

#innovacion
#ayudascdti
#asesoramiento
#internacionalizacion



Clúster 4 - Digital

Enrique Pelayo Campillos

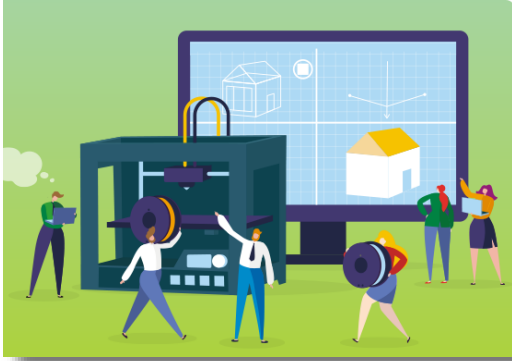
2023



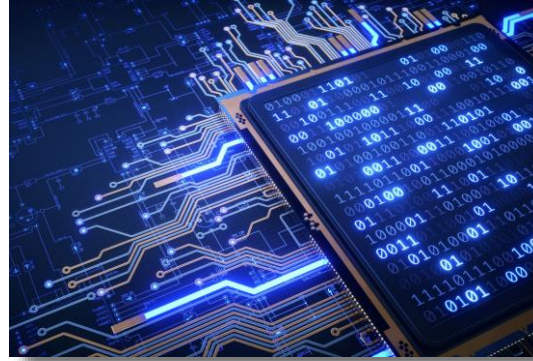
HORIZONTE

EUROPA
@HorizonteEuropa

Index



Horizon Europe



C4 - Digital



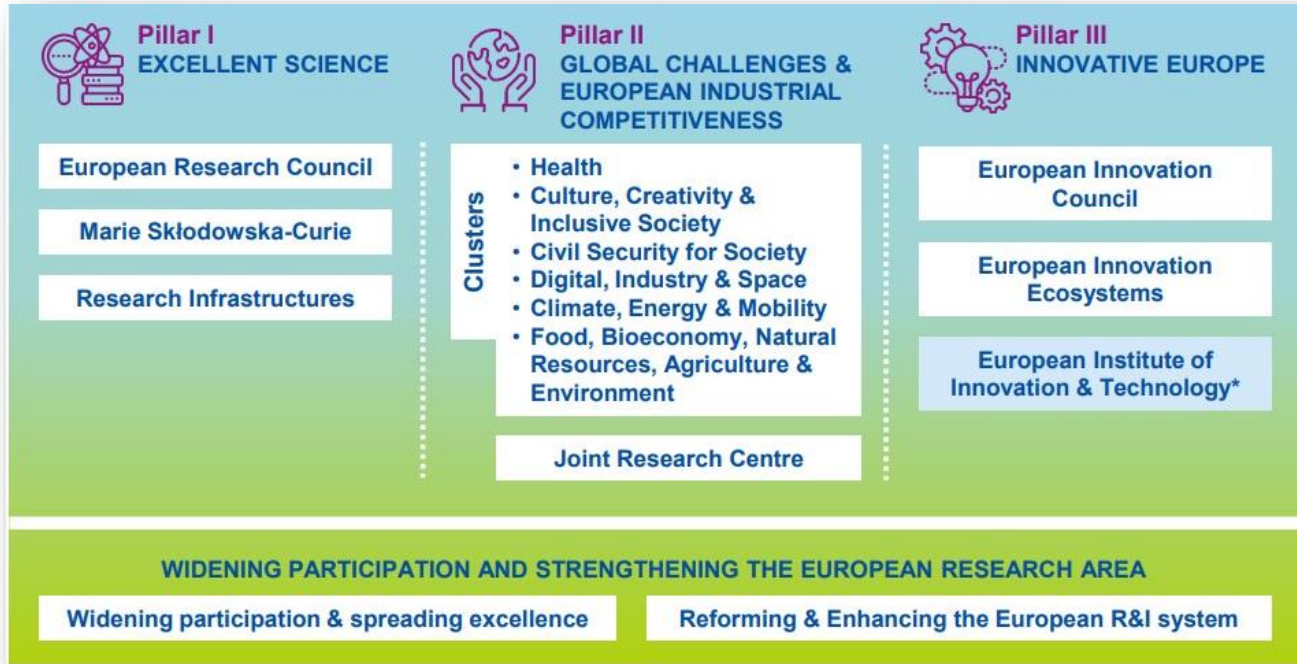
Additional
support

#HorizonEU

HORIZON EUROPE

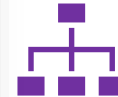
THE EU RESEARCH &
INNOVATION PROGRAMME

Horizon Europe



95.500 M€

2021-2027



/ Pillars
/ Clusters
/ Destinations
/ Topics



+3 Countries

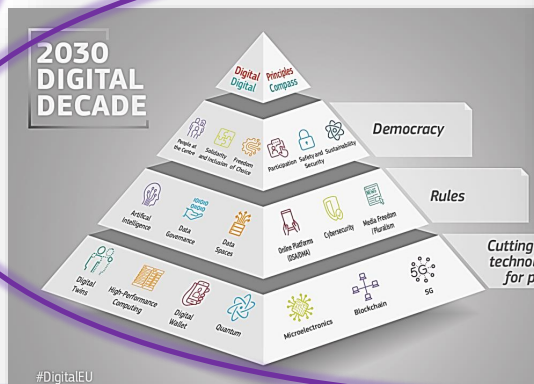


- Research (RIA)
- Innovation (IA)
- Coordination (CSA)

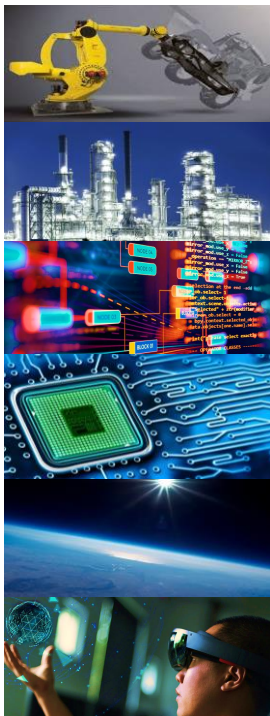
Horizon Europe / cluster 4



Political Strategy



Cluster 4 - Destinations



CLIMATE NEUTRAL, CIRCULAR AND DIGITISED **PRODUCTION**

INCREASED AUTONOMY IN KEY STRATEGIC VALUE CHAINS FOR **RESILIENT** INDUSTRY

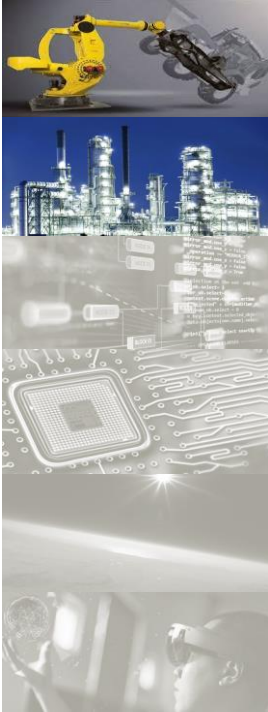
WORLD LEADING **DATA** AND COMPUTING TECHNOLOGIES

DIGITAL AND **EMERGING** TECHNOLOGIES FOR COMPETITIVENESS AND FIT FOR THE GREEN DEAL

OPEN STRATEGIC AUTONOMY IN DEVELOPING, DEPLOYING AND USING GLOBAL **SPACE-BASED** INFRASTRUCTURES, SERVICES, APPLICATIONS AND DATA

A **HUMAN-CENTRED** AND ETHICAL DEVELOPMENT OF DIGITAL AND INDUSTRIAL TECHNOLOGIES

Cluster 4 - Industry



CLIMATE NEUTRAL, CIRCULAR AND DIGITISED **PRODUCTION**

INCREASED AUTONOMY IN KEY STRATEGIC VALUE CHAINS FOR **RESILIENT** INDUSTRY

WORLD LEADING **DATA** AND COMPUTING TECHNOLOGIES

DIGITAL AND **EMERGING** TECHNOLOGIES FOR COMPETITIVENESS AND FIT FOR THE GREEN DEAL

OPEN STRATEGIC AUTONOMY IN DEVELOPING, DEPLOYING AND USING GLOBAL **SPACE-BASED** INFRASTRUCTURES, SERVICES, APPLICATIONS AND DATA

A **HUMAN-CENTRED** AND ETHICAL DEVELOPMENT OF DIGITAL AND INDUSTRIAL TECHNOLOGIES

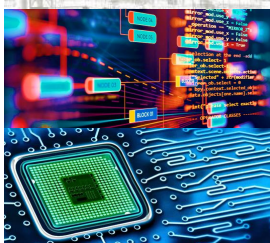
Cluster 4 - Digital



CLIMATE NEUTRAL, CIRCULAR AND DIGITISED **PRODUCTION**



INCREASED AUTONOMY IN KEY STRATEGIC VALUE CHAINS FOR **RESILIENT** INDUSTRY



WORLD LEADING **DATA** AND COMPUTING TECHNOLOGIES

DIGITAL AND **EMERGING** TECHNOLOGIES FOR COMPETITIVENESS AND FIT FOR THE GREEN DEAL

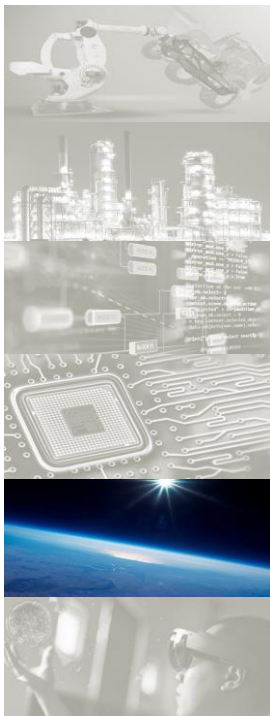


OPEN STRATEGIC AUTONOMY IN DEVELOPING, DEPLOYING AND USING GLOBAL **SPACE-BASED** INFRASTRUCTURES, SERVICES, APPLICATIONS AND DATA



A **HUMAN-CENTRED** AND ETHICAL DEVELOPMENT OF DIGITAL AND INDUSTRIAL TECHNOLOGIES

Cluster 4 - Space



CLIMATE NEUTRAL, CIRCULAR AND DIGITISED **PRODUCTION**

INCREASED AUTONOMY IN KEY STRATEGIC VALUE CHAINS FOR **RESILIENT** INDUSTRY

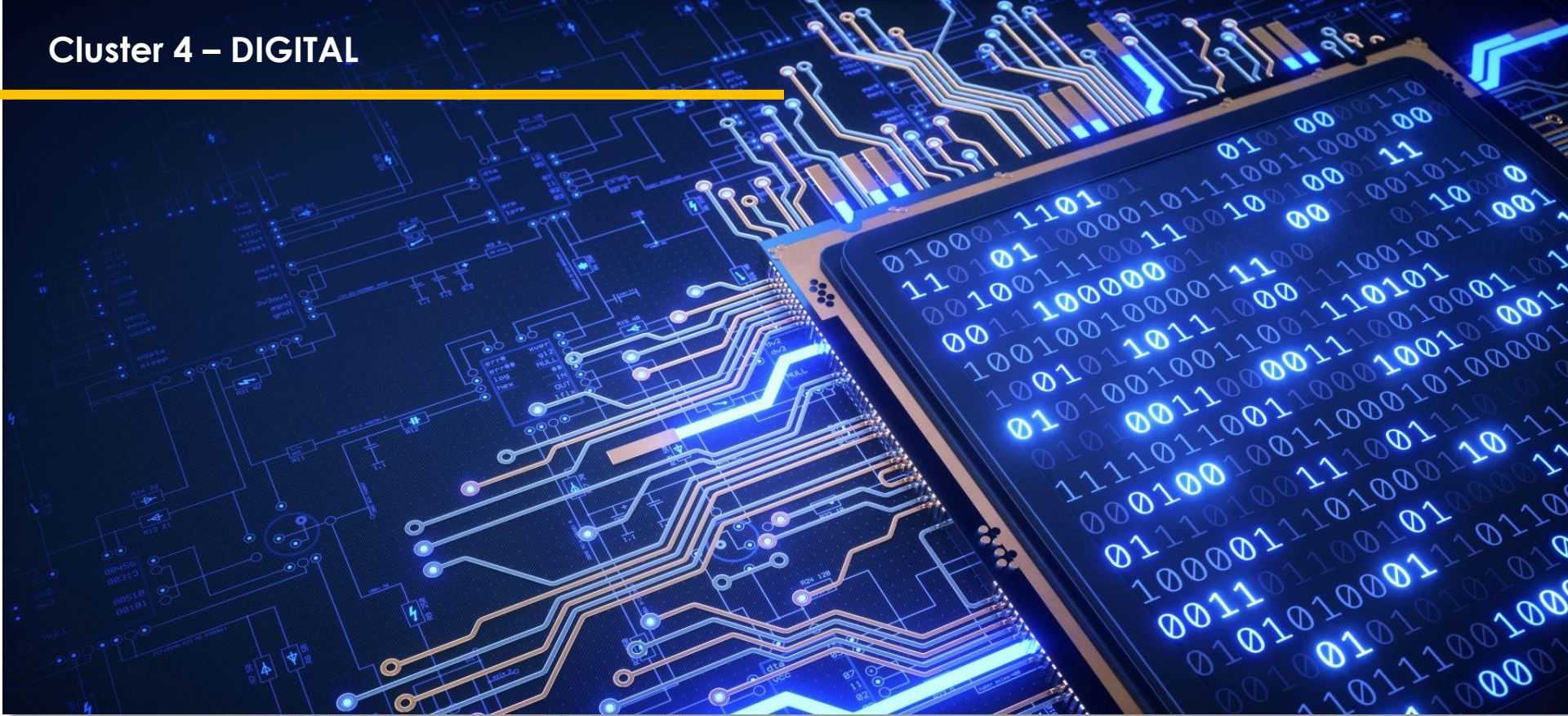
WORLD LEADING **DATA** AND COMPUTING TECHNOLOGIES

DIGITAL AND **EMERGING** TECHNOLOGIES FOR COMPETITIVENESS AND FIT FOR THE GREEN DEAL

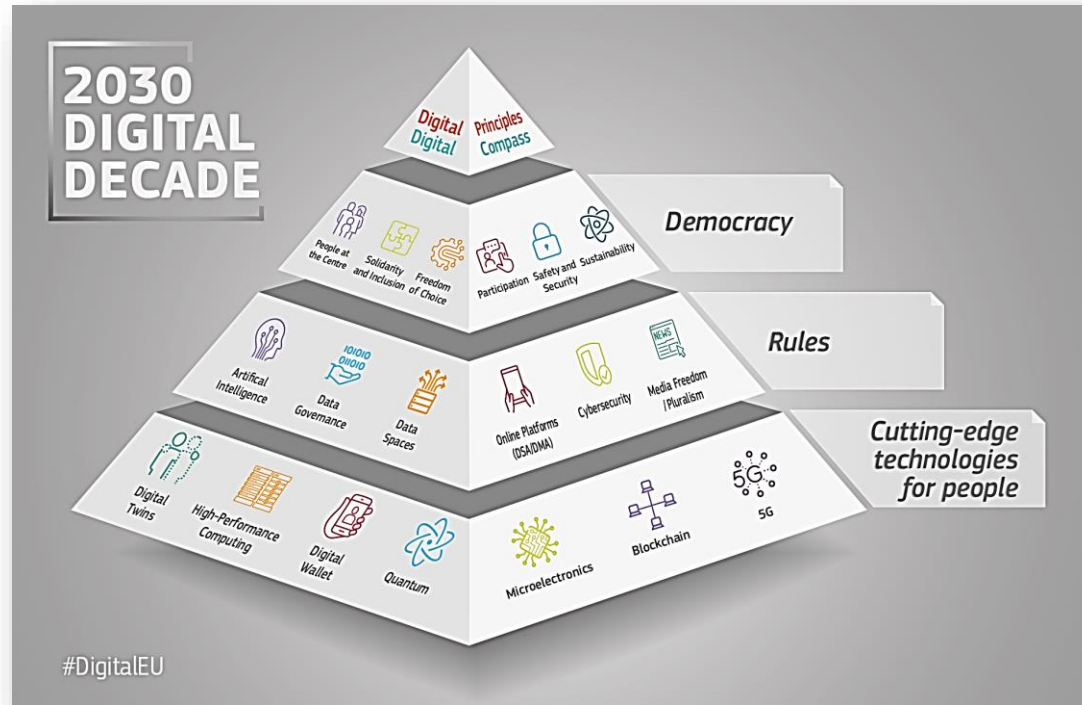
OPEN STRATEGIC AUTONOMY IN DEVELOPING, DEPLOYING AND USING GLOBAL **SPACE-BASED** INFRASTRUCTURES, SERVICES, APPLICATIONS AND DATA

A **HUMAN-CENTRED** AND ETHICAL DEVELOPMENT OF DIGITAL AND INDUSTRIAL TECHNOLOGIES

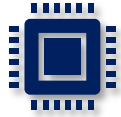
Cluster 4 – DIGITAL



Political Strategy – Digital Decade



Political Strategy – Chips Act



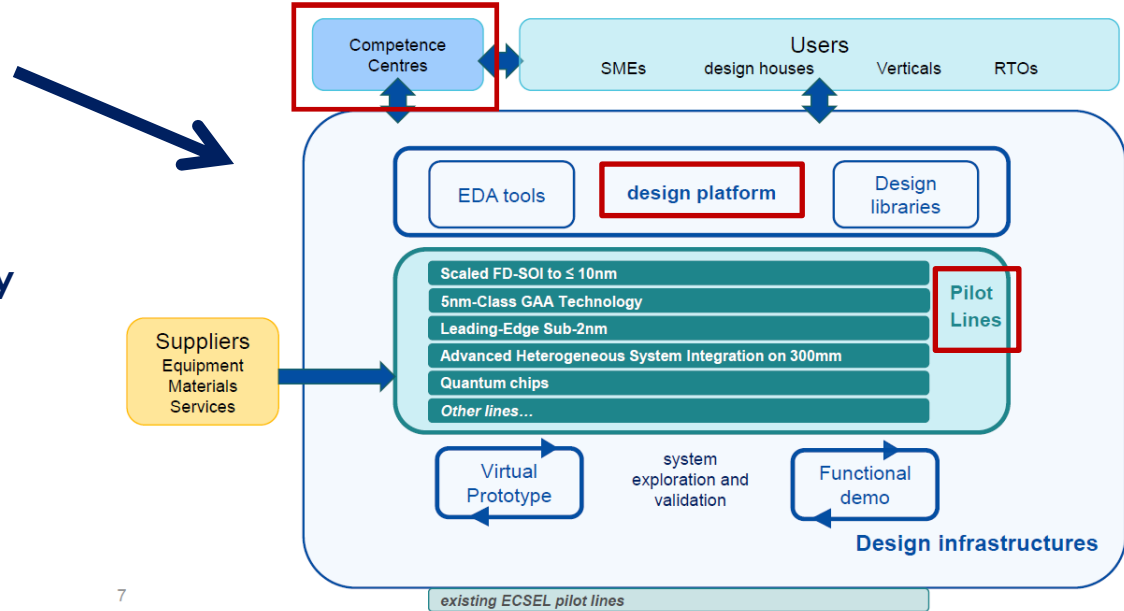
Chips for Europe Initiative



Security of Supply



Crisis response



7

C4 - DIGITAL / Partnerships

Institutionalised



- High Performance Computing (EuroHPC)

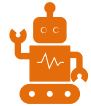


- Key Digital Technologies (KDT) >> **Future CHIPS JU**



- Smart Networks and Services (SNS)

Co-programmed



- AI / Data / Robotics

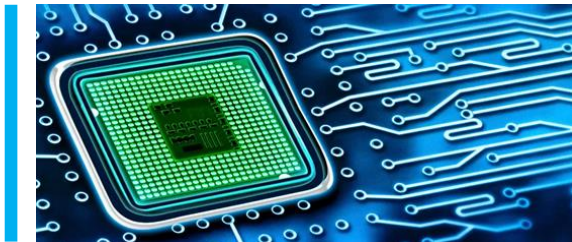


- Photonics

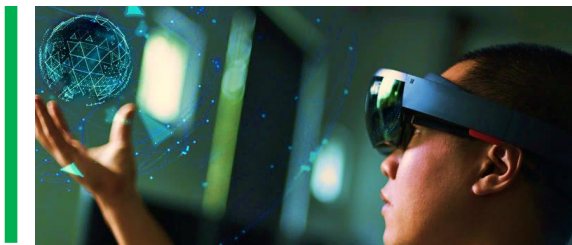
Cluster 4 - Digital



WORLD LEADING **DATA** AND
COMPUTING TECHNOLOGIES



DIGITAL AND **EMERGING** TECHNOLOGIES
FOR COMPETITIVENESS AND FIT FOR THE
GREEN DEAL



A **HUMAN-CENTRED** AND ETHICAL
DEVELOPMENT OF DIGITAL AND
INDUSTRIAL TECHNOLOGIES

Cluster 4 / Data/ Impacts



Improved European leadership in the global **data economy**



Maximised **social and economic** benefits from the wider and more effective use of data



Reinforced Europe's ability to manage **urgent societal challenges** (e.g. data for crisis management, digital for clean energy).



GOBIERNO
DE ESPAÑA

MINISTERIO
DE CIENCIA
E INNOVACIÓN



Cluster 4/Data



▪ Data Sharing



▪ Cloud-Edge



▪ Analytics

Cluster 4 / DATA-2023

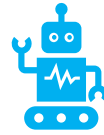
IOIO
IOIO



Data	01-02	Integration of data life cycle, architectures and standards for complex data cycles and/or human factors, language (AI, data and robotics partnership) (RIA)	RIA	5	45,0	
Data	01-04	Cognitive Computing Continuum: Intelligence and automation for more efficient data processing (AI, data and robotics partnership) (RIA)	RIA	6	28,0	LS
Data	01-06	Coordination and Support of Cognitive Computing Continuum research and policy (CSA)	CSA	1	2,0	
Data	01-07	Collaboration with NSF on fundamental research on new concepts for distributed computing and swarm intelligence (CSA)	CSA	1	1,0	

LS = LUMP SUM, 22.5 = Article 22.5

Cluster 4 / Digital Emerging / Impacts



Europe's open **strategic autonomy** by sustaining first-mover advantages in strategic areas including AI, data, robotics, quantum computing, and graphene, and by investing early in emerging enabling technologies.



Reinforced **European industry leadership** across the digital supply chain.



Robust European **industrial** and **technology presence** in all key parts of a greener digital supply chain, from low-power components to advanced systems, future networks, new data technologies and platforms.

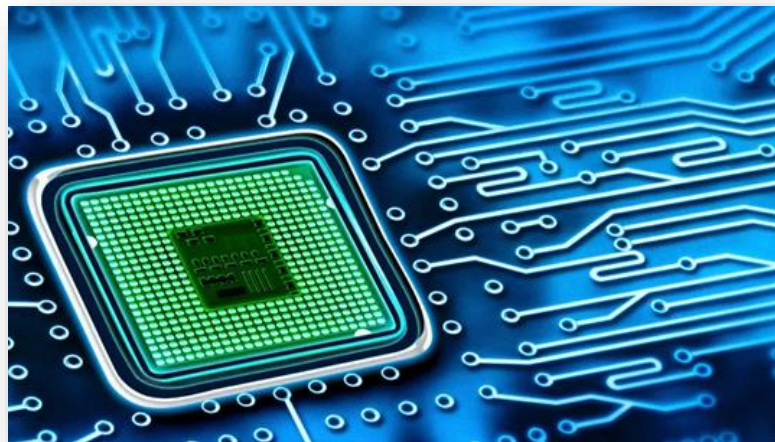


GOBIERNO
DE ESPAÑA

MINISTERIO
DE CIENCIA
E INNOVACIÓN



Cluster 4/Digital Emerging



- Electronics (KDT-JU)/ Low power proc.



- Photonics



- 6G (SNS-JU)



- AI/Data/Robotics



- Emerging



- Quantum



- Graphene

C4 / DIGITAL-EMERGING-2023



Emerging	01-32	Sustainable safe-by-design 2D materials technology (RIA)	RIA	2	6,0	LS	
Emerging	01-33	2D materials of tomorrow (RIA)	RIA	3	12,0		
Emerging	01-51	Pervasive photonics - multi-technology integration for digital infrastructure, sensors and internet of things (Photonics partnership)(RIA)	RIA	4	18,0		
Emerging	01-53	Versatile light sources and systems as tools for manufacturing and medical application (Photonics Partnership) (RIA)	RIA	4	18,0	LS	
Emerging	01-57	Advanced imaging and sensing technologies (IA)(Photonics Partnership)	IA	4	20,0	LS	
Emerging	01-56	Photonic Strategies and Skills Development (CSA) (Photonics Partnership)	CSA	2	4,0		
Emerging	01-40	Quantum Photonic Integrated Circuit technologies (RIA)	RIA	2	12,0	LS	22.5
Emerging	01-43	Framework Partnership Agreement for developing large-scale quantum Computing platform technologies (FPA)	FPA	0	-		22.5
Emerging	01-41	Investing in alternative quantum computation and simulation platform technologies (RIA)	RIA	2	20,0		22.5
Emerging	01-50	Next generation quantum sensing and metrology technologies (RIA)	RIA	3	10,0		22.5
Emerging	01-01	Industrial leadership in AI, Data and Robotics – advanced human robot interaction (AI Data and Robotics Partnership) (RIA)	RIA	4	30,0		
Emerging	01-02	Industrial leadership in AI, Data and Robotics – advanced human robot interaction (AI Data and Robotics Partnership) (IA)	IA	3	30,0		
Emerging	01-12	Adaptive multi-scale modelling and characterisation suites from lab to production (RIA)	RIA	4	22,0		
Emerging	01-11	Low TRL research in micro-electronics and integration technologies for industrial solutions (RIA)	RIA	10	35,0		

Cluster 4 / Human / Impacts



Increased inclusiveness, by supporting a **human-centred approach to technology development** that is aligned with European social and ethical values, as well as sustainability



Sustainable, **high-quality jobs** by targeting skills mismatches, the need to empower workers, and ethical considerations relating to technological progress



GOBIERNO
DE ESPAÑA

MINISTERIO
DE CIENCIA
E INNOVACIÓN



Cluster 4/Human



- AI based on trust



- Internet of trust



- eXtended Reality (XR)



- Society & Industry

C4 / HUMAN-2023



Human 01-01	Efficient trustworthy AI - making the best of data (AI, Data and Robotics Partnership) (RIA)	RIA	5	35,0	
Human 01-02	Large Scale pilots on trustworthy AI data and robotics addressing key societal challenges (ADRA Partnership)	IA	3	24,0	
Human 01-03	Natural Language Understanding and Interaction in Advanced Language Techs (ADRA Partnership)	RIA	3	20,0	
Human 01-04	Open innovation: Addressing Grand challenges in AI (AI Data and Robotics Partnership) (CSA)	CSA	1	4,0	
Human 01-05	Through AI from Disinformation to Trust (IA)	IA	2	10,0	LS
Human 01-54	Green and digital skills and training needs for a just transition (CSA)	CSA	5	2,5	LS
Human 01-81	Digital Humanism - Putting people at the centre of the digital transformation (CSA) . Art. 22.5	CSA	1	1,5	LS
Human 01-82	Art-driven digital innovation: Towards human compatible and ecologically conscious technology (CSA)	CSA	1	3,0	LS
Human 01-51	Pilots for an innovative human-centric industry (RIA)	RIA	1	10,0	
Human 01-52	Drivers and success factors for progress towards Industry 5.0 (RIA)	RIA	1	4,0	
Human 01-32	Piloting communities of expert facilitators to improve industry-academia-public sector co-creation (CSA)	CSA	1	2,0	
Human 01-53	Localised and Urban Manufacturing, supporting creativity and the New European Bauhaus (RIA + FSTP)	RIA	4	10,0	
Human 01-91	International Hub for Digital Partnerships in the Indo-Pacific (CSA)	CSA	1	2,5	LS
Human 01-92	R&I cooperation with Sub-Saharan Africa (CSA)	CSA	1	2,0	LS
Human 01-93	R&I cooperation with Latin America (Mexico, Brazil, Argentina, and other countries in the BELLA network)	CSA	1	2,0	LS

LS = LUMP SUM, 22.5 = Article 22.5



C4 / HUMAN-2023



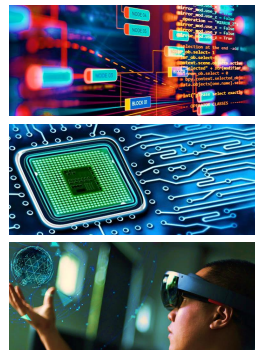
STD



Human 01-11	Next Generation Internet Fund (RIA)	RIA	1	27,0
Human 01-12	Pilots for the Next Generation Internet (IA)	IA	5	14,0
Human 01-13	Next Generation Internet International Collaboration - USA (RIA)	RIA	1	4,0
Human 01-14	Next Generation Internet Commons Policy (CSA)	CSA	1	2,0
Human 01-62	Boosting industrial symbiosis by standardisation (CSA)	CSA	1	2,0
Human 01-64	Pre-normative research and standardisation in industrial ecosystems (CSA)	CSA	8	8,0
Human 01-63	Experts for European Standardisation: attract the students of university/HEI	CSA	1	3,0
Human 01-66	Promoting EU standards globally (CSA)	CSA	1	2,5 LS
Human 01-21	Next Generation eXtended Reality (RIA)	RIA	4	26,0
Human 01-22	eXtended Reality for Industry 5.0 (IA)	IA	4	25,0
Human 01-23	Supporting the emergence of an open human-centric Metaverse (CSA)	CSA	1	2,0
Human 01-31	Toolbox for efficient IP licensing for market uptake and societal value creation (CSA)	CSA	1	2,0
Human 01-33	Fostering knowledge valorisation through societal and cultural interactions (CSA)	CSA	5	5,0

LS = LUMP SUM, 22.5 = Article 22.5

HORIZON-CL4-2022 (digital): WP + Budget



BUDGET	29/3/2023	19/3/2024
DATA-2023	76M€	
DATA-2024		85M€
DIGITAL-EMERGING-2023	237M€	
DIGITAL-EMERGING-2024		224,5M€
HUMAN-2023	256,5M€	
HUMAN-2024		61M€
	569,5M€	370,5M€



https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/horizon-europe-work-programmes_en

Digital Programs



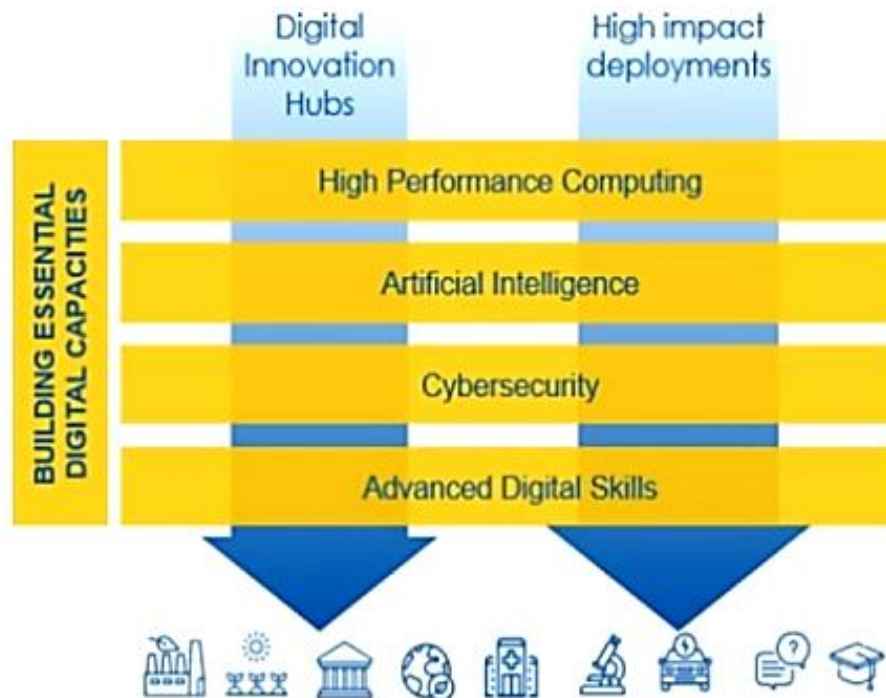
DIGITAL EUROPE PROGRAM



Digital Europe Programme



DIGITAL EUROPE PROGRAM



Additional support

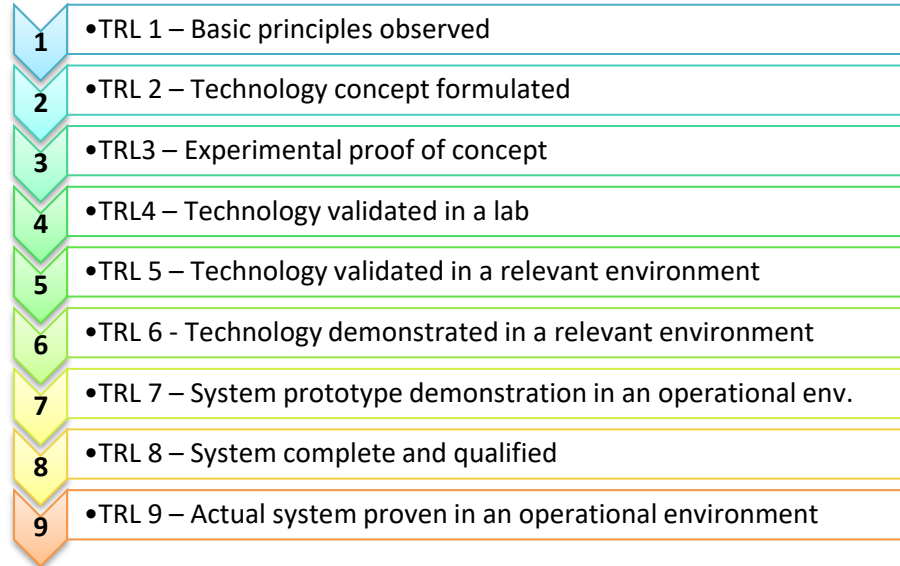


Propuesta de éxito: Excelencia

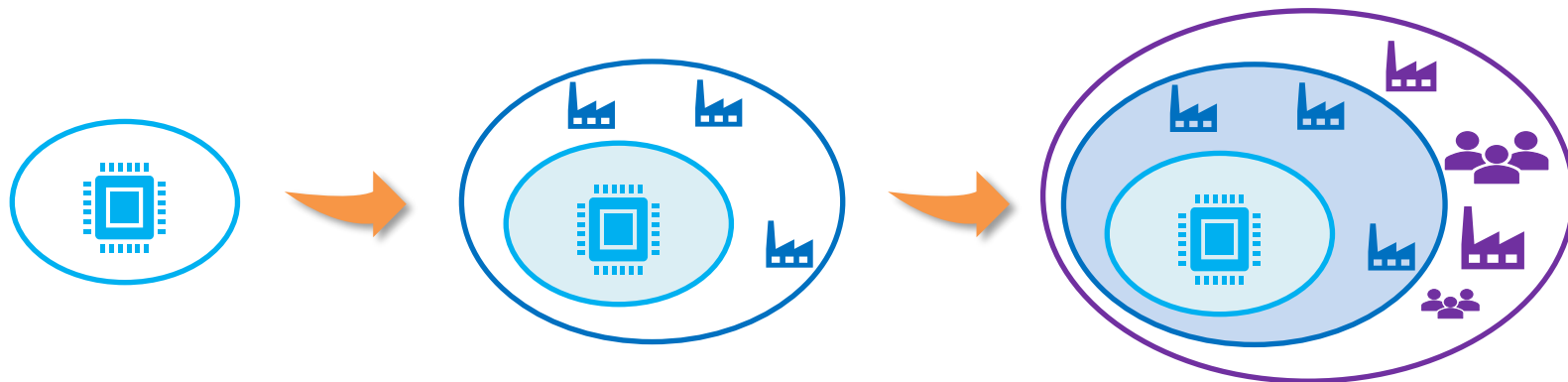
Avance SoA

Research &
Innovation
Action

Innovation
Action



Propuesta de éxito: Impacto



1. Results

De los socios
Al terminar proyecto

2. Outcomes

Proveedores, Clientes, ...
Medio plazo

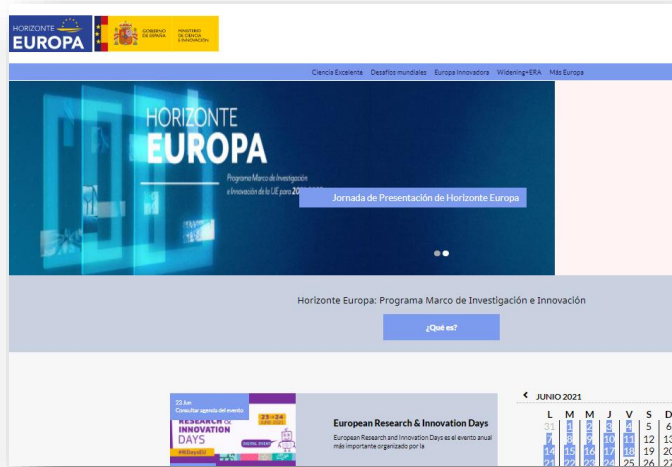
3. Impact

Sociedad
Largo plazo

Webs/links

HorizonteEuropa.es

<https://www.horizonteeuropa.es/>



Eventos CDTI

<https://eventos.cdti.es/>



Infodays/Brokerage event - Cluster 4 digital

Infodays (13/14 Dic 2022)



<https://www.horizonteeuropa.es/anuncio-de-fechas-para-los-info-days-de-la-comision-europea-del-cluster-4-digital-industria-y>

Brokerage event (15/16 Dic 2022)



<https://digital2022.b2match.io/>

Participation: Support



National Contact Points - DIGITAL



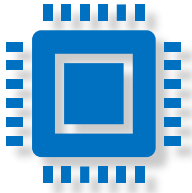
enrique.pelayo@cdti

fernando.rico@cdti



fernando.martin@cdti.es

Conclusions



Technology
Development



Partnerships



NCPs

+info sobre programas y ayudas CDTI
para
proyectos de I+D empresarial e innovación



@CDTI_innovacion