

Cyber reality now – and what next?

Bank of Finland, 30.10.2024

Jarno Linnell

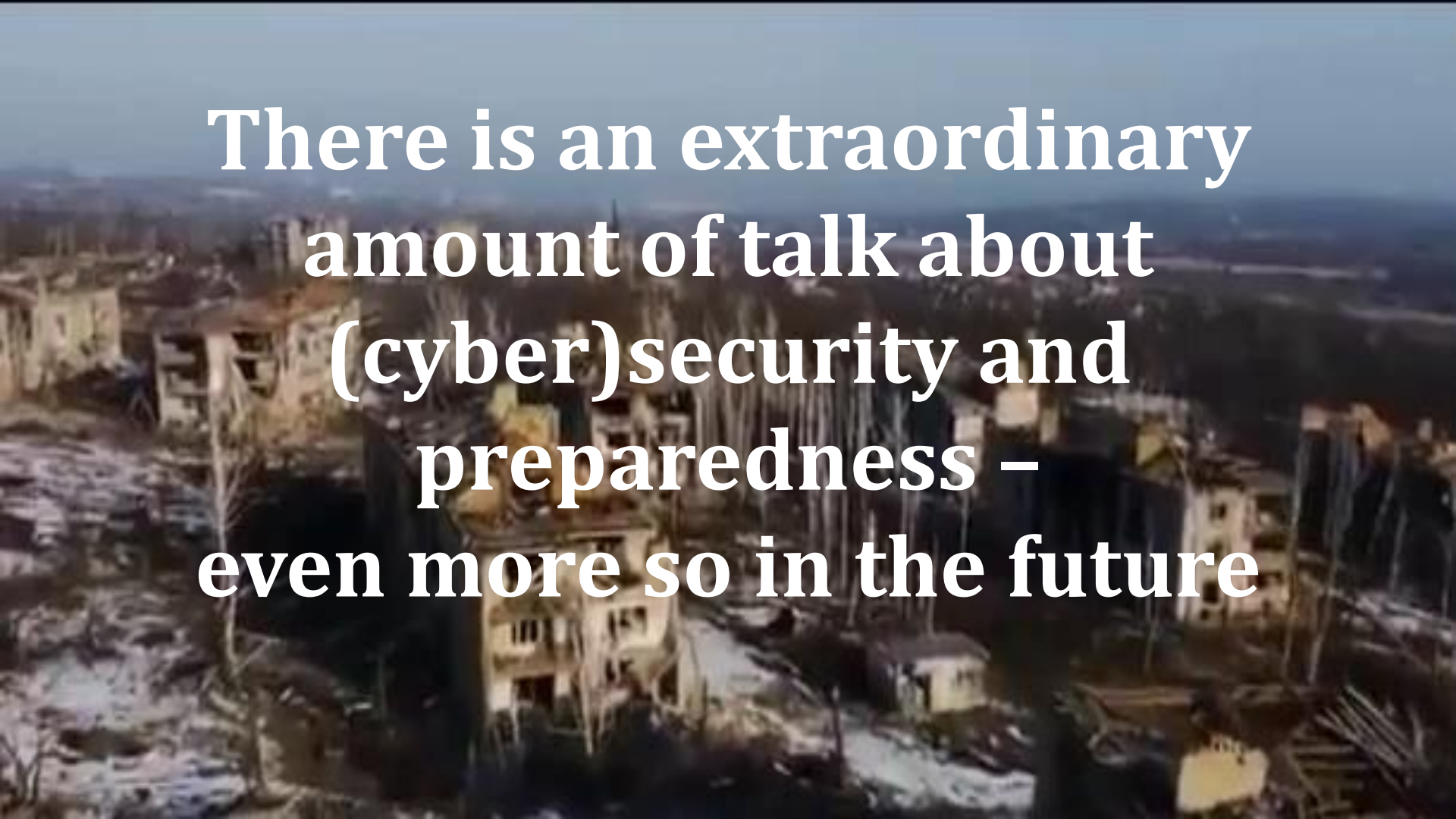
Member of Parliament

Adjunct professor, National Defence University, University of Jyväskylä, University of Tampere

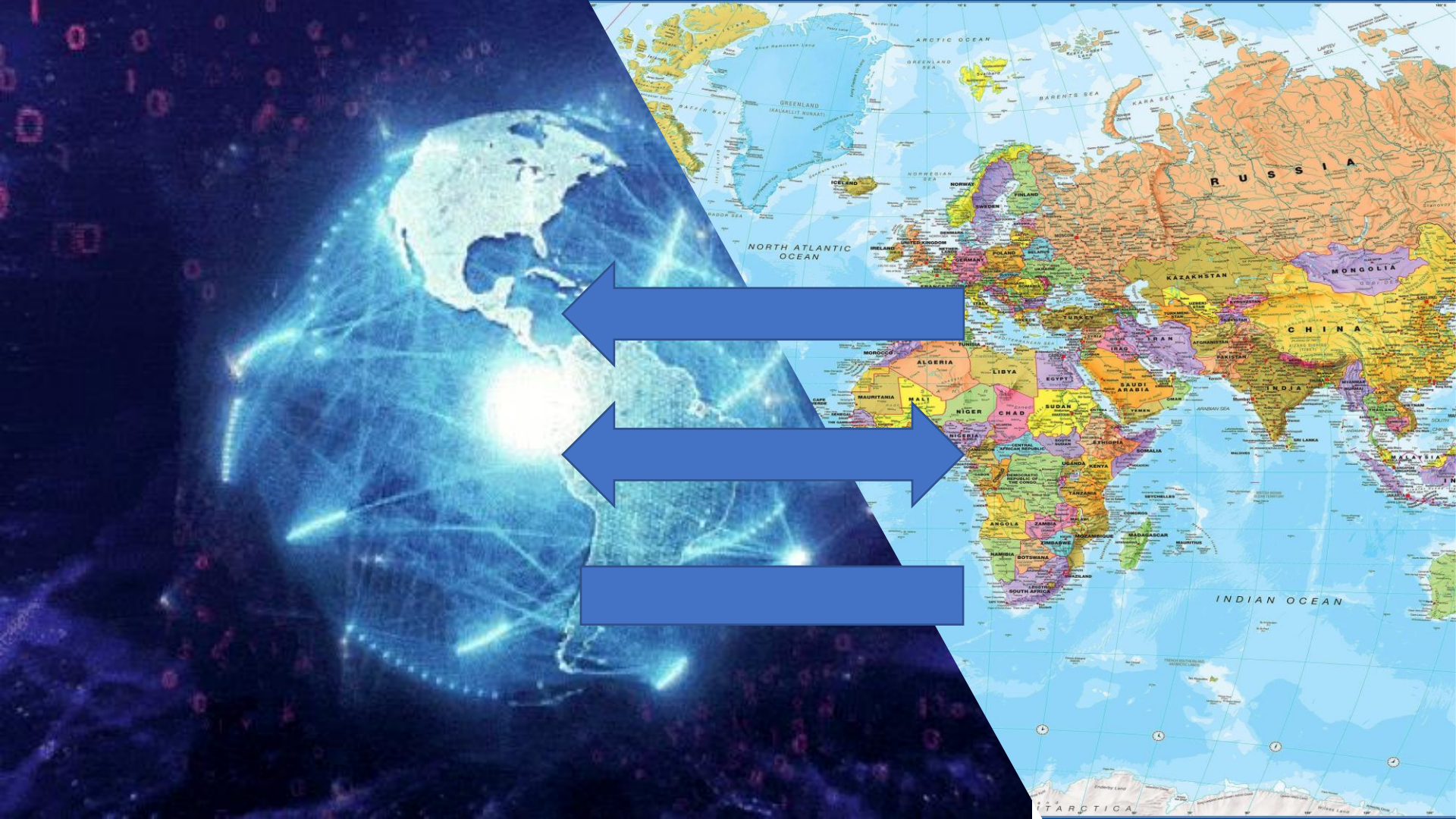
Member of Expert network in World Economic Forum

Doctor of Military Science



An aerial photograph of a city in a state of complete ruin. The buildings are mostly skeletal remains, with charred walls and twisted metal. The ground is covered in ash and debris. In the background, a hazy landscape with some distant structures is visible under a grey, overcast sky. The overall tone is somber and desolate.

**There is an extraordinary
amount of talk about
(cyber)security and
preparedness –
even more so in the future**



ARCTIC OCEAN

GREENLAND

NORTH ATLANTIC OCEAN

RUSSIA

CHINA

INDIA

LIBYA

EGYPT

SUDAN

ETHIOPIA

ANGOLA

SOUTH AFRICA

INDIAN OCEAN

ANTARCTICA

The image features a hand, rendered in a metallic, copper-like texture, holding a green printed circuit board (PCB). The PCB is covered in intricate circuit patterns and various alphanumeric labels such as 'TN193', 'TN188', 'TN187', 'TN196', 'TN179', 'TN180', 'TN181', 'TN182', 'TN183', 'TN184', 'TN185', 'TN186', 'TN187', 'TN188', 'TN189', 'TN190', 'TN191', 'TN192', 'TN193', 'TN194', 'TN195', 'TN196', 'TN197', 'TN198', 'TN199', 'TN200', 'TN201', 'TN202', 'TN203', 'TN204', 'TN205', 'TN206', 'TN207', 'TN208', 'TN209', 'TN210', 'TN211', 'TN212', 'TN213', 'TN214', 'TN215', 'TN216', 'TN217', 'TN218', 'TN219', 'TN220', 'TN221', 'TN222', 'TN223', 'TN224', 'TN225', 'TN226', 'TN227', 'TN228', 'TN229', 'TN230', 'TN231', 'TN232', 'TN233', 'TN234', 'TN235', 'TN236', 'TN237', 'TN238', 'TN239', 'TN240', 'TN241', 'TN242', 'TN243', 'TN244', 'TN245', 'TN246', 'TN247', 'TN248', 'TN249', 'TN250'. The word 'Cybersecurity' is written in a large, white, serif font across the center of the image, with a thick red horizontal line striking through it. The background is dark, and the entire scene is framed within a circular vignette.

~~Cybersecurity~~

Pagers Explode Across Lebanon In Attack On Hezbollah



Production lines, insider

Cyber-physical operation

Psychological affect



**Fast development in cyberworld and
technology**

Blurring state-actors and non state-actors

Understanding of digital vulnerabilities



Implications in a networked world



WAR

PEACE



FINANCIAL TIMES



“Russia plotting sabotage
across Europe, intelligence
agencies warn”

REWARD UP TO \$10 MILLION FOR INFORMATION ON RUSSIAN MILITARY INTELLIGENCE OFFICERS



VLADISLAV BOROVKOV



DENIS DENISENKO



YURIY DENISOV



DMITRIY GOLOSHUBOV



NIKOLAY KORCHAGIN

These individuals are members of Unit 29155 of the Russian General Staff Main Intelligence Directorate (GRU), which has conducted malicious cyber activity against U.S. critical infrastructure, particularly in the energy, government, and aerospace sectors.

These Unit 29155 GRU officers are responsible for targeting critical infrastructure in the Ukraine and dozens of allied Western countries.

Anyone with information on Vladislav Borovkov, Denis Igorevich Denisenko, Yuriy Denisov, Dmitry Yuryevich Goloshubov, and Nikolay Aleksandrovich Korchagin, GRU's malicious cyber activity, or associated individuals and entities should contact Rewards for Justice via the Tor-based tips-reporting channel below.



U.S. Department of State
Diplomatic Security Service
Rewards for Justice

[Tor Link: he5dybnt7sr6cm32xt77pazmtm65flqy6irivtflruqfc5ep7eiodiad.onion](https://he5dybnt7sr6cm32xt77pazmtm65flqy6irivtflruqfc5ep7eiodiad.onion)



Hybrid influence in the coming months?

- Information Influence, affects political decision -making and social atmosphere
- Land, marine and airspace, violation of state borders in their various forms
- Cyber attacks: telecommunications, finance, critical infrastructure, cyber espionage, health care information systems
- Energy
- Human flows to the eastern border
- Disturbing of foreign trade (sea)
- ??



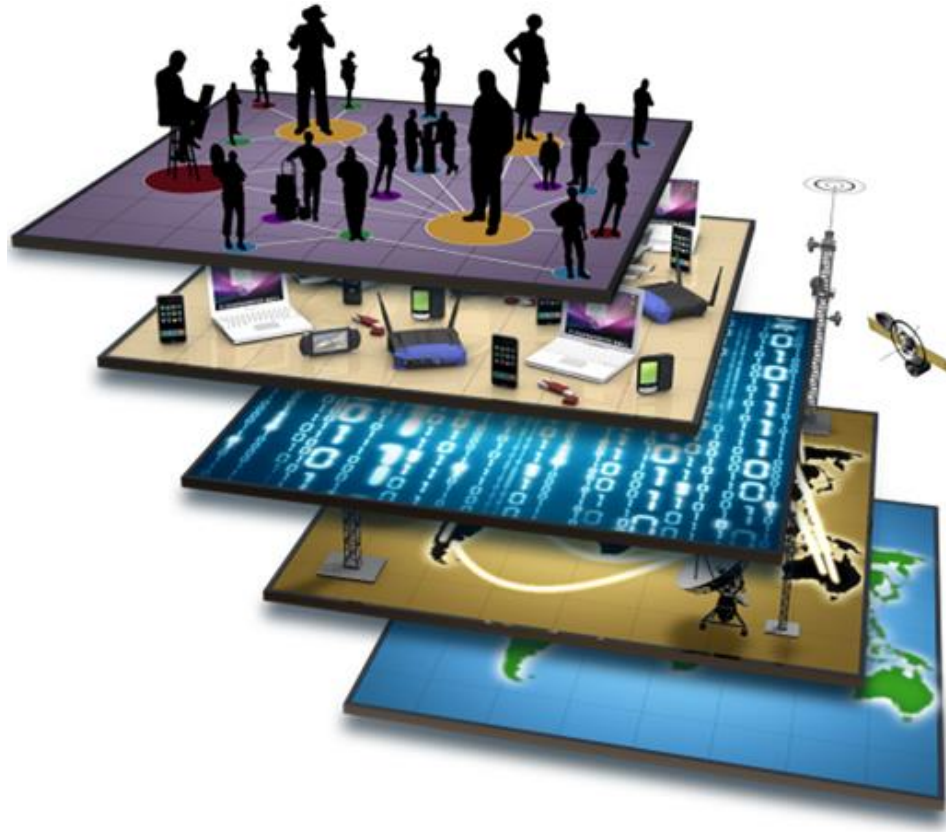
Ransomwares

Phishing

DDoS

Cyberespionage

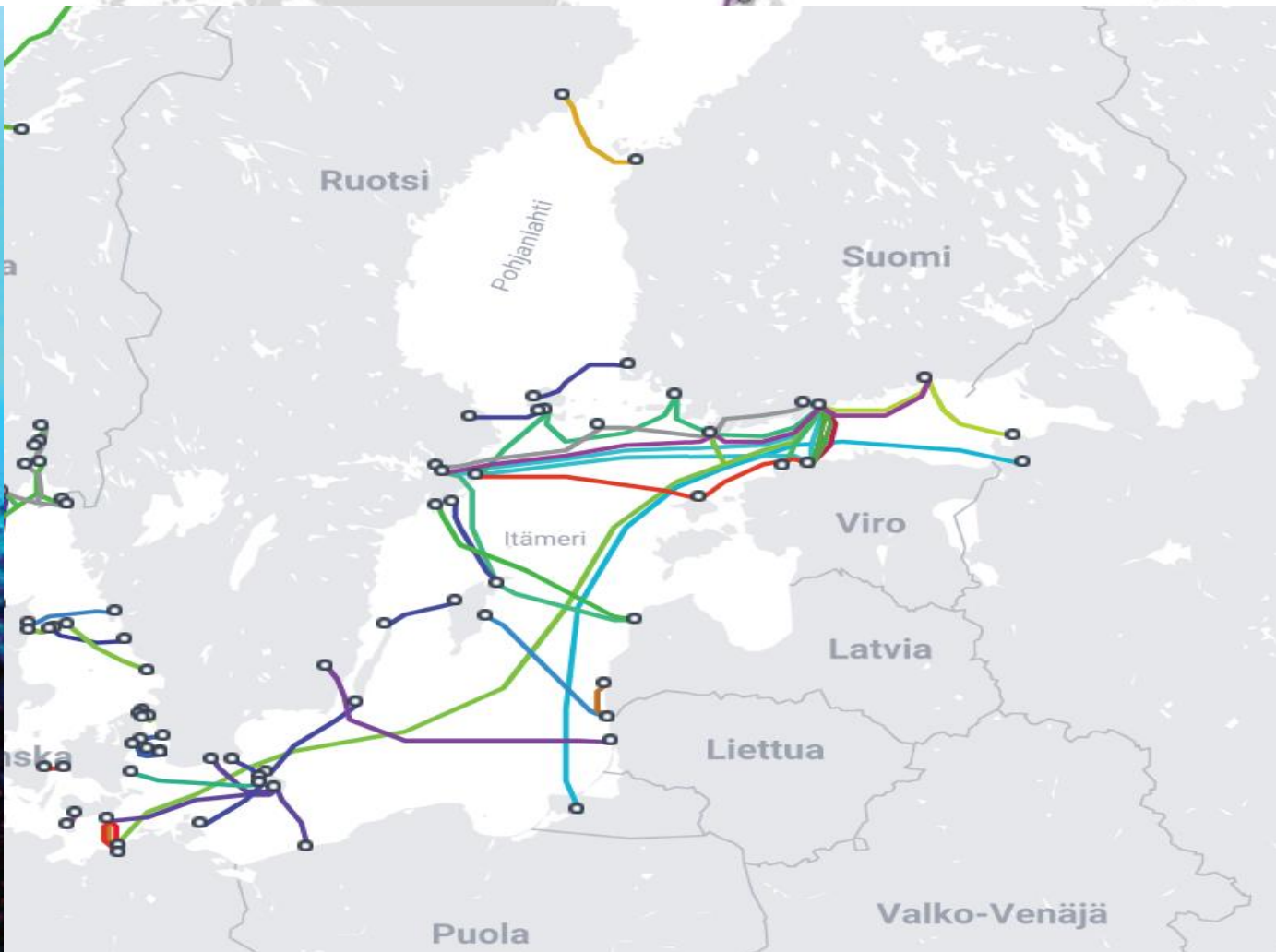
Layers of Cyberspace



Social layer
(Cognitive Cyber)

Logical layer
(Software Cyber)

Physical Layer
(Physical Cyber)





Software is being used to wipe computers across Ukraine as Russia invades



Three key learnings, cybersecurity in Ukraine:

- **Preparation is worth it**
- **Trusted and skilled allies**
- **Cyberresilience (plan B, continuity)**



The Global Risks
Report 2024
19th Edition
INSIGHT REPORT



Global Risks Report 2024

Top 10 risks



"Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period."



Risk categories | Economic | Environmental | Geopolitical | Societal | Technological

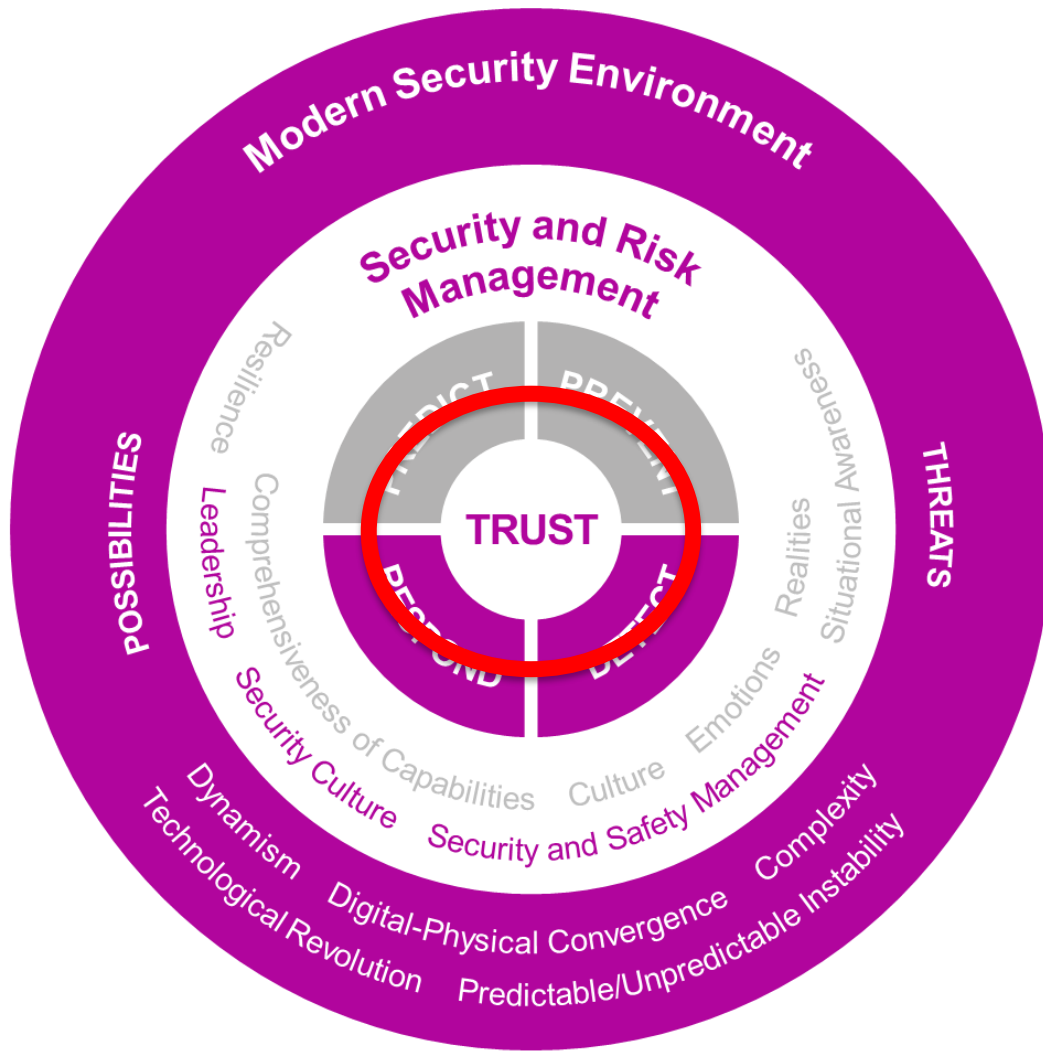
Source: World Economic Forum Global Risks Perception Survey 2023-2024.

» SECURITY «

To remember:

- 1. One security, including communications**
- 2. Situational awareness, security is a process**
- 3. Importance of resilience**
- 4. Practice - know your vulnerabilities and manage risk level**
- 5. The importance of staff motivation and vigilance**





Trust



“It is not the strongest species that survive, nor the most intelligent, but the ones responsive to change.”

- Charles Darwin

Thank you

