Norsk Regnesentral
NORWEGIAN COMPUTING CENTER

The Future of the European Cluster for Securing Critical Infrastructures – ECSCI

EU-CIP Project & ECSCI Cluster 1st Annual Conference on Critical Infrastructure Resilience: "Reinventing Resilience"

– 20 September 2023, Brussels, Belgium

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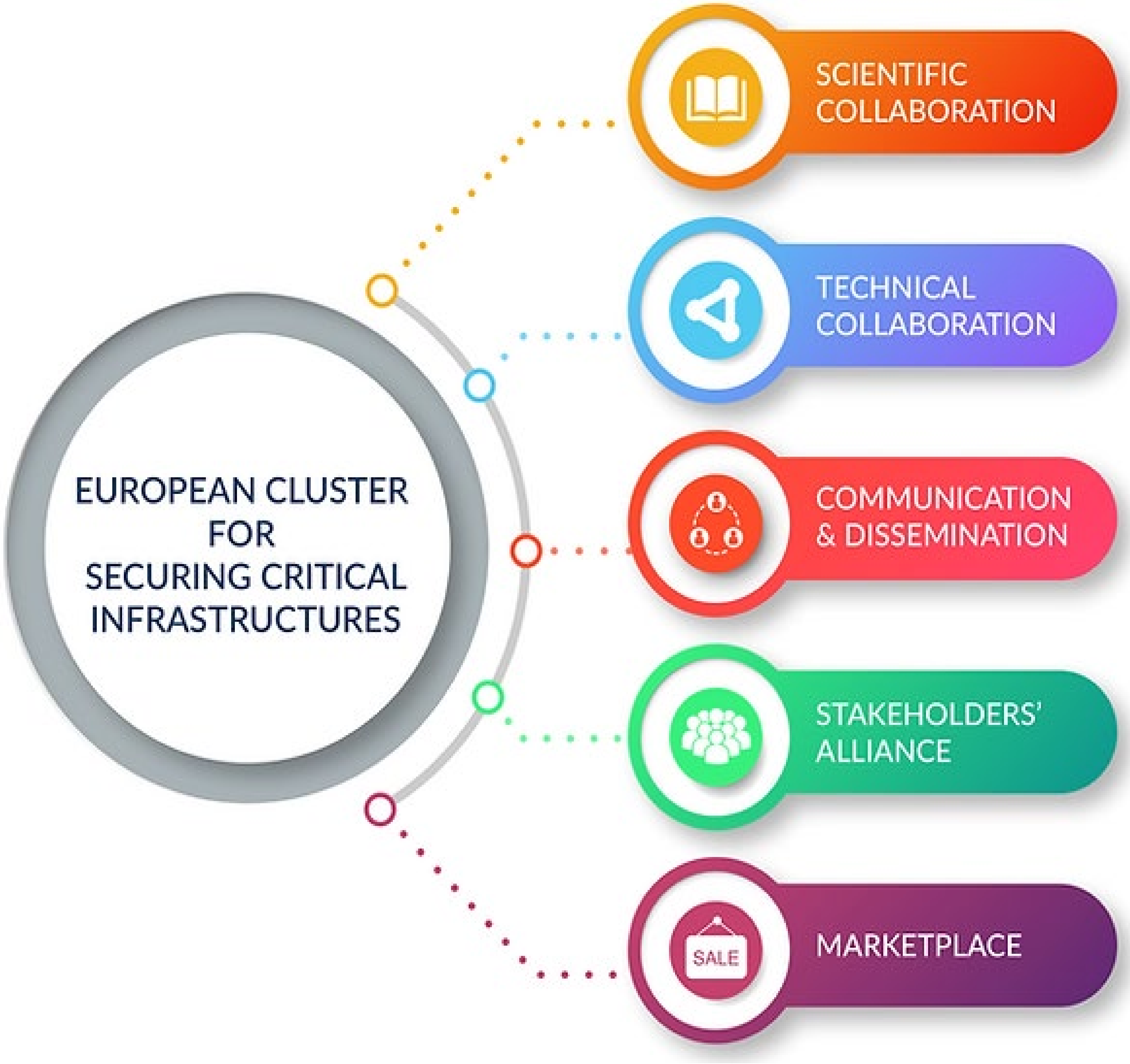
https://www.finsec-project.eu/ecsci

ECSCI Overview: ECSCI Liaison Plan

- European Commission encourages collaboration among funded projects
- The Liaison Plan
  - create the ECSCI cluster of EU projects dealing with cyber and physical security of critical infrastructures and underpinning complex architectures
- ECSCI's main high-level objectives are:
  - Scientific Collaboration
  - Technical Collaboration
  - Communication & Dissemination (Workshops, Press, Web Presence,...)
  - Stakeholder Alliance
  - Marketplace



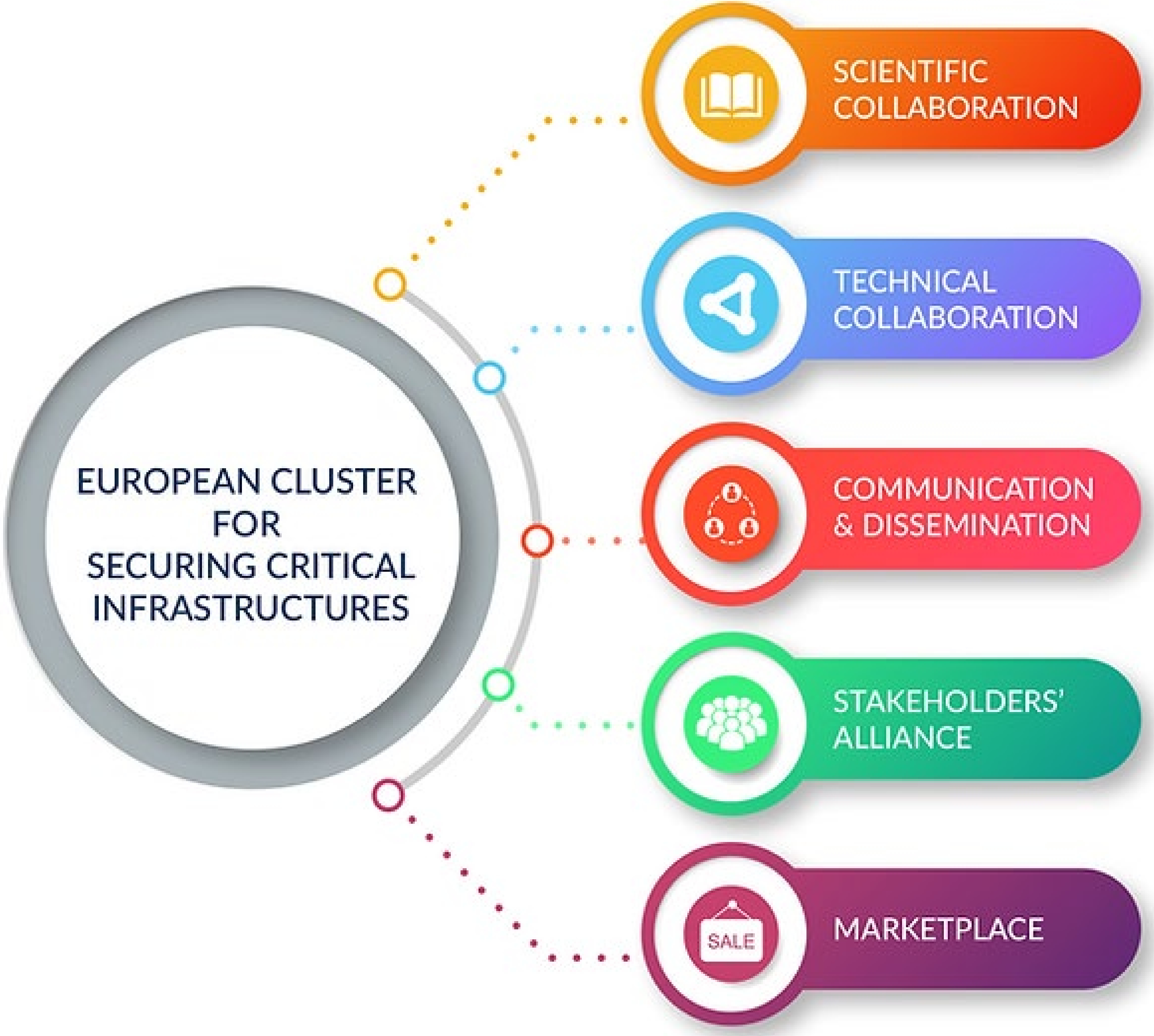
ECSCI Specific Objectives

- Create synergies and foster emerging disruptive security solutions via cross-projects collaboration and innovation

- Focus on the different approaches between the clustered projects

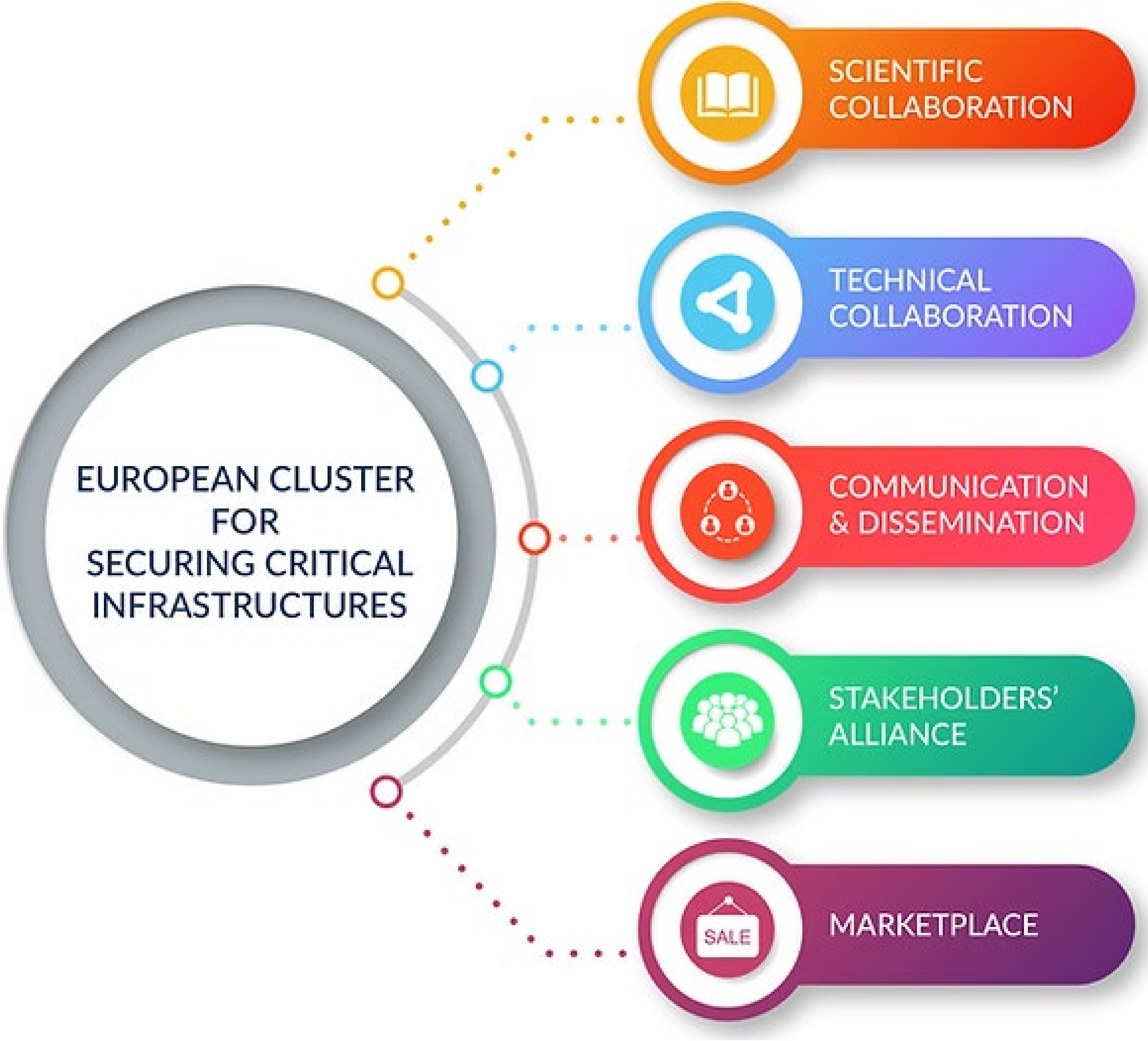
- Establish tight and productive connections with closely related and complementary projects

- Promote the activities of the cluster
  - international scientific conferences/workshops
  - national or international stakeholders' workshops, involving both policy makers, industry and academic practitioners, and representatives from the European Commission



ECSCI: Share, Consolidate and Focus

- ECSCI projects share experiences and best practices about CIP in different sectors
- ECSCI tries to consolidate and reflect a European approach for Cyber-Physical Threat Intelligence in Critical Infrastructure Protection
- The cluster is focused on research that protects and secures critical infrastructures and services
  - respecting the differences between individual projects, such as the different approaches, sectors of interest, or target groups,
  - while establishing tight and productive connections with closely related or complementary Horizon 2020 projects

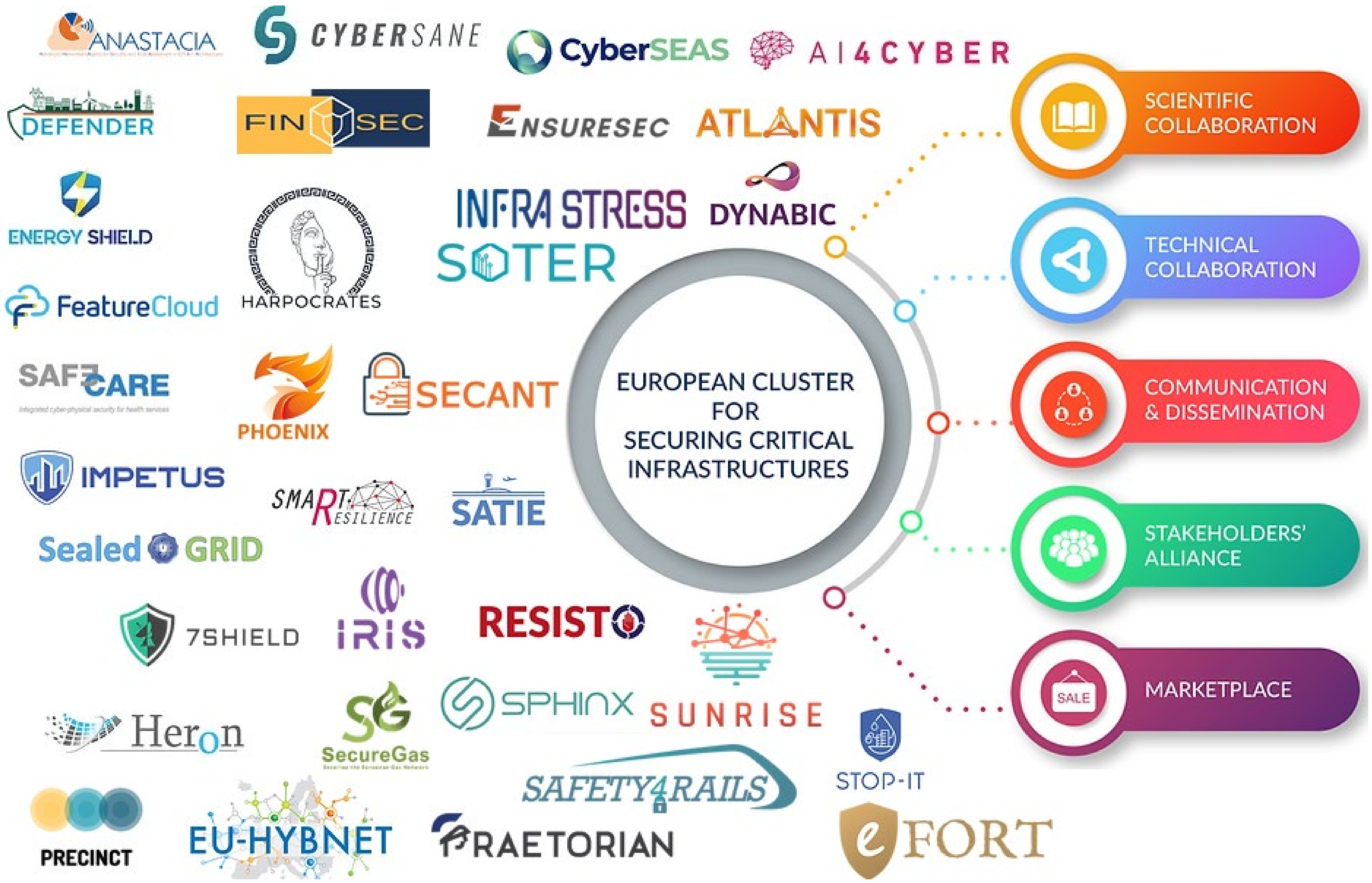


ECSCI Founding and Current Members

- ECSCI was originally a collaboration between three H2020 funded projects, which became the founding members:
  - FINSEC (https://www.finsec-project.eu/)
  - ANASTASIA (http://www.anastacia-h2020.eu/)
  - DEFENDER (https://defender-project.eu/)

- ECSCI cluster currently counts over 34 EU-funded projects focusing on varies sectors:
  - finance
  - air transport
  - healthcare
  - energy
  - communication
  - gas and water

ECSCI Member Projects & Collaborations



Joint workshops and conferences; Co-writing of academic papers, books, etc.

Sharing approaches on cyber-physical security, risk assessment and predictive analytics

Common web and social media presence; dissemination of joint events

Mobilisation of local ecosystems

Extension of FINSEC Marketplace to other sectors (health, energy, communication, gas, water)

ECSCI Cluster Status

ECSCI running projects

- **AI4CYBER**
- **ATLANTIS**
- **CyberSEAS**
- **DYNABIC**
- **eFORT**
- **EU-HYBNET**
- **FeatureCloud**
- **HARPOCRATES**
- **HERON**
- **IRIS**
- **PRAETORIAN**
- **PRECINCT**
- **SECANT**
- **SUNRISE**

ECSCI ended projects supported by coordinators

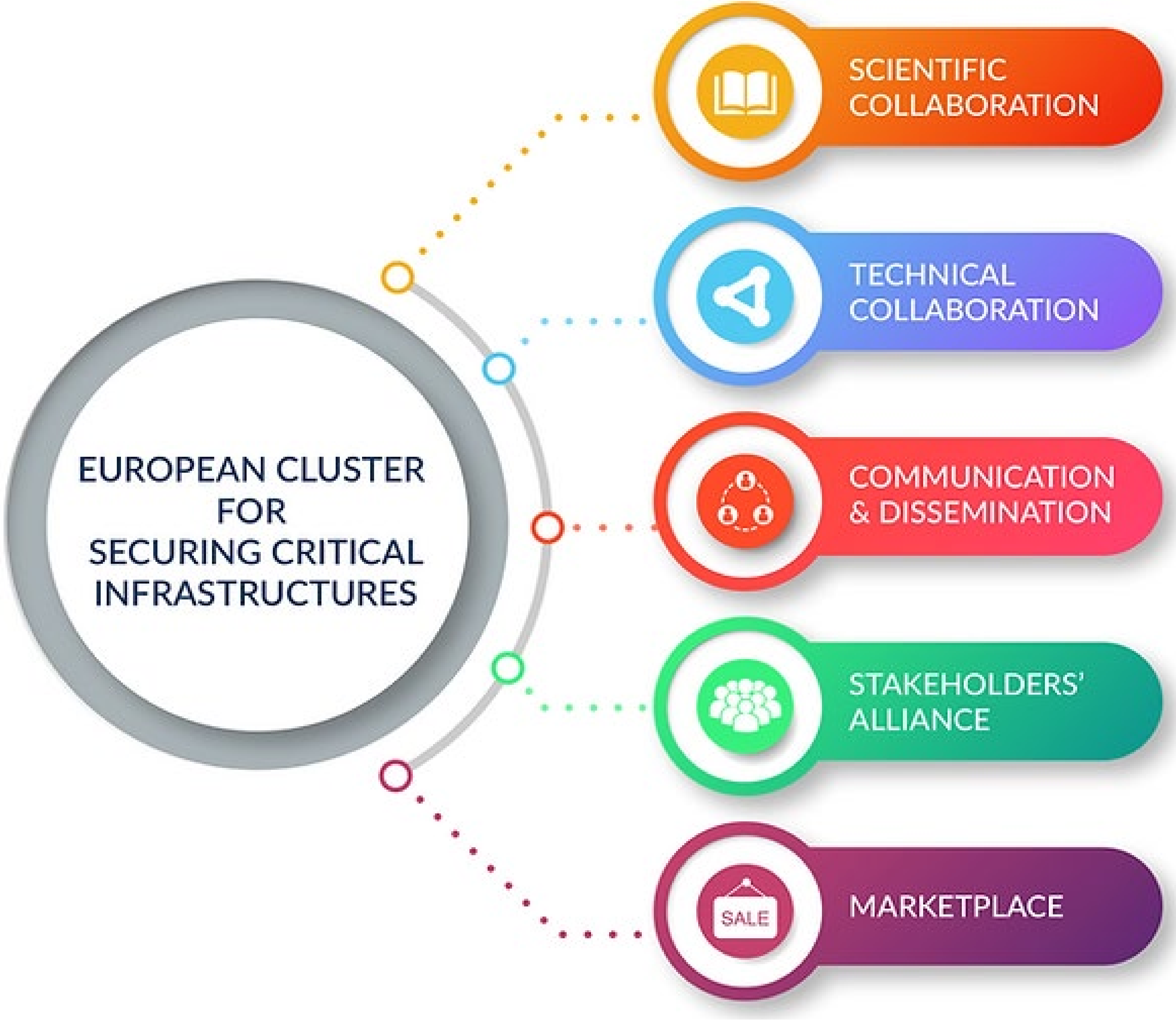
- 7SHIELD
- FINSEC
- ANASTACIA
- CyberSANE
- DEFENDER
- EnergyShield
- ENSURESEC
- IMPETUS
- InfraStress
- PHOENIX
- PHOENIX
- RESISTO
- SAFECARE
- SAFETY4RAILS
- SATIE
- SealedGRID
- SecureGas
- SmartResilience
- SOTER
- SPHINX
- STOP-IT

Supporting projects national projects

- NORCICS
- RESTABILISE4.0
- CybAlliance

ECSCI Members Activities

- Members of the cluster engage in various activities:
  - Scientific collaborations, in the form of joint workshops and conferences, co-writing of academic publications
  - Technical collaborations, such as sharing approaches on cyber-physical security, risk assessment, and predictive analytics
  - Communication and dissemination of information about the cluster's activities and outputs through common web and social media presence as well as joint events
  - Building and fostering stakeholders' alliances, allowing for the mobilisation of local ecosystems
  - Marketplace extensions of members and their products/services across various sectors



ECSCI Common Activities

A platform for combined safety and security for European Critical Infrastructures

- Convergence of safety and security standards, and the pre-establishment of certification mechanisms.
- Combined Risk Assessment Process
- Combined Safety & Security Catalogue
- Supporting multi-dimensional decisions on safety and security
- Ontologies

European Common Platform for cascading effects on the different Critical Infrastructures

- Cross-sectoral and multi-risk approach to cascading effects
- A platform for a common picture of cascading effects affecting multiple critical infrastructures
- Knowledge models and ontologies
- Interfaces between the different Critical Infrastructures
- Common Cause Failures and Cascading Failures

Contribution to standards and regulations on the protection of Critical Infrastructures

- Securing the supply chain in different Critical Infrastructure sectors
- Guidelines on risk management in CIP
- Standards for threat intelligence sharing
- EU Standardizations in safety and security
- Overcoming the separation between Security and Safety
- Links between safety & security and international organizations

ECSCI Collaboration & Information Sharing

- The Open Access Book I: Cyber-Physical Threat Intelligence for Critical Infrastructures Security
  - Structured in Five Parts: Finance, Energy, Healthcare, Communications, Sector Agnostic Topics
  - Collaboration of five (5) Projects
- The Open Access Book II: Cyber-Physical Threat Intelligence for Critical Infrastructures Security: Securing Critical Infrastructures
  - Structured in Seven Parts: Air Transport, Water, Gas, Healthcare, Finance and Industry
  - Collaboration of eight (8) Projects
- The Finsecurity.eu Market Platform
  - Early Contributors: DEFENDER / Energy, STOP-IT / Water, RESISTO / Communications
  - Register with Finsecurity.eu – it takes 1’

ECSCI Stakeholders Workshops

- 1st ECSCI Workshop on Critical Infrastructure Protection, virtual workshop, 24-25 June 2020,
    - https://www.finsec-project.eu/ecsci-virtual-workshop
- 2nd ECSCI Workshop on Critical Infrastructure Protection, virtual workshop, 27-29 April 2022,
    - https://www.finsec-project.eu/second-ecsci-virtual-workshop
- 1st Annual Conference On Critical Infrastructure Resilience: “Reinventing Resilience” – Co-organised by the EU-CIP Project & the ECSCI Cluster, 20-21 September 2023, Brussels –
    - https://www.eucip.eu/2023/06/06/1st-annual-conference-on-critical-infrastructure-resilience-reinventing-resilience-coorganised-with-the-ecsci-cluster-20-21-09-2023-brussels/

ECSCI Scientific Workshops

- **FINSEC 2019**
  - The 1st International Workshop on Security for Financial Critical Infrastructures and Services Co-located with ESORICS 2019, Luxembourg, September 27, 2019
- **CPS4CIP 2020**
  - The 1st International Workshop on Cyber-Physical Security for Critical Infrastructures Protection Co-located with ESORICS 2020, Guildford, United Kingdom, September 14-18, 2020
- **CPS4CIP 2021**
  - The 2nd International Workshop on Cyber-Physical Security for Critical Infrastructures Protection Co-located with ESORICS 2021, Darmstadt, Germany, October 04–08, 2021
- **CPS4CIP 2022**
  - The 3rd International Workshop on Cyber-Physical Security for Critical Infrastructures Protection Co-located with ESORICS 2022, Copenhagen, Denmark, September 26-30, 2022
- **CPS4CIP 2023**
  - The 4th International Workshop on Cyber-Physical Security for Critical Infrastructures Protection Co-located with ESORICS 2023, The Hague, The Netherlands, September 25-29, 2023

ECSCI Contributions to Proceedings/Newsletters

- 1st ECSCI Virtual Workshop, Virtual, 24-25, June 2020
  - Consolidated Proceedings of the 1st ECSCI Workshop on Critical Infrastructure Protection

- 2nd ECSCI Virtual Workshop, Virtual, 27-29, April 2022
  - Consolidated Proceedings of the 2nd ECSCI Workshop on Critical Infrastructure Protection

- ECSCI Contributions to Newsletter on Critical Infrastructure Resilience
  1. The European Cluster for Securing Critical Infrastructures (ECSCI)
  2. Report on The 2nd ECSCI Workshop on Critical Infrastructure Protection

- Contributions to Proceedings
  1. Computer Security: ESORICS 2019 International Workshops, IOSec, MSTEC, and FINSEC
  2. Cyber-Physical Security for Critical Infrastructures Protection, 1st International Workshop, CPS4CIP 2020
  3. Computer Security. ESORICS 2021 International Workshops: CyberICPS, SECPRE, ADIoT, SPOSE, CPS4CIP, and CDT&SECOMANE
  4. ESORICS 2022 Workshops (ADIoT, CDT&SECOMANE, CPS4CIP, CyberICPS, EIS, SecAssure, SECPRE, SP-MIoT, SPOSE)
  5. ESORICS 2023 International Workshops (CyberICPS, DPM, CBT, SECPRE, CPS4CIP, ADIoT, SecAssure, WASP, TAURIN, PriST-AI, SECAI) under preparation

ECSCI Inspired National Ecosystem

NESIOT

https://www.ntnu.edu/norcics/it-ot-integration-nesiot

- **NORCICS partners**
  - NTNU, NR, SINTEF, Elvia AS, Equinor ASA, Siemens AS
- **Cross-sectors**
  - Simula, IFE, Watchcom, Defendable, USN
  - Oslo Municipality
    - Agency for Improvement and Development
    - Stovner District
    - Agency for Water and Wastewater Services
    - Oslobygg
    - Department of Finance
- **Norwegian CERTS/CSERTs**
  - Norwegian National Cyber Security Centre (NCSC/NSM), KraftCERT/InfraCERT, Telenor CERT, Equinor CSIRT
- **Norwegian certification authorities and security evaluation facilities**
  - Nemko System Sikkerhet AS, Norconsult ITSEF
- **Norwegian Regulators, Standards and Policies**
  - Petroleumstilsynet, NVE, NVE-RME, NEK
- **EU & RCN Funded Projects**
  - FINSEC (NR), CyberSec4Europe (NTNU), STOP-IT (SINTEF), CONCORDIA (OsloMet), NEMECYS (SINTEF), CoTech (USN), CybAlliance (NR)

- Norwegian Ecosystem for Secure IT-OT Integration (NESIOT)
- SFI NORCICS (Norwegian Centre for Cybersecurity in Critical Sectors) spinoff
- The objective is to create synergies and foster emerging solutions for secure IT-OT Integration via cross-sectors collaboration and innovation
- The moral is to amplify the inspiration of ECSCI and encourage the establishment of similar national ecosystems around relevant topics EU wide

Future of the ECSCI Cluster

- is ECSCI presence valuable to the CIP/CIR & research communities?
- expectations and other issues/activities that should be covered
- role of member projects and obligations, e.g.,
  - produce periodic white papers/newsletters to be published on ECSCI website,
  - submit at least 1-2 papers in CPS4CIP workshop
  - conduct their final events or dissemination workshops in collaboration with ECSCI, etc.
- involvement of project representatives in thematic working groups that will discuss their results and share knowledge
- use of the ECSCI website as a hub for sharing results and findings (e.g. repository of public deliverables)

Sustainability of the ECSCI cluster

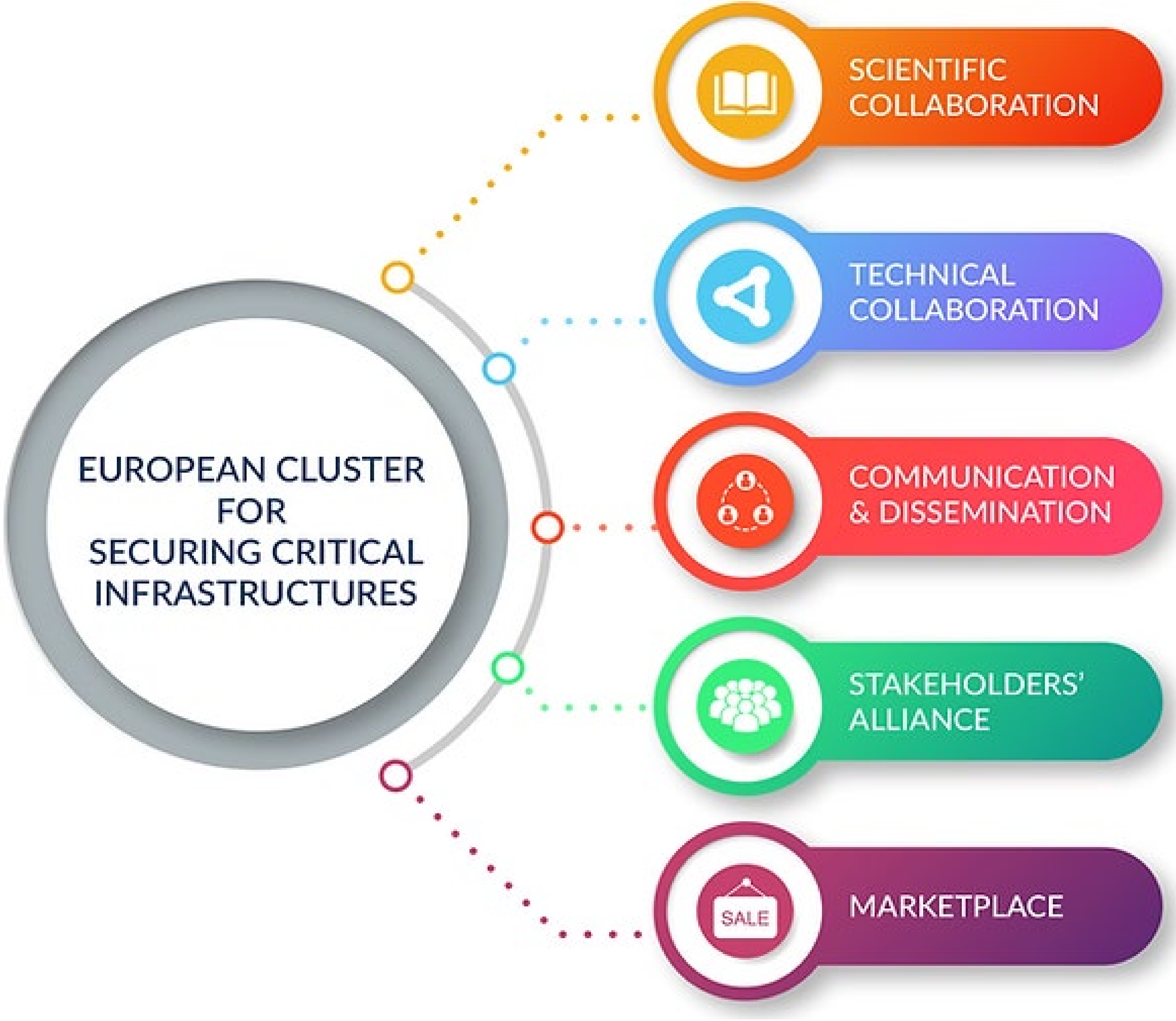
- Should the ECSCI cluster ceased to exist ?
- If NO how to sustain the ECSCI cluster?
  - Business models
  - Coordination and support actions (CSA)
  - Other funding sources within the EC
  - Governmental funding agencies

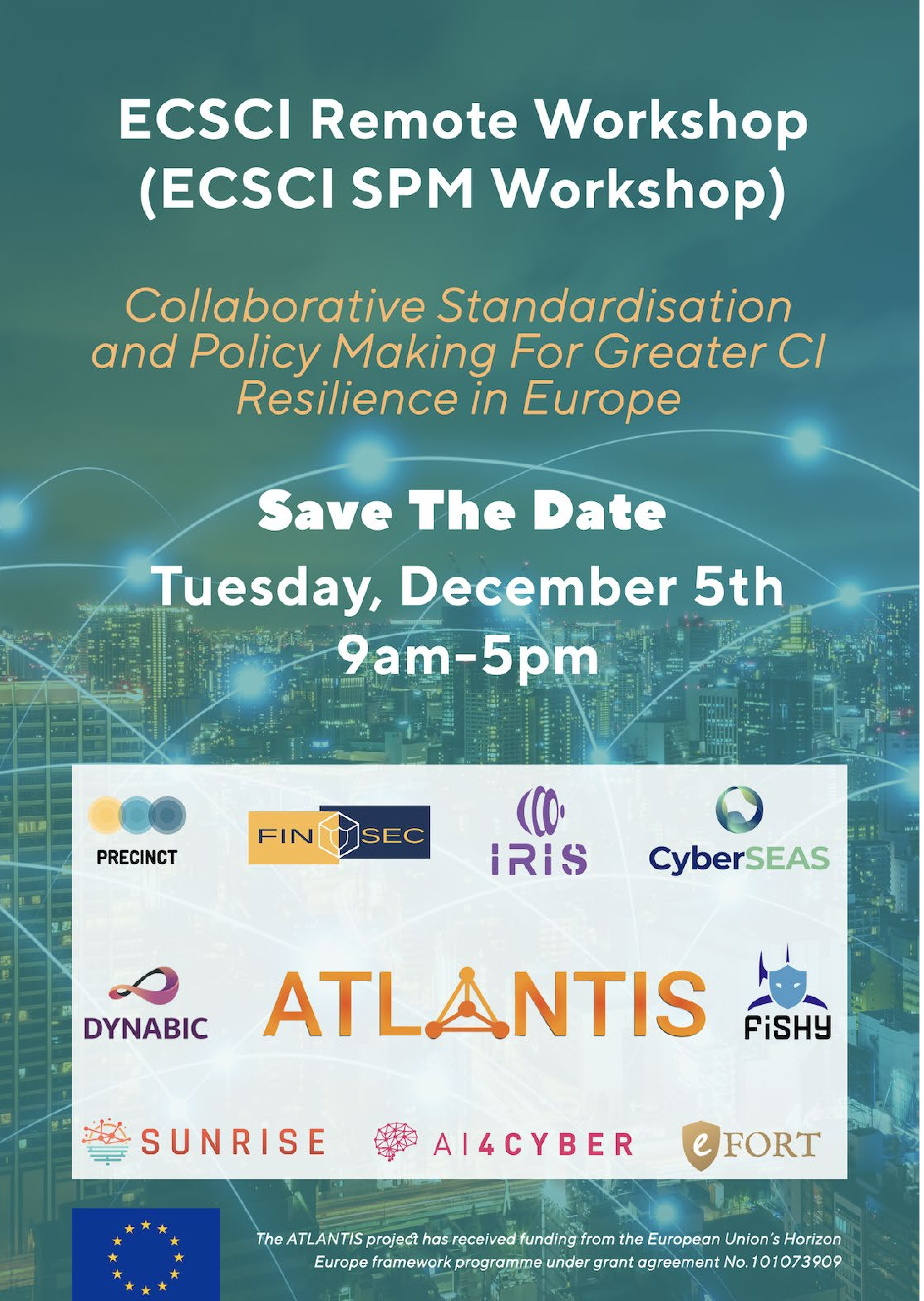
- What benefits has the ECSCI cluster provided and will provide to members and the community large?

- What should we then do with the finished member projects?

Forthcoming Event I

- The 4th International Workshop on Cyber-Physical Security for Critical Infrastructures Protection (CPS4CIP 2023) Scientific collaborations, in the form of presenting projects and results
  - Join us in the Hague 29/09-2023
- https://st.fbk.eu/events/CPS4CIP2023/





ECSCI Remote Workshop (ECSCI SPM Workshop)

Collaborative Standardisation and Policy Making For Greater CI Resilience in Europe

Save The Date

Tuesday, December 5th

9am-5pm

PRECINCT
FINSEC
iRiS
CyberSEAS
DYNABIC
ATLANTIS
FiSHY
SUNRISE
AI4CYBER
eFORT

The ATLANTIS project has received funding from the European Union's Horizon Europe framework programme under grant agreement No. 101073909

Upcoming events II

- Understand the EC's **long-term vision** on CI resilience.
- Share **experiences and lessons learnt** from closed EU-funded projects.
- Recognise the **gaps and needs** in the standardisation and policy making areas.
- Identify **opportunities** within running EU-funded projects.
- Establish **a joint, actionable strategy for efficient and effective collaborative** standardisation and policy making.

ECSCI

Key Takeaways

- Stimulate the uptake of project results, spinoffs
- Exploit synergies
- Share best practices
- Stimulate network and alliance formation
- Become Collaborative platform
- Selected by EC DG Home & CoU/CERIS as a success story of synergy building

More information

If you are interested in ECSCI activities…

you can visit ECSCI official website

Read ECSCI publication, such as

Consolidated Proceedings of the 1st ECSCI Workshop on Critical Infrastructure Protection

Consolidated Proceedings of the 2nd ECSCI Workshop on Critical Infrastructure Protection

A Guide to Integrated Cyber-Physical Protection of Modern Critical Infrastructures

Securing Critical Infrastructures in Air Transport, Water, Gas, Healthcare, Finance and Industry