Resilience, OECD Publishing, Paris

Recommendation of the Council on the Governance of Infrastructure



Recommendation of the Council on the Governance of Infrastructure

OECD Legal Instruments

OECD BETTER POLICIES FOR BETTER LIVES

Strengthen critical infrastructure resilience by:

a) setting-up a cross-sector and multi-level governance structure for critical infrastructure resilience, monitoring implementation and progress in attaining resilience objectives, and defining an accountability framework for critical infrastructure operators.

b) adopting methodologies and metrics to understand complex interdependencies and vulnerabilities across infrastructure systems and prioritise resilience efforts.

c) establishing trust between government and operators by securing risk-related information-sharing.

d) building partnerships to agree on a common vision and achievable resilience objectives.

e) defining the policy mix to prioritise cost-effective resilience measures across the life-cycle.

f) addressing transboundary dependencies in critical infrastructure systems by coordinating policies with neighbouring countries and beyond.

g) developing requirements and specifications to promote resilient infrastructure to all-hazards, including climate related risks.

OECD (2020), OECD Recommendation of the Council on the Governance of Infrastructure, OECD Publishing, Paris

Principle 1: Create a multi-sector governance structure

- Adopt a **whole-of-government** approach to critical infrastructure resilience.

- **Involve the sectoral ministries and agencies** overseeing infrastructure delivery and regulation in the multiple critical sectors**, as well as those in charge of resilience to all-hazards and threats**.

Principle 2: Understanding complex inter-dependencies and vulnerabilities

- Identify the critical functions, systems and assets that should be prioritised for investments in building resilience.

- Good understanding of how disruptions can affect infrastructure assets and systems and where dependencies and interdependencies are found that could amplify their impacts.

- Once priority nodes and hubs are identified across interdependent systems, there is a need to assess their resilience with relevant indicators and to compare actual and expected results to see where the gaps are.

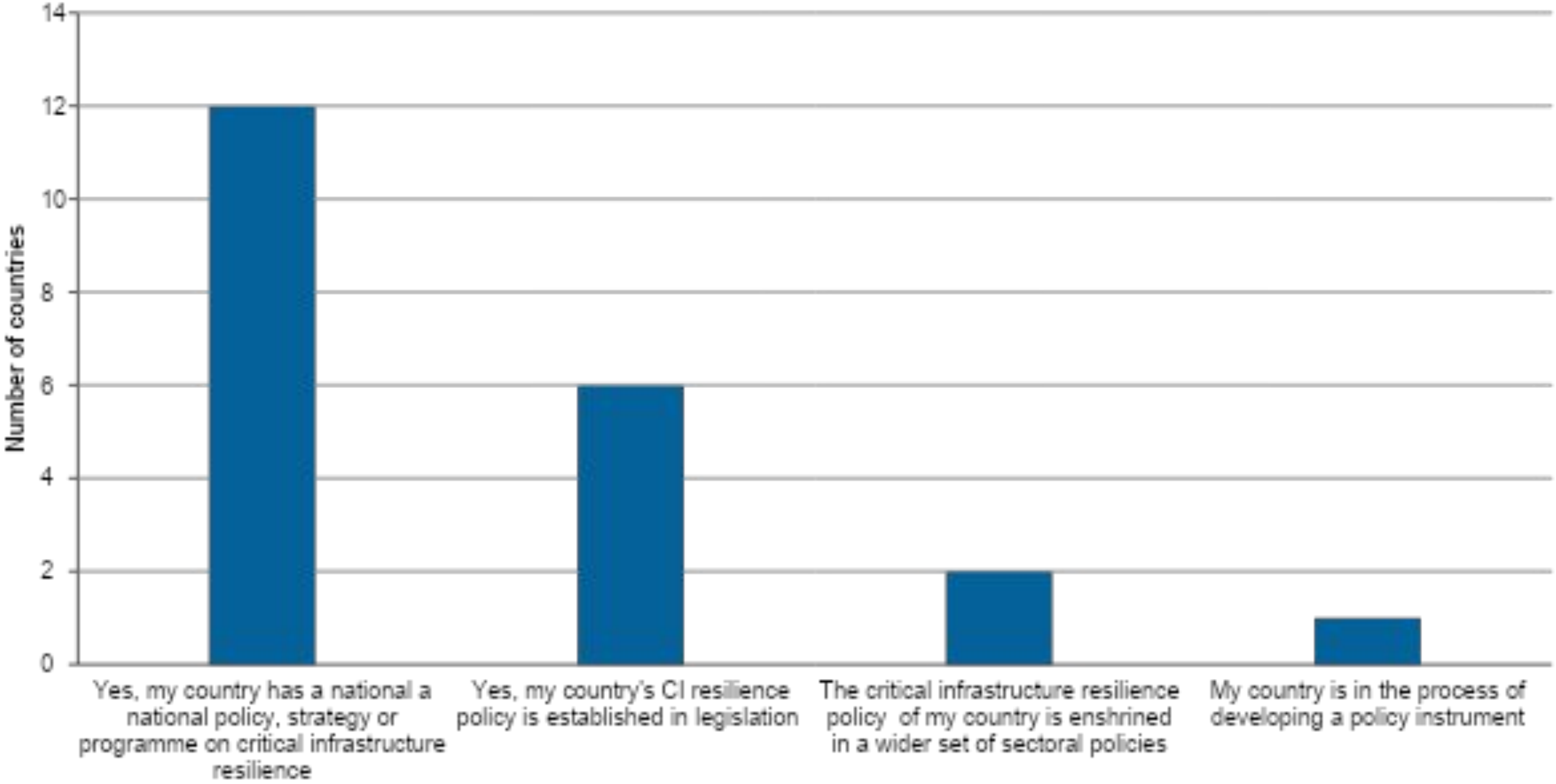
Principle 7: Addressing the transboundary dimension of infrastructure systems

- Government should coordinate national critical infrastructure resilience policies with neighboring countries and beyond, to address transboundary dependencies.

- International information-sharing mechanisms should be set up to assess risks and vulnerabilities across borders as well as to develop common approaches for critical infrastructure resilience.

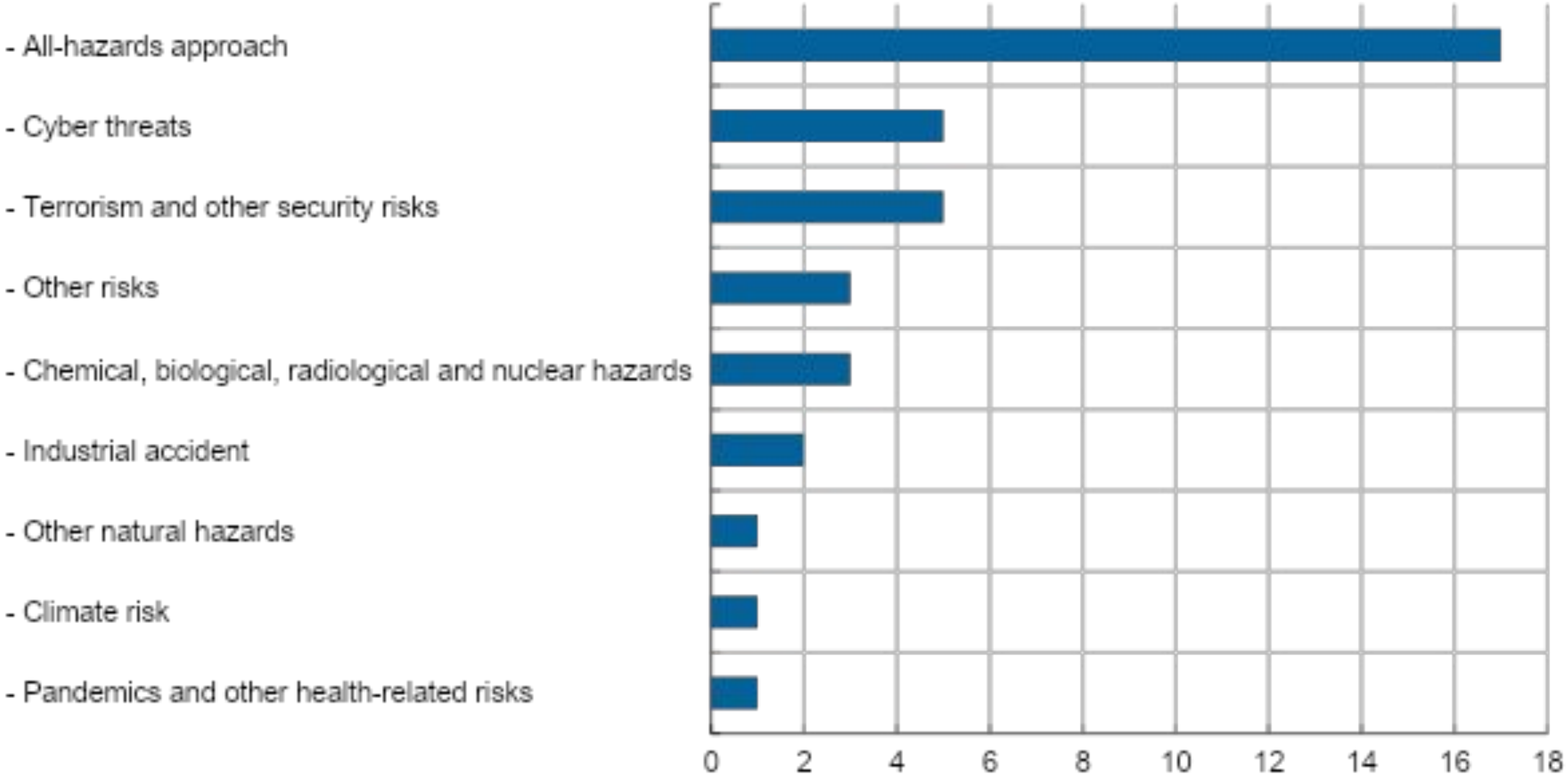
Critical infrastructure resilience policies / strategies / programmes across the OECD

- By 2022, nearly a third of OECD countries had an established critical infrastructure resilience strategy or national



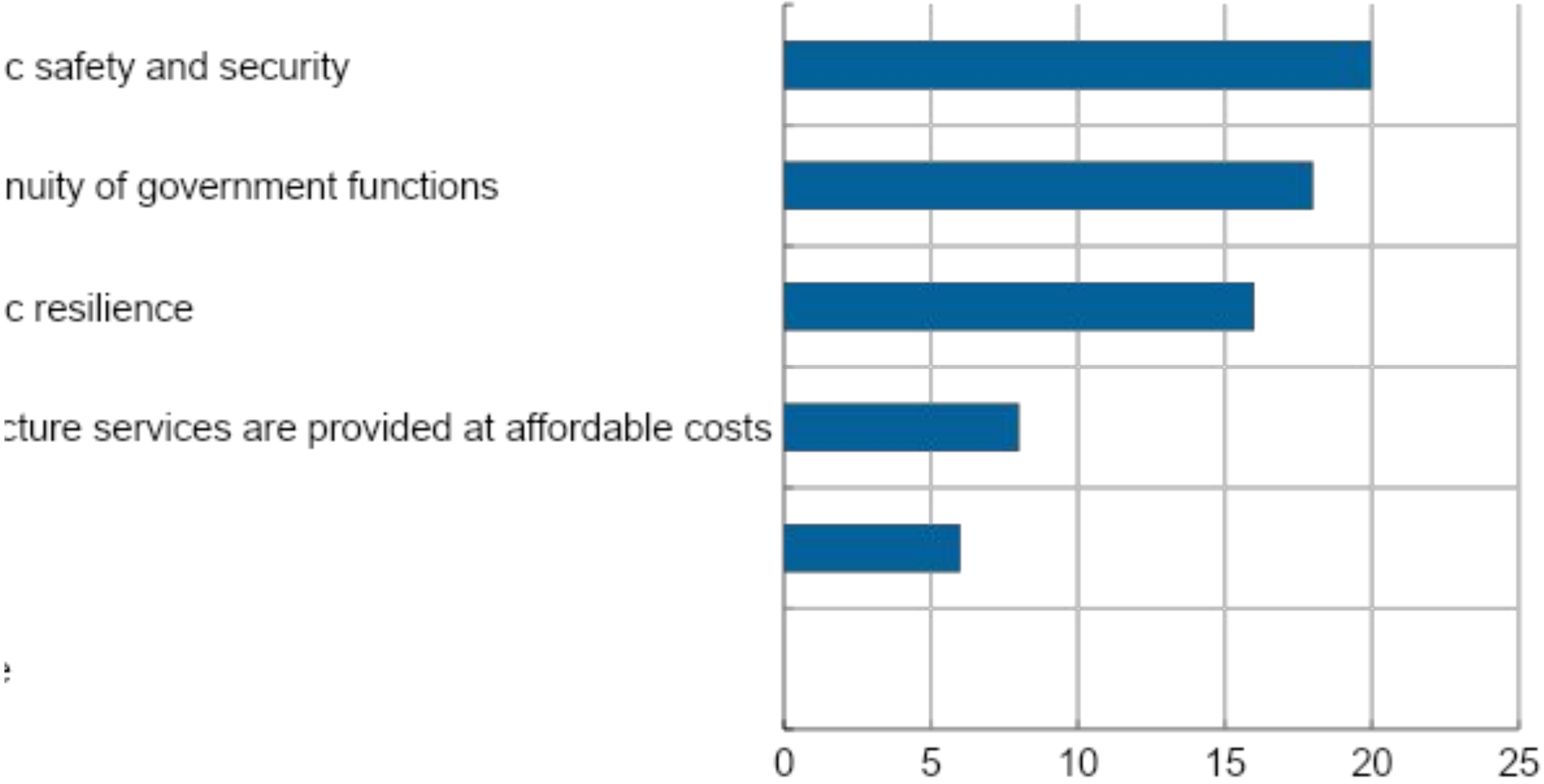
Hazards / threats addressed by critical infrastructure resilience policies

- The majority of the countries follow an all-hazards approach to critical infrastructure resilience



Main policy objectives of critical infrastructure resilience policies

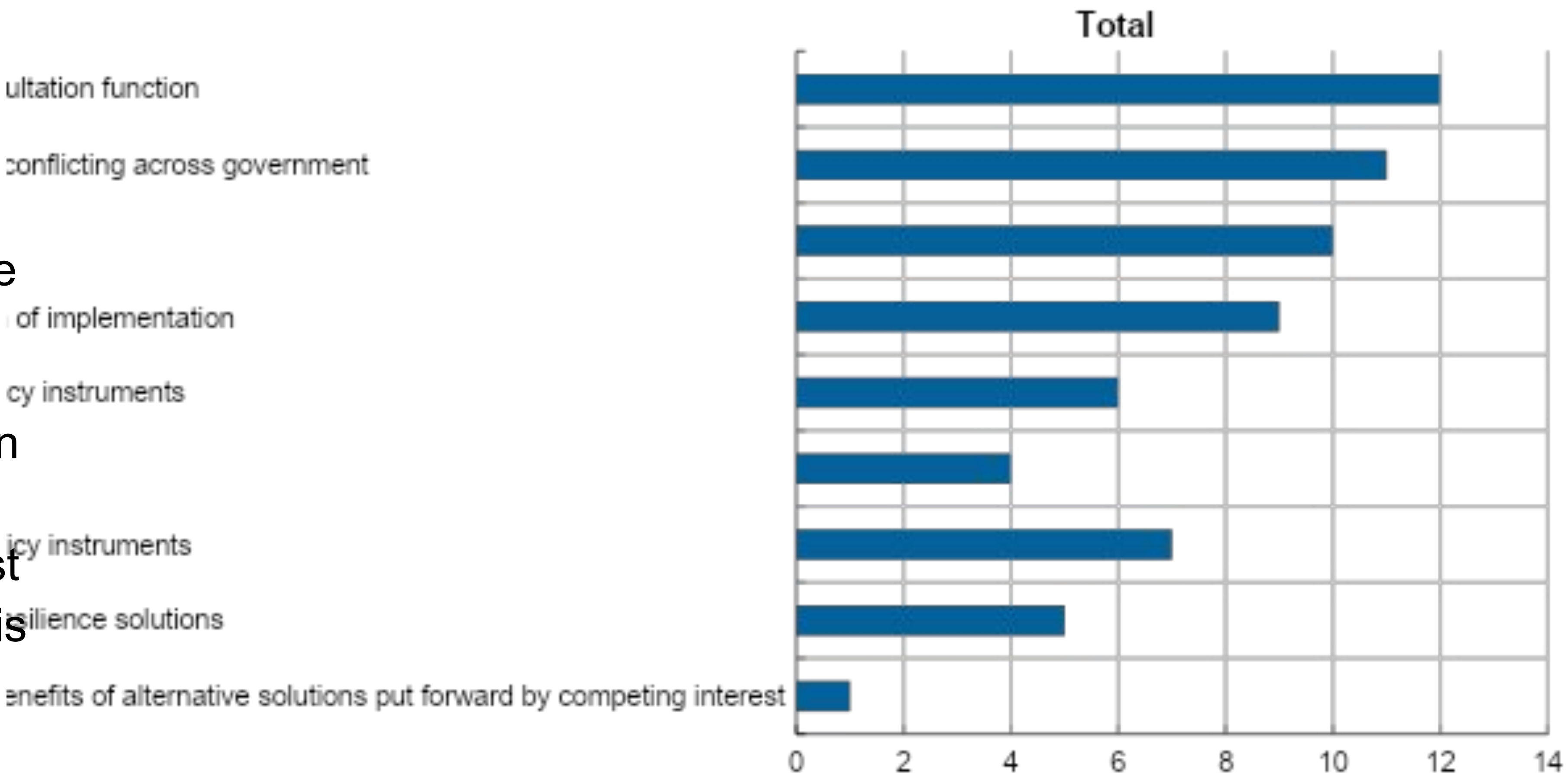
- Main policy objectives are: Ensuring public safety and security, enabling the continuity of key government functions and economic resilience



Cross-government policy coordination mechanisms

- Most countries have a cross-government policy coordination mechanism for critical infrastructure resilience policies

- Facilitating consultation across whole of government is the most common function of this mechanism



Australia’s Critical Infrastructure Resilience Strategy

- Australia has adopted a resilience-based approach to critical infrastructure in order to enable it to adapt to change, reduce the country’s exposure to risk and learn lessons from past incidents.

- Australia notes that a key element of disaster resilience is enhancing “the capacity to withstand and recover from emergencies and disasters.

- Australia’s resilience strategy encourages organizations to identify ways in which they can be flexible and adaptable in the face of unforeseen shocks

Australian Government
Department of Home Affairs

CYBER AND
INFRASTRUCTURE SECURITY
CENTRE

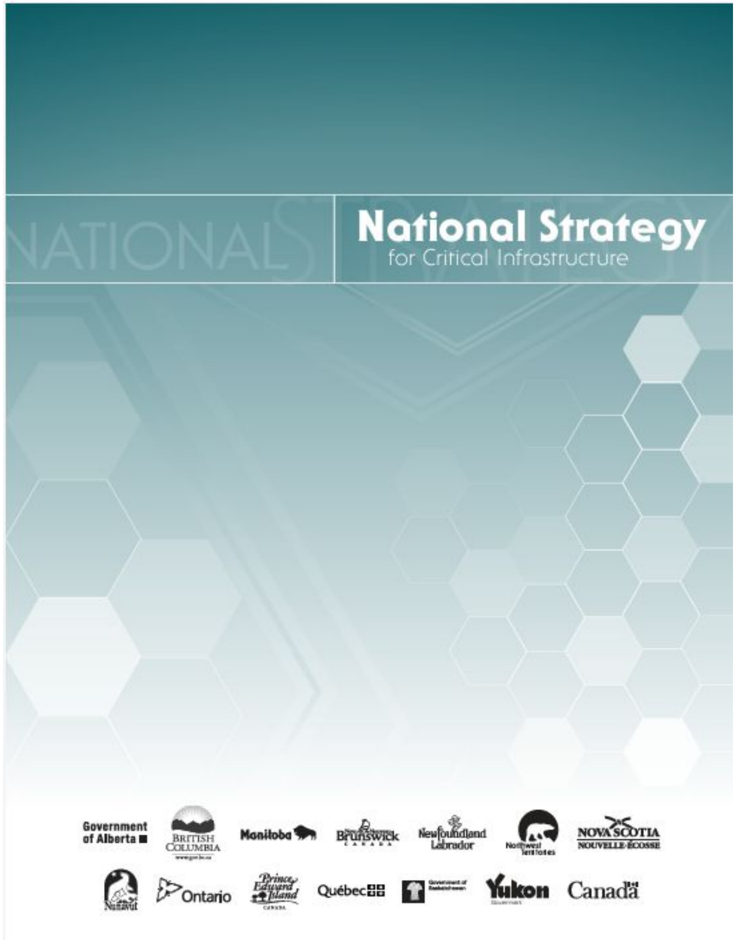
Critical Infrastructure
Resilience Strategy

February 2023

Source: https://www.cisc.gov.au/resources-subsite/Documents/critical-infrastructure-resilience-strategy-2023.pdf

Canada’s National Strategy for Critical Infrastructure

- Canada’s strategy defines the following key Elements:
  - **Collaboration:** Partnerships between all levels of government and critical infrastructure sectors based on the Emergency Management Framework for Canada.
  - **All-hazards approach:** Risk management for both intentional and accidental disruptions.
  - **Information Sharing:** Improve sharing of threat, risk, and best practice information between government and infrastructure operators
- It also establishes that Owners/Operators have primary responsibility for asset protection and first response during emergencies, whilst governments (at all levels) are responsible for providing strategic leadership, coordination, and support,
- Combines security measures, business continuity practices, and emergency management plans to build infrastructure resilience.



National Strategy
for Critical Infrastructure

Source: https://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/srtg-crtcl-nfrstrctr/srtg-crtcl-nfrstrctr-eng.pdf

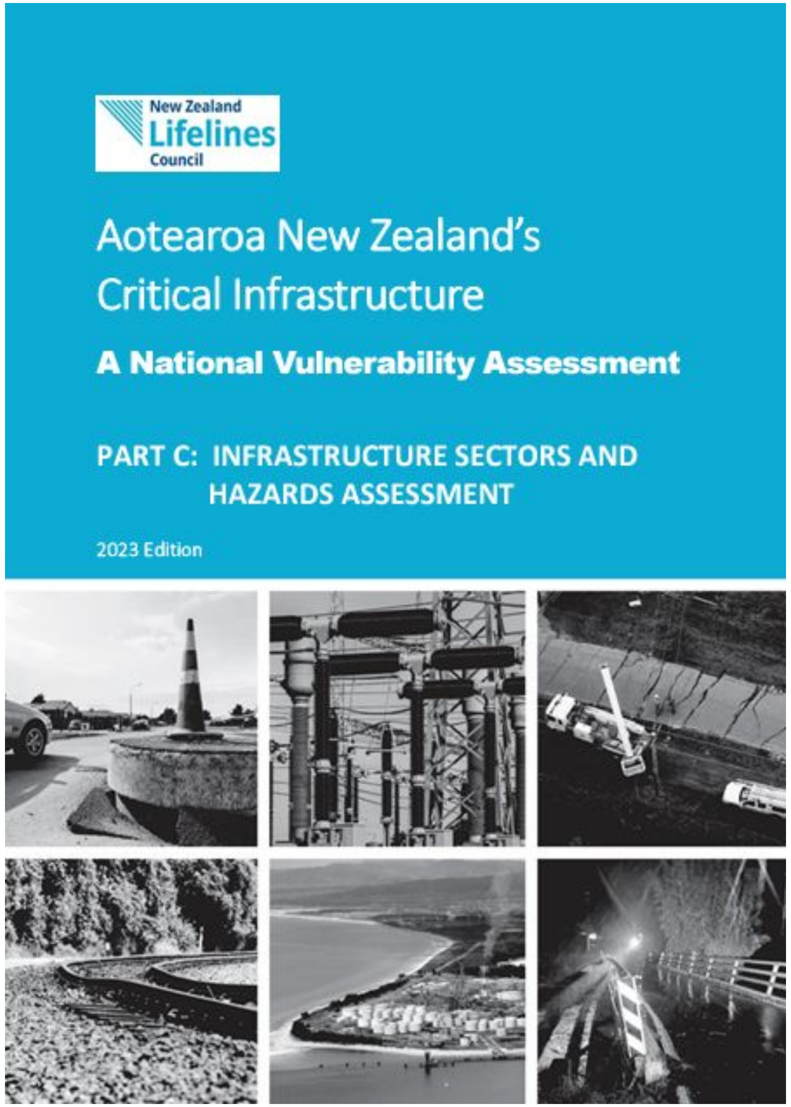
US National Security Memorandum on Critical Infrastructure

- **Leadership Role**
  The **Department of Homeland Security (DHS)** leads efforts to secure U.S. critical infrastructure, with the **Cybersecurity & Infrastructure Security Agency (CISA)** acting as the National Coordinator for security and resilience.
- **Intelligence Sharing**
  The U.S. Intelligence Community is tasked with gathering and sharing intelligence
- **Sector Risk Management Agencies (SRMAs)**
  Designation of 16 critical infrastructure sectors, each managed by a federal **Sector Risk Management Agency (SRMA)**
- **Security Standards**
  Prioritizes minimum security and resilience requirements across sectors, acknowledging the need for stronger standards beyond voluntary measures due to evolving threats, in line with the National Cyber Strategy.

Source:
on critical

New Zealand’s National Critical Infrastructure Vulnerability Assessment

- Identify the critical functions, systems and assets that should be prioritised for investments in building resilience.
- Good understanding of how disruptions can affect infrastructure assets and systems and where dependencies and interdependencies are found that could amplify their impacts.
- Once priority nodes and hubs are identified across interdependent systems, there is a need to assess their resilience with relevant indicators and to compare actual and expected results to see where the gaps are.



New Zealand Lifelines Council

Aotearoa New Zealand’s Critical Infrastructure

A National Vulnerability Assessment

PART C: INFRASTRUCTURE SECTORS AND HAZARDS ASSESSMENT

2023 Edition

New Zealand’s National Critical Infrastructure Vulnerability Assessment

Essential and Enabling (Lifelines) Infrastructure	Essential Services (Critical Customers)
Energy ▪ Telecommunications / Broadcasting ▪ Transport ▪ Water, Wastewater and Stormwater ▪ Flood Protection ▪ Finance (Payment Services) ▪ Solid Waste ▪ Data Storage / ICT	Health and Aged Care ▪ Education ▪ Corrections ▪ Emergency Management and Emergency Services ▪ Financial Services ▪ Fast Moving Consumer Goods ▪ Community Facilities ▪ Major Industry

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Korea's Government-wide Core Infrastructure Security Council

대 한 민 국
대통령실

- Seeking to strengthen inter-departmental collaboration to prepare for hybrid threats such as hacking
- Promoting international cooperation on infrastructure security
- Launched in May 2024 and convened under the authority of the President and chaired by the National Security Office.
- Brings together officials from 11 government agencies that manage and supervise key national infrastructure facilities
- Acknowledges the need to strengthen the response system at the individual agency level and establish an integrated response system at the government level.
- Seeks to identify and manage key infrastructure at the national level in an integrated manner, while eliminating barriers between agencies and responding to various new threats through active information sharing and cooperation.
- Plans to establish a joint response system with allied countries in the future.

Source: https://www.president.go.kr/newsroom/press/L6RR125O