



ECHO Project Overview

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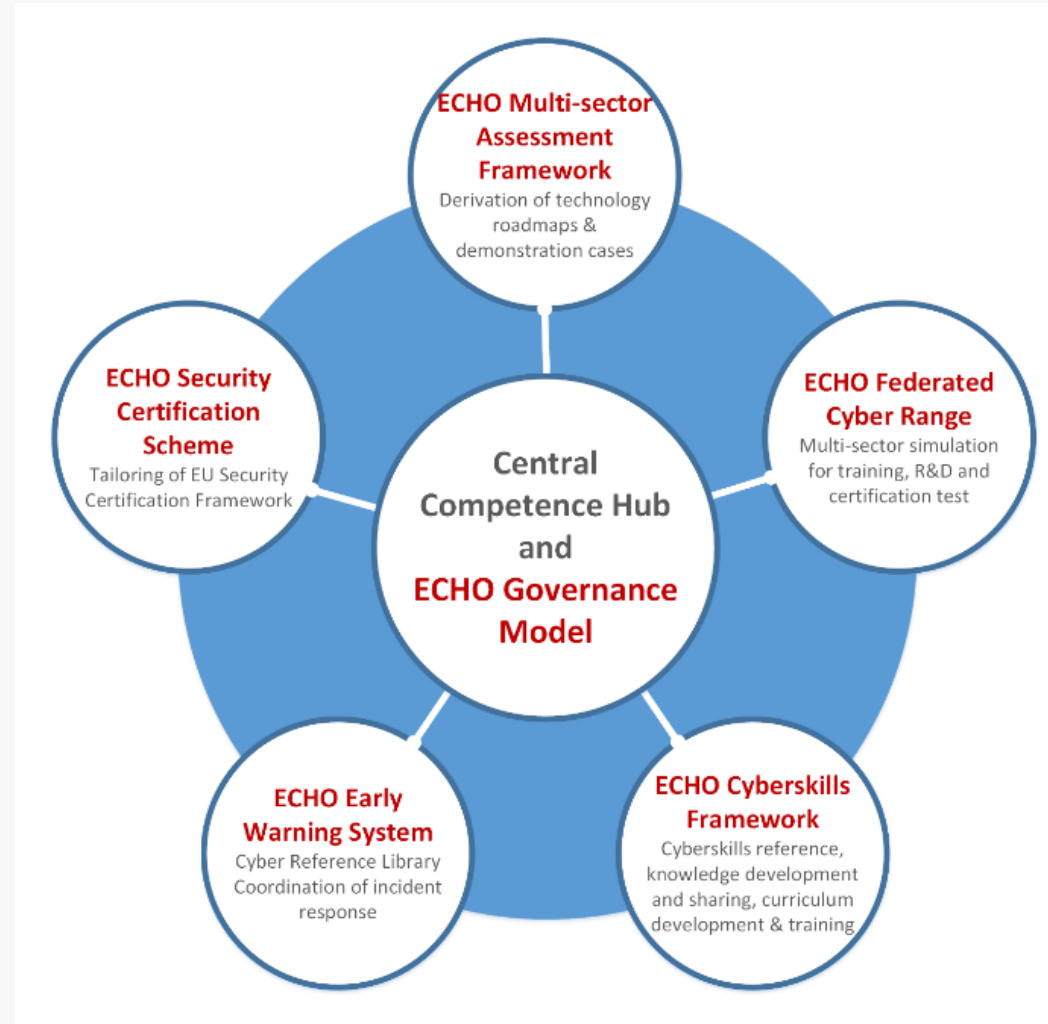
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European network of **C**ybersecurity centres and competence **H**ub for innovation and **O**perations

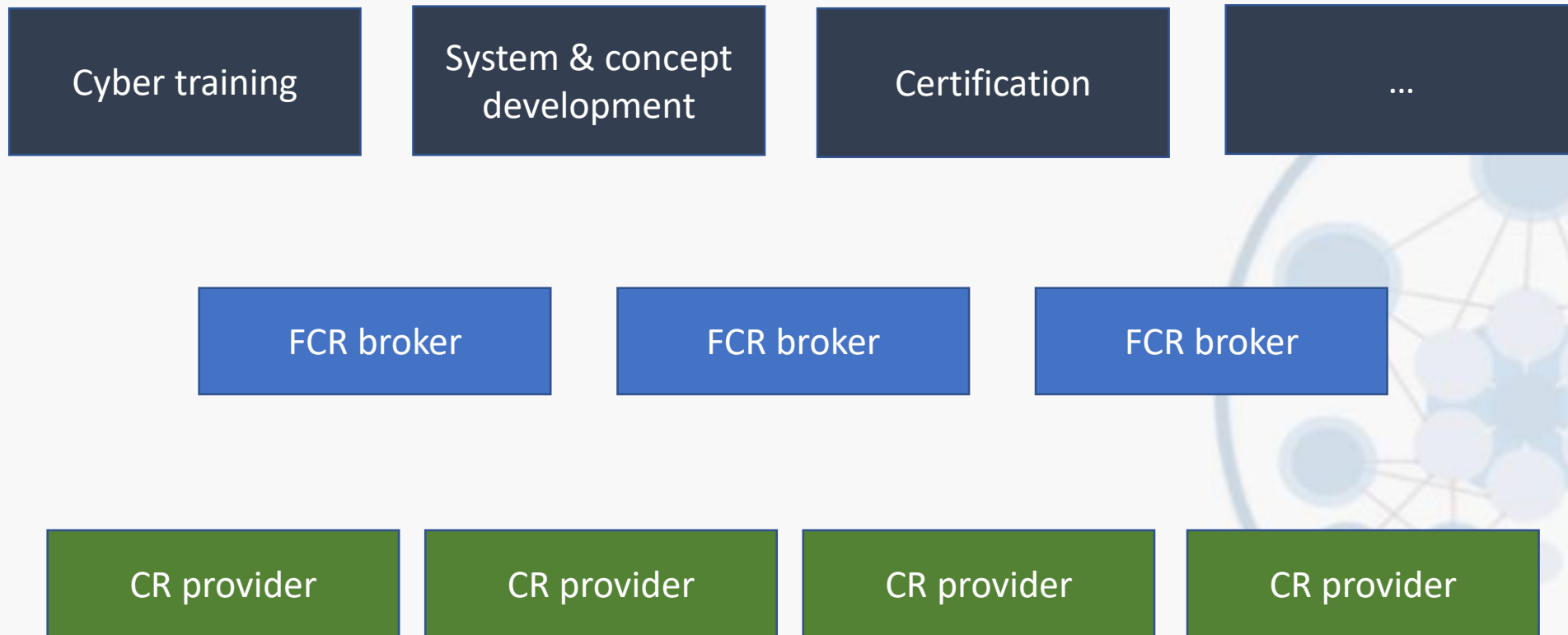
- Main concepts:
 - ECHO Governance Model:
 - Management of direction and engagement of partners (current and future)
 - ECHO Multi-sector assessment framework:
 - Transverse and inter-sector needs assessment and technology R&D roadmaps
 - ECHO Cyberskills Framework and training curriculum
 - Cyberskills reference model and associated curriculum
 - ECHO Security Certification Scheme
 - Development of sector specific security certification needs within EU Cybersecurity Certification Framework
 - ECHO Federated Cyber Range
 - Advanced cyber simulation environment supporting training, R&D and certification
 - ECHO Early Warning System
 - Secured collaborative information sharing of cyber-relevant information

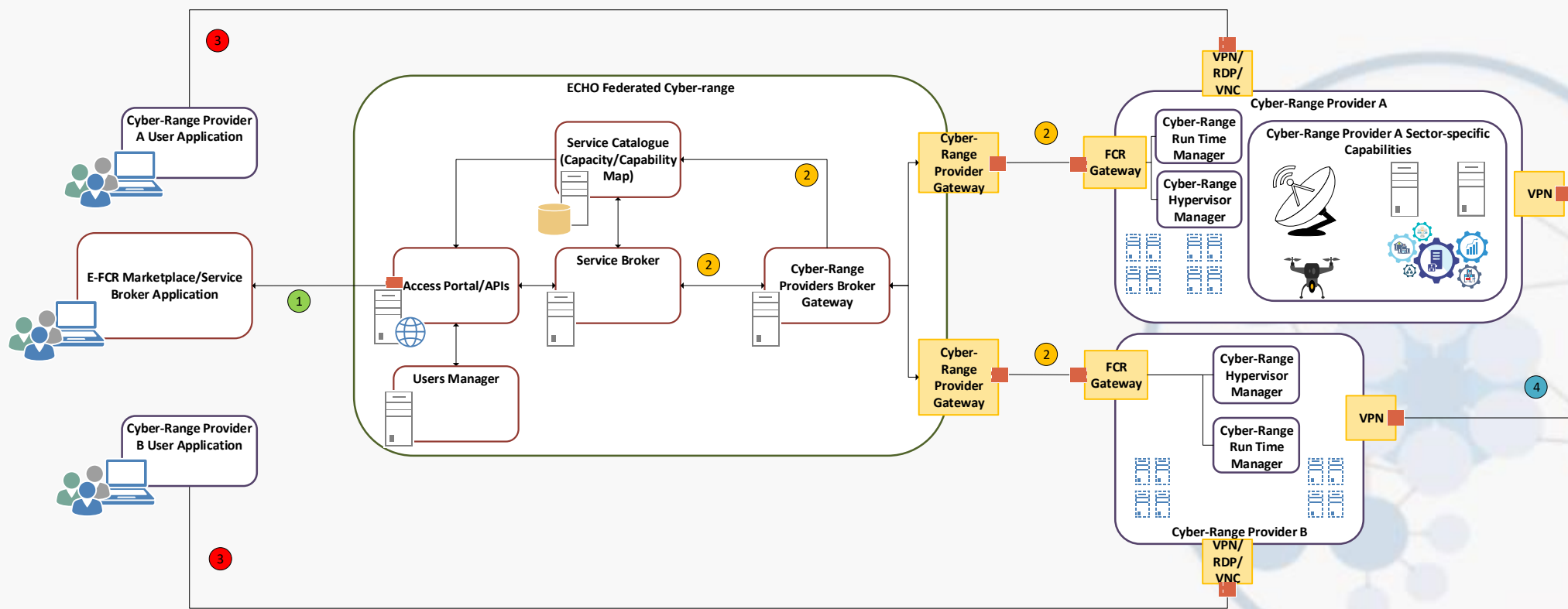


- ECHO Federated Cyber Range (FCR)
 - Interconnect existing and new cyber range capabilities through a convenient portal
 - Portal operates as a **broker** among cyber ranges
 - Enables access to emulations of **sector specific and unique technologies**
- Cyber Range is a multipurpose **virtualization environment** supporting “**security-by-design**” needs
 - Safe environment for **hands-on cyberskills** development
 - Realistic simulation for **improved system assurance** in development
 - Comprehensive means for **security test and certification** evaluation
- To be used as virtual environment for:
 - Development and demonstration of **technology roadmaps**
 - Delivery of specific instances of the **cyberskills training** curricula



Federated cyber ranges





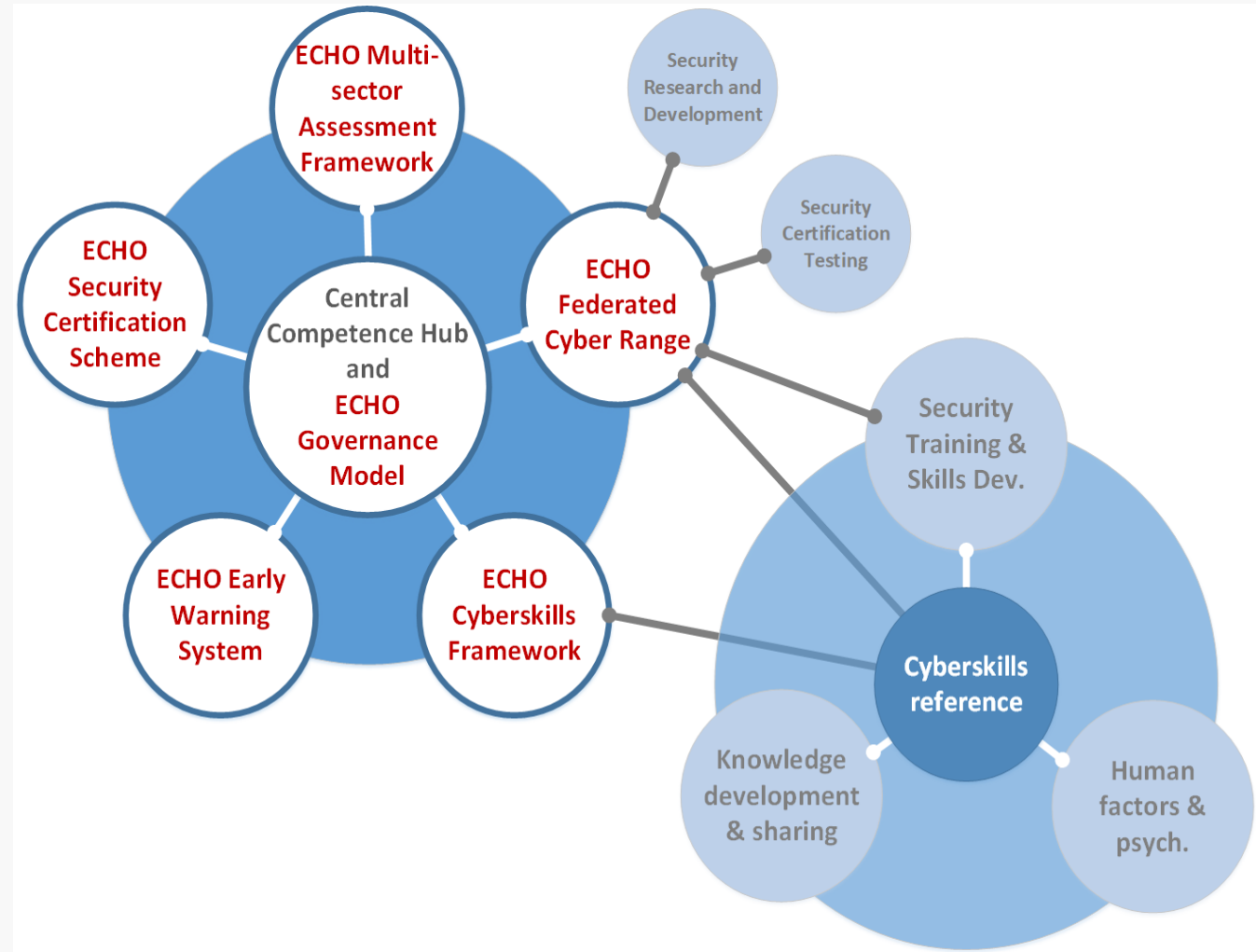
- ECHO Early Warning System
 - **Security operations support** tool enabling members to **coordinate and share** cyber relevant information in near-real-time
 - Secure information sharing **between organizations**; across organizational boundaries and national borders
 - Coordination of **incident management workflows**
 - Retain **independent management and control of cyber-sensitive** information
 - Account for **sector specific needs** and protection of **personal information protection** (GDPR compliant)
 - Includes sharing of **reference library** information and **incident management** coordination

- ECHO Cybersecurity Certification Scheme
 - Leverages and builds upon work of **ENISA** (EU Cybersecurity Certification Framework) and **ECISO** (e.g., meta-scheme development)
 - Provide **product oriented** cybersecurity certification schemes
 - Support sector specific and inter-sector security requirements
 - Support **delivery and acceptance of technologies** resulting from technology roadmaps
 - **Improved security assurance** through use of **certified products**
 - Support development of **Digital Single Market**
 - Limits duplication and fragmentation of the cybersecurity market
 - **Common** cybersecurity **evaluation methods, acceptance** throughout Europe
 - Applicability across **Information Technologies** (IT/ICT) and **Operations Technologies** (OT/SCADA)



- ECHO Cyberskills framework
 - Mechanism to improve the **human capacity** of cybersecurity across Europe
- Leverage a **common cyberskills reference**:
 - Derived and refined from ongoing and related work (e.g, ECSO, e-Competence Framework, European Qualification Framework)
- Design modular **learning-outcome based curricula**
- **Hands-on skills development** opportunities through realistic simulation (ECHO Federated Cyber Range)
- Lessons learned feed **knowledge sharing** (ECHO Early Warning System)

Cybersecurity skills



Partners

Key summary

- 30 partners
- 15 new partner engagements
- 13 existing competence centres
- 16 nations
- 9 industrial sectors
- 13 security disciplines
- 5 demonstration cases
- 6 technology roadmaps
- 3 multi-sector scenarios





- ECHO website: www.echonetwork.eu
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