THE DANISH INSTITUTE OF FIRE AND SECURITY TECHNOLOGY

DBI is a **Danish Research and Technology Organisation** also called RTO (GTS in Danish).

We are a **‘not-for-profit association’** which means that we do not earn profit for our owners. All earnings goes right back into running the company.

Last but not least we are also a **commercial company** with stable growth and big ambitions.

At DBI, we bring knowledge and technology safely and quickly to use based on "safeguarding lives and assets”.

DBI

R&D FOCUS | New technologies are every where – and cause new risks and challenges

Buildings within planetary boundaries

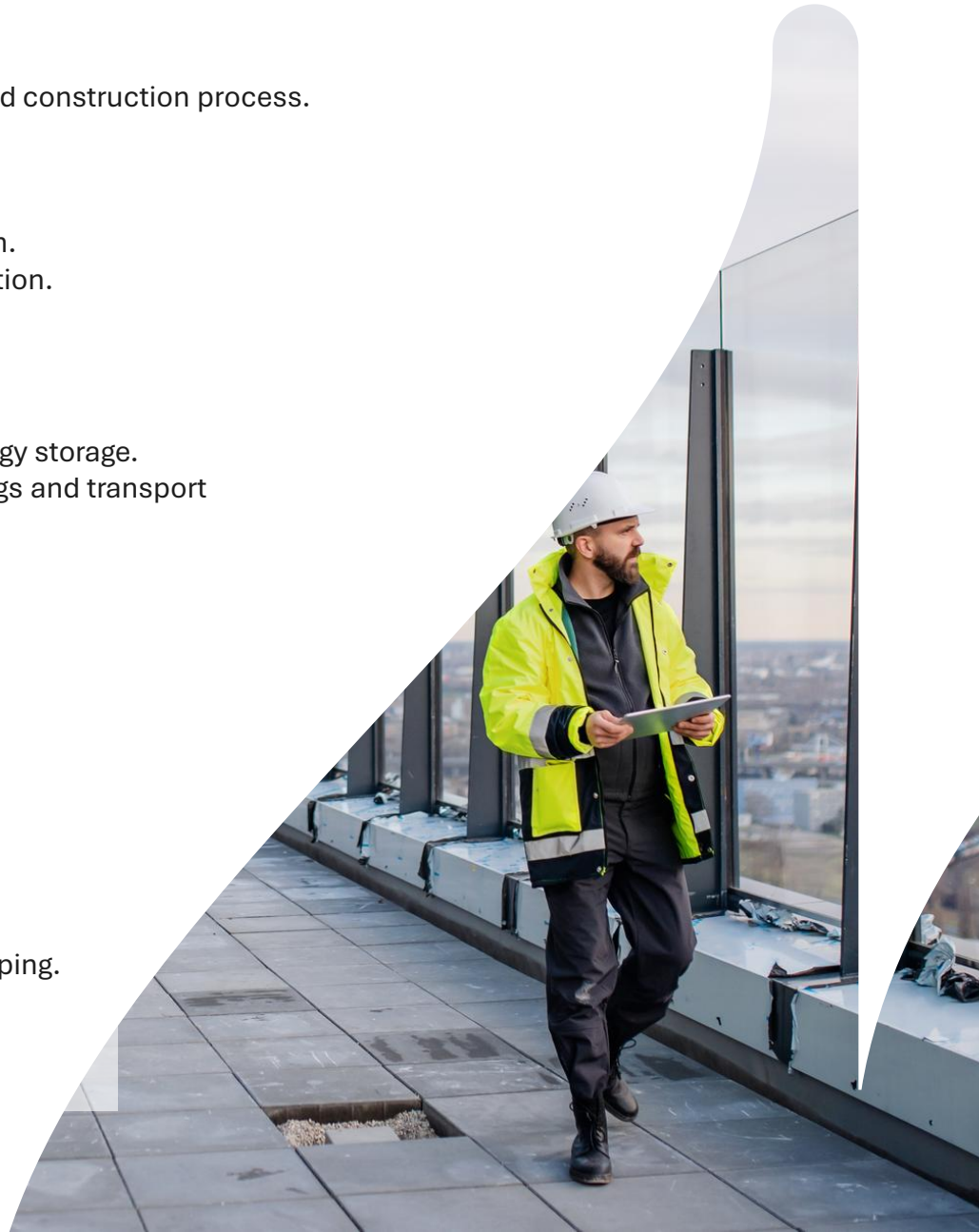
- CO2 footprint from building materials and construction process.
- Renewable resources and recycling.
- Renovation rather than new buildings.
- Buildings with multiple possible uses.
- Data-driven design and digital integration.
- Photo-voltaics, batteries, and electrification.

CO2-neutral and robust energy and transport systems

- Climate-friendly energy.
- Integration of energy systems and energy storage.
- Batteries and energy storage in buildings and transport facilities.
- Electrofuels.
- Electrification.
- Reduce dependence on energy.

Robust civil society and strong defence

- Organisational Resilience
- Focus on security and defense.
- The Arctic, the North Atlantic, and shipping.
- Green fuels for the defence.
- Regulatory focus.



ONE OF THE SEVEN DENMARK´S GTS (RTO) INSTITUTES

In Denmark, there are seven Approved Technological Service Institutes (GTS institutes). They are part of the Danish effort to create an innovative and competitive business community. The task of the GTS institutes is to accelerate the business community's application of new knowledge and technology.

- Research-based
- Non-profit
- Reinvest incomes

Approved by Uddannelses- og Forskningsministeriet

GTS

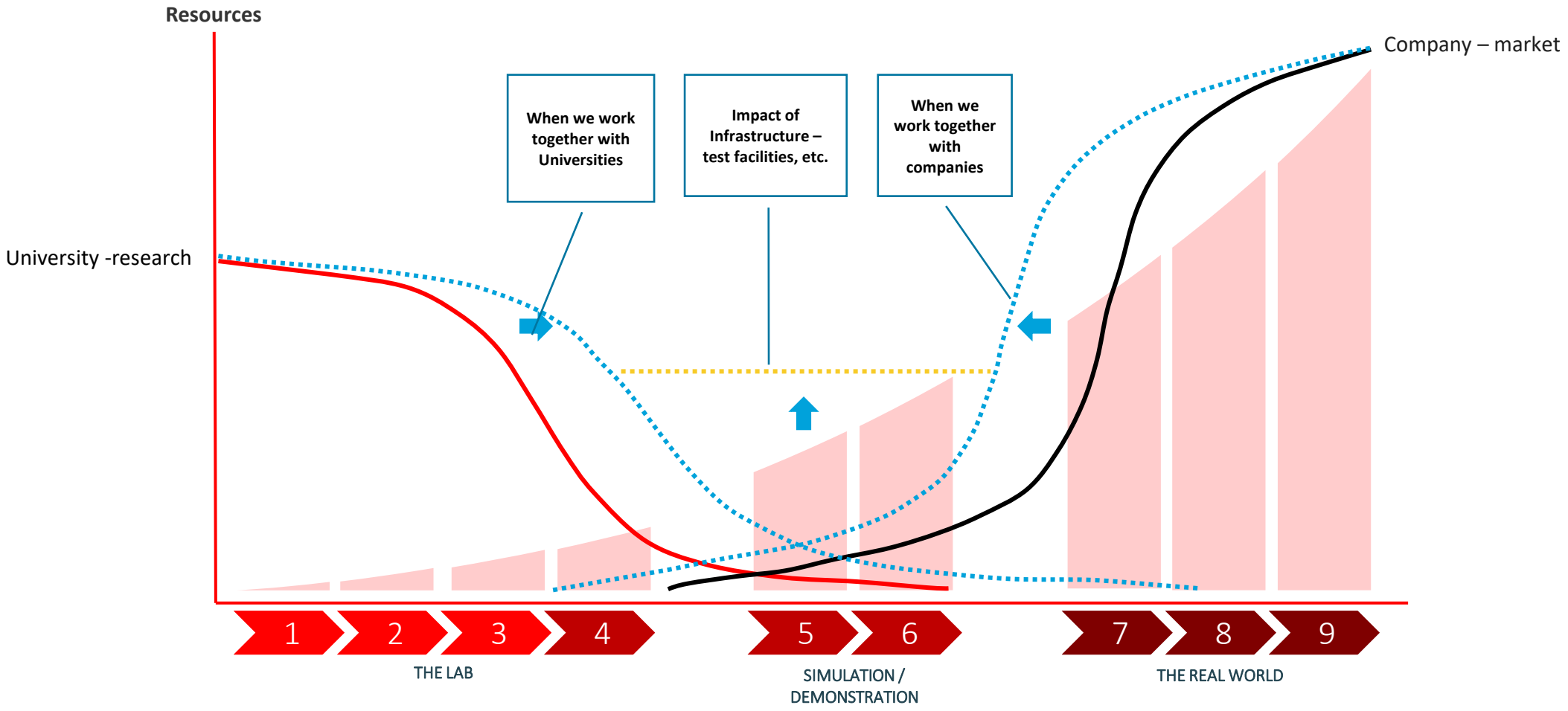
Facts about the GTS

In 2024, the GTS institutes had a total turnover of just over 575 million Euros and served >21,000 private Danish customers, of which 89% were small and medium-sized enterprises.

DBI

In the Netherlands… TNO innovation for life

Linking academia and the Industry



Technology Readiness Level

Inspireret af Hensen, J.L.M., Loonen, R.C.G.M., Archontiki, M., Kanellis, M. (2015). Using building simulation for moving innovations across the "Valley of Death". REHVA Journal, Volume 52, Issue 3, pp: 58-62

Photo by Mr Alex Photography: https://www.pexels.com/photo/a-clock-tower-with-a-green-spire-and-a-clock-on-top-27959957/

DANISH SOCIETAL SECURITY AND EMERGENCY PREPAREDNESS

Building Resilience Together: Public-Private Partnerships

March 2026

Jorge Ivan Contreras Cardeño
Principal Consultant Resilience

DBI

CONSOLIDATION OF SOCIETAL SECURITY AND EMERGENCY PREPAREDNESS IN A NEW MINISTRY

Government Strategy 2022

- *"Danish society must be made more robust in the face of future threats, challenges, and crises. Therefore, the government will take the initiative to strengthen the organization and prioritization of societal preparedness, crisis management, critical infrastructure, and security of supply."*

Royal Resolution of 29 August 2024

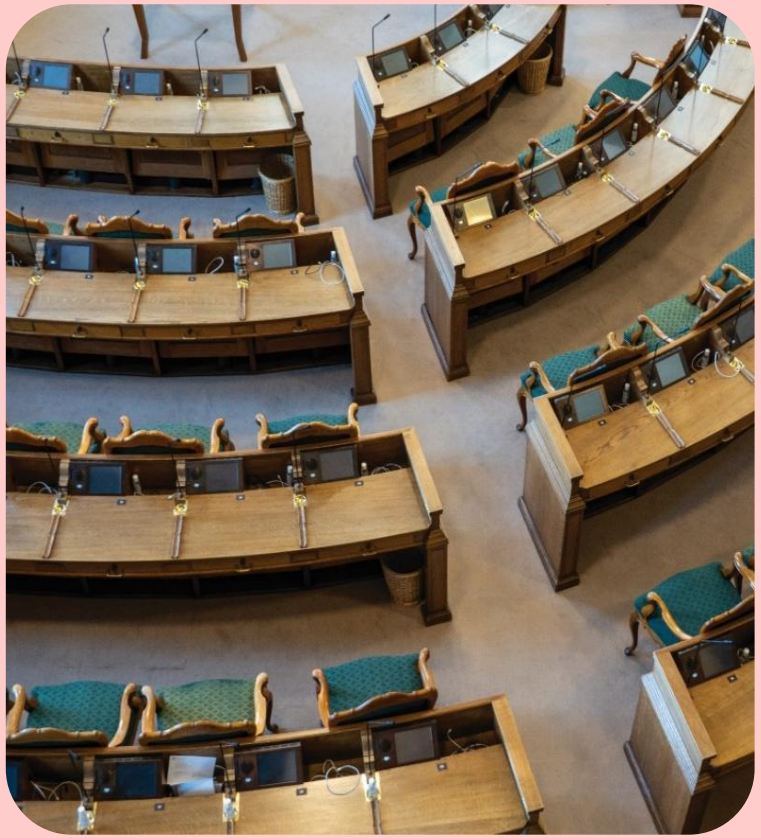
- Establishment of the Ministry of Societal Resilience and Preparedness (**MSSB**).

Establishment of SAMSIK on 29 January 2025

- Creation of the Danish Resilience Agency (SAMSIK), consisting of units from the former Centre for Cyber Security, the Danish Emergency Management Agency, the Danish Security and Intelligence Service, the Danish Digital Agency, and the entire Danish Security of Supply Agency.

Organization of SAMSIK 1 May 2025

Strengthening Preparedness Acts (July 2025)



Source:
Morten Ørbech, Head of Department, **SAMSIK**. October 2025

CONSOLIDATION OF SOCIETAL SECURITY AND EMERGENCY PREPAREDNESS IN A NEW MINISTRY

MINISTRY OF RESILIENCE AND PREPAREDNESS

THE DANISH RESILIENCE AGENCY
(SAMSIK)

DANISH EMERGENCY MANAGEMENT AGENCY
(Beredskabsstyrelsen)

The Danish Resilience Agency

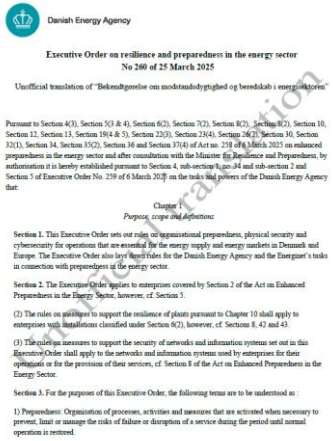
Source:
Morten Ørbech, Head of Department, **SAMSIK**. October 2025

IMPLEMENTATION OF THE EUROPEAN DIRECTIVES (CER-NIS2)

- The Danish NIS 2 Law is the primary piece of legislation that businesses must consult. In addition to the law, there are three other key regulatory instruments related to NIS 2: the NIS 2 Implementing Regulation, the NIS 2 Directive, and the Regulation on the Designation of Competent Authorities.

- The CER Law transposes the Directive (EU) 2022/2557 (Critical Entities Resilience Directive) and introduces binding resilience requirements for infrastructure operators and providers of services that are crucial for the maintenance of vital societal functions, economic activities, public health and safety, or the environment.

The Act on Strengthened Preparedness in the Energy Sector and the Executive Order on Resilience and Preparedness in the Energy Sector



Danish Energy Agency

Executive Order on resilience and preparedness in the energy sector
No 260 of 25 March 2025

Unofficial translation of "Bekendtgørelse om modstandsdygtighed og beredskab i energisektoren"

Pursuant to Section 4(3), Section 5(3 & 4), Section 6(2), Section 7(2), Section 8(2), Section 8(2), Section 10, Section 12, Section 13, Section 19(4 & 5), Section 22(3), Section 23(4), Section 26(2), Section 30, Section 32(1), Section 34, Section 35(2), Section 36 and Section 37(4) of Act no. 258 of 6 March 2025 on enhanced preparedness in the energy sector and after consultation with the Minister for Resilience and Preparedness, by authorisation it is hereby established pursuant to Section 4, sub-section 1, no. 34 and sub-section 2 and Section 5 of Executive Order No. 259 of 6 March 2025 on the tasks and powers of the Danish Energy Agency that:

Chapter 1
Purpose, scope and definitions

Section 1. This Executive Order sets out rules on organisational preparedness, physical security and cybersecurity for operations that are essential for the energy supply and energy markets in Denmark and Europe. The Executive Order also lays down rules for the Danish Energy Agency and the Energinet's tasks in connection with preparedness in the energy sector.

Section 2. The Executive Order applies to enterprises covered by Section 2 of the Act on Enhanced Preparedness in the Energy Sector, however, cf. Section 5.

(2) The rules on measures to support the resilience of plants pursuant to Chapter 10 shall apply to enterprises with installations classified under Section 6(2), however, cf. Sections 8, 42 and 43.

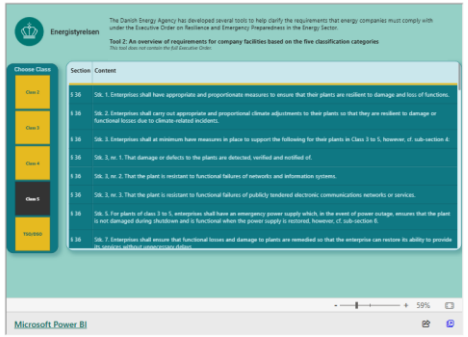
(3) The rules on measures to support the security of networks and information systems set out in this Executive Order shall apply to the networks and information systems used by enterprises for their operations or for the provision of their services, cf. Section 8 of the Act on Enhanced Preparedness in the Energy Sector.

Section 3. For the purposes of this Executive Order, the following terms are to be understood as :

1) Preparedness: Organisation of processes, activities and measures that are activated when necessary to prevent, limit or manage the risks of failure or disruption of a service during the period until normal operation is restored.

Tool 1: An overview of requirements for companies based on their classification levels 1 to 5.

Tool 2: An overview of requirements for company facilities based on the five classification categories.



IMPLEMENTATION OF THE EUROPEAN DIRECTIVES (CER-NIS2)

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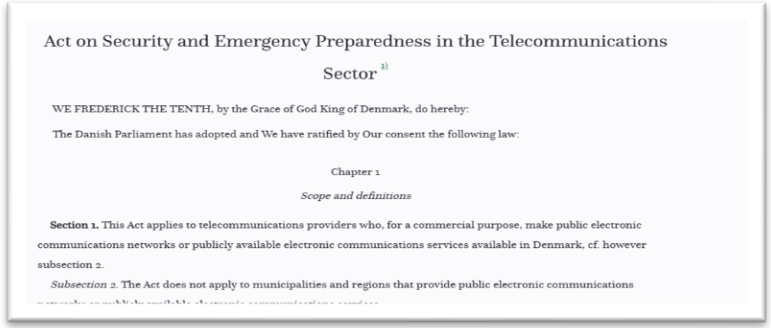
Act on security and emergency preparedness in the telecommunications sector,



Act on Security and Emergency Preparedness in the Telecommunications Sector [1)]

WE FREDERICK THE TENTH, by the Grace of God King of Denmark, do hereby:

The Danish Parliament has adopted and We have ratified by Our consent the following law:

Chapter 1

Scope and definitions

Section 1. This Act applies to telecommunications providers who, for a commercial purpose, make public electronic communications networks or publicly available electronic communications services available in Denmark, cf. however subsection 2.

Subsection 2. The Act does not apply to municipalities and regions that provide public electronic communications

TOTAL DEFENCE DENMARK

"Through total defence, we work together to strengthen Denmark's defence capability. It is society's collective effort to prevent and manage major incidents, crises, disasters, and war."…

…"Businesses must integrate security and preparedness into their operations. Associations and volunteers must contribute where they have insight, competencies, and resources."

The primary task of total defence is the continuation of society and the protection of vital functions that ensure our democracy can continue to function. Preparedness should be part of everyday life – in households, organisations, businesses, and public authorities – even before a crisis occurs. A prepared society is a strong society.

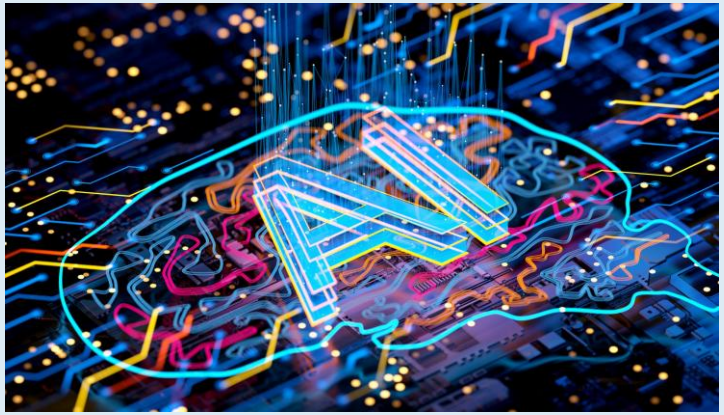
The Danish Resilience Agency

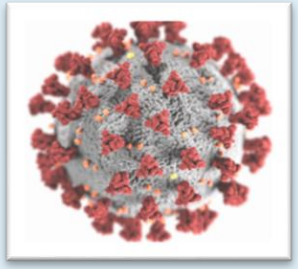
1. INCREASED GEOPOLITICAL UNCERTAINTY

COMPANIES

Large Danish company hit by hacker attack: "I felt like I got a real kick in the stomach"

The company Würth, which supplies equipment to craftsmen and tradespeople, was hit between Christmas and New Year and had to struggle to rebuild its systems. It is just another example of major Danish companies being hit by hacker attacks in recent months. Experts predict that the threat from the Internet will increase.





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nets

Nets serves millions of European consumers providing **digital payment services** that are used by over 740,000 merchant outlets and more than 250 banks and other issuers of payment cards.

Angry drivers tried to force barriers up on the Great Belt. Sund & Bælt reports two incidents of vandalism to the police. Unlike the Great Belt, the Øresund Bridge dropped payments when Net's payment system went black on Saturday.

Storebælt police report drivers after crash and investigate threats

During a crash in Nets' systems on Saturday evening, frustrated drivers vandalized some of the barriers at the Great Belt Bridge toll booth. The staff at the site also received death threats, according to the South Zealand and Lolland-Falster Police. File photo: Finn Frandsen

MICHAEL OLSEN
Journalist

LISTEN TO THE ARTICLE

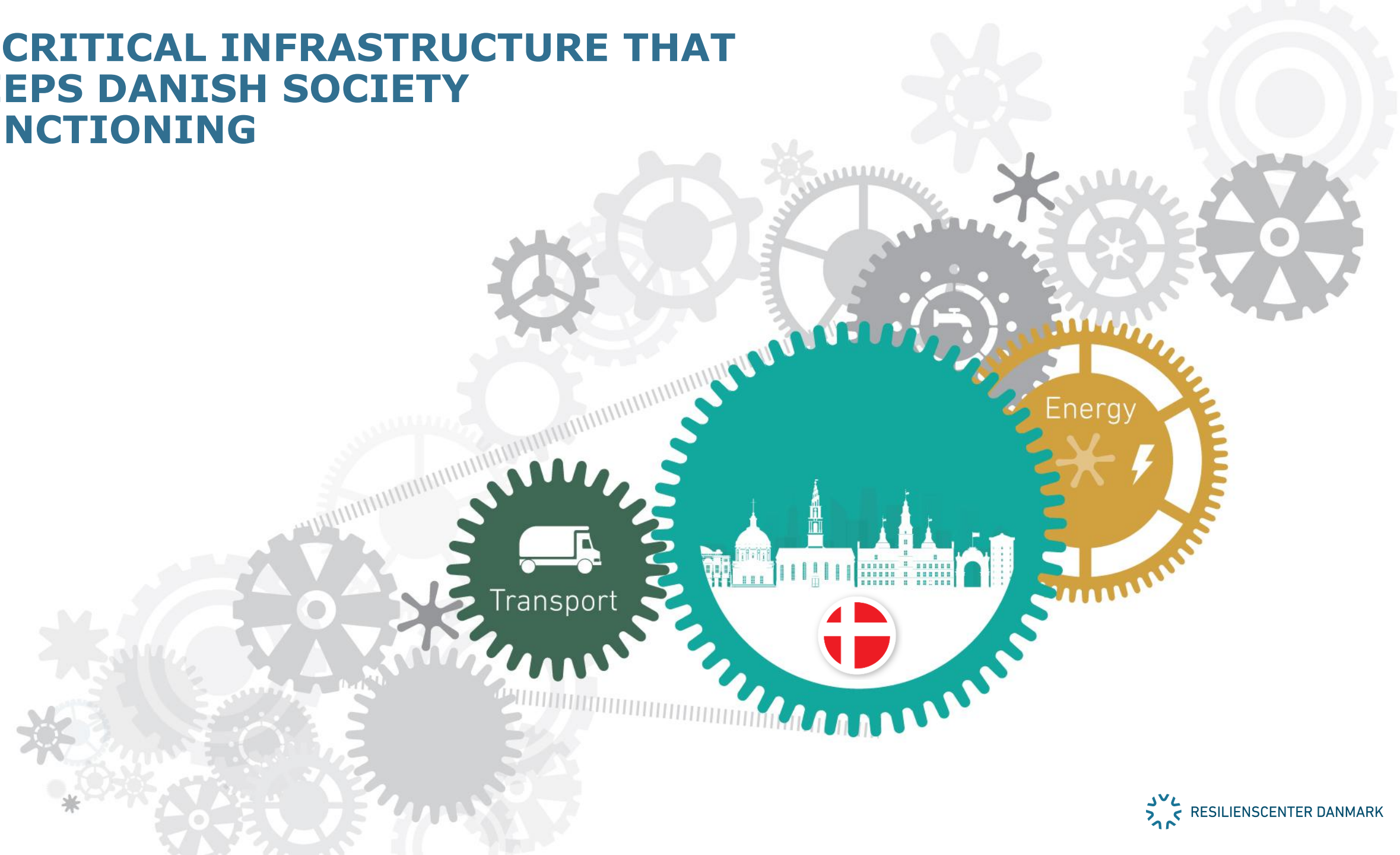
SAVE THE ARTICLE

DENMARK
JULY 20, 2025, 09:26

POSTS IN THE CONVERSATION

This resulted in long queues and deep frustrations on the Great Belt Bridge, payment problems for Danish tourists abroad, lost revenue at several music festivals and lots of inconvenience, chaos and lost revenue at the Tivoli amusement park in the middle of Copenhagen.

2. CRITICAL INFRASTRUCTURE THAT KEEPS DANISH SOCIETY FUNCTIONING



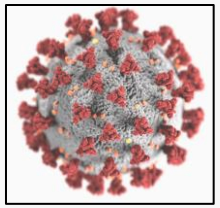
RESILIENSCENTER DANMARK

3. EFFECT: They affect the entire value chain, create operational disruptions, and cause delays, which affect the entire system.

SOCIETY MUST BE QUICKLY PREPARED FOR INCREASED UNCERTAINTY

AN OPPORTUNITY FOR BUSINESS

Increased geopolitical uncertainty



Response

- Companies: Continued operation
- EU **Directives**
- National **Regulation**
- NATO: Article 3

New market

DEMAND RESILIENCE

Large companies
Critical infrastructure
Subcontractors

New opportunity for business
Advise
Train
Educate
Monitor
Document

GTS

Technology and advanced knowledge about e.g.

Pandemics
Cybersecurity
Fire
Explosion
Terror
Flood
Materials
Supply chains
…

RESILIENCE CENTER DENMARK

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ALL GTS INSTITUTES ESTABLISHED THE RESILIENCE CENTER DENMARK-RCD

ALEXANDRA INSTITUTTET

bioner

DBI

DFM Danmarks Nationale Metrologiinstitut

DHI

DANISH TECHNOLOGICAL INSTITUTE

FORCE TECHNOLOGY

RESILIENCE CENTER DENMARK

Access to GTS knowledge and technology
Technological infrastructure, e.g.
- ✓ **Standards/ Guidelines**
- ✓ **Training**
- ✓ Testing and simulating ("war games")
- ✓ Educate advisors
- ✓ Certify advisors
- ✓ Certify companies

International Network

RESILIENCE CENTER DENMARK

RESILIENCE CENTER DENMARK

Strengthening resilience for critical infrastructures in Denmark

INTERDEPENDENCIES (CROSS-BORDER – SECTORS)

Suppliers and Partners

Logistics and Transport

You are a provider of warehouse storage for the energy sector

RESILIENSCENTER DANMARK

Suppliers and Partners

Logistics and Transport

You are a provider of cargo transport for the energy sector

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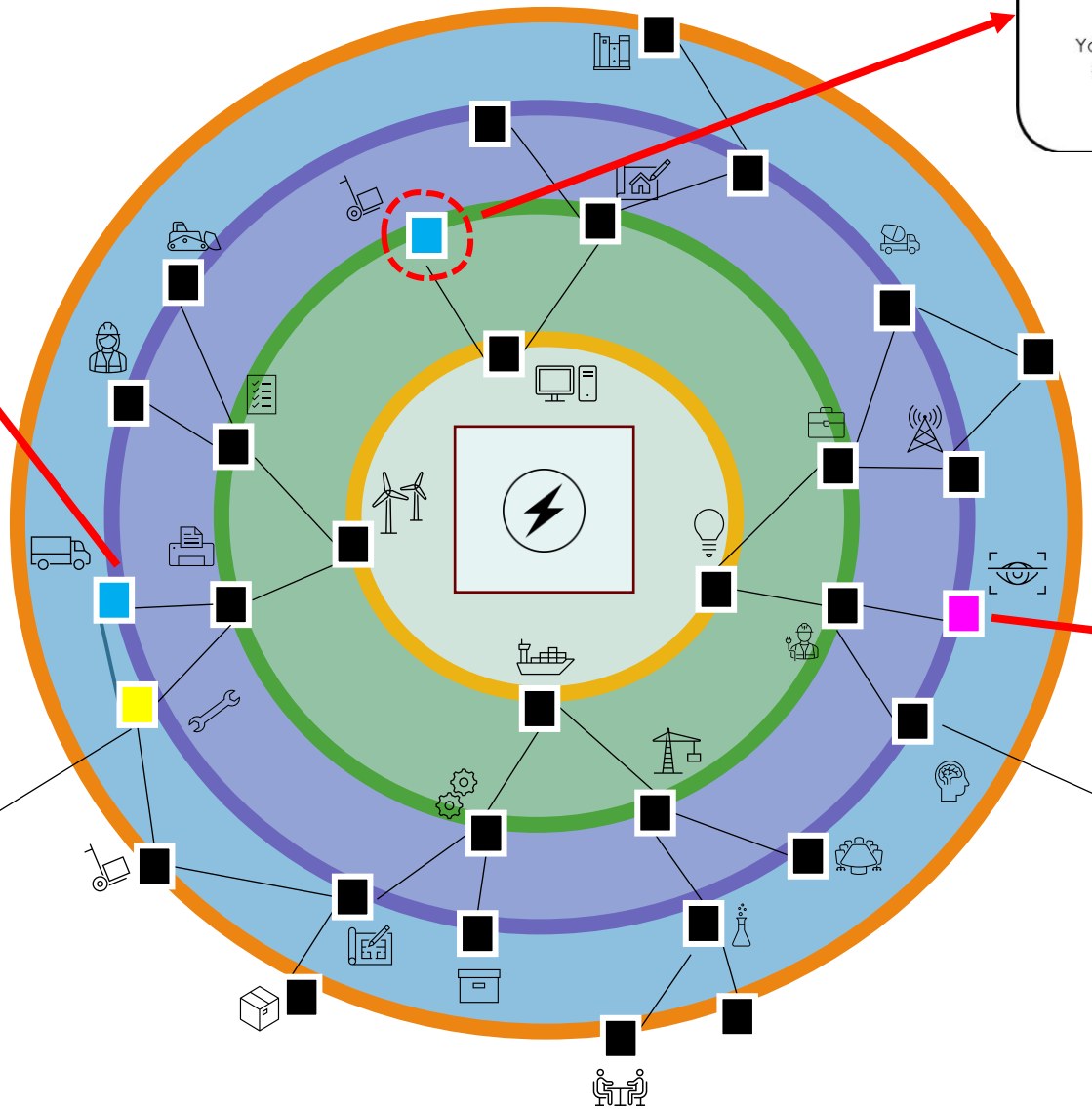
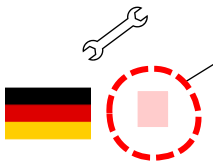


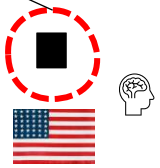
Digital Infrastructure and Web Services

Smart Grid Technologies

You are a producer of control systems for the energy sector

RESILIENSCENTER DANMARK





RESILIENSCENTER DANMARK

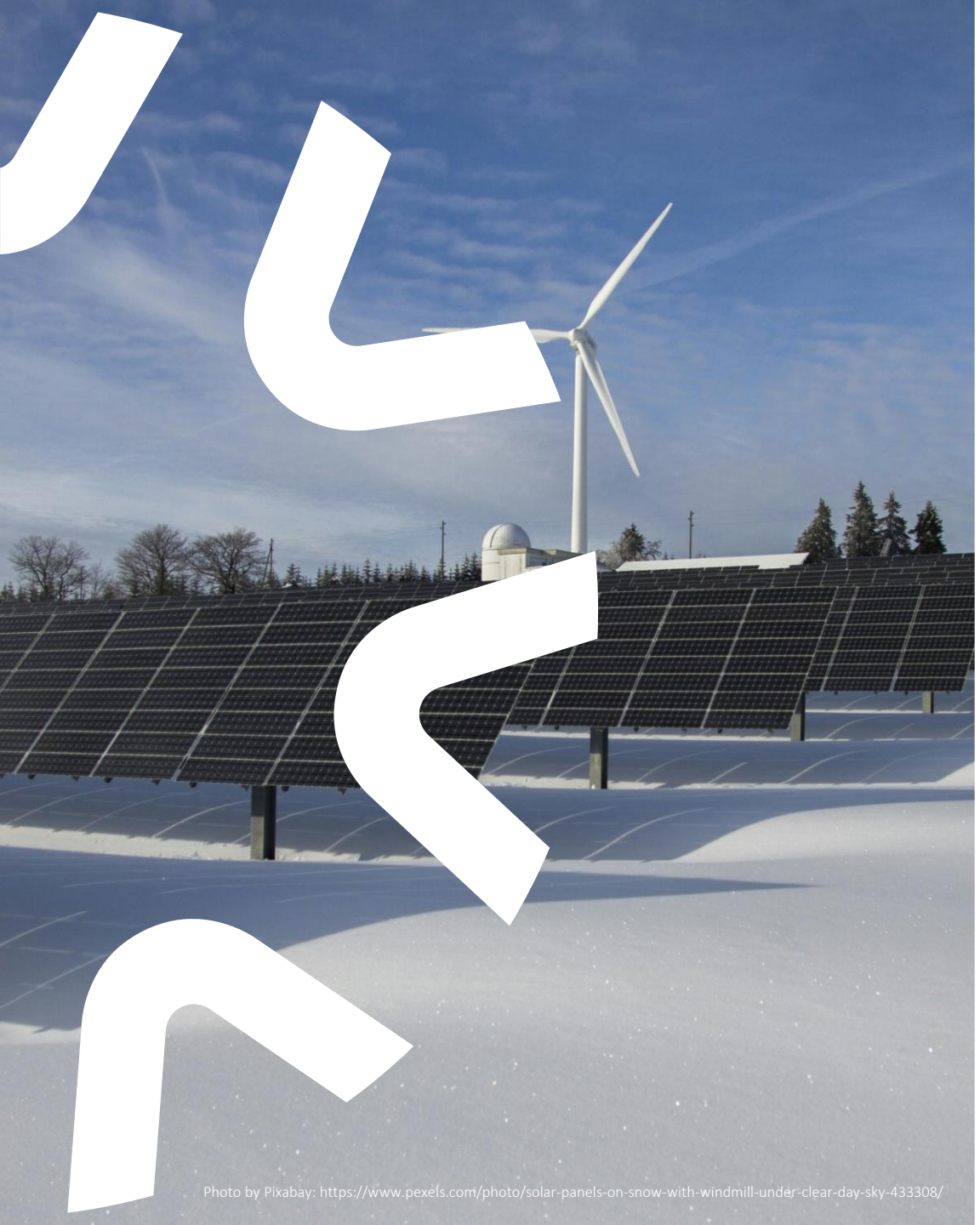
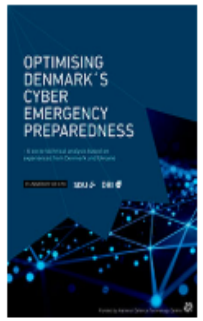


Photo by Pixabay: https://www.pexels.com/photo/solar-panels-on-snow-with-windmill-under-clear-day-sky-433308/

RESILIENCE CENTER DENMARK

IDENTIFYING NEEDS (MAPPING THE SECTORS)

- Energy
- Telecommunications
- Water
- Pharmaceutical



Optimising Denmark´s Cyber Emergency Preparedness

This project is funded by the National Defence Technology Center (NFC) and conducted in collaboration between ITU, SDU, and DBI. It examines Denmark´s preparedness to defend against cyberattacks on critical infrastructure, with a particular focus on telecommunications. Based on 27 interviews with Danish and Ukrainian stakeholders, the report demonstrates how cyberattacks on telecom systems can disrupt essential societal functions and trigger cascading effects across sectors such as healthcare. Drawing on lessons from Ukraine, the project identifies key cyber threats, systemic vulnerabilities, and the need for multi-layered zero trust strategies, strong organisational practices, and cross-sector collaboration.

Download the report to explore the findings and recommendations in full.

Download ›

CURRENT TOOLS

ANNUAL CONFERENCE

Every year we organize the Resilience for Critical Infrastructures annual conference. Here we present state of the art relevant research, study cases, sessions for training and new technologies, and create a forum for networking and collaboration.

Join the **Resilience Center Denmark network group** to stay informed about upcoming events.

THE RESILIENCE GAME

At RC-D we are convinced that resilience goes beyond compliance, if you are curious about this, book a spot to play the Resilience Game in your company. Invite some of your colleagues to build the concept of resilience for critical infrastructures in your company and in Denmark in general.

Contact us >

WEBINARS & TRAINING

Each semester we organize a webinar where we address concrete cases that RC-D is developing or that require inputs from the industry and all the actors from the resilience ecosystem. We also hold training sessions or free courses.

Watch previous webinars here >

RESILIENCE CENTER DENMARK

NEWS EVENTS ABOUT US NETWORK

Contact DA

WHEN THE UNEXPECTED OCCURS, WE HELP KEEP DENMARK UP AND RUNNING.

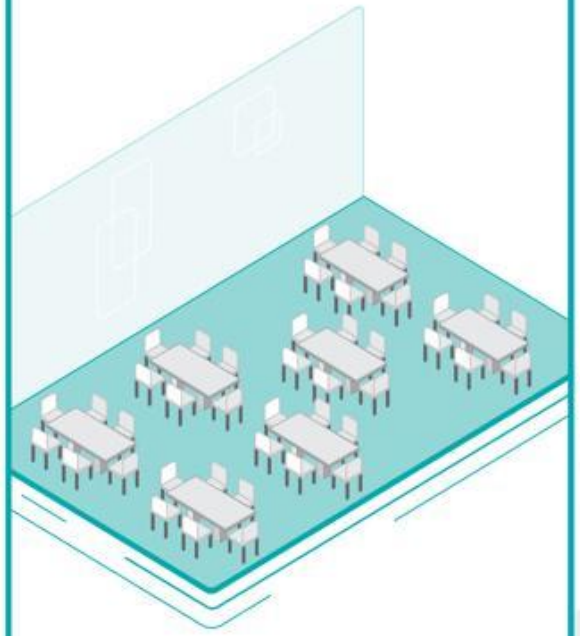
Resilience Center Denmark strengthens the development of knowledge and solutions through innovation that can help companies meet new demands for increased resilience. The center unites the efforts of the seven Danish GTS institutes to promote the growth and export of resilience technology, and ultimately to strengthen Denmark's resilience.

The RESILIENCE Game as a means to explain, enable, and enact Resilience

Jorge Ivan Contreras Cardeño
Principal Consultant Resilience

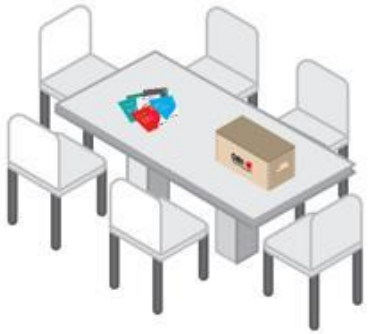
Game- for reflections and alignment on barriers for resilience

THE ROOM



EXPLANATION

TOOLS

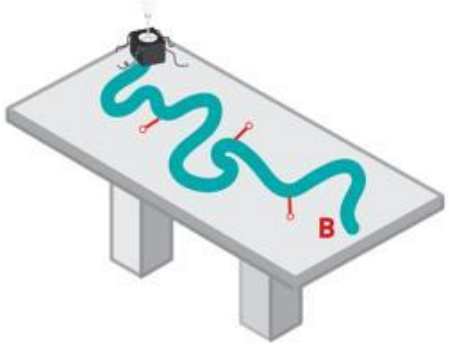


- Eye mask
- Modelling
- Strings (cords)
- Thumb bandage
- Tape
- Goggles
- Clip
- Wood

- Plan
- Cards

PLANNING

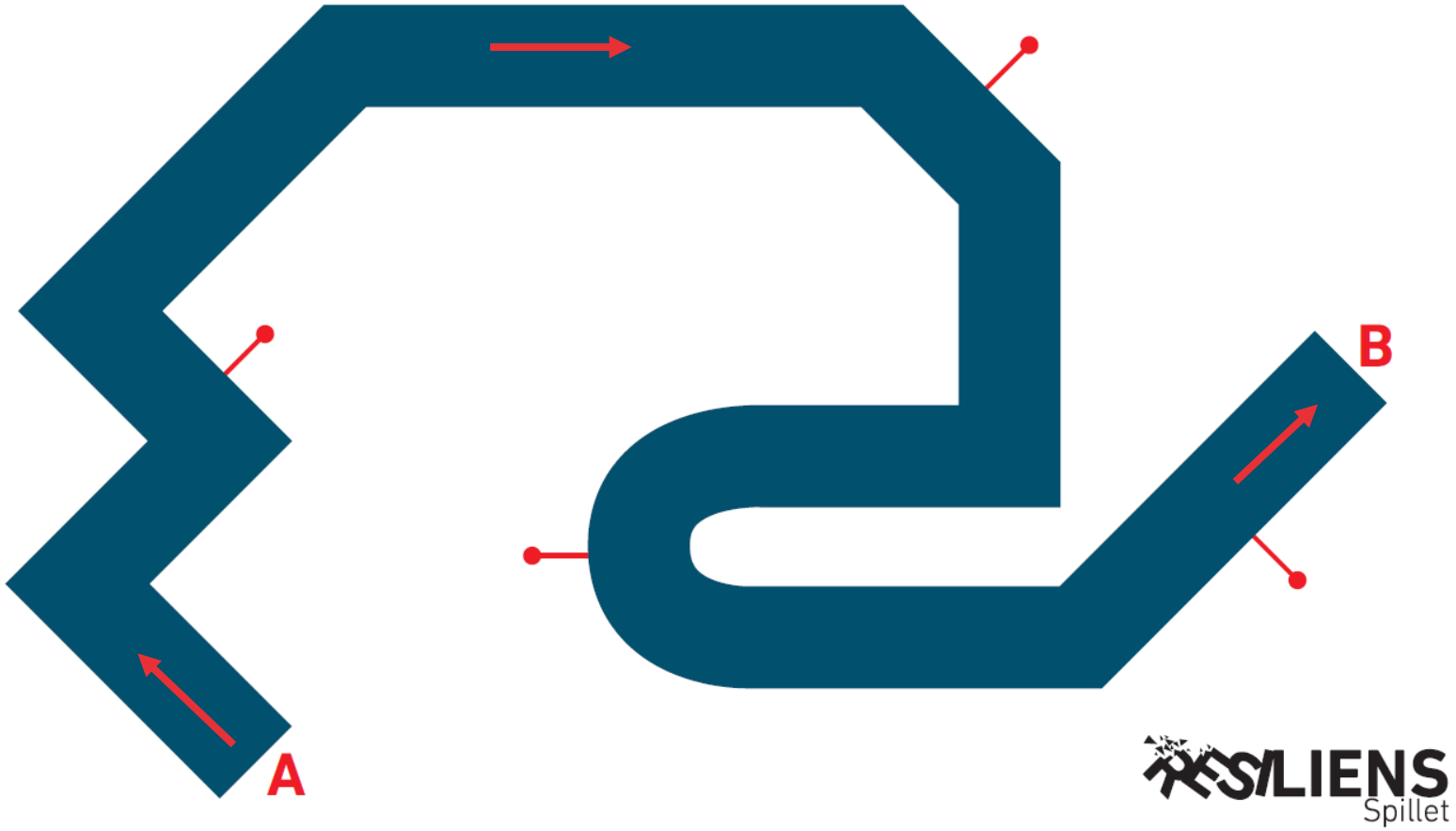
THE TRACK



EXECUTION

REFLECTIONS

Your company's operation



Stress-testing questions for reflections

Does culture matter?

Code, Habits, Rituals, Symbols, Groups. (Yes, we need to address this!)

Why is it important to make agreements? And what about mapping capacities and capabilities?

How is this connected to Resilience?

Communication, Consciousness, Trust, Decision-making, Care, Collaboration, Facilitations, Sustainability and practice.

Back to principles

What is resilience?

Is the organization´s ability to prevent, resist, absorb and recover from disruptive incidents, including those caused by natural hazards, terrorism, insider threats, sabotage, or public health emergencies. **CER Directive**

Something unexpected, unpredictable, and complex!

Take home messages

1

Resilience is not only robustness, resistance, and preparedness.

2

Resilience requires constant agreements and Collaboration

3

Resilience is

non-transferable and interdependent

4

Resilience goes beyond compliance; it is with “the People” and the technology (scaffolding)

5

Resilience Center Denmark is a meeting point for Resilience and for Practice. What about you?

RESILIENSCENTER DANMARK

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+45 50809644
www.linkedin.com/in/jorgecontrerasdk

DBI
FIRE AND SECURITY