

> **The very first cyber strategy for the universities:
This is how we should protect Danish research
against cyberespionage and cybercrime**

69th TF-CSIRT Meeting
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DKCERT
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> Who is DKCERT?

- > DKCERT, the Danish academic CERT/CSIRT was founded 1991
- > Since 2012 a service provided by DeiC (Danish e-Infrastructure Cooperation) as part of NREN services
- > Since 1993 member of FIRST
- > Member of TF-CSIRT and Trusted Introducer since 1999/2000, accredited since 2002, now certification candidate
- > <https://www.cert.dk>, <mailto:cert@cert.dk>

An aerial night photograph of a city harbor. A large red and white ship is docked at a pier. The city lights are visible in the background, and a curved road with streetlights is in the foreground. The water reflects the city lights.

The Danish
National Strategy
for Cyber and
Information Security

[https://digst.dk/media/
27024/digst_ncis_2022
-2024_uk.pdf](https://digst.dk/media/27024/digst_ncis_2022-2024_uk.pdf)

**Cyber and information security in the central government:
New requirements for government agencies**

Must comply with a number of new require-

Ministries
(or parts thereof)
responsible for vital
societal functions



Must comply with a number of new require-
ments for organising security work around the
vital societal functions, including requirements
to set up a DCIS and develop its own cyber
and information security strategy for the vital
societal functions

All government
agencies



Must comply with a set of minimum require-
ments, including the organisation of security
work, compliance with ISO 27001 and techni-
cal minimum requirements

> Robust protection of vital societal functions

Security and cooperation regarding vital societal functions and ICT systems critical to society will be strengthened with new requirements for the organisation of security work, including requirements for a partial strategy and decentralized cyber and information security units.



> Vital societal functions are ...

the activities, goods and services that are the basis for the general functioning of society

Among these functions are (part of) research



Research in a safe environment

Sub-strategy for Cyber and Information security 2022-2024

January 2023

Forskning i trygge rammer

Delstrategi for Cyber- og Informationssikkerhed 2022-2024

Januar 2023

<https://ufm.dk/publikationer/2023/filer/forskning-i-trygge-rammer-delstrategi-for-cyber-og-informationssikkerhed-2022-2024.pdf>

> Vital societal functions

- > The vital societal functions in the research and higher education sector are predominantly carried out by the universities
- > In addition, a number of vital societal functions are also carried out in connection with the Ministry's role as coordinating space authority in Denmark



- > **Premise for the sectoral strategy**
- > The sector's statutory scope is supported by a principle of academic freedom which is a fundamental element in an open democratic society
- > The legislation supports free research in a safe environment
- > The academic freedom cannot be contested

> Threats to the university sector

- > *“The threat to Danish research is real. In recent years, we have seen a number of espionage activities and other foreign interference. Owing to its highly open culture and broad international cooperation, the Danish research community may be considered a relatively easy target for foreign states. Denmark is also an attractive target due to its high research standards and geopolitical position.”*

Danish Security and Intelligence Service (PET) / Ministry of Higher Education and Science (UFM):

“IS YOUR RESEARCH AT RISK?” 2021

<https://ufm.dk/en/publications/2021/files/er-din-forskning-i-fare-en.pdf>

> Threats to the university sector

- > The threat of cyberespionage against the university sector is **VERY HIGH**
- > The threat of cybercrime against the university sector is **VERY HIGH**
- > The threat of cyberactivism against the university sector is **HIGH**
- > The threat of destructive cyberattacks against the university sector is **LOW**
- > The threat of cyberterror against the university sector is **NONE**

DKCERT Trend Report 2023: <https://www.cert.dk/en/node/5505>

> Threats from the human factor

- > The **unconscious** faculty or staff member (/student/guest lecturer, etc.)
- > The **negligent** faculty or staff member (/student/guest lecturer, etc.)
- > The **dishonest** faculty or staff member (/student/guest lecturer, etc.)

- > **Committee on guidelines for international research and innovation cooperation (URIS)**
- > Ethical, financial and security risks have made international cooperation in the field of research and innovation more complex in the past decade, just as espionage poses a greater threat than before.
- > In May 2022, URIS published a series of recommendations and a set of concrete guidelines that can support Danish research and educational institutions in their international cooperation.

https://ufm.dk/publikationer/2022/filer/uris-guidelines_english-version.pdf

- > **Four benchmarks and 14 initiatives**
- > **1 – Top management anchoring**
- > **Initiative 1.1:** Management anchoring based on the risk appetite of the individual organization and with an increased focus on up-to-date risk management
- > **Initiative 1.2:** Increased maturity in relation to cyber and information security
- > **Initiative 1.3:** Increased strategic measurability on the security and maturity level

- > **Four benchmarks and 14 initiatives**
- > **2 - High security as a necessary condition**
- > **Initiative 2.1:** Dealing with the specific circumstances of universities
- > **Initiative 2.2:** Detection and identification

- > **Four benchmarks and 14 initiatives**
- > **3 - The strategy should support and develop the risk-based approach**
- > **Initiative 3.1:** Continuous threat and risk analyzes for the university sector
- > **Initiative 3.2:** Continuous risk assessments of critical IT infrastructure that supports functions vital to society
- > **Initiative 3.3:** Increased insight into threats and consequences by researchers
- > **Initiative 3.4:** Ongoing assessment of the universities' connection to the CFCS sensor network

- > **Four benchmarks and 14 initiatives**
- > **4 - Enhanced collaboration and coordination across the sector**
- > **Initiative 4.1:** Establishment of operative Decentral Cyber and Information Security entity (DCIS)
- > **Initiative 4.2:** Knowledge sharing of current threats with relevant forums
- > **Initiative 4.3:** Strengthened security supervision with system suppliers and data processors
- > **Initiative 4.4:** Intelligent monitoring
- > **Initiative 4.5:** Cross-university awareness-promoting measures

- > **14 initiatives for the university domain, 3 for the space domain**
- > **Initiatives for the space domain**
- > **Initiative 5.1:** Support the work around strengthening Denmark's contribution to cyber security in the European space-based infrastructure
- > **Initiative 5.2:** Raise awareness of the cyber threat
- > **Initiative 5.3:** Contribute to the development of a threat picture for the space domain

> Q & A



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