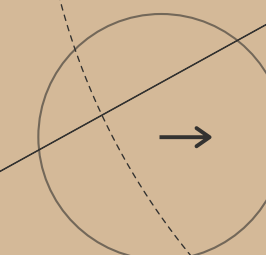




CYBERTHREATS

European Network and Information Security Agency (ENISA)



CYBERSECURITY IN LIFE SCIENCES

BIOTECHNOLOGY

Research and Innovation Brief – Annual Report on Cybersecurity Research and
Innovation Needs and Priorities — ENISA (europa.eu)



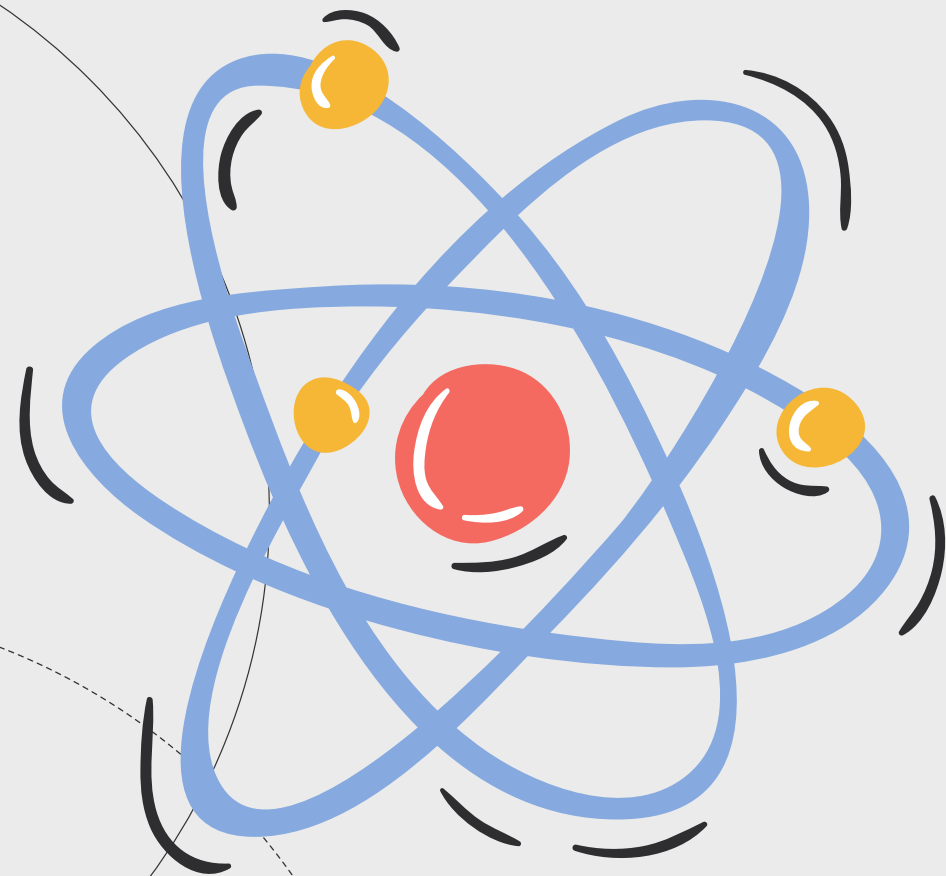
The affected Information Resource

Data of;

- Life Sciences
 - chemical industry
 - nuclear physics
- Biotechnological
 - also called cyberbiosecurity

-important research data which can be used for benefit or for harm

The Modus operandi of the Threat



Stealing and sniffing data of different moduls

- CRISPPR-CAS9

Malicious codes

- Including viruses which affect the data

Trojan Horse



Modify the data inside a lap

- e.g. chaning the DNA Structure in a study series

Threat Actors

- Terrorists
 - nuclear physics
 - biotechnology
 - engineering metabolic pathway
 - drugs productions
 - Bioweapons
- Politics
-



Related Protection Measures

- Regular security audits
- bounds checking
- memory-safe languages
- software analytics
- firewalls



