

Space Cyber Range



Empowering space cybersecurity in civilian and defence domains.

The Solution

The solution is being developed in collaboration with the **European Space Agency** and brings together CGI Estonia, CybExer Technologies, Spaceit, and the Foundation CR14. It delivers a unified virtual simulation environment—the **Space Cyber Range (SCR)**—designed to strengthen cyber resilience across space and defence domains.

Built on Estonia’s proven cyber range expertise, particularly in the defence sector, the SCR addresses the growing convergence of civilian and defence space systems. It enables bidirectional knowledge transfer: applying defence-grade cyber defence practices to space infrastructures while feeding space-sector innovations back into defence operations.

The SCR enables:

Test & validate:

Assess space-related software cyber readiness to reduce vulnerabilities and risks. Capabilities include penetration testing, communication testing, integration testing, performance testing, reliability and recovery testing, as well as testing using open-source and other means.

Train & exercise

Create space-related environments and simulate potential cyber threats within secure artificial environments (cyber ranges) to train users for more effective defence capabilities. The SCR will offer team-based hybrid exercises, multiparty exercises, collision avoidance scenarios, live-fire exercises, and other cyber defence exercises. Additionally, users can incorporate their own content into the platform.

Knowledge sharing

The SCR will function as a marketplace for sharing space cybersecurity related content, including articles, blog posts, academic publications and manuals. Additionally, it will support the organization of various cyber defence related events with a space infrastructure component.



Space Cyber Range (SCR)

unified **virtual simulation environment** for cyber resilience across space and defence domain.

Enabling:

- Testing and validation
- Training and exercise
- Knowledge sharing

Strategic benefits:

Enhanced mission assurance

Operational readiness and efficiency

Multi-domain defence enablement

Strategic Benefits for Defence Operations

Enhanced Mission Assurance:

- Deep understanding of cyber risks affecting space-enabled operations
- Access to validated and tested defence-grade solutions
- Early identification and mitigation of vulnerabilities

Operational Readiness & Efficiency:

- Realistic training environments improving decision-making under pressure
- Optimized resource use through virtual testing instead of physical deployment
- Faster validation cycles for mission-critical technologies

Multi-Domain Defence Enablement

- Support for synchronized defence across space, air, and cyber domains
- High-fidelity threat modelling for modern hybrid warfare scenarios
- Interoperable “system-of-systems” environment for proactive threat hunting

Get in touch for an introductory session and brainstorm around your challenges:

Sille Kraam

Director of Consulting Services,
Space and Earth Observation
sille.kraam@cgi.com

Peeter Einbaum

Defence Expert
CGI Estonia
peeter.einbaum@cgi.com

About CGI

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