

ECSO

EUROPEAN CYBER SECURITY ORGANISATION



ECSO WG6 future priorities and roadmap

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Shaping the future of cybersecurity

Priorities, challenges and funding opportunities for a more resilient Europe

– *Online, 13 July 2021* –

Vision

ECSO endeavours to support the achievement of a **Cyber resilient digital Europe** and increase **European Digital Sovereignty & Strategic Autonomy** through the establishment of **trusted & resilient supply chains** for cybersecurity solutions and services.

To achieve this Vision, ECSO implements its **Strategy** and drives its **Actions** at **short, medium and long term** also considering political, economic, societal context and technology drivers.



Cyber Resilient Digital
Europe

–
European Digital
Sovereignty & Strategic
Autonomy

ECISO suggestions for priorities



HORIZON EUROPE PROGRAMME
Priorities for the definition of a SRIA in Cybersecurity by ECISO

ECOSYSTEM, SOCIAL GOOD & CITIZENS

- Approaches, methods, processes to support cybersecurity assessment, evaluation and certification
- Building and Operating Resilient Systems: Adaptive Software Hardening, Self-Healing systems and BASC
- Development of digital forensics mechanisms and analytical support
- Clear ranges and simulation environments
- Cyber-physical systems security and cyber secure pervasive technology

APPLICATION DOMAINS & INFRASTRUCTURE

- Cyber resilient digitised infrastructures
- Secure Quantum Infrastructures
- Cyber secure future communication systems and networks
- Vertical sectors cyber challenges (Industry 4.0 and ICS, Energy, and smart grids, Transportation, Financial Services, payments and insurance, Public services, governmental, digital citizenship, Healthcare, Smart cities and smart buildings, Robotics, Agrifood)

DATA & ECONOMY

- Data security and malicious use of data
- End-to-end privacy
- Economic aspects of cybersecurity

BASIC & DISRUPTIVE TECHNOLOGIES

- Secure and Trustworthy AI
- Software and Hardware cybersecurity engineering and assurance
- Cryptography
- Blockchains and DLTs
- IoT Security
- AI technologies for better security & malicious use of AI

ECISO
FOR A CYBER RESILIENT DIGITAL EUROPE
Read more at: www.eciso.org.eu

MAIN PRIORITIES
Risks / Threat management
Data & AI (including privacy)
Cyber secure HW & SW (including crypto) supply chains
Infrastructure resilience
Skills
Support to European competitiveness

DIGITAL EUROPE PROGRAMME

Strategic areas of investment to develop a Capability Development Plan, increase autonomy and respond to the needs of our industrial sectors

SUPPORT TO POLICY IMPLEMENTATION

- Develop tools to support the implementation of EU Cybersecurity Act
- Travel management and cross-vertical platforms
- Governance, policy and legal aspects

SUPPORT TO TECHNOLOGY IMPLEMENTATION

- Deploying resilient digital infrastructures in the field
- Platform for privacy management
- Platform for identity management
- Establishing an engineering platform for trustworthy hardware, software and systems

SUPPORT TO COMPETITIVENESS & MARKET DEVELOPMENT

- Investments in Europe and development of regional ecosystem
- Platforms for market support to SMEs
- International cooperation and investments

SUPPORT TO COMPETENCE BUILDING

- Operational, interoperable and cognitive cyber ranges
- Careers and social good
- Jobs and professional skills

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<https://ecs-org.eu/documents/publications/5fdc4c5deb6f9.pdf>

<https://ecs-org.eu/documents/publications/5fdc4ca16dde0.pdf>

Areas for possible investments to capabilities under RRF: a ECSO analysis

- **Cybersecurity for the digital transformation of strategic sectors: cyber resilient critical infrastructures and essential services**
 - Threat intelligence, cyberattack detection and response platforms (incl. A.I. supported SOCs) and risk management for the protection of critical infrastructures
 - Resilient cross-vertical platforms for interconnected infrastructures
 - Securing integrity and availability of the global DNS root system
- **Cyber secure communication systems / networks and secure connectivity of products and associated services including secure digital services for B2C**
 - 5G infrastructure and end point security (incl. OS and software security and trusted execution environments)
 - Secure end-to-end connectivity for digital services (including essential services – e.g. Health)
 - Protection of sellers in eCommerce and retail from cyber threats as well as of users of selling platforms (citizens) from fraud
- **Secure data**
 - End-to-end data protection and secure data management
 - Protection from data manipulation and fake news
- **Secure and trusted digital identity management**
 - Self Sovereign Identity based upon advanced PKI infrastructure and blockchain to guarantee easier adoption of digital services while satisfying European / democratic values
- **Cyber security aware citizens / decision makers and highly skilled workforce**
 - Human aspects: education, professional training and skills development, as well as actions on awareness-raising and gender inclusiveness



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Join the
Community



WG6 - Strategic R&I and Cybersecurity Technologies

Working Group 6 (WG6) is composed of Universities, RTOs, Associations, large companies & SMEs both users and providers of cybersecurity solutions, services and products.

The objective of Working Group 6 is to contribute to define the cyber security EU R&I roadmap and vision to strengthen and build a resilient EU ecosystem. Analyse the challenges of digitalisation of the society and industrial sectors to sustain EU digital autonomy by developing and fostering trusted technologies. The activities of this Working Group are structured around 2 main pillars:



Establish priorities through a Strategic Research and Innovation Agenda



Establish cooperation with European Commission, EU Agencies, other PPPs and Pilot Projects.

WG6 Co-chairs:

- Fabio Cocurullo (Leonardo)
- Fabio Martinelli (CNR)
- Volkmar Lotz (SAP)

SWG 6.1 Ecosystem

SWG 6.2 Digital Transformation in Verticals

SWG 6.3 Data and Economy

SWG 6.4 Basic and Disruptive Technologies

SWG 6.5 Dual use technologies and Space

ECSO cybersecurity priorities for Horizon Europe and Digital Europe Programme (expected total EC funding ~2,5 b€ in 2021-2027): suggestion to EC and MS

MAIN PRIORITIES	HORIZON EUROPE PRIORITIES	DIGITAL EUROPE PROGRAMME and other EU funds
Risks / Threat management	<ul style="list-style-type: none"> Emerging threats, risk management, resilient systems, security by design Development of digital forensics mechanisms and analytical support 	<ul style="list-style-type: none"> Threat management and cross-vertical platforms
Data & AI (including privacy)	<ul style="list-style-type: none"> Data security and malicious use of data End-to-end Privacy Economic aspects of cybersecurity Securing and Trustworthy Artificial Intelligence systems Artificial Intelligence techniques for better security; countering malicious use of AI 	<ul style="list-style-type: none"> Platform for identity and privacy management
Cyber secure HW & SW (including crypto) supply chains	<ul style="list-style-type: none"> Approaches, methods, processes to support cybersecurity assessment, evaluation & certification Software and hardware cybersecure engineering and assurance Cryptography Blockchains and Distributed Ledger Technologies IoT security Cyber-physical systems security and cyber secure pervasive technology 	<ul style="list-style-type: none"> Develop tools to support the implementation of EU Cybersecurity Act Establishing an engineering platform for trustworthy hardware, software, and systems
Infrastructure resilience	<ul style="list-style-type: none"> Cyber resilient digital infrastructures Secure Quantum Computing Infrastructure Cyber secure future communication systems and networks Vertical sectors cyber challenges: Industry 4.0 and ICS; Energy (oil, gas, electricity) and smart grids; Transportation (road, rail, air; sea, space); Financial Services, e-payments and insurance; Public services, e-government, digital citizenship; Healthcare; Smart cities and smart buildings (convergence of digital services for citizens) and other utilities; Agrifood 	<ul style="list-style-type: none"> Deploying resilient digital infrastructures in the field
Skills	<ul style="list-style-type: none"> Cyber ranges and simulation environments 	<ul style="list-style-type: none"> Operational, interoperable and cognitive cyber ranges Citizens and social good Jobs and professional skills
Support to European competitiveness		<ul style="list-style-type: none"> Governance, policy and legal aspects Investments in Europe and development of regional ecosystem Platforms for market support to SMEs International cooperation and investments



WG6 – Summary of Achievements



Strategic R&I Priorities (SRIA)

- Drafted and submitted a [SRIA for H2020](#) priorities as per cPPP commitment to the European Commission. Alignment with the WP2017-2020.
- Initial Areas of Interest regarding Cybersecurity for Dual Use Technologies
- [SRIA for Horizon Europe](#) (ECSO 2021-2027 vision) organized un 4 pillars
- [Strategic areas of investments under the Digital Europe Programme](#) (ECSO 2021-2027 vision)
- 5 Technical papers on Artificial Intelligence, Internet of Things, Blockchain, Digital Twin and Software supply chain (under definition)

13 July 2021



Cooperation with EU initiatives and Agencies

- Support to ECSO members for the creation of Pilot Projects for Competence Centres: almost 40% of partners are members of ECSO. Support to coordination of cybersecurity activities with CCN Pilots
- Cooperation with EU Agencies (ENISA, EDA, and ESA).
- Coordination with JRC for convergence on taxonomy and ATLAS

Trans-Continuum initiative

Collaboration with European cPPPs and other EU initiatives



WG6 - Objectives 2021

- Pursue the Strategic Research and Innovation Roadmap and vision to strengthen the European cybersecurity ecosystem.
- Monitor the future Horizon Europe and Digital Europe Programmes and investment opportunities for R&I.
- Coordinate the cybersecurity activities across cPPPs, CCN Pilots and other EU Initiatives: analysis of roadmaps
- Focus on digital autonomy and sovereignty:
- Provide inputs to relevant cyber security technologies for dual use technologies and Space
- Support the activities of the European Commission for the implementation of the R&I programmes
- Work in coordination with JRC on taxonomy from Research to Market (mapping of taxonomies)