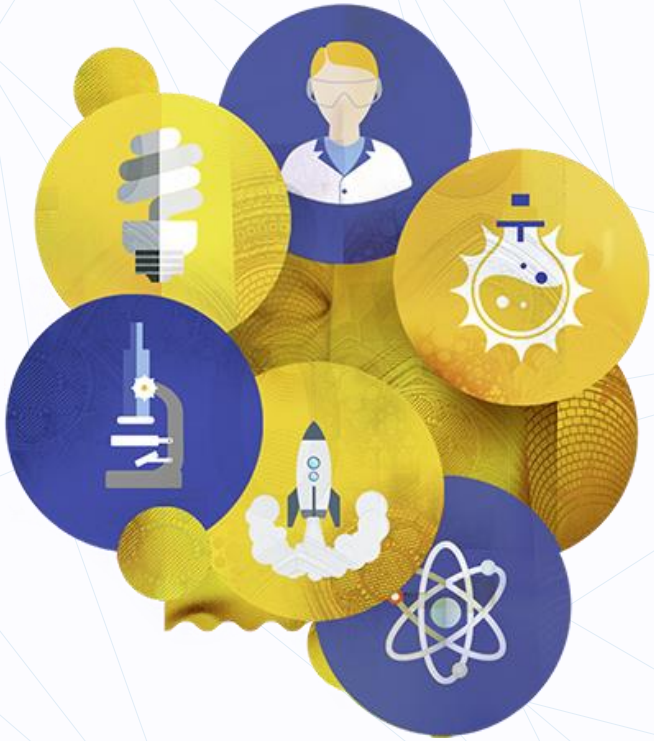
Horizon Europe
Kíberbiztonság

Németh Edina
Nemzeti Kutatási, Fejlesztési és Innovációs Hivatal



Szakpolitikai kontextus

- Security Union Strategy
- Cybersecurity Act - creates a framework for European cybersecurity certification schemes for products, processes and services
- Cyber security strategy
- NIS Directive - Directive on Security of Network & Information Systems
- The European Cybersecurity Industrial, Technology and Research Competence Centre and the Network of National Coordination Centres (ECCC)
- European Electronic Communications Code (EECC)

Overview of tools & actions

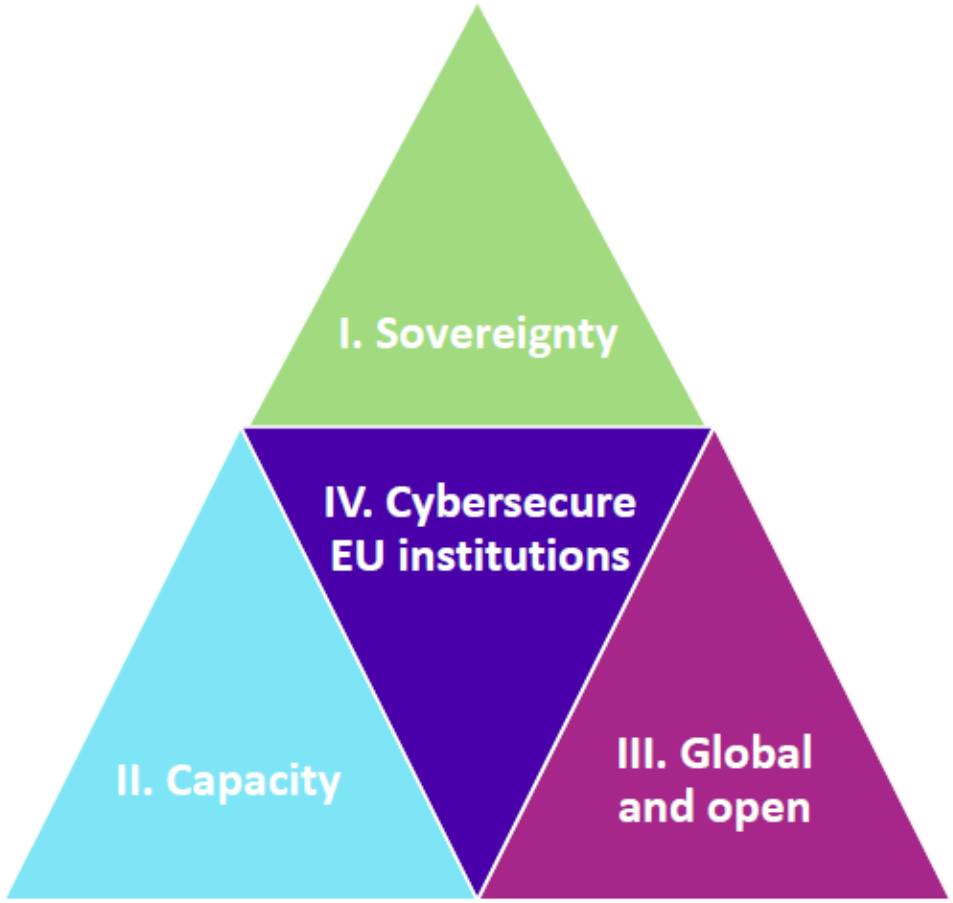
Why a new strategy?

- **Critical services** have gone digital
- **IoT** proliferating: 25 bn connected objects
- **Cyberattacks** increasing 241% (DDoS)
- **Dependency** accelerated by pandemic -also expanding **attack surface**(hospitals, vaccine distribution)
- **Geopolitical** contest over cyberspace; authoritarian regimes damage open global Internet & try dominate international bodies/ norm setting
- ***Digital transformation can only succeed with cybersecurity***

Overview of tools & actions

- Smart digital investment: up to €4.5bn for cybersecurity 2021-27 (MFF+RRF+MS+Industry)
- New regulatory tools
- New policy instruments
- Comprehensive Strategy
  - internal market
  - law enforcement
  - diplomacy
  - defence

...to make EU greater than the sum of its parts.



8th enisa threat landscape report Oct2020

European Cybersecurity Industrial Technology & Research Competence Centre

Centre's Role:

- Network coordination and support
- Research programming and implementation
- Procurement
- Ensuring synergies between civilian and defence spheres

Cybersecurity Competence Centre

- European Cybersecurity Competence Centre (ECCC) aims at fostering our capability to:
  - Secure sensitive infrastructures such as 5G.
  - Help reduce dependency on other parts of the globe for most crucial technologies.

- It will be the main implementation body for EU financial resources dedicated to cybersecurity under the Digital Europe and Horizon Europe Programme.
- Trialog negotiations - Political agreement has been reached in December 2020.
- Based on art. 187 of the Treaty, the Centre will function as an institutionalised partnership. It will be located in Bucharest, Romania.

DIGITAL IN THE NEXT MFF: OVERVIEW

Digital Europe

1. High Performance Computing (HPC)
2. Artificial Intelligence (AI)
3. Cybersecurity
4. Advanced digital skills
5. Digital transformation and interoperability

~ 7.5 B €

Digital in Horizon Europe

1. Digital under "global challenges"
   - Digital and industry cluster
   - Digital in other clusters - health, mobility, energy, environment,..
2. FET Open under Open Innovation
3. Research Infra under Open Scienc

~ 12 B €

CEF - Digital

Connectivity

- Synergies with Transport /Energy
- WIFI/BB 4EU
- 5G roll out

~ 2 B €

MEDIA under Creative Europe within Cohesion and Values

- Distribution of works
- Creation

~ 1 B €

Hol találunk Horizon Europe kíberbiztonsági felhívásokat?

Mindenhol !

https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme/european-partnerships-horizon-europe_en

HORIZONT EURÓPA

ICT

ICT

ICT

ICT

ICT

ICT

ICT

Nyitott felhívások

Infokommunikációs technológia-orientált kutatások

Infokommunikációs technológiák alkalmazása

Tematikus és nyitott felhívások

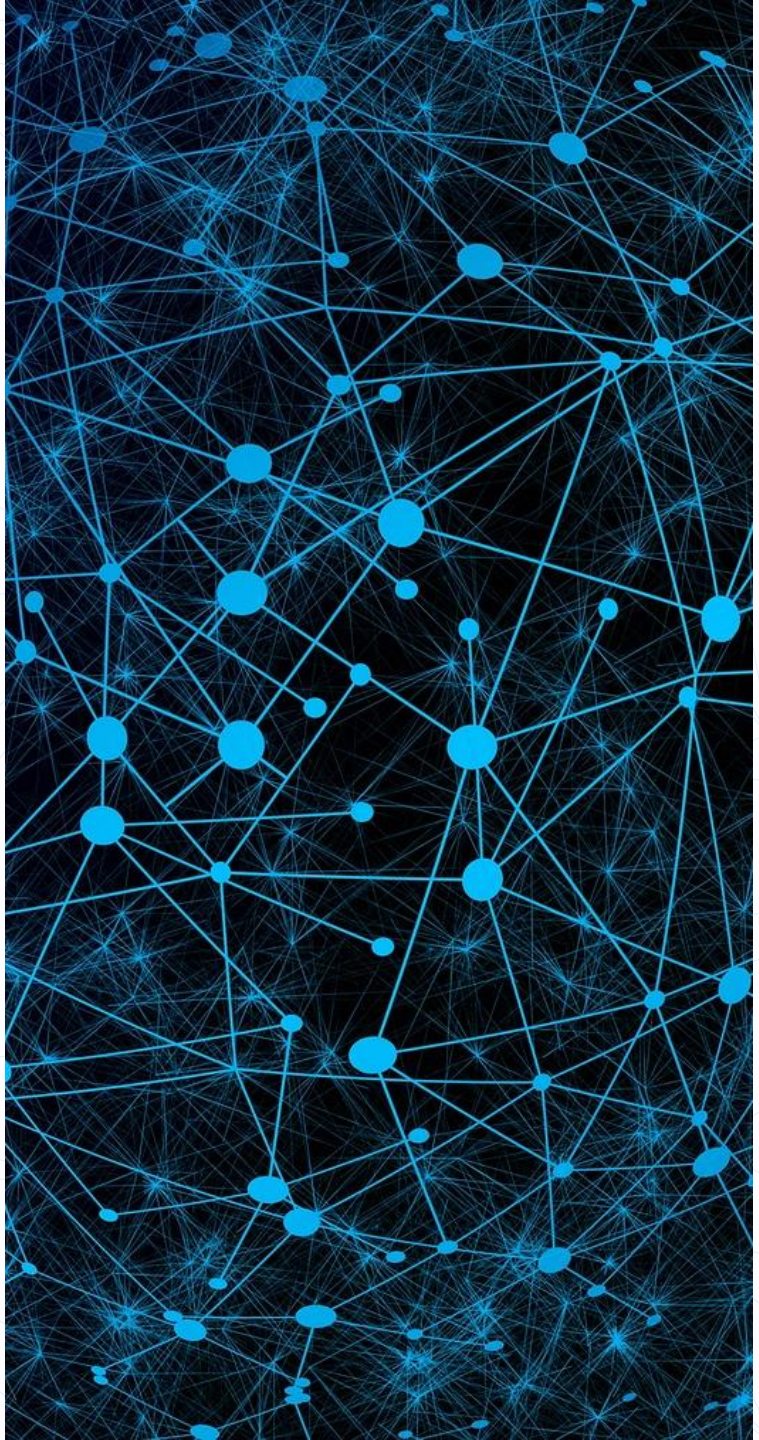
3. klaszter

A kíberbiztonság erősítése

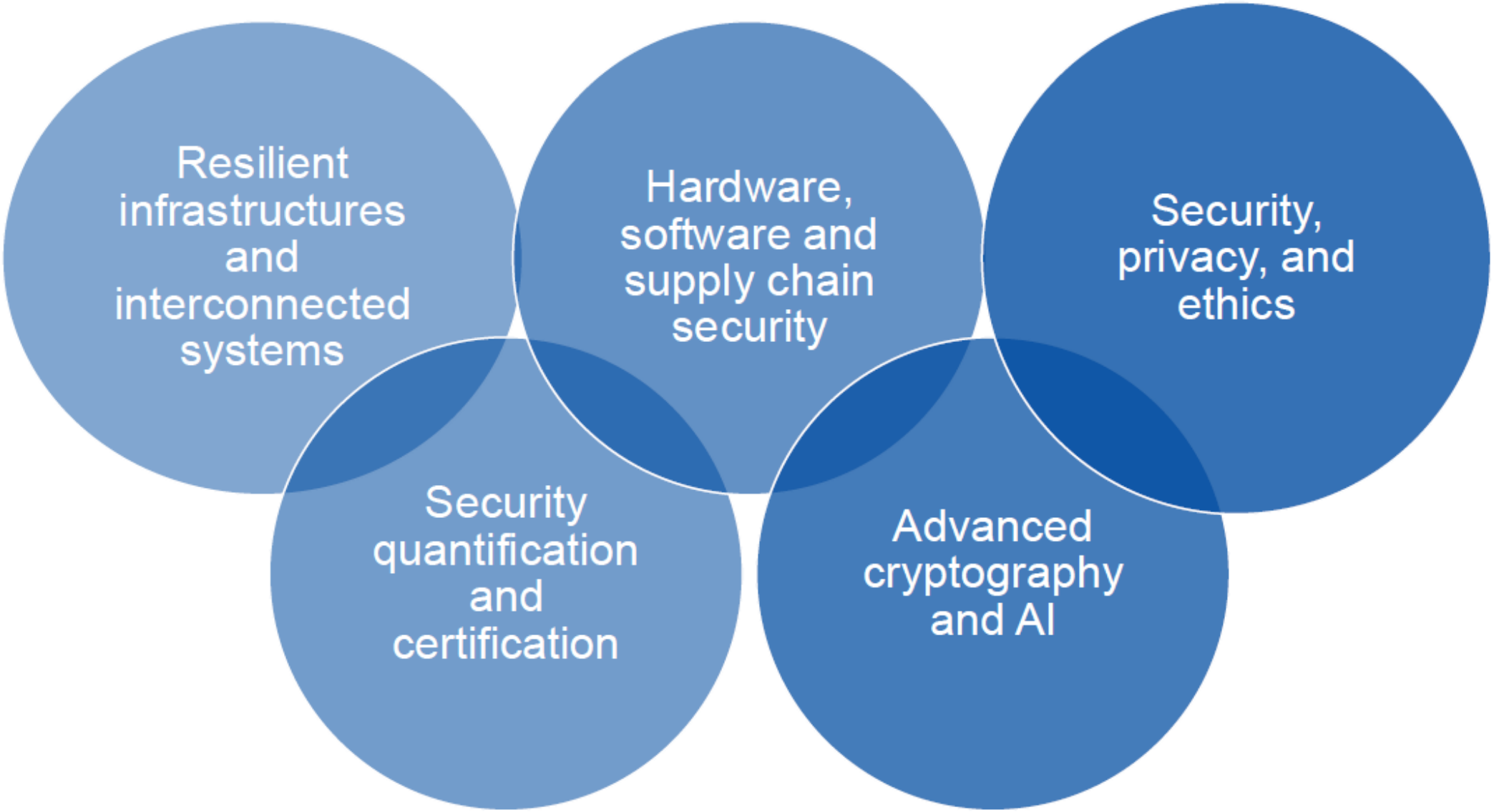
4. Destination
Increased Cybersecurity

Expected impact:

"*Increased cybersecurity and a more secure online environment by developing and using effectively EU and Member States' capabilities in digital technologies supporting* ***protection of data and networks*** *aspiring to* ***technological sovereignty*** *in this field, while respecting* ***privacy and other fundamental rights****; this should contribute to* ***secure services, processes and products****, as well as to robust* ***digital infrastructures*** *capable to resist and counter* ***cyber-attacks and hybrid threats****.*"



HORIZON EUROPE (2021 – 2027 MFF)
(draft) Cybersecurity Funding Priorities



D4 DESTINATION
Increased cybersecurity

AREAS

- Secure and resilient digital infrastructures & interconnected systems
- Hardware, software and supply chain security
- Cybersecurity and disruptive technologies
- Smart and quantifiable security assurance and certification shared across Europe
- Human-centric security, privacy and ethics

CS01

Secure and resilient digital infrastructures & interconnected systems

- HORIZON-CL3-2021-CS-01-01:
  Dynamic business continuity and recovery methodologies based on models and prediction for multi-level Cybersecurity

- HORIZON-CL3-2022-CS-01-01:
  Improved monitoring of threats, intrusion detection and response in complex and heterogeneous digital systems and infrastructures

CS02

Hardware, software and supply chain security

- HORIZON-CL3-2021-CS-01-02: Improved security in open-source and open-specification hardware for connected devices

- HORIZON-CL3-2022-CS-01-02: Trustworthy methodologies, tools and data security “by design” for dynamic testing of potentially vulnerable, insecure hardware and software components

CS03

Cybersecurity and disruptive technologies

- HORIZON-CL3-2021-CS-01-03:
  AI for cybersecurity reinforcement

- HORIZON-CL3-2022-CS-01-03:
  Transition towards Quantum-Resistant Cryptography

CS04

Smart and quantifiable security assurance and certification shared across Europe

- HORIZON-CL3-2022-CS-01-04: Development and validation of processes and tools used for agile certification of ICT products, ICT services and ICT processes

CS05

Human-centric security, privacy and ethics

- HORIZON-CL3-2022-CS-01-02:
  Scalable privacy-preserving technologies for cross-border federated computation in Europe involving personal data

D4 Increased cybersecurity

2021

Topics	Type of Action	Budget (M €) 2021	Expected EU contribution per project (M €)	Number of projects
Opening: 15 Apr 2021 Deadline(s): 08 Sep 2021				
HORIZON-CL3-2021-CS-01-01	RIA	21.50	3.00 - 5.00	5
HORIZON-CL3-2021-CS-01-02	RIA	18.00	3.00 - 5.00	4
HORIZON-CL3-2021-CS-01-03	RIA	11.00	3.00 - 4.00	3
HORIZON-CL3-2021-CS-01-04	RIA	17.00	3.00 - 5.00	4
Overall indicative budget		67.50		

nkfih

D4 Increased cybersecurity

2022

Topics	Type of Action	Budgets (M €) 2022	Expected EU contribution per project (M €)	Number of projects
Opening: 15 Mar 2022 Deadline(s): 08 Sep 2022				
HORIZON-CL3-2022-CS-01-01	IA	21.00	4.00 - 6.00	4
HORIZON-CL3-2022-CS-01-02	RIA	17.30	3.00 - 5.00	4
HORIZON-CL3-2022-CS-01-03	IA	11.00	3.50 - 6.00	2
HORIZON-CL3-2022-CS-01-04	IA	17.00	3.00 - 5.00	4
Overall indicative budget		67.30		

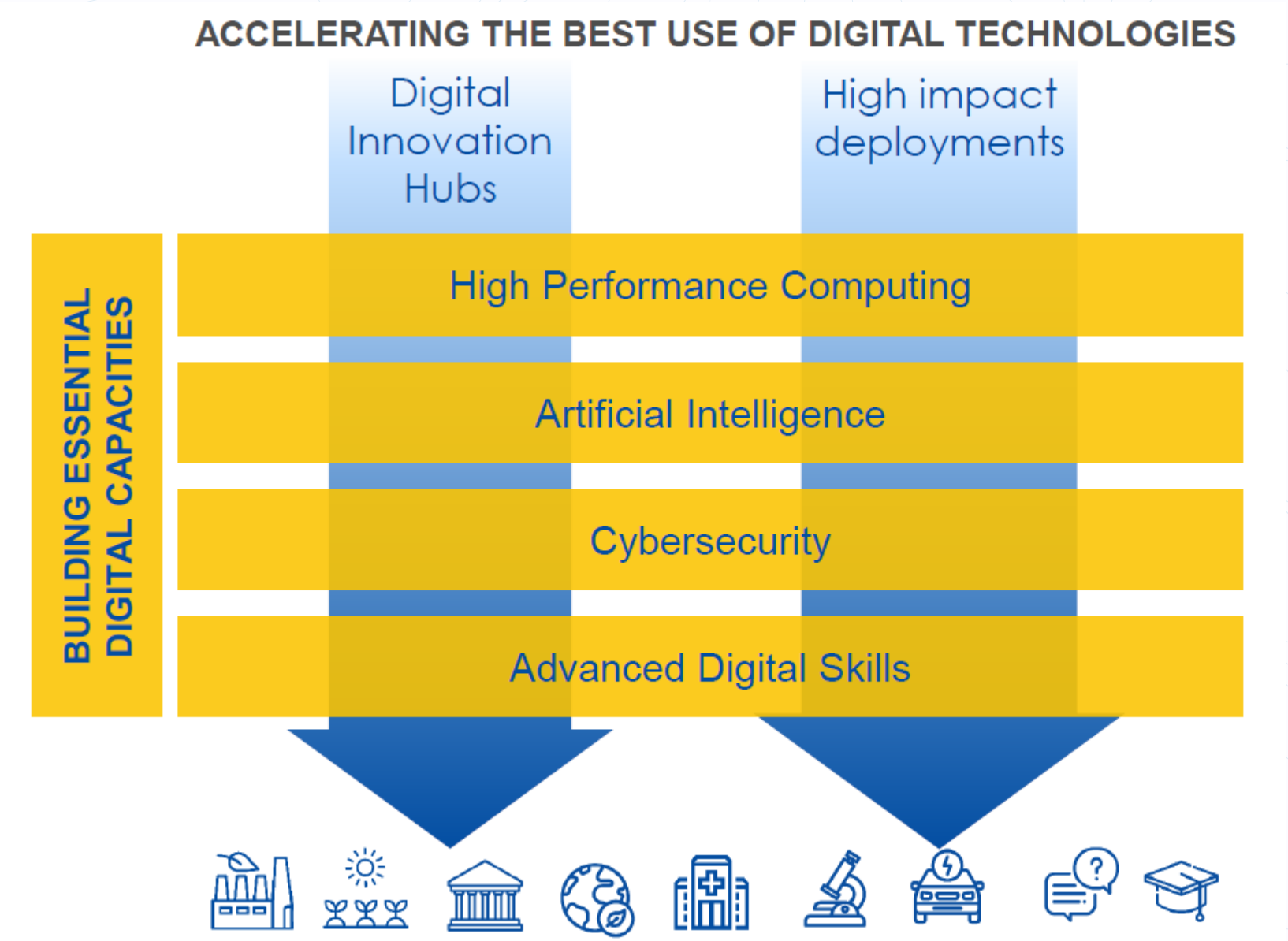
4. klaszter

Digitális gazdaság, ipar és világűr

HORIZONT EURÓPA | 4. KLASZTER | DESZTINÁCIÓK

D1	Klímasemleges, körforgásos és digitális termelés	718.6 M €
D2	Digitális, erőforrás-hatékony és ellenálló ipar	759.3 M €
D3	Adat- és nagy teljesítményű számítástechnika a világ élvonalában	346 M €
D4	Digitális és áttörést jelentő technológiák a versenyképesség és az európai zöld megállapodás szolgálatában	724 M €
D5	Stratégiai autonómia globális űrinfrastruktúrák fejlesztésében bevezetésében és alkalmazásában	504.9 M €
D6	A digitalis és ipari technológiák emberközpontú és etikus fejlesztése	327 M €

Digital Europe program struktúra



DIGITAL EUROPE (2021 – 2027 MFF)
(draft) Cybersecurity Funding Priorities

Support to the network of National Coordination Centres and Cybersecurity Community

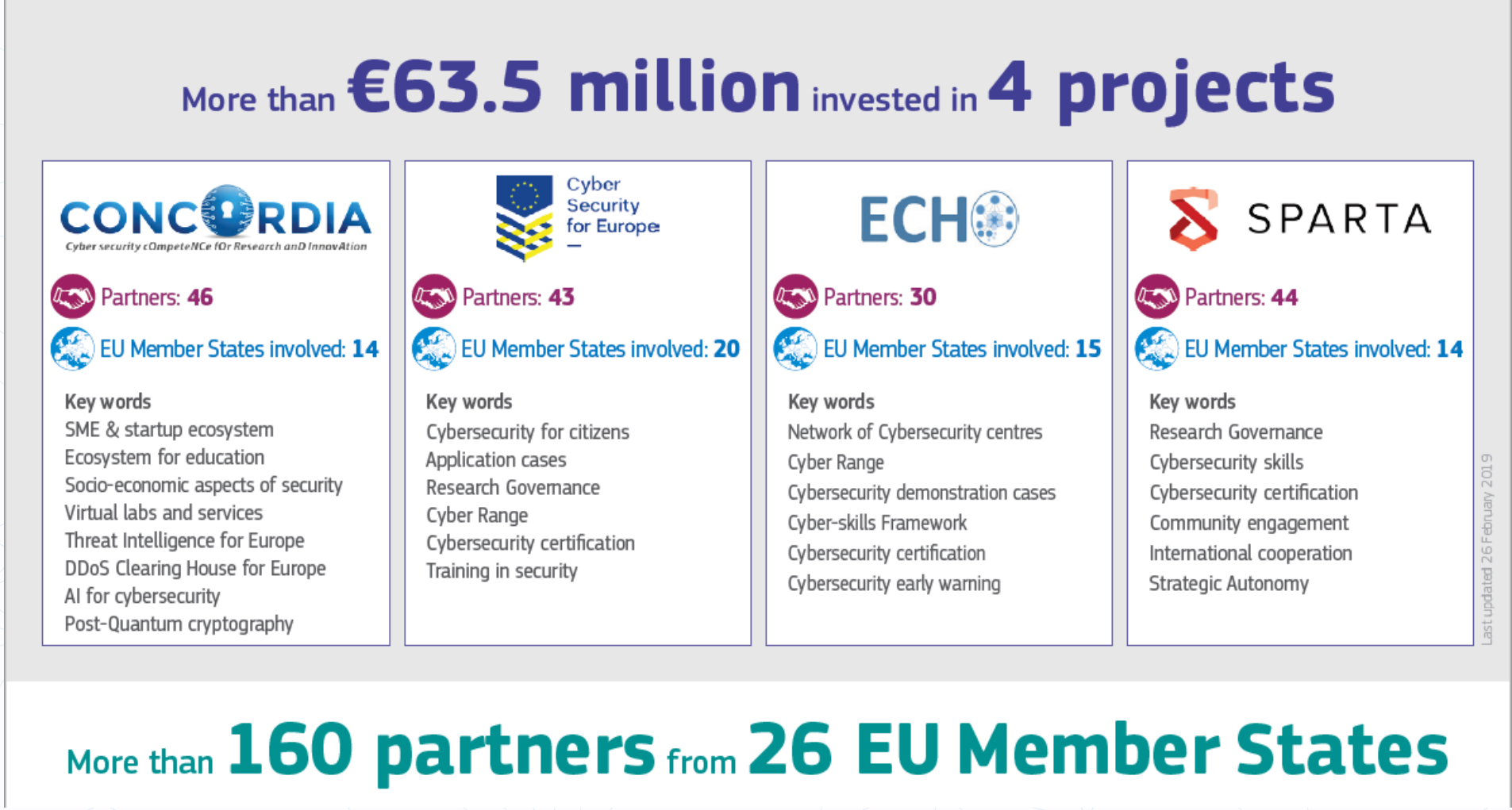
Key capacity building.

Testing and certification capabilities

Widening the deployment of cybersecurity tools

Supporting the NIS Directive implementation

EU pilots European Cybersecurity Competence Network



More info at:
https://ec.europa.eu/digital-single-market/en/news/four-eu-pilot-projects-launched-prepare-european-cybersecurity-competence-network

Partnerség

vezérelt program

https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme/european-partnerships-horizon-europe_en

Horizon Europe

Partnerships in other clusters / cross-cluster

- European Open Science Cloud
- Innovative Health
- Personalised Medicine
- Large-scale innovation & transformation of health systems
- Clean Aviation
- Safe & Automated Road transport
- Zero-emission Road Transport
- EIT Urban Mobility
- Sustainable, smart & inclusive cities & communities
- Clean Energy Transition
- Accelerating farming systems transition
- Safe & sustainable food system
- Innovative SMEs

Global competitive space system

High data transmission capacity

Critical electronic components

AI, data & robotics for in-orbit operations

Key enabler for Industry 4.0 (laser-based technologies)

Photonics

Integrated Circuit, high efficiency devices

Critical components and systems for NG high-speed information networks

Technologies & components for advanced network capacities

Smart networks & services

Connectivity and service platforms for IIoT'

Key Digital Technologies

Technologies and components for the 'Industrial Internet of Things'

EIT Digital

Converging agendas e.g. Neuromorphic architectures

Components (processors, accelerators) & embedded software

EuroHPC

Key technological elements - hardware components & software (e.g. for AI-optimised chips)

AI, data, robotics

Other partnerships in the same cluster

- Metrology
- Clean Steel
- Carbon neutral and circular industry
- EIT Manufacturing
- EIT Raw materials
- Made in Europe

Other EU initiatives

- CEF
- Digital Europe Programme
- ERDF

Candidate Institutionalised Partnerships | EIT KIC | Co-Programmed | Co-Funded | CP or CF

Digital Centric Partnerships

- **Key Digital Technologies** (proposed as institutionalised) addressing the technological challenges and emerging opportunities for Europe on key digital technologies. This include microelectronics, embedded software and smart microsystems enlarged with elements of photonics, higher-layers of software and complex system integration

- **High Performance Computing** (proposed as institutionalised) to develop and deploy highly competitive and innovative HPC ecosystems in Europe. It will build on the experience gained in EuroHPC for achieving world-class exascal eand post-exascale (HPC) technologies in Europe, including their integration with Quantum computing

- **Smart Networks and Services** (proposed as institutionalised) to strengthen the position of the European industry in the global race on digital connectivity infrastructures including “5G and beyond” and later ”6G” network systems and associated services

- **Artificial Intelligence, data and robotics** (proposed as co-programmed) with a strong socio-economic transformational potential with impact in sectors like health, manufacturing, ship-building, construction, service industries and farming, etc.

- **Photonics** (proposed as co-programmed) with a strong and growing impact on a broad variety of end user industries, developing next-generation photonics components and systems fostering synergies and coordination amongst research and industrial actors.

Horizon Europe finanszírozás Harmadik felek felhívásai (más néven Kaszkád támogatások)

Munkaprogram / felhívás → **Projekt** → **3. fél felhívása** → **Kaszkád támogatás**

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/competitive-calls

KÖSZÖNÖM A FIGYELMET!

Németh Edina

Nemzeti Kutatási, Fejlesztési és Innovációs Hivatal
Programbizottsági tag, nemzeti kapcsolattartó

Digitális gazdaság, ipar, világűr (4. klaszter)

Európai Innovációs Tanács, Pathfinder (3. pillér)

edina.nemeth@ist.hu