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# **LE PROGRAMME EUROPÉEN POUR LA RECHERCHE ET L'INNOVATION**

## **GUIDE DES APPELS À PROJET 2026-2027**

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# AVANT-PROPOS

Horizon Europe est le programme-cadre de l'Union européenne pour la recherche et l'innovation. Il couvre la période 2021-2027 et est doté d'un **budget de 95,5 milliards d'euros**.

Le présent guide a été réalisé par les [membres du Point de Contact National \(PCN\)](#) français Horizon Europe en charge du **Cluster 4** sur la thématique **Numérique**.

En **France**, le dispositif des PCN des clusters 4 et 5 est placé sous l'autorité de **Bpifrance**. Il est piloté par la Direction des Filières Industrielles et la Direction Europe. Les missions principales des PCN sont :

- **Inform**er, sensibiliser les communautés françaises de recherche et d'innovation sur les opportunités de financement d'Horizon Europe.
- **Aider**, conseiller et former les porteurs de projets aux modalités de fonctionnement du programme.

Ce guide s'adresse à tous les acteurs français de la recherche et du développement du secteur public et privé ainsi qu'aux autorités publiques, aux acteurs économiques, sociaux et culturels potentiellement ciblés par le Cluster 4 Numérique. Il offre un premier niveau d'accès au **programme de travail 2025 du Cluster 4 Numérique**, en proposant des éléments structurels qui permettent de comprendre les fondements et les priorités de ce Cluster, ainsi qu'une synthèse des éléments clés de chaque appel.

Les porteurs de projet intéressés doivent se référer au [programme de travail 2026-2027 du Cluster 4](#) et au [programme de travail de l'activité horizontale IA](#).

## L'équipe Point de Contact National Numérique (PCN)



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DIRECTION  
DES FILIÈRES  
INDUSTRIELLES



Une équipe d'ingénieurs, docteurs ès sciences, universitaires de 3<sup>e</sup> cycle, grandes écoles, entrepreneurs...avec de l'expérience en entreprise

## 4 DOMAINES thématiques



**+60**

Collaborateurs

UNE EXPERTISE  
MULTIDISCIPLINAIRE

UNE CONNAISSANCE  
SECTORIELLE



PCN CLUSTERS 4 et 5



Numérique, Espace, Industrie et Mobilité

# 2

## REPRÉSENTATION DE LA FRANCE AU COMITÉ DE PROGRAMME

# Dispositif français d'accompagnement à Horizon Europe

## focus sur RCP/Experts

### La Comitologie :

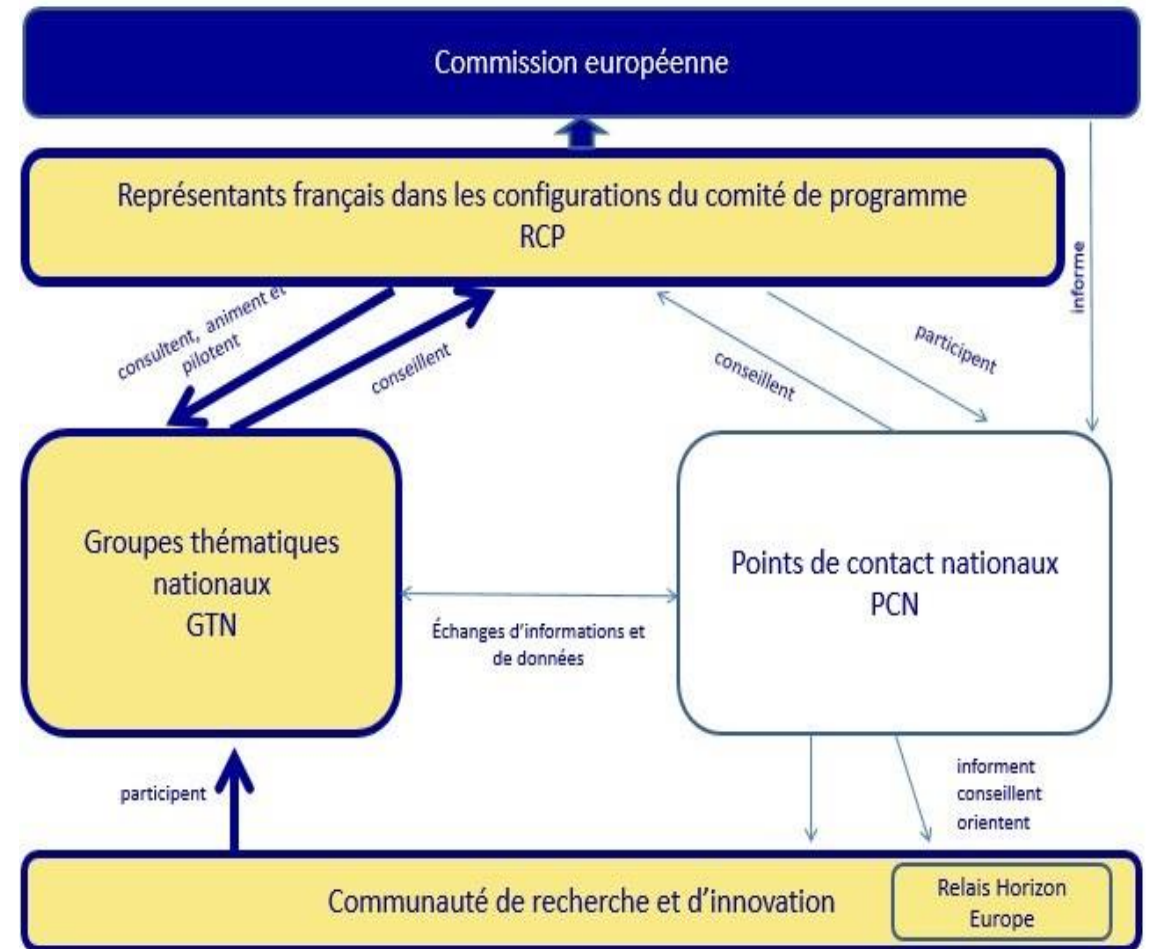
« La législation européenne autorise parfois la Commission à adopter des actes d'exécution : programmes de travail, qui définissent les conditions permettant de garantir l'application uniforme d'un acte législatif donné issu du règlement HE.

La comitologie renvoie à une série de procédures, notamment des réunions **de comités représentatifs** → **comité de programme**) qui permettent aux pays de l'UE d'avoir un droit de regard sur les actes d'exécution. » + d'infos

### La délégation française :

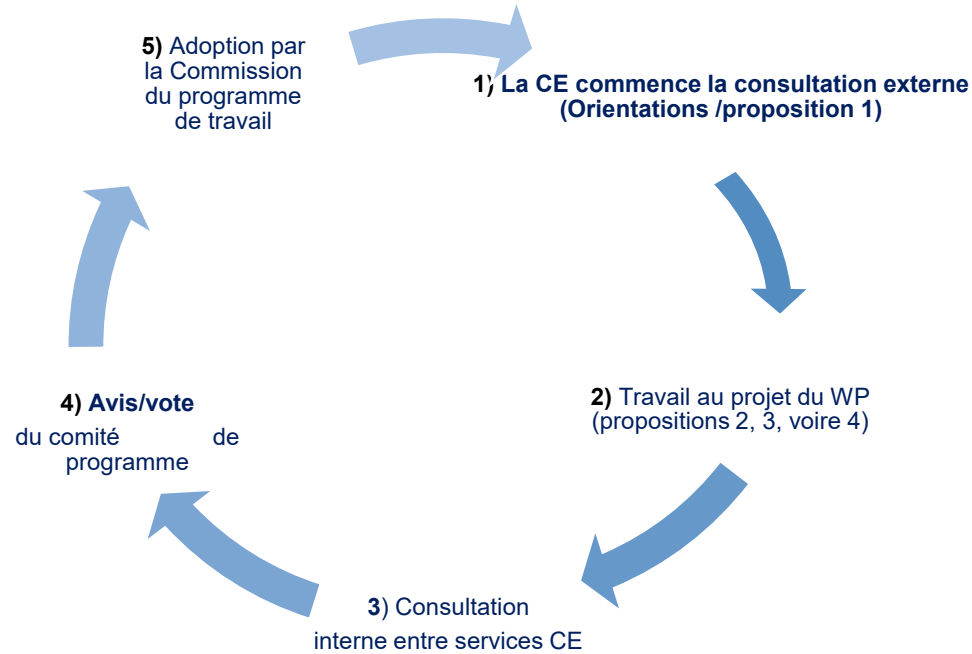
Environ **80 RCP et experts** issus des ministères et opérateurs de l'état sont impliqués dans les différentes **configurations du comité de programme** Horizon Europe.

Ce dispositif est piloté par le MESRE



# Rôle d'une délégation : mission « influence »

## Processus d'élaboration d'un programme de travail



*Durée d'une négociation d'un programme de travail : environ 10 mois.*

*A noter : avant la première proposition, des discussions peuvent avoir lieu sur les grandes priorités/axes à définir*

*Tant que le programme de travail n'est pas publié, il reste confidentiel !*

# Le travail en binôme, RCP/PCN numérique français

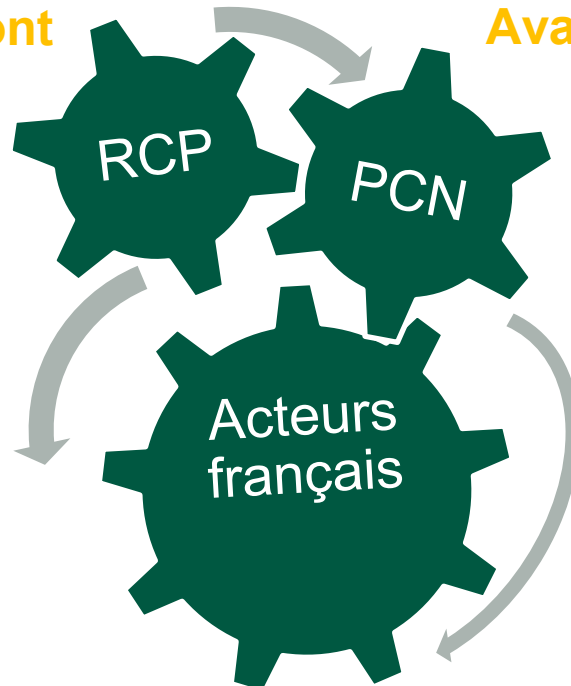
**Collaboration étroite entre la Représentante au Comité de Programmation (RCP) et l'équipe Point de Contact National (PCN) du cluster 4 – Numérique Horizon Europe**



Isabelle De Sutter  
MESRE

La RCP porte les priorités françaises lors de l'élaboration des programmes de travail avec la Commission (Influence). Elle coordonne et anime le groupe thématique national (GTN) numérique.

Amont



Aval

Le PCN accompagne l'écosystème national des acteurs de la R&I. Il organise des événements d'information et soutient les candidats français à soumettre des propositions de projet sur les programmes de travail Horizon Europe.

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# 3

## PRÉSENTATION GÉNÉRALE

# HORIZON EUROPE ET LE CLUSTER 4

## Le Programme-Cadre de l'Union européenne pour la Recherche et l'innovation

2021-2027

- **95,5 Mds€**
  - Renforcer les **bases scientifiques et technologiques** de l'Union ;
  - Stimuler sa capacité d'**innovation**, sa **compétitivité** et la création d'**emplois**
  - Concrétiser les **priorités politiques** stratégiques de l'Union ;
  - Contribuer à répondre aux **problématiques mondiales** dont les objectifs de **développement durable** des Nations Unies.



## Appels thématiques “top-down”

Approche « top-down » pour soutenir les **priorités politiques stratégiques** de l'Union Européenne et les **objectifs de développement durable** des Nations Unies.

- Appels à projets **centrés sur des problématiques sociétales**, des **défis globaux** :
  - Répondre aux **impacts attendus**
  - Fournir des **options** et **solutions (non) technologiques, recommandations....**
- Projets **collaboratifs** transdisciplinaires, transsectoriels et transnationaux
- **3-4 ans** en moyenne
- Minimum **2-3 M€** et **4-6 M€** en moyenne, voire au-delà
- **3 types de projets** : RIA, IA, CSA



### Pilier 2

Problématiques mondiales  
et compétitivité industrielle  
européenne

Pôles

- Santé
- Culture, créativité et société inclusive
- Sécurité civile pour la société
- Numérique, industrie et espace
- Climat, énergie et mobilité
- Alimentation, bioéconomie, ressources naturelles, agriculture et environnement

Centre commun de recherche

Trois types de projets collaboratifs (instruments de financement)

Un financement à 100 %. Sauf : IA = financement à 70 % pour les acteurs privés (Entreprises de toutes tailles)

### Research and Innovation Actions (RIA)

TRL 2 à 5

Activités visant à **établir de nouvelles connaissances** ou à **explorer la faisabilité** d'une technologie, d'un produit, d'un processus, d'un service ou d'une solution nouvelle ou améliorée : recherche fondamentale et appliquée, développement de technologie, essais d'un prototype à petite échelle...

### Innovation Actions (IA)

TRL 5 à 8

Activités visant à **produire des plans ou des conceptions pour des produits, des processus ou des services** nouveaux, modifiés ou améliorés : prototypage, essais, démonstration ou pilotes, validation du produit à grande échelle, première commercialisation...

### Coordination and Support Actions (CSA)

Activités contribuant aux objectifs d'Horizon Europe et consistant principalement en des **mesures d'accompagnement** : mise en réseau des acteurs, actions de communication et sensibilisation, dialogue politique, production d'études/rapports, planification stratégique...

# CONDITIONS D'ÉLIGIBILITÉ : COMPOSITION DU CONSORTIUM ET GENDER EQUILITY PLAN (GEP)



## Composition minimale du consortium (projets collaboratifs)

- Au moins une entité légale indépendante établie dans un Etat membre de l'UE, et
- Au moins deux autres entités légales indépendantes établies chacune dans un Etat membre ou pays associé différent



## Gender Equality Plan

- Les entités participantes qui sont des organisations publiques, des organisations de recherche ou des établissements d'éducation supérieurs établies dans un Etat membre ou dans un pays associé doivent avoir un gender equality plan, couvrant des exigences minimales
- Une auto-déclaration est requise au moment de la soumission de la proposition.
  - Le GEP sera inclus dans le processus de validation des entités (sur la base de l'auto-déclaration).

# CRITÈRES D'ÉVALUATION (RIA ET IA)

## EXCELLENCE

- Clarté et pertinence des **objectifs du projet**, et dans quelle mesure le travail proposé est ambitieux.
- Solidité de la **méthodologie** proposée, prise en compte appropriée de **la dimension de genre** dans le contenu de la recherche et de l'innovation, et la qualité des pratiques de **science ouverte**

## IMPACT

- Crédibilité des **trajectoires** pour atteindre **les résultats et impacts** spécifiés dans le programme de travail, ainsi que l'importance et la portée des contributions apportées par le projet.
- Pertinence et qualité des **mesures pour maximiser les résultats et impacts attendus**, comme indiqué dans le plan de diffusion et d'exploitation, y compris les activités de communication.

## QUALITE ET EFFICACITE DE LA MISE EN OEUVRE

- Qualité et efficacité du **plan de travail**, évaluation des risques, et adéquation de l'effort assigné aux tâches de travail, ainsi que des ressources globales.
- Capacité et rôle de chaque **participant**, et dans quelle mesure le **consortium** dans son ensemble réunit l'expertise nécessaire.

## Les partenariats du Cluster 4 Numérique

### Partenariats institutionnalisés

- High Performance Computing (EuroHPC)
- Smart Networks and Services (SNS)
- Chips Act JU

### Partenariats co-programmés

- AI Data Robotics
- Photonics
- Virtual Words

### Partenariats co-financés



Programme de travail 2026-27 du **cluster 4**  
**Industrie – Numérique – Espace** du  
programme-cadre Horizon Europe

- « **Destination** » = thématique qui introduit les grandes orientations politiques et les impacts attendus
- « **Heading** » = Sous-destination de la destination
- « **Call** » = Appel thématique  
« HORIZON-CL4-202z-xx-DATA-yy » = Liste des sujets « topics » ouverts en 2026 ou 2027 aux candidatures pour des projets collaboratifs

*Horizon Europe - Work Programme 2026-2027*  
*Digital, Industry and Space*

**Destination: Developing an agile and secure single market and infrastructure for data-services and trustworthy artificial intelligence services**

**Telco-Edge-Cloud continuum/ 3C Network (Connected Collaborative Computing) and Open Internet Stack**

HORIZON-CL4-2026-04-DIGITAL-EMERGING-01: Pilot of the “Science for AI” Pillar of RAISE (“Resource for AI science in Europe”) (RIA)	RIA	17.00	Around 17.00	1
HORIZON-CL4-2026-04-DIGITAL-EMERGING-08: Robotics for Manufacturing: Advancing Core Skills through Technical Challenges (RIA) (Partnership in AI, Data and Robotics)	RIA	18.00	Around 18.00	1
HORIZON-CL4-2026-04-DIGITAL-EMERGING-09: Advanced local digital twins using AI for Early warning and preparedness (IA)	IA	6.00	Around 6.00	1
HORIZON-CL4-2026-04-DIGITAL-EMERGING-11: Quantum Sensors for Inertial Navigation	CSA	2.00	0.50 to 2.00	2000000

## Focus : Lire un appel

1. Code et titre de l'appel ou « topic » : Programme, Cluster, appel prévu en 2025, de la destination 3 (data) du 12<sup>e</sup> call.
2. Conditions : budget approximatif par projet, budget total pour l'appel, type d'action, conditions d'éligibilité
3. Résultats attendus des projets financés
4. Activités : enjeux traités, périmètre du sujet, liens avec les stratégies politiques, références à d'autres projets, etc.

1

Call: **DIGITAL**

Specific conditions

2

<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 17.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 17.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply:  Subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 2 and achieve TRL 4 by the end of the project – see General Annex B.

3

Expected Outcome:

- Strengthen capabilities in the development of frontier AI models.
- Enhance computational efficiency of large AI models, leading to reduced computational costs.
- Strengthen safety of advanced AI systems through the development and implementation of safe-by-design principles.

4

Scope: To advance developments in frontier models taking into account their growing energy footprint, current computational limitations, and their safety.

4

# GUIDE DES APPELS 2026-27

	Destinations	Domaine	Date d'ouverture	Date de fermeture
<b>2026</b>	Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data	Space	10-mars-2026	3-sept.-2026
	Leadership in materials and production for Europe	Industry	6-janv.-2026	21-avr.-2026
	Leadership in materials and production for Europe	Industry "two-stage"	16-déc.-2025	1st stage : 17-mars-2025 2nd stage : 13-oct.-2026
	<b>Achieving open strategic autonomy in digital and emerging enabling technologies</b>	Industry "two-stage"	16-déc.-2025	1st stage : 17-mars-2025 2nd stage : 13-oct.-2026
		<b>Digital</b>	<b>15-janv.-2026</b>	<b>15-avr.-2026</b>
	<b>Developing an agile and secure single market and infrastructure for data-services and trustworthy artificial intelligence services</b>	<b>Digital</b>	<b>15-janv.-2026</b>	<b>15-avr.-2026</b>
	<b>Digital and industrial technologies driving human-centric innovation</b>	<b>Digital</b>	<b>15-janv.-2026</b>	<b>15-avr.-2026</b>

	Destinations	Domaine	Date d'ouverture	Date de fermeture
<b>2027</b>	Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructure, Services, Applications and Data	Space	9-mars-2027	2-sept.-2027
	Leadership in materials and production for Europe	Industry	22-sept.-2026	2-fevr.-2027
	Leadership in materials and production for Europe	Industry "two-stage"	22-sept.-2026	1st stage : 2-fevr.-2027 2nd stage : 2-sept.-2027
	<b>Achieving open strategic autonomy in digital and emerging enabling technologies</b>	Industry "two-stage"	22-sept.-2026	1st stage : 2-fevr.-2027 2nd stage : 2-sept.-2027
	<b>Developing an agile and secure single market and infrastructure for data-services and trustworthy artificial intelligence services</b>	Digital	<b>17-nov.-2026</b>	<b>18-mars-2027</b>
	<b>Digital and industrial technologies driving human-centric innovation</b>	Digital	<b>17-nov.-2026</b>	<b>18-mars-2027</b>

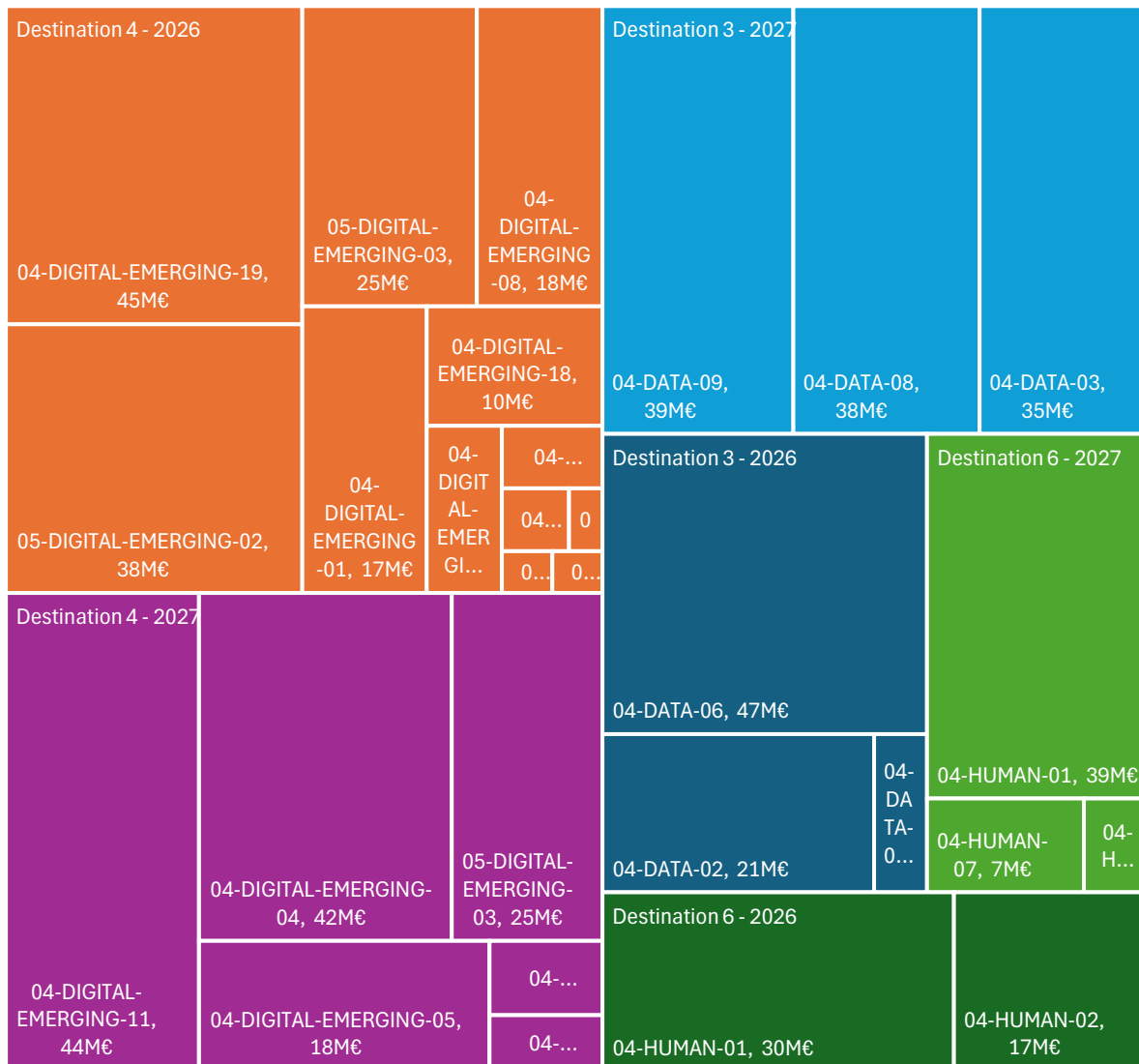
## Les destinations du Cluster 4 - Numérique : 3, 4 et 6

**Destination 3** : Développer un marché unique et des infrastructures agiles et sécurisés pour les services de données et une intelligence artificielle fiable.

**Destination 4** : Atteindre une autonomie stratégique ouverte dans les technologies numériques et les technologies émergentes habilitantes.

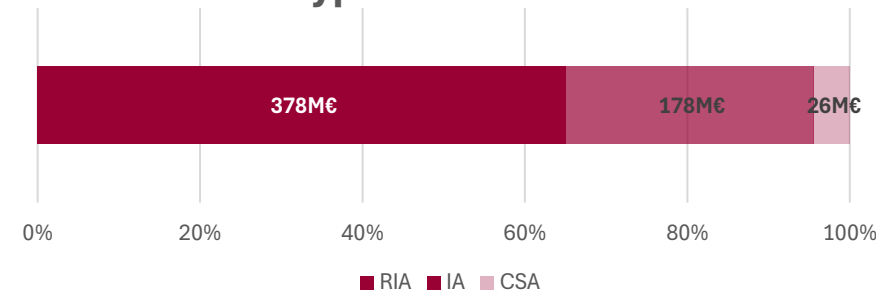
**Destination 6** : Les technologies numériques et industrielles au service de l'innovation centrée sur l'humain

# Thématique Numérique 2026-27 : budget de 582 M€

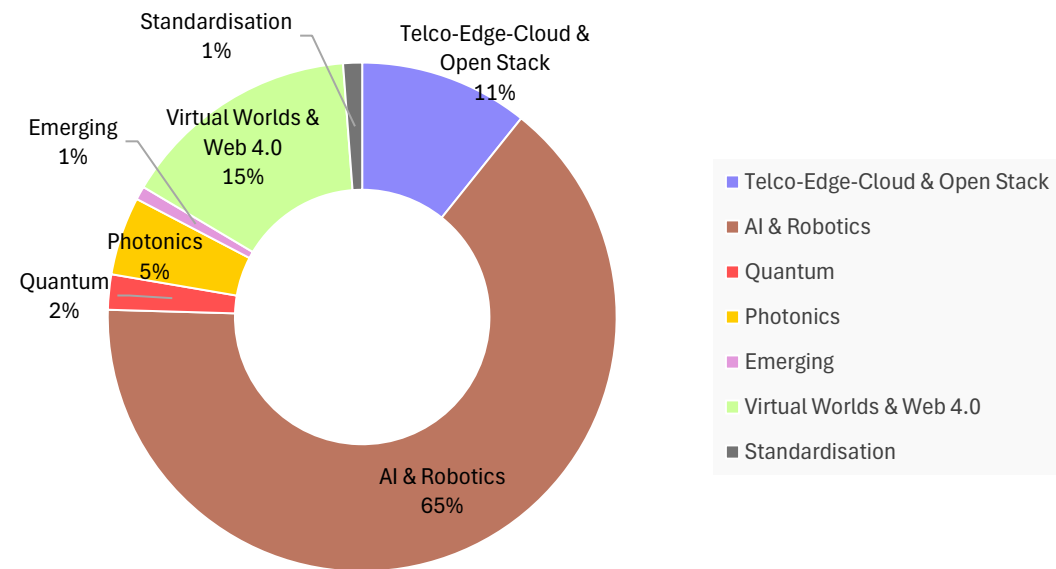


- Destination 3 - 2026
- Destination 4 - 2026
- Destination 6 - 2026
- Destination 3 - 2027
- Destination 4 - 2027
- Destination 6 - 2027

Mix type d'actions

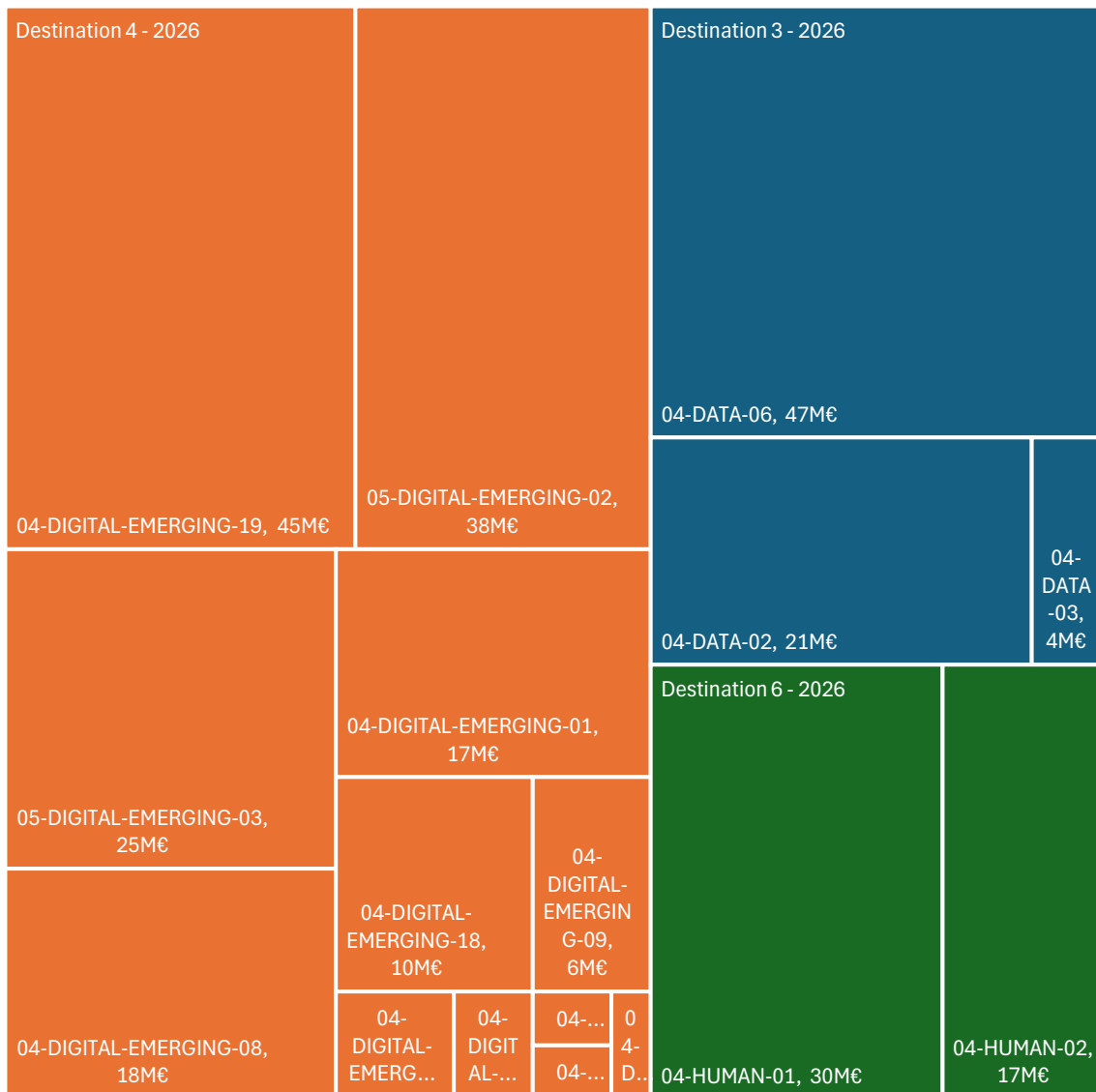


Ventilation par secteur

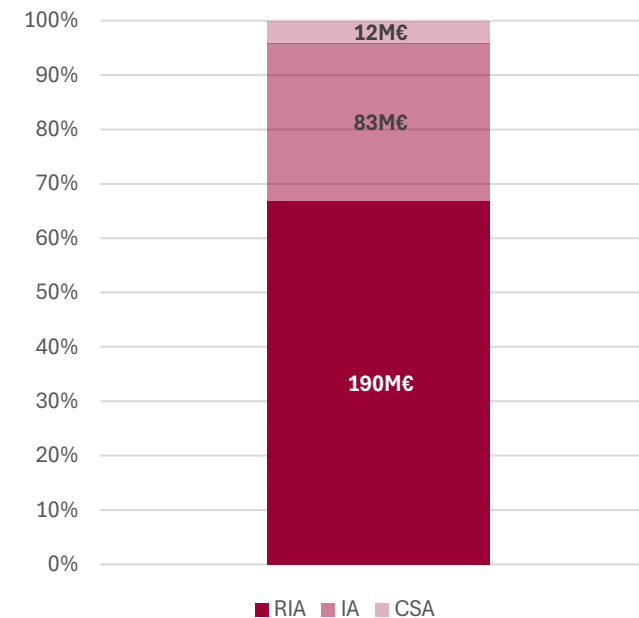


# Thématique Numérique zoom 2026 : budget de 285 M€

- Destination 3 - 2026
- Destination 4 - 2026
- Destination 6 - 2026



Mix type d'actions



# 4.1

## **GUIDE DES APPELS 2026-2027 NUMÉRIQUE - DESTINATION 6**

## Appels Numérique - Destination 6

Code Topic	Nom du Topic	Type d'action	Budget total (M€)	Budget par projet ( M€)	Nombre de projets attendus
HORIZON-CL4-2026-04-HUMAN-01	Developing and demonstrating core technologies for Virtual Worlds and Web4.0	IA	30	4 to 5	7
HORIZON-CL4-2026-04-HUMAN-02	Web 4.0 architectural framework and Open Internet Stack applications for virtual worlds	RIA	16,8	2,8 to 8,4	3
HORIZON-CL4-2027-04-HUMAN-01	Advanced and Innovative hardware components for Virtual Worlds	RIA	39	4,8 to 5,6	8
HORIZON-CL4-2027-04-HUMAN-02	Create A thriving and competitive Virtual Worlds and Web4.0 ecosystem	CSA	3	3	1
HORIZON-CL4-2027-04-HUMAN-07	Facilitate the engagement of European stakeholders in international digital standardisation	CSA	7	7	1

**HORIZON-CL4-2026-04-HUMAN-01 : Developing and demonstrating core technologies for Virtual Worlds and Web4.0**

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
-	15/04/2026	30	4 - 5	7	IA	No	4 to 6	UE 27 + IC,NO,CA,IS	Yes

Expected Outcomes	<ul style="list-style-type: none"> <li>eXtended Reality (XR), immersive and interactive technologies that bring full integration of Virtual Worlds and Web 4.0 technologies to the next level</li> <li>The objective is to pave the way for the next generation of virtual worlds, enhancing immersive visualisation and interaction experience, immersing users at the centre of the Virtual Worlds applications, enabling seamless interaction and data exchange :               <ul style="list-style-type: none"> <li>Asset and scene creation technology evolving in parallel to enable the generation of a human-centric, highly detailed and realistic environments to interact with,</li> <li>Use of Generative AI for more personalised and natural experiences</li> <li>Visualisation and interaction through innovative immersive technologies to enhance the user experience through a seamless, inclusive and immersive involvement</li> <li>Full integration and interoperability of XR and immersive domains and applications (including e.g. Digital Twins)</li> </ul> </li> <li>Proposals will include demonstrators of the developed technologies in real-world scenarios</li> <li>Proposals should involve the effective contribution of Social Sciences and Humanities (SSH) disciplines and SSH experts</li> </ul>
Do not want	<ul style="list-style-type: none"> <li>State-of-the-art applications</li> <li>Non suitable, unethical or unsafe solutions</li> <li>Research non-grounded into real world scenarios</li> <li>Non-transdisciplinary research</li> <li>Research that does not involve end-users</li> </ul>
Topic evolution	<ul style="list-style-type: none"> <li>This topic is in line with the previous XR calls since 2021 under Pillar 2, Cluster 4, DESTINATION 6: A HUMAN-CENTRED AND ETHICAL DEVELOPMENT OF DIGITAL AND INDUSTRIAL TECHNOLOGIES :</li> <li>2021 - 5 topics in XR (on innovation for media, haptics, modelling, collaborative telepresence and Ethics, Interoperability and Impact) / 2022 - XR Learning - Engage and Interact (IA) / 2022 - eXtended Reality Technologies (RIA) / 2023 - Next Generation eXtended Reality (RIA) / 2023 - eXtended Reality for Industry 5.0 (IA) / 2025 - GenAI4EU (IA) / 2025 - Core technologies for virtual worlds (RIA)</li> </ul>
Initiatives that proposers should be aware of	<ul style="list-style-type: none"> <li>AR-VR Industrial Coalition</li> <li>Virtual Worlds partnership</li> <li>HORIZON-CL4-2027-04-HUMAN-02 : Create A thriving and competitive Virtual Worlds and Web4.0 ecosystem</li> </ul>
Existing projects	<ul style="list-style-type: none"> <li>All the information on current projects is available at: <a href="https://europa.eu/!7kJMmJ">https://europa.eu/!7kJMmJ</a></li> </ul>
Stakeholders	<ul style="list-style-type: none"> <li>Research institutions and universities, SMEs and start-ups, Targeted industries, End-users, XR Community in general</li> <li>Special attention will be given to proposals including interdisciplinary research</li> </ul>
Additional background documents	<ul style="list-style-type: none"> <li>Strategic Research and Innovation Agenda (SRIA) of the Virtual Worlds Partnership</li> <li><a href="https://www.virtualworldsassociation.eu/actions/strategic-research-innovation-agenda-virtual-worlds-eu">https://www.virtualworldsassociation.eu/actions/strategic-research-innovation-agenda-virtual-worlds-eu</a></li> <li>Horizon Europe Cluster4 INFO DAYS - 29-30/01/2026</li> </ul>

**HORIZON-CL4-2026-04-HUMAN-02: Web 4.0 architectural framework and Open Internet Stack applications for virtual worlds (RIA)**

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	15/04/2026	16,8M€	2,8-8,4M€	3	RIA	Yes		EU 27 + Participating countries	Yes

Expected Outcomes	<ul style="list-style-type: none"> <li>Stimulate the emergence of Web 4.0 and virtual worlds solutions</li> <li>Architectural Framework:               <ul style="list-style-type: none"> <li>An emerging Web 4.0 architectural framework made of cross-platforms, interoperable, trustable, safe and secure building blocks that rely on Open Source software</li> <li>A structured and agile eco-system of talented contributors driving the creation and evolution of commons based on Open Source software, open standards and open hardware and designs</li> </ul> </li> <li>Applications:               <ul style="list-style-type: none"> <li>Open source and made in Europe, supporting trust and sovereignty, and delivering credible alternative choices for citizens, governments and companies including start-ups and SMEs.</li> <li>Interoperable, standards-based, decentralised solutions exploiting extended reality technologies.</li> <li>Compliant-by-design with EU rules and regulations. Paced for easy deployment by the rich European eco-systems of providers, integrators and verticals.</li> </ul> </li> </ul>
Do not want	<ul style="list-style-type: none"> <li>Proprietary, experimental, outside the 2 areas mentioned</li> </ul>
Scope	<p>Demonstrate immersive multi-modal user interaction and enhance trust, privacy, portability, and advanced identity management, facilitating deployment of the EU Wallet while optimizing the balance between decentralization, security, and energy efficiency with verifiable metrics.</p> <p>Proposals will cover the one or more of the following technologies:</p> <ul style="list-style-type: none"> <li>Alternative decentralised applications and services such as synchronous and asynchronous messaging, videoconferencing, collaboration and groupware or social media that can be exploited through Virtual Worlds technologies, including immersion and interaction.</li> <li>App-stores (incl. web-based) adapted for Virtual Worlds</li> <li>Shared, robust and trustworthy cross-technology Virtual Worlds for user and attribute management</li> </ul> <p>Proposals will have to demonstrate (1) technical maturity in terms of scalability, resiliency, alignment with standards (2) critical mass of communities actively supporting the development (3) evidence of interest from users and deployers of the solutions.</p>
Links to other topics	Applicants should create the conditions for successful collaboration and synergies with other European initiatives such as the Virtual Worlds/Web 4.0, 3C and Open Internet Stack initiatives as well as with like-minded funding efforts at national, European levels and beyond Europe such as Digital Commons initiatives.
Upcoming events	<p>EC information on Web 4.0 and Virtual Worlds: <a href="https://digitalstrategy.ec.europa.eu/en/policies/virtual-worlds">https://digitalstrategy.ec.europa.eu/en/policies/virtual-worlds</a></p> <p>Horizon Europe Cluster 4 Info Days: 29 January 2026</p>

# 4.2

## **GUIDE DES APPELS 2026-2027 NUMÉRIQUE - DESTINATION 3**

## Appels Numérique - Destination 3

Code Topic	Nom du Topic	Type d'action	Budget total (M€)	Budget par projet ( M€)	Nombre de projets attendus
HORIZON-CL4-2026-04-DATA-02	Open Internet Stack Sovereign Solutions	RIA	20,5	7 to 10,25	2
HORIZON-CL4-2026-04-DATA-03	Open Internet Stack Support for Scale	CSA	4	4	1
HORIZON-CL4-2026-04-DATA-06	Efficient and compliant access to and use of data	IA	46,5	11,5 to 23,5	3
HORIZON-CL4-2027-04-DATA-08	Demand-side 3C pilot demonstrators on converged Telco Edge Cloud Infrastructure	IA	38	19	2
HORIZON-CL4-2027-04-DATA-03	New approaches for decentralized, federated and sustainable AI data processing	RIA	35	17,5	2
HORIZON-CL4-2027-04-DATA-09	Energy efficiency and sustainability of AI data processing in Data Centres	IA	39	10	3

**HORIZON-CL4-2026-04-DATA-02 : Open Internet Stack Sovereign Solutions**

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	FSTP	TRL	Pays/restrictions	Restriction Telecom
	15/04/2026	20,5	7 à 10,25	2	RIA	YES	3-7	EU 27, General Annex B	YES

Expected Outcomes	<p>The overall outcome will be a large selection of Open-Source solutions that will be organised under the Open Internet Stack framework built under WP 2025. This will address the needs of both supply and demand side of the rich and diverse eco-system of 3C European providers and verticals. This topic will stimulate the emergence at European and global scale of solutions that are:</p> <p>Open source and made in Europe, supporting trust, and sovereignty, and delivering credible alternative choices for citizens, governments and companies including start-ups and SMEs.</p> <ul style="list-style-type: none"> <li>• Open source and made in Europe, supporting trust, and sovereignty, and delivering credible alternative choices for citizens, governments and companies including start-ups and SMEs</li> <li>• Paced for easy deployment by the rich European eco-systems of providers, integrators and verticals</li> <li>• Interoperable, standard-based, decentralised solutions for enabling network effect.</li> </ul>
Scope	<p>Proposals should address one or several of the following technology areas</p> <ul style="list-style-type: none"> <li>• Network and Transport technologies including for example routing and virtual private networks, survivable mesh technologies</li> <li>• Sovereign operating systems and firmware (including smartphones)</li> <li>• Open Source software productivity and supply chain technologies such as federated forges, independent and cross-platform development framework.</li> </ul>
Link to other topics	<p>Applicants will detail any relevant previous projects on which the project will expand.</p> <p>Applicants will detail their plan to creating synergies with other topics such as those in the WP25 Open Internet Stack, 3C, Virtual Worlds/Web4.0.</p> <p>Proposals should also detail their strategy for maintenance, cataloguing, marketing, communication as well as the relationship with to the "Open Internet Stack Support for Scale" topic.</p>
Do not want	Proprietary, experimental, outside the 3 technology areas mentioned
Upcoming events	Horizon Europe Cluster 4 Info Days: 29-30 January 2026

**HORIZON-CL4-2026-04-DATA-06 : Efficient and compliant access to and use of data**

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	15/04/2026	46,5	11,5 à 23,5	3	IA	NO	6-8	EU 27, Iceland, Norway, associated countries and OECD countries	NO

Expected Outcomes	<p>Improved availability, accuracy, privacy and interoperability of data</p> <ul style="list-style-type: none"> <li>• AI-driven compliance technologies and regulatory tools that reduce administrative burdens, promote regulatory efficiency</li> <li>• Agile regulatory processes, cross-border compliance and interoperability, transparency and trust</li> <li>• Enhance competitiveness, digital sovereignty, better public services through better (real/synthetic) data for AI</li> </ul>
Scope	<p>Proposals should clearly indicate their main focus area between :</p> <ol style="list-style-type: none"> <li>1. Advanced AI-driven compliance technologies and solutions that automate data transactions and key regulatory processes, reduce administrative burdens, and facilitate seamless adherence to EU rules.</li> <li>2. Secure, scalable, and adaptive data management systems that automate key data processes; high-quality synthetic data</li> </ol> <p>What is not wanted :</p> <ul style="list-style-type: none"> <li>• repetition of actions that previous projects already covered</li> <li>• theoretic/research projects, or anything targeting lower than TRL level 8 at the end of the project</li> <li>• Lack of focus: addressing both topic areas and all expected outcomes "just in case" hoping to score better in evaluation</li> </ul>
Link to other topics	This topic implements the co-programmed European Partnership on Artificial Intelligence, Data and Robotics (ADRA, BDVA)
Upcoming events	Data Spaces Symposium 10-11 Feb 2026 Madrid Data Week 5-6 May 2026, Oslo

# 4.3

## **GUIDE DES APPELS 2026-2027 NUMÉRIQUE - DESTINATION 4**

## Appels Numérique - Destination 4

Code Topic	Nom du Topic	Type d'action	Budget total (M€)	Budget par projet ( M€)	Nombre de projets attendus
HORIZON-CL4-2026-04-DIGITAL-EMERGING-01	Pilot of the “Science for AI” Pillar of RAISE	RIA	17	17	1
HORIZON-CL4-2026-04-DIGITAL-EMERGING-08	Robotics for Manufacturing: Advancing Core Skills through Technical Challenges	RIA	18	18	1
HORIZON-CL4-2026-04-DIGITAL-EMERGING-09	Advanced local digital twins using AI for Early warning and preparedness	IA	6	6	1
HORIZON-CL4-2026-04-DIGITAL-EMERGING-11	Quantum Sensors for Inertial Navigation	CSA	2	0,5	3
HORIZON-CL4-2026-04-DIGITAL-EMERGING-12	Standards for Quantum Technologies	CSA	1	1	1
HORIZON-CL4-2026-04-DIGITAL-EMERGING-18	Large-Scale Photonic Quantum Computing Platform Technologies	RIA	10	10	1
HORIZON-CL4-2026-04-DIGITAL-EMERGING-14	Networking and Future Photonics Strategy	CSA	3	3	1
HORIZON-CL4-2026-04-DIGITAL-EMERGING-15	Strengthening the cooperation of semiconductor-intensive EU regions	CSA	1	1	1
HORIZON-CL4-2026-04-DIGITAL-EMERGING-17	Fostering 2-Dimensional Materials (2DM) based emerging and enabling technologies	CSA	1	1	1
HORIZON-CL4-2026-04-DIGITAL-EMERGING-19	Challenge-Driven GenAI4EU Booster in Apply AI prioritised sectors	RIA	45	15	3
HORIZON-CL4-2026-05-DIGITAL-EMERGING-02	Next-Generation AI Agents for Real-World Applications in the ApplyAI sectors	RIA	38	19	2
HORIZON-CL4-2026-05-DIGITAL-EMERGING-03	Next-Generation Agile and Intelligent Robotics Platforms for Industrial and Service Applications	RIA	25	12 to 13	2

## Appels Numérique - Destination 4 (suite)

Code Topic	Nom du Topic	Type d'action	Budget total (M€)	Budget par projet ( M€)	Nombre de projets attendus
HORIZON-CL4-2027-04-DIGITAL-EMERGING-04	Challenge-Driven AI Innovation Booster in Apply AI prioritised sectors	RIA	42	14	3
HORIZON-CL4-2027-04-DIGITAL-EMERGING-05	AI-Driven Robotics for Industry: Enabling System Integration and Adoption	IA	18	18	1
HORIZON-CL4-2027-04-DIGITAL-EMERGING-06	International cooperation in AI	RIA	3	1,5	2
HORIZON-CL4-2027-04-DIGITAL-EMERGING-10	Horizon scanning and foresight in future enabling digital technologies	CSA	4	4	1
HORIZON-CL4-2027-04-DIGITAL-EMERGING-11	EU Frontier AI Initiative: Developing frontier AI solutions that are safe and computationally efficient within Apply AI	RIA	44	44	1
HORIZON-CL4-2027-05-DIGITAL-EMERGING-03	Advanced integrated photonic devices for extended features and ultra-low power consumption	RIA	25	3 to 5	6

**HORIZON-CL4-2026-04-DIGITAL-EMERGING-01: Pilot of the "Science for AI" Pillar of RAISE**

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	15/04/2026	17	17	1	RIA	NO	2-4	EU 27 General annex B/ Subject to restrictions for the protection of European communication networks.	YES



*a virtual European institute that pools essential AI resources*  
**Science for AI & AI for science**

Bringing together the best research teams in Europe:

- Fostering AI talent.
- Supporting cutting-edge research.
- Collaborating with Startups.

In total over 300 labs and more than 1000 researchers are involved, with over 1000 publications.

Expected Outcomes	<ul style="list-style-type: none"> <li>• Set up a network of excellent AI Labs in the EU and Associated Countries, raising visibility and strengthening collaboration in European AI research</li> <li>• Establish a model of cooperation among these labs and support the development of a strategic research agenda for fundamental research in AI.</li> <li>• Ensure that the network operates as a virtual institute across Europe, pooling resources and expertise.</li> <li>• Develop synergies with the AI in science efforts in RAISE.</li> <li>• Stimulate and support world-class research in AI, both fundamental and applied research.</li> </ul>
Activities	<ol style="list-style-type: none"> <li>1. An ambitious strategic research agenda towards the next frontier in AI (in 5 years), including explicit targets and milestones;</li> <li>2. Coordination of the participating institutes and their research in AI. The defined programmes will guide collaborative efforts and ensure a cohesive approach to advancing fundamental AI. Collaboration will, among other, be reinforced by jointly supervised PhDs and Postdocs.</li> <li>3. The implementation of a world class AI research program, supporting PhDs and Postdocs as well as jointly agreed collaborative research projects, functioning as a distributed "European AI Institute," reflecting the RAISE initiative's long-term vision and enhancing collaboration.</li> </ol>
Other considerations	<ul style="list-style-type: none"> <li>• To ensure openness, during the first year, the project will establish a call for expressions of interest to identify additional leading European AI research labs and individual experts that may collaborate with the project.</li> <li>• This initiative will also work in close collaboration with other initiatives in the European AI landscape, such as existing Networks of Excellence, AI societies and associations.</li> <li>• It should also collaborate with the fundamental research activities in AI taking place in the horizontal call HORIZON RAISE.</li> <li>• Proposals are expected to allocate tasks for cohesion activities with ADRA and the CSA HORIZON-CL4-2025-03- HUMAN-18: GenAI4EU central Hub.</li> </ul>
Award criteria	<ul style="list-style-type: none"> <li>• Size: each participant should have at least ten distinct AI research groups.</li> <li>• Infrastructure: each participant should possess dedicated premises and infrastructure necessary for high-quality AI research</li> <li>• Legal Structure: each participant should have the requisite legal framework.</li> <li>• Scientific Excellence: the scientific excellence of each participant will be assessed based on the scientific credentials of its senior AI researchers</li> </ul>

**HORIZON-CL4-2026-04-DIGITAL-EMERGING-02 : Next-Generation AI Agents for Real-World Applications in the ApplyAI sectors**

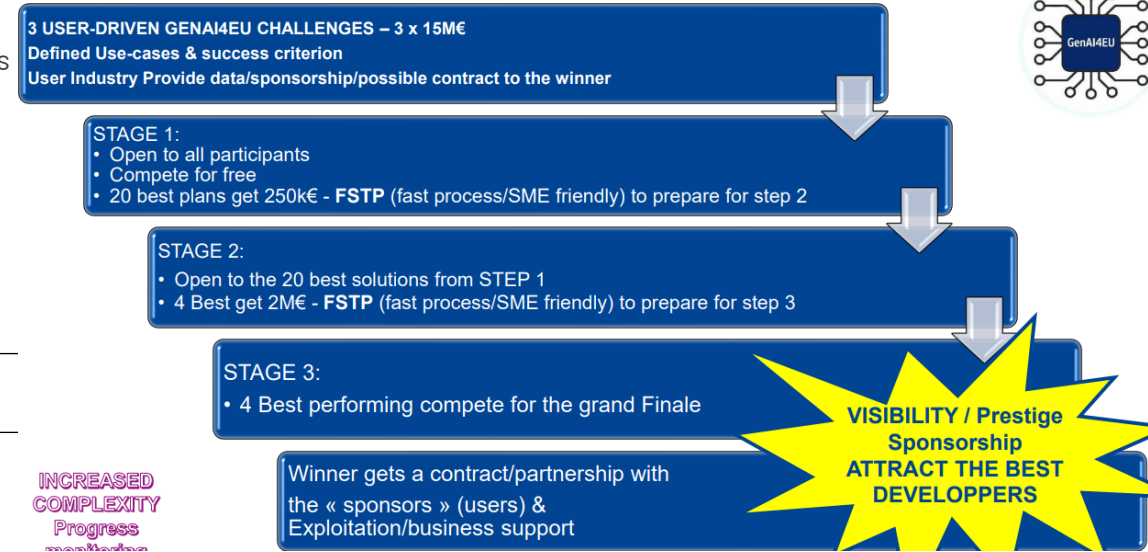
Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	15/04/2026	38	19	2	RIA	NO	2-5	EU 27, Annex B	YES

Expected Outcomes	<ul style="list-style-type: none"> <li>Improvement in the autonomy, robustness and reliability of AI agents through advanced planning, memory management, and reasoning capabilities.</li> <li>Innovative multi-agent frameworks and protocols demonstrating effective collaboration among multiple AI agents.</li> </ul>
Scope	<ol style="list-style-type: none"> <li>Enhancing AI agent autonomy through advanced self-planning and self-optimization capabilities.</li> <li>Memory-augmented AI agents to facilitate robust long-term reasoning and lifelong learning.</li> <li>Enhancing agent performance in tasks requiring accuracy and reliability through external tools.</li> <li>Developing advanced multi-agent frameworks specifically tailored for collaborative agents.</li> <li>Other innovative approaches.</li> </ol>
Other considerations	<ul style="list-style-type: none"> <li>Projects selected in this topic should link to the resources offered by the AI Factories, including the Data Labs.</li> <li>The results may be validated in the Testing and Experiment Facilities and further deployed via the European Digital Innovation Hubs (EDIHs) and will contribute to the Apply AI strategy.</li> </ul>
Key actors	<ul style="list-style-type: none"> <li>This topic strongly encourages the formation of interdisciplinary teams combining the necessary technical expertise.</li> <li>This topic implements the co-programmed European Partnership on AI, data and robotics.</li> </ul>
Link to other topics	Proposals are expected to allocate tasks for cohesion activities with ADRA and the CSA HORIZON-CL4-2025-03- HUMAN-18: GenAI4EU central Hub.
Upcoming events	A brokerage event organized by ADRA is planned for the 9th - 10th of February.

**HORIZON-CL4-2026-04-DIGITAL-EMERGING-19 : Challenge-Driven GenAI4EU Booster in Apply AI prioritised sectors**

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	15/04/2026	45	15	3	RIA	NO	3-6	EU 2, annex B	YES

Expected Outcomes	<ul style="list-style-type: none"> <li>• Significant technology progress and innovation through challenge-driven approach in the fields of aerospace, pharma/drug development or telecommunication networks.</li> <li>• Increased competitiveness and visibility of the Generative AI community in Europe, in demonstrating their capability to achieve challenging tasks within the aerospace, pharma/drug development or telecommunication sectors.</li> <li>• Increased adoption of Generative AI in aerospace, pharma/drug development or telecommunication networks through tangible progress and achievement demonstrated via the challenge-driven process.</li> </ul>
Scope	<p>Key Areas of Research &amp; Innovation</p> <ul style="list-style-type: none"> <li>• Development of powerful sector-driven GenAI use cases</li> <li>• GenAI for aerospace: e.g. optimize aircraft design, streamline manufacturing processes</li> <li>• GenAI for pharma: e.g. molecule design, drug discovery</li> <li>• GenAI for telecom: e.g. network management, network optimization, network slicing</li> </ul> <p>Not wanted :</p> <ul style="list-style-type: none"> <li>• Generic GenAI projects with no clear sectoral focus or real-world challenge</li> <li>• Lack of industry backing or no access to relevant data for model fine-tuning</li> <li>• Weak dissemination plans, or limited visibility and outreach</li> <li>• Proposals without a structured, competitive, and support-rich multi-stage approach</li> </ul>
Upcoming events	<ul style="list-style-type: none"> <li>• Horizon Europe Info Days (29-30 January 2026)</li> <li>• ADRA Brokerage Event (9-10 February 2026, exact date tbc)</li> </ul>



**HORIZON-CL4-2026-04-DIGITAL-EMERGING-09 : Advanced local digital twins using AI for Early warning and preparedness**

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	15/04/2026	6	6	1	IA	NO	5-7	EU 27, Annex B	YES

Expected Outcomes	<p>Open AI models that can help predict, respond to, and mitigate impacts before a disaster occurs, enabling proactive decision-making and effective disaster management effectively. Protection of citizens from natural hazards through proactive measures, preparedness strategies, and urban resilience, planning Project results are expected to contribute to one of the following outcomes:</p> <ul style="list-style-type: none"> <li>• Enhanced protection of citizens from the natural hazard of flooding by facilitating proactive decision-making and effective disaster management through open AI-driven models for urban resilience strategies and planning that can help predict, respond to, and mitigate impacts before a disaster occurs.</li> <li>• Improved modelling and prediction of urban and riverine flooding by expanding the capabilities of Local Digital Twins with sophisticated AI algorithms and relevant data detailing hydrological and hydraulic processes.</li> <li>• Strengthened integration of diverse and essential datasets including detailed terrain, land cover, urban features, soil data, and real-time meteorological information (rainfall and temperature, river geometry, and flow) sourced from national hydrometric networks, urban drainage infrastructure, and flood protection assets. This integration aims to enhance flood analysis, simulation, and preparedness particularly in response to climate change and flood scenarios like heavy rainfall impacting nearby river basins.</li> </ul> <p>The projects will leverage high-resolution climatic and meteorological models to assess extreme weather, while also drawing on relevant initiatives such as the Global Flood Awareness System and Destination Earth.</p>
Scope	<p>In line with the Apply AI Strategy, proposals should develop and implement projects that advance innovative AI algorithms and models from concept to large-scale testing and validation. These solutions will be applied to the creation of Local Digital Twins for flood preparedness, enabling the simulation of flood scenarios, identification of areas at risk, and estimation of potential damage.</p> <ul style="list-style-type: none"> <li>• Proposals should focus on the development of innovative AI algorithms that move beyond rigid functions, employing instead a dynamic set of descriptive building features derived from digital models (e.g., geometrical parameters, urban morphology, socio-economic indicators). These algorithms should be integrated with advanced, high-resolution hazard models – including hydrological and hydraulic models – tailored to the specific characteristics of the local area.</li> <li>• The Local Digital Twins will enable: <ul style="list-style-type: none"> <li>– Flood damage models capable of calculating building-scale impacts, forming the basis for damage hotspot maps.</li> <li>– Interactive user interfaces that allow components to be exchanged, modified, and reconfigured to estimate flood damage under various urban planning and risk management scenarios – for example, assessing the feasibility of proposed or existing constructions in flood-prone zones and recommending targeted mitigation strategies.</li> </ul> </li> </ul>
Link to other topics	<p>Proposals should take into account the expertise of the European Commission's Joint Research Centre (JRC)118, particularly its experience in developing global systems for disaster and risk management and analyse the potential uptake of the project outcomes by the Copernicus Emergency Management Service. In addition, proposals should align with for the 2025 Mission call on Local Digital Twin for urban planning, ensuring interoperability and complementarity with related European initiatives.</p>

## HORIZON-CL4-2026-04-DIGITAL-EMERGING-03: Next-Generation Agile and Intelligent Robotics Platforms for Industrial and Service Applications

Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
15/04/2026	25	12-13	2	RIA	No	2-5	EU 27 + IC, NO, CA, IS, KO, NZ, SW, UK	Yes

Expected Outcomes	<ul style="list-style-type: none"> <li>Novel robot design technique, materials and control techniques for flexible and meticulous manipulation of robots in unstructured environment, with high autonomy and in collaboration with humans</li> <li>New generation of flexible and safe robot systems validated in key application sectors defined in the Apply AI strategy , developed with a human-centric approach.</li> </ul>
Scope	Dynamic real-world environments require a new generation of agile, cost-effective, and intelligent, and modular robot platforms able to interact in safe and effective manner with humans across diverse industrial and service applications. These systems should be easily reconfigurable and adaptable, enabling deployment in real-time, high-performance operational contexts with minimal integration effort. To ensure relevance and uptake, solutions must address industrial demands for high speed, precision, and reliability, enabling deployment in real-time, high-performance operational contexts
Do not want	<ul style="list-style-type: none"> <li>Pure technology push – disconnected from Industry needs</li> <li>Lack of clear industrial or service relevance</li> <li>Lack of industrially relevant / real-world validation</li> <li>Designs that cannot be adapted, reconfigured, or scaled across different sectors</li> <li>Lack of strong industry/end-user engagement</li> <li>Lack of demonstration of improvements in speed, precision, or reliability</li> </ul>
Topic evolution	Contributes to the Apply AI Strategy by fostering deployment pipelines for AI-powered robotics and strengthening continuity from research to real-world uptake Complements soft robotics developments(coordination encouraged with HORIZON-CL4-2025-04-DIGITAL-EMERGING-05)
Stakeholders	Industrial end-users(manufacturing, logistics, service robotics) Robotics developers, SMEs, startups, and research organisations with expertise in robot design, advanced materials, actuation systems, sensing, mobility and autonomy Partners specialised in human-robot interaction (HRI), safety, and control architectures for flexible and reliable operation Organisations capable of integrating robotics into industrial and service workflows, supporting real deployment and adoption Teams working on secure, efficient communication protocols and interoperability with digital frameworks or multi-agent systems Stakeholders supporting scalability, commercialisation, safety-product approaches, and end-user uptake
Relevant upcoming events	Horizon Europe Info Days (29-30 January 2026) ADRA Brokerage Event (9-10 February 2026, exact date tbc)

## HORIZON-CL4-2026-04-DIGITAL-EMERGING-08: Robotics for Manufacturing: Advancing Core Skills through Technical Challenges

Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
15/04/2026	18	18	1	RIA	No	2-5	EU 27 + IC, NO, CA, IS, KO, NZ, SW, UK	Yes
Expected Outcomes	<ul style="list-style-type: none"> <li>Advanced robotics skills (e.g. high precision autonomous pick and place manipulation, autonomous navigation in unstructured environments) using robotics foundation models, tailored for manufacturing. Creation of a comprehensive framework for general purpose and flexible robotics skills development with industry-relevant challenges, evaluation metrics and success criteria.</li> <li>Facilitation of widespread deployment of robotics in manufacturing especially SMEs, through modular, adaptable, and reconfigurable solutions built on robotics foundation models, to meet evolving production needs</li> </ul>							
Do not want	<ul style="list-style-type: none"> <li>Generic robotics projects with no clear technical challenge or limited industrial relevance</li> <li>Proposals without user-industry partners (manufacturing / automotive) or without real data / test environments</li> <li>Weak visibility, poor dissemination or no ecosystem engagement</li> <li>Proposals without a structured multi-stage competition and clear evaluation methodology</li> <li>Robotics solutions not compatible with adaptability, modularity, or transferability across manufacturing settings</li> </ul>							
Topic evolution	<p><b>Stage 1 – Open call:</b> The consortium launches an open call for proposals. A challenge, open to all, will allow the selection of the 10 highest-ranked proposals for each of the three technical robotics skills, according to a pre-defined selection process and criteria. Each solution competing for the challenge can be submitted either by a single SME, research organisation or public body secondary or higher education establishment, developer of robotics solutions, or a small team of organizations.</p> <p><b>Stage 2 – Competition among Stage 1 winners:</b> The 10 teams or organisations selected from Stage 1 will receive a EUR 200,000 FSTP grant each in accordance with their successfully selected proposal (which addresses the tasks and challenges defined for this stage by the consortium). At the end of Stage 2, the 3 highest-ranked competing solutions will be selected for the next stage according to a pre-defined selection process and criteria.</p> <p><b>Stage 3 – Grand Finale (competition among Stage 2 winners):</b> The 3 best teams or organisations selected from Stage 2 will receive a EUR 1,000,000 FSTP grant each in accordance with their successfully selected proposals to address the tasks and challenges defined for this stage. In conjunction, they will prepare for the grand finale that will identify the best performing solution at the end of Stage 3 according to the evaluation methodology defined by the consortium.</p>							
Link to other topics	ADRA Partnership (AI, data & robotics) • AI Factories including Data Labs • Testing & Experimentation Facilities (TEFs) • European Digital Innovation Hubs (EDIHs) • Apply AI Strategy initiatives							
Stakeholders	<p>Leading user-industry companies from the manufacturing sector (including automotive + others encouraged) providing use cases, data, and validation environments</p> <p>Ideally SEVERAL companies (with similar needs – joining forces to scale) with genuine interest in the project</p> <p>Robotics developers, SMEs, research organisations, technical experts in robotics skills development</p> <p>Organisations with strong experience in challenge design, FSTP management, benchmarking &amp; evaluation</p> <p>Partners experienced in robotics simulation, testing, and deployment</p> <p>Dissemination, communication and ecosystem-building partners to support visibility and international outreach</p>							
Future trends/Emerging initiatives	<p>Horizon Europe Info Days (29-30 January 2026)</p> <p>ADRA Brokerage Event (9-10 February 2026, exact date tbc)</p>							

## HORIZON-CL4-2026-04-DIGITAL-EMERGING-18 : Large-Scale Photonic Quantum Computing Platform Technologies

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	15/04/2026	10	10	1	RIA	NO	4-7	EU 27+ ISL, NOR + pays associés : CAN, ISR, KOR, NZ, SW, UK.	YES

Expected Outcomes	<p>Développer des plateformes de calcul quantique photonique évolutives, modulaires et interopérables en apportant des solutions crédibles à au moins deux obstacles techniques majeurs :</p> <ul style="list-style-type: none"> <li>• L'absence d'architectures déterministes, à haut rendement et tolérantes aux pertes, permettant une mise à l'échelle tolérante aux pannes ;</li> <li>• L'absence d'une pile de contrôle standardisée et intégrée combinant matériel photonique, micrologiciel et logiciel système, avec des outils d'évaluation fiables pour une comparaison entre les plateformes.</li> </ul> <p>Les résultats du projet devront contribuer aux objectifs suivants :</p> <ul style="list-style-type: none"> <li>• D'ici 2028, démonstration d'un processeur NISQ photonique comportant au moins 100 qubits photoniques, intégrant des sources de photons uniques déterministes, des guides d'ondes à faibles pertes, des détecteurs sur puce et une pile logicielle (ordonnanceur, contrôleur, compilateur), validée par des tests de performance indépendants du matériel et des applications hybrides photoniques-HPC démontrant la transition classique-quantique.</li> <li>• D'ici 2030, mise au point d'un ordinateur quantique photonique complet, à haute connectivité, doté d'une modularité évolutive, d'interconnexions intégrées sur puce et par fibre optique, et de portes logiques haute fidélité (taux d'erreur <math>\leq 10^{-3}</math>), avec un objectif indicatif de 1 000 qubits photoniques, permettra de jeter les bases de démonstrations prototypes de l'utilité de l'informatique quantique pour des applications industrielles pertinentes.</li> <li>• Interopérabilité et normalisation au niveau système, avec des spécifications d'interface publiées pour l'ensemble des composants matériels et logiciels quantiques photoniques, incluant le packaging, les API, les interfaces de compilation et les protocoles cloud compatibles avec les longueurs d'onde des télécommunications.</li> <li>• Validation de la distribution de l'intrication entre les modules par le biais de protocoles normalisés et de démonstrations sur le terrain de processeurs quantiques photoniques interconnectés.</li> <li>• Accélération de l'industrialisation et de la commercialisation incluant une feuille de route pour les lignes de production pilotes, les protocoles d'assurance qualité et le développement d'une chaîne d'approvisionnement européenne souveraine pour les technologies quantiques photoniques.</li> <li>• Démonstration des résultats du projet à travers un cas d'usage « concret » fourni par un partenaire utilisateur final majeur du consortium, validant la pertinence et la performance de la plateforme dans des conditions opérationnelles réelles.</li> </ul>
Scope	<p>Les propositions devront être portées par une <b>start-up</b> justifiant d'une expertise reconnue en informatique quantique photonique. Cette start-up devra collaborer avec des partenaires académiques, industriels et des organismes de recherche et de technologie (RTO) pertinents afin de garantir à la fois une expertise technologique approfondie et une orientation marché. Le consortium devra également inclure <u>au moins un utilisateur final majeur</u> dont les besoins opérationnels orienteront la conception de la plateforme et dont l'infrastructure accueillera un démonstrateur.</p> <p>Logiciel, architecture système et cas d'utilisation au niveau applicatif. Les activités doivent inclure :</p> <ul style="list-style-type: none"> <li>• Développement de plateformes pour des processeurs quantiques photoniques ouverts et évolutifs, intégrant des puces photoniques à semi-conducteurs et/ou à base de verre, une électronique de contrôle intégrée, un firmware et des mécanismes robustes de correction et d'atténuation d'erreurs.</li> <li>• Intégration système pour la réalisation de nœuds quantiques modulaires avec interconnexions photoniques et la validation d'architectures évolutives sous des contraintes réalistes de bruit, de pertes et de contrôle.</li> <li>• Co-conception de la pile logicielle intégrant firmware bas niveau, compilateurs, algorithmes hybrides et API réseau afin de démontrer l'avantage quantique au niveau applicatif et l'interopérabilité HPC.</li> </ul>
Other considerations	<p>Les propositions devront s'appuyer sur les résultats antérieurs du Quantum Flagship et démontrer la capacité de contribuer activement à la gouvernance et à la coordination stratégique de l'écosystème de l'informatique quantique de l'UE, y compris les synergies avec STEP, Chips JU, les projets IPCEI et EuroHPC.</p>
Key actors	<p>Start-up, industriels (dont utilisateur final), organismes de recherche (ONR) et de technologie (RTO) pertinents</p>

**5**

# **GUIDE DES APPELS 2026-2027**

## **ACTIVITÉS HORIZONTALES - IA**

## Appels Horizontaux – Focus IA – budget ~90M€

Destination	Code Topic	Nom du Topic	Type d'action	Budget total (M€)	Budget par projet ( M€)	Nombre de projets attendus	Date d'ouverture	Date de fermeture
AI in Science	HORIZON-RAISE-2026-01-01	Thematic Networks of Excellence for AI in Science	RIA	15	15	1	06-janv-26	21-avr-26
AI in Science	HORIZON-RAISE-2026-01-02	Thematic Networks of Excellence for AI in Science – Agriculture and Environment	RIA	12,8	12,8	1	06-janv-26	21-avr-26
AI in Science	HORIZON-RAISE-2027-01-01	Automated Scientific Discovery	RIA	29	29	1	22-sept-26	02 fev 2027
AI in Science	HORIZON-RAISE-2027-01-02	Automated Scientific Discovery – Food	RIA	3	3	1	22-sept-26	02 fev 2027
RAISE Doctoral Networks for AI in Science	HORIZON-RAISE-2026-01-03	RAISE Doctoral Networks for AI in Science	TMA Doctoral Networks	30	-	-	28-mai-26	24-nov-26

## HORIZON-RAISE-2026-01-01 : Thematic Networks of Excellence for AI in Science

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	21/04/2026	7M€	7M€	1	RIA	No		EU 27 + Participating countries	No

Expected Outcomes	<ul style="list-style-type: none"> <li>• Scientific progress with the help of AI, addressing strategic scientific challenges in the thematic area of material science;</li> <li>• Pilot a network of excellent labs in the selected thematic area to pool talent and expertise as part of RAISE, operating as a virtual institute across Europe;</li> <li>• Establish a model of cooperation among these labs and support the development of a strategic research agenda for the application of AI in scientific research in the selected thematic domain</li> <li>• Reinforce the European AI in science community, attract top-notch talent and spread excellence in AI in science;</li> <li>• Develop synergies with the "Science for AI" Network of Excellence RAISE pilot call.</li> </ul>
Scope	Material science experts should be leading, not computer scientific AI specialists
Link to other topics	<ul style="list-style-type: none"> <li>• Foundation Models call (WP25 CL4)</li> <li>• RAISE Network of Excellence "Science for AI" (WP26 CL4)</li> <li>• RAISE Network of Excellence "Environmental Pollution" (WP26 Horizontal Actions)</li> </ul>

## HORIZON-RAISE-2026-01-02 : Thematic Networks of Excellence for AI in Science – Agriculture and Environment

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	21/04/2026	12,8	12,8	1	RIA	No		EU 27 + Participating countries	No

Expected Outcomes	<p>Project results are expected to contribute to the following expected outcomes:</p> <ul style="list-style-type: none"> <li>• scientific progress with the help of AI, addressing strategic scientific challenges in the thematic areas selected (agricultural sciences and environmental pollution sciences);</li> <li>• pilot network of excellent labs in the selected thematic areas to pool talent and expertise as part of a Resource for AI Science in Europe (RAISE), operating as a virtual institute across Europe;</li> <li>• establish a model of cooperation among these labs and support the development of a strategic research agenda for the application of AI in scientific research in the selected thematic domains;</li> <li>• reinforce the European AI in science community, attract top-notch talent and spread excellence in AI in science;</li> <li>• develop synergies with the “Science for AI” RAISE pilot call.</li> </ul>
Scope	<p>The aim of this topic is to establish a network of excellent labs across Europe, dedicated to collaborative research using AI in strategic and promising scientific areas or domains, piloting RAISE and aligning research efforts. The selected consortium will be composed of leading European research labs in the thematic area with strong experience in applying AI in the research process. At least half the members of the consortium should have a proven track record of developing innovative AI solutions for scientific research. Consortia are welcome to involve expertise in Social Sciences and Humanities in their proposal as they see fit to achieve the objectives. The network of excellence will be dedicated to the application of AI to scientific research in a agricultural sciences and environmental pollution sciences (Cluster 6). To achieve these objectives, the consortium will undertake a range of dedicated activities:</p> <ul style="list-style-type: none"> <li>• drawing on the consortium's knowledge and excellence, propose an ambitious strategic research agenda for the field, beyond the research agenda of the consortium in the context of the project, identifying key scientific grand challenges that can be addressed with AI in the thematic area of the network</li> <li>• carry out collaborative research to solve the prioritised scientific challenges, through explicit targets and milestones;</li> <li>• as part of RAISE as a virtual institute, closely work with central RAISE governance and the other RAISE networks of excellence as privileged partners for sharing data, research results, expertise and infrastructure;</li> <li>• develop talent and knowledge exchange schemes (e.g. jointly supervised fellowships, mobility schemes, summer schools, matchmaking events) and include partnering schemes with institutes outside the excellence network to spread excellence across Europe;</li> <li>• identify, expand, curate, integrate share and make available relevant datasets and AI models. Develop community-driven standards and benchmarks for AI models in the thematic scientific area or discipline;</li> <li>• develop collaborations with industry for uptake of scientific outcomes and AI-based research methodologies.</li> </ul>
Links to other topics	<p>Proposals are expected to develop synergies with running Horizon Europe projects in the same field, notably with the projects on AI foundation models in agricultural sciences and environmental pollution sciences funded under topic HORIZON-CL4-INDUSTRY-2025-01- DIGITAL-61: AI Foundation models in science (GenAI4EU)</p>

**HORIZON-RAISE-2026-01-03 : RAISE Doctoral Networks for AI in Science**

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	24/11/2026								

<p>Expected Outcomes</p>	<p>The project results are expected to contribute to the following outcomes: For supported doctoral candidates:</p> <ul style="list-style-type: none"> <li>• New research and transferable skills and competences in the application of AI in science, leading to improved employability and career prospects within and outside academia;</li> <li>• New knowledge allowing the conversion of ideas into products and services, where relevant;</li> <li>• Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.</li> </ul> <p>For participating organisations:</p> <ul style="list-style-type: none"> <li>• Improved quality, relevance and sustainability of doctoral training programmes and supervision arrangements;</li> <li>• Enhanced cooperation and transfer of knowledge between sectors and disciplines;</li> <li>• Increased integration of training and research activities between participating organisations;</li> <li>• Boosted R&amp;I capacity and uptake of AI in science;</li> <li>• Increased internationalisation and attractiveness;</li> <li>• Regular feedback of research results into teaching and education at participating organisations.</li> </ul>
<p>Scope</p>	<p>Successful RAISE Doctoral Networks and doctoral candidates will be associated with RAISE, the Resource for AI Science in Europe. They will become part of the RAISE research community and will interact with its other members.</p> <p>As such, the scope of this call is limited to AI (artificial intelligence) in science, as outlined below. Proposals should therefore clearly specify how they meet this “AI in science” criterion.</p> <p>Doctoral candidates are to either develop or significantly participate in the development of innovative AI systems, models, tools or methodologies for their scientific domain. These systems, models, tools or methodologies must substantially innovate the way in which scientific information is analysed and enable a scientific contribution that furthers the state of the art in the discipline of the doctoral research.</p> <p>The development of the AI tool, model or methodology is to be an integral and indispensable part of the research work and be clearly delineated in the research work package. The scientific advancements of the project are to be directly dependent on the capabilities and application of these AI algorithms to drive the scientific inquiry, prediction, or understanding.</p> <p>Proposals are to achieve research results in the domain-scientific discipline of the doctoral research through using innovative AI techniques, going beyond a unique focus on computerscientific AI development (e.g. to result in publications only in computer-scientific AI-related venues) or the use of existing AI systems, methodologies or general-purpose computational tools for data processing/statistical analysis in an instrumental way. All doctoral candidates should receive dedicated doctoral-level training on AI in science (understood as outlined above).</p>

**6**

# **GUIDE DES APPELS**

## **2026-2027**

### **PARTENARIATS ET PROGRAMMES CONNEXES**

## Les partenariats du Cluster 4 Numérique

### Partenariats institutionnalisés

- High Performance Computing (EuroHPC)
- Smart Networks and Services (SNS)
- Chips Act JU

Appels non présentés dans le Work Programme

### Partenariats co-programmés

- AI Data Robotics
- Photonics
- Virtual Words

Appels présentés dans le Work Programme

### Partenariats co-financés



# 6.1

## **GUIDE DES APPELS 2026-2027**

### **HIGH PERFORMANCE COMPUTING (EUROHPC)**

## Qu'est-ce que High Performance Computing (EuroHPC) ?

**EuroHPC Joint Undertaking (JU)** est un partenariat public-privé européen qui vise à développer et déployer une infrastructure de calcul haute performance (HPC) en Europe. Il regroupe la Commission européenne, les États membres et des partenaires privés pour renforcer la compétitivité de l'Europe dans le domaine du HPC.

## Objectifs principaux :

- Développer une infrastructure HPC de classe mondiale en Europe
- Soutenir la recherche et l'innovation dans le domaine du HPC
- Faciliter l'accès au HPC pour les chercheurs, les entreprises et les administrations publiques
- Renforcer la compétitivité de l'Europe dans le domaine du HPC

## Chiffres clés :

- Budget total 2021-2027 : 8 milliards d'euros
- Plus de 30 supercalculateurs déployés
- Collaboration avec plus de 20 pays européens

## Pourquoi c'est important pour vous ?

- Accès à une infrastructure HPC de pointe pour la recherche et l'innovation
- Opportunités de collaboration avec des leaders industriels et des centres de recherche
- Soutien à la compétitivité et à la croissance économique de l'Europe

# 6.2

## **GUIDE DES APPELS**

### **2026-2027**

#### **SMART NETWORKS AND SERVICES (SNS)**



**MINISTÈRE  
DE L'ÉCONOMIE,  
DES FINANCES  
ET DE LA SOUVERAINETÉ  
INDUSTRIELLE ET NUMÉRIQUE**

*Liberté  
Égalité  
Fraternité*



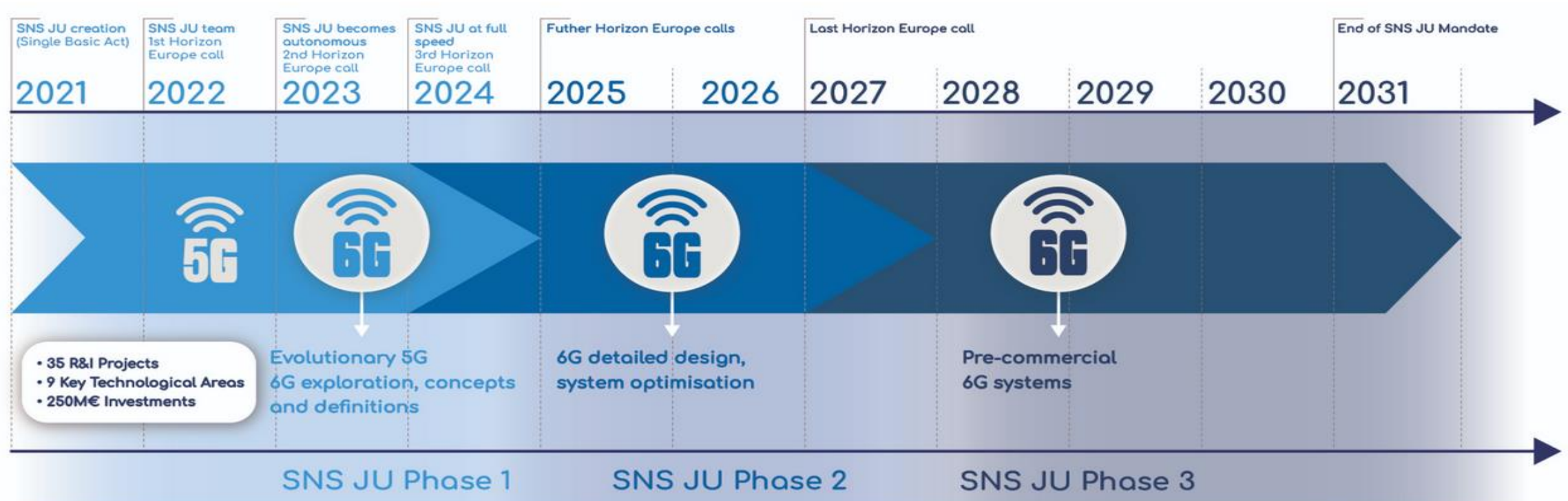
## **« JOINT UNDERTAKING SMART NETWORKS AND SERVICES »**

18/12/2025

La *Joint Undertaking Smart Networks and Services* (« JU SNS ») porte sur le développement de la 5G et des futures technologies de réseau.

Il s'agit d'une JU bipartite, entre la Commission Européenne et l'association d'industriels 6G-Industry Association (« 6G-IA »).

### Budget de la JU : 900 M€ pour la période 2021-2027



Sa mission principale est la promotion et le renforcement de **la souveraineté technologique de l'Europe dans la 5G *Advanced* et la 6G.**

Les objectifs portent sur :

- ◇ Le **renforcement des efforts européens** ;
- ◇ La **mobilisation des acteurs de l'écosystème** (industriels et académiques) ;
- ◇ L'assertion du **leadership européen** pour les futures technologies de réseaux ; et
- ◇ L'**alignement des efforts technologiques** et des **positions des Etats Membres** pour la recherche sur la 6G et le déploiement des réseaux 5G avancés.









Dans le cadre **d'appels à projets (« AAP ») annuels**, la JU SNS propose un soutien financier sous la forme de subventions, allant **de 40 à 100%**.



### **Technologies visées :**

- Plateformes expérimentales
  - Architectures systèmes
    - Microélectronique
- Composants & terminaux
  - Sécurité
  - Sustainability
  - IA de confiance
- Réseaux non terrestres

~630 MM € of public funding investment in SNS JU Calls

		Call 1 Started Jan '23	Call 2 Started Jan '24	Call 3 Started Jan '25	2025 Calls To be Started in 2026
 <b>Stream A</b> 5G Evolution systems	<b>Components, systems &amp; networks</b>	7 Complementarity projects validate <b>complete system</b> view			
	 <b>Stream B</b> Research for radical technology advancement towards 6G definition	System Architecture Wireless & Signal Infrastructure & Devices Security Microelectronics Sustainability International Collab	19 projects research <b>Novel technologies</b> expected to be adopted in commercial networks in a <b>mid /long-term horizon</b>	24 projects working on Innovative solutions towards real life networks over a <b>long-term horizon</b> . Also targets <b>International Cooperation</b> 	12 projects targeting a higher TRL range, compared to previous calls, aiming to produce <b>more mature results</b> and impact on standardization . Includes lighthouse project on <b>Sustainability</b> and targets <b>International Cooperation</b>  
 <b>Stream C</b> Experimental Infras/Platforms	Platforms Enablers/ Proof Concept	3 projects validate <b>6G technical enablers</b>	1 Europe-wide <b>experimental infrastructure(s)</b> to support SNS program	1 project on integration of <b>microelectronics</b> components	1 project on <b>Telco cloud</b> and service provision enablers
	  <b>Stream D</b> Large Scale Trials With Verticals	Applications & services Business ecosystems	4 projects on specific verticals with <b>high economic and societal importance</b>	2 projects focusing on i) <b>Automotive</b> ii) <b>Health, Smart Cities, Farming and Education</b>	2 projects on advanced <b>5G/6G technologies in/for verticals</b> , with special focus on sustainability
		Call 1 240 MM €	Call 2 132 MM €	Call 3 129 MM €	Call 4 & 5 128 MM €

### Bi-Annual Work program 2026-27

#### R&I program 2026



#### R&I program 2027

January-April 2026

Call Open

January-April 2027



Operations - Output optimisation - Ecosystem Building

INCO India

6G Devices

Experimental Infrastructures

Datasets for AI Model training

Main Areas of Focus

To be agreed in H2 2026

Le subventionnement est incitatif, du fait d'une prise en charge **des coûts éligibles de 90% pour les entreprises**, (70% pour le *Stream D*) et **100% pour les organismes à but non lucratif**.

### Entités éligibles :

- Chaque consortium doit être composé **d'au moins trois entités légales**, dont :
- Une entité **indépendante** domiciliée dans un Etat Membre ; et
- Au moins deux **entités indépendantes** domiciliées dans d'autres **Etats Membres** et/ou **Pays Associés** (une liste évolutive des Pays Associés est définie par [Horizon Europe](#)).

### Critères d'évaluation :

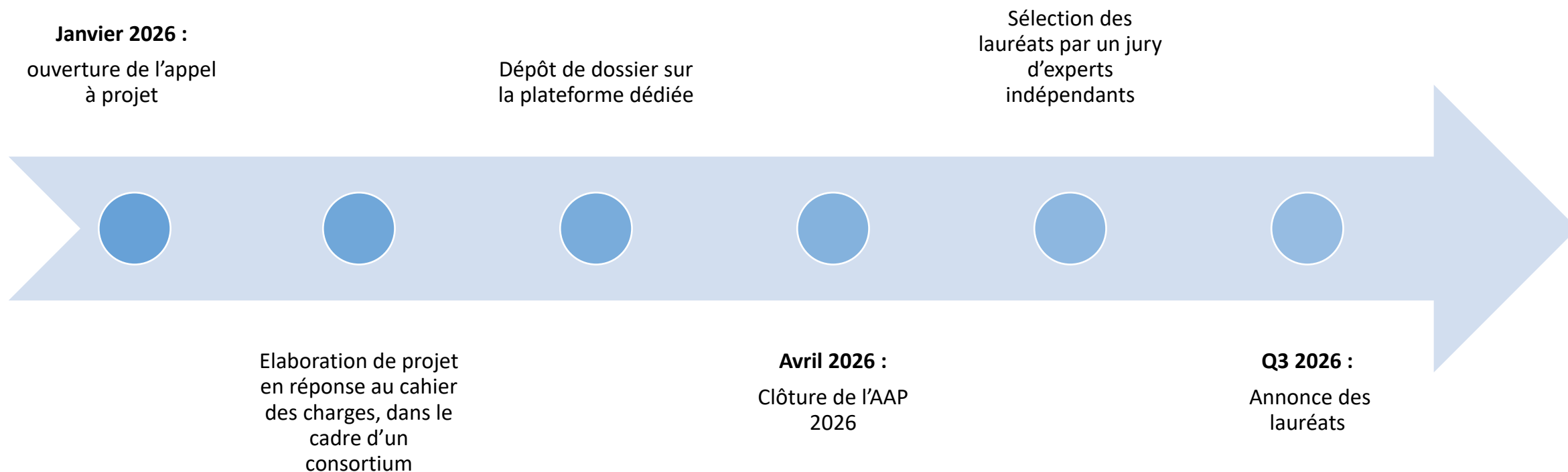


La procédure de sélection des lauréats est pilotée par un **jury d'experts indépendants** sélectionnés par la Commission Européenne.

Les critères pris en compte dans l'évaluation sont :

- ✓ La capacité de **renforcement de l'offre européenne** par le projet soutenu ;
- ✓ La **présence de PME** et de **membres de 6G-IA** au sein du consortium ;
- ✓ La **clarté** et la **pertinence** des objectifs poursuivis ;
- ✓ La **pertinence de la méthodologie** ;
- ✓ L'**interdisciplinarité** de l'approche ;
- ✓ La **capacité de réponse aux objectifs** du plan de travail du projet ;
- ✓ La **qualité et capacité des mesures présentées** dans le plan de travail à **maximiser les résultats du projet** (y compris les activités de communication) ;
- ✓ La **plus-value ajoutée** à la chaîne de valeur ;
- ✓ La **qualité de la feuille de route**, de la **gestion du risque**, de l'**adéquation des efforts** déployés et de l'**usage des ressources** ;
- ✓ La capacité de développement **d'expertises nouvelles**.

## Processus de candidature au programme JU SNS 2026



# Points de contacts

La JU SNS est suivie par :

✓ **La Direction Générale des Entreprises**



oumaima.el-bouhmadi@finances.gouv.fr

✓ **La Direction Générale de la Recherche et Innovation**



isabelle.de-sutter@recherche.gouv.fr

**6.3**

# **GUIDE DES APPELS**

## **2026-2027**

### **CHIPS JU**

## Qu'est-ce que le Chips JU ?

Le **Chips Joint Undertaking (Chips JU)** est un partenariat public-privé européen visant à renforcer la recherche, le développement et l'innovation dans le domaine des **semi-conducteurs et des systèmes électroniques** fabriqués en Europe.

### Objectifs principaux :

- **Accroître la capacité de production de semi-conducteurs** en Europe
- **Soutenir l'innovation et la compétitivité de l'industrie européenne** des semi-conducteurs
- **Réduire la dépendance de l'Europe** vis-à-vis des importations de semi-conducteurs
- **Favoriser la collaboration** entre les acteurs industriels, académiques et institutionnels

### Chiffres clés :

- Budget total pour 2023-2027 : **4,175 milliards d'euros**
- Plus de **100 partenaires** dans 25 pays


### Pourquoi c'est important pour vous ?

- Opportunités de financement pour des projets innovants dans le domaine des semi-conducteurs
- Accès à un réseau européen de partenaires industriels et académiques
- Soutien à la compétitivité et à la croissance de l'industrie européenne des semi-conducteurs

**Calls 2026** : Deux séries d'ateliers en ligne pour la préparation des thématiques en septembre 2025

Deux axes : Chips for European Initiative (plateformes design et lignes pilotes) et ECS R&I (RIA/IA)

## Chips Act JU - Open and Coming Calls

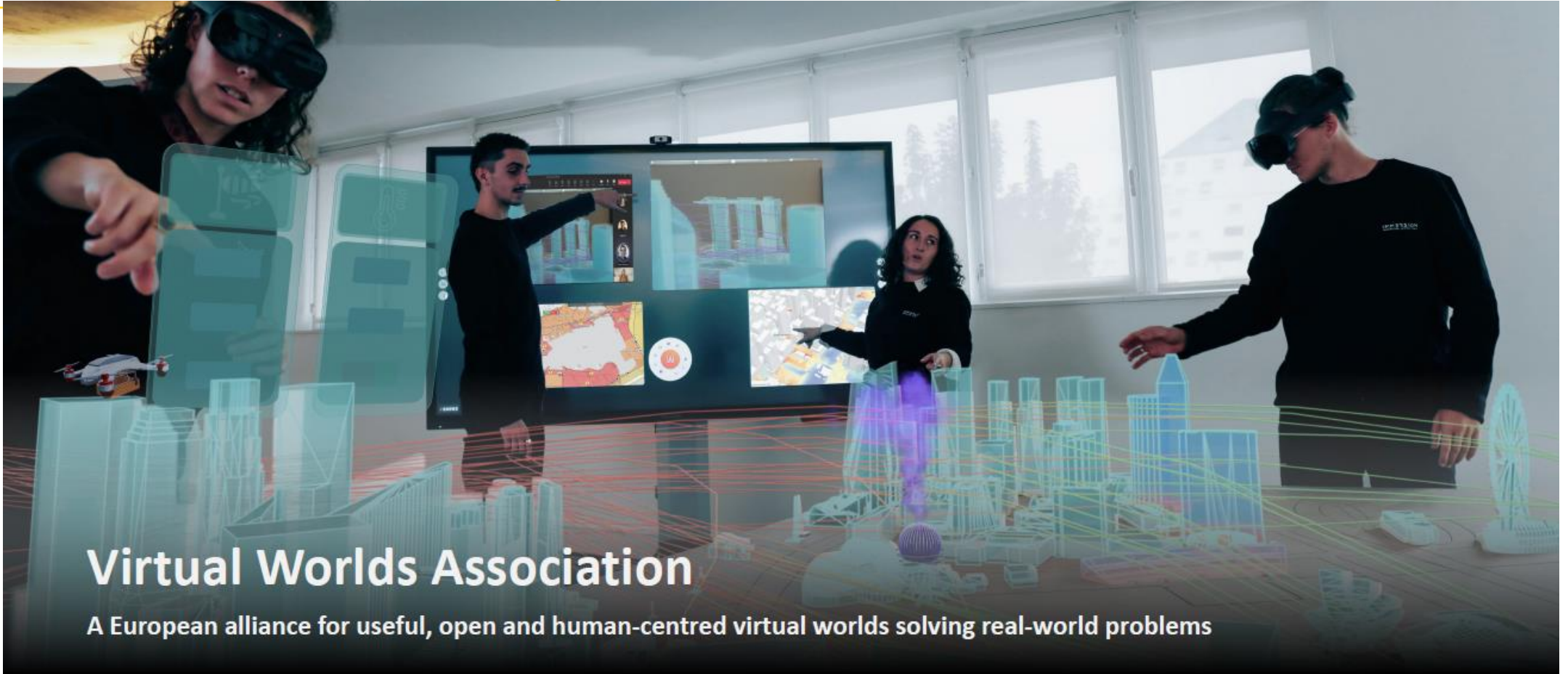
Call identifier	Topic	Opening Date	Deadline
A venir en janvier pour les calls 2026		<p><b>ECS Brokerage Event 2026</b></p> <p>📅 04/02/2026 📅 06/02/2026</p> <p>📍 Brussels, Belgium</p> <p>The event combines the brokerage activities of the industry associations AENEAS, EPoSS and INSIDE into one networking event dedicated to project proposals for the ne...</p> <p><a href="#">Registration</a></p>	

Se faire connaître également auprès de la DGE pour tout nouveau projet sur ces calls chips JU: contact Arnaud Ritou

[Lien web : Events · Chips Ju](#)

**6.4**

# **PARTENARIAT CO-PROGRAMMÉ VIRTUAL WORDS**



**Virtual Worlds  
Association**

The VWA officially announces its establishment as an international non-profit association. The VWA aims to accelerate the rise of European virtual worlds by uniting communities, boosting world-class research, and moving innovations from academia to real-world markets and users.

# About the Virtual Worlds Association

The Virtual Worlds Association (VWA) is a European international non-profit association created in 2025. It builds bridges between industry, SMEs, universities and research organisations to accelerate the development and adoption of Virtual Worlds.

## Objectives:

- Foster cutting-edge research
- Promote interoperability
- Enable training and dissemination
- Create ethical, sustainable and human-centred immersive technologies

## Contact Information

**Website:** [virtualworldsassociation.eu](https://virtualworldsassociation.eu)

**LinkedIn:** [linkedin.com/company/virtual-worlds-association](https://linkedin.com/company/virtual-worlds-association)

**Press Contact:** Julien Castet, VWA communication leader -  
+33 5 57 54 17 00 - [julien.castet@immersion.fr](mailto:julien.castet@immersion.fr)

# A European need, a common ambition



## Foundation

Agreement signed 3 June 2025 by 18 organisations from 8 countries preparing the European Partnership under Horizon Europe on Virtual Worlds.



## Industry Impact

Immersive 3D environments shorten design-to-production cycles, improve safety, coordinate multi-site operations, and enable predictive maintenance.



## Education & Training

Realistic simulations, continuous assessment and large-scale reskilling opportunities across sectors.



## Unlimited creativity

Volumetric media and avatars, immersive events, adaptive gaming, with arts as a horizontal enabler in achieving Europe's green, digital, and inclusive goals

Virtual worlds are rapidly becoming **essential infrastructure** across manufacturing, energy, mobility, construction, culture, gaming and science. For Europe, they mean **productivity gains, new high-value jobs, and resilient value chains** aligned with European values of openness, trust and sustainability.

# Missions of the VWA

01

## Create Positive Impact

Tangible contributions to business, society and policy-making in Virtual Worlds realisation, solving real-world problems

02

## Unite Communities

Energise and support communities developing enabling technologies and content across Europe.

03

## Ignite Research

Drive world-class research for excellence and competitiveness in Virtual Worlds domains.

04

## Transfer Knowledge

Bridge academic contexts to end-users through commercial sector, raising awareness of new business models.

05

## Build Sustainable Future

Contribute to ethical, human-centric European future combining real and digital worlds.

The Association enables regional multi-partner cooperation to collaborate at European level, supporting co-creation, development and experimentation of pan-European Virtual Worlds applications and services.

# Governance

The VWA is governed by a President, two Vice-Presidents, a Treasurer and a Board of Directors:

**4**

SMEs

**3**

Large Companies

**11**

Universities & Public Organisations

## President

Matthieu Worm, *Siemens, Germany*

## Vice-Presidents

Laszlo Arnould, *PopuLAR, Belgium*

Leif Oppermann, *Fraunhofer, Germany*

## Treasurer

Francisco Ibáñez, *Brainstorm Multimedia, Spain*

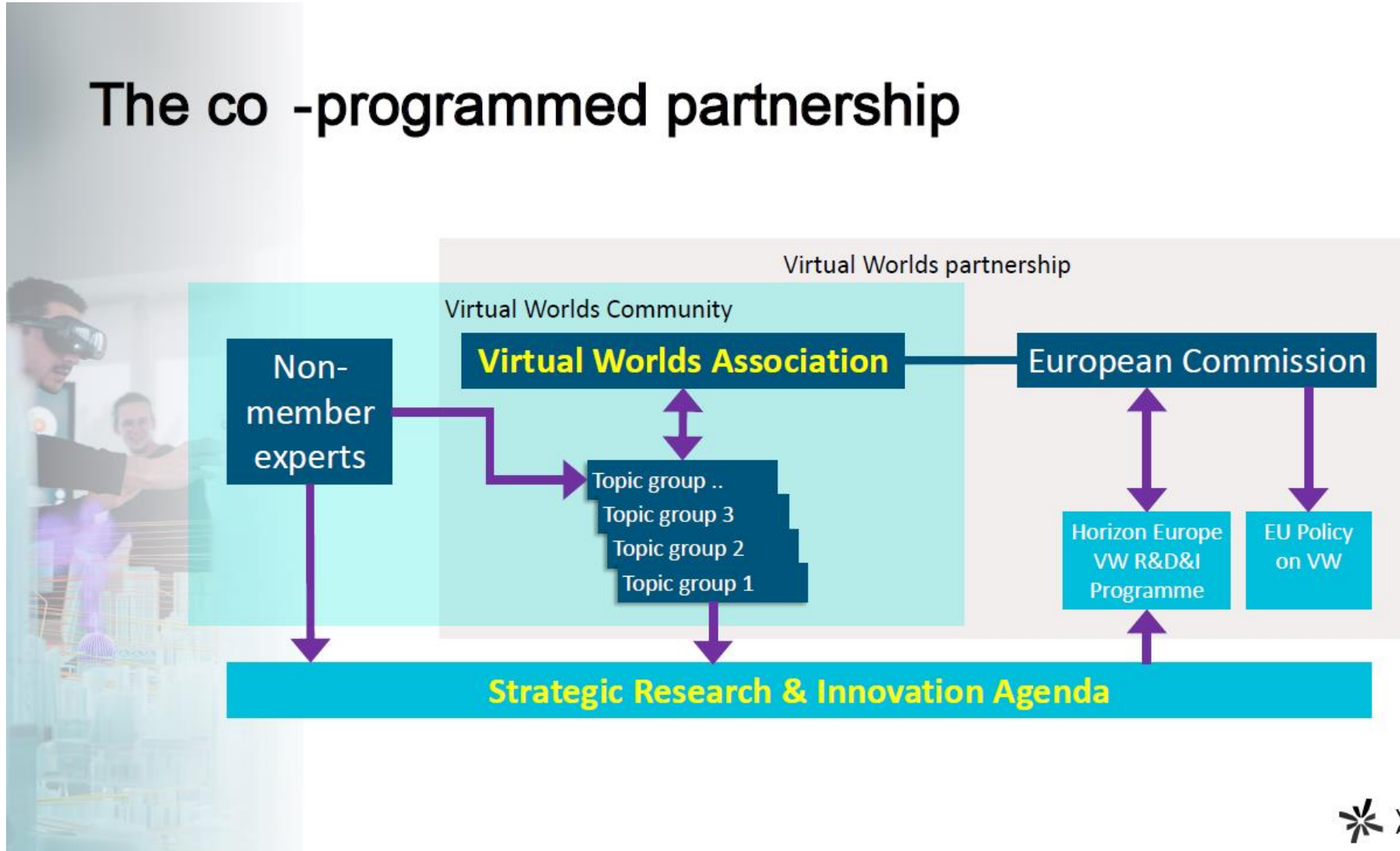
**SIEMENS**



**POPULAR**



# The co-programmed partnership



## Join the European eco-system for virtual worlds



Join us by registering on our website : [virtualworldsassociation.eu](https://virtualworldsassociation.eu)

Categories include startups, SMEs, large industry, and institutional members such as universities and research organizations.

VWA communication leader - Julien Castet - [communications@virtualworldsassociation.eu](mailto:communications@virtualworldsassociation.eu)

**6.5**

## **PARTENARIAT CO-PROGRAMMÉ ADRA**

## BUILDING EUROPE'S INNOVATION ECOSYSTEM

- Influence EU Policy & Standards: Shape supportive R&D roadmaps and legislation.
- Forge Key Connections: Network across sectors and access shared R&D infrastructure
- Fuel Innovation: Secure funding and resources to develop new technologies.

## DRIVING COLLABORATION

- Co-create Solutions: Access shared insights and co-design pioneering projects.
- Innovate Collectively: Engage in pre-competitive R&D for shared IP and market understanding.
- Unite for Impact: Build trusted networks to solve industry-wide challenges.

## ADVANCING STRATEGIC INITIATIVES

- Direct EU Strategy: Shape policy and strategic R&D agendas for future growth
- Gain Strategic Advantage: Leverage EU insights and support for your key projects
- Lead Market-Driven Innovation: Use early intelligence to design impactful initiatives.

## EMPOWERING IMPACT

- Achieve Tangible Results: Generate new business, IP, services, and market success.
- Enhance Performance: Implement best practices, boost efficiency, and accelerate your strategy.
- Magnify Your Voice: Solve critical challenges and strengthen collective industry influence.

**ADRA BROKERAGE EVENT (9-10 FEBRUARY 2026, EXACT DATE TBC)**

**6.6**

# **PROGRAMME CONNEXE DIGITAL EUROPE**

# Direction générale des Entreprises

Au service de la compétitivité  
des entreprises

#DGEntreprises

**DGE**

Accélérer l'économie  
de demain !

→ [www.entreprises.gouv.fr](http://www.entreprises.gouv.fr)

X    @DGEntreprises



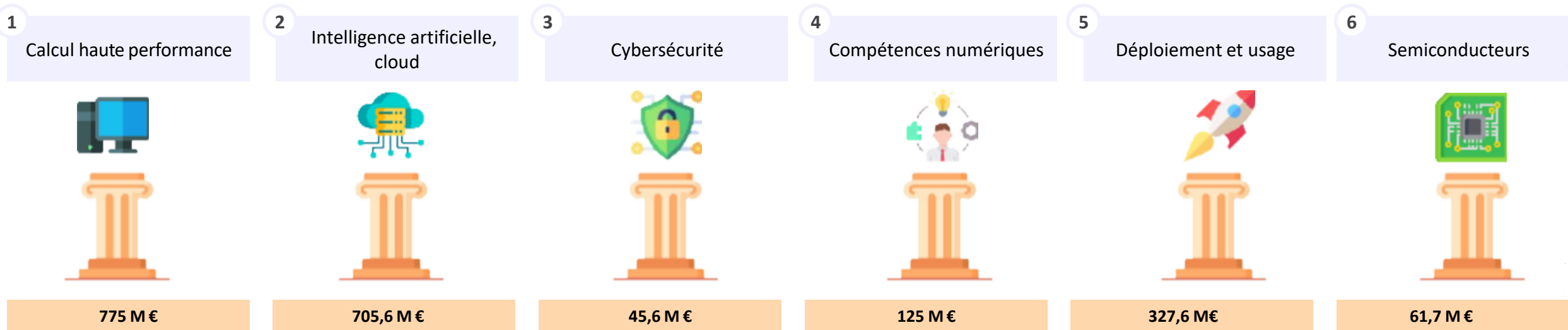
MINISTÈRE  
DE L'ÉCONOMIE,  
DES FINANCES  
ET DE LA SOUVERAINETÉ  
INDUSTRIELLE ET NUMÉRIQUE

*Liberté  
Égalité  
Fraternité*

# PRESENTATION DU PROGRAMME « DIGITAL EUROPE »

# Un cadre financier pluriannuel complexe mais dont la part dédiée aux technologies, au numérique et à l'innovation ne cesse de croître

## Budget indicatif pour la période 2025-2027 (programme de travail)



Soutien à la **transformation numérique** de la société et de l'économie européenne

Renforcement des **capacités numériques critiques** de l'UE

Accroître la **compétitivité de l'Europe** et sa souveraineté technologique

# Candidater à un appel de Digital Europe




## Conditions d'éligibilité :

- Projets collaboratifs de minimum 3 partenaires
- Membres UE ou de pays associés au programme

## Type de bénéficiaire :

- Toutes entités juridiques publiques et privées

 *Pays associés*

 *Pays associés (pour les objectifs 1, 2, 4 et 5)*

# Présentation du programme Digital Europe

## Deuxième vague d'appels à projet en 2026 (1/4)

Call	Topic	Titre	Type d'action	Taux de financement	Budget
<u>DIGITAL-2026- AI-09 AI Continent</u>	<u>DIGITAL-2026-AI-09-GENAI-PA</u>	Apply AI: GenAI for the public administrations	CSA	100%	1,8M€
	<u>DIGITAL-2026-AI-09-SOLUTIONS-CANCER-STEP</u>	Deployment of cutting-edge multi-modal AI-based solutions in medical imaging	SME Support Action	50% (75% pour les PME)	14,4M€
	<u>DIGITAL-2026-AI-09-ECAVA</u>	Secretariat of the European Connected and Autonomous Vehicle Alliance	CSA	100%	1M€
	<u>DIGITAL-2026-AI-09-DS-HEALTH-STORAGE</u>	Health: Data ingestion capacities and data services for the European Genomic Data Infrastructure in the European Health Data Space: data storage and processing capacity	Grant for Procurement	50%	17,5M€

# Présentation du programme Digital Europe

## Deuxième vague d'appels à projet en 2026 (2/4)

Call	Topic	Titre	Type d'action	Taux de financement	Budget
<u>DIGITAL-2026- AI-09 AI Continent</u>	<u>DIGITAL-2026-AI-09-DS- HEALTH-TOOL</u>	Health: Data ingestion capacities and data services for the European Genomic Data Infrastructure in the European Health Data Space: data tools	Simple Grant	50%	5M€
	<u>DIGITAL-2026-AI-09- VIRTUAL-TESTBEDS-STEP</u>	Virtual worlds test beds	Simple Grant	50%	17M€
	<u>DIGITAL-2026-AI-09- AUTOMOTIVE</u>	Collaboration platform for the European connected and autonomous vehicle of the future	Simple Grant	50%	3,5M€

# Présentation du programme Digital Europe

## Deuxième vague d'appels à projet en 2026 (3/4)

Call	Topic	Titre	Type d'action	Taux de financement	Budget
<u>DIGITAL-2026- AI-09 AI Continent</u>	<u>DIGITAL-2026-EDIH-AC-09- COMPLETION-STEP</u>	Completion of the initial Network of European Digital Innovation Hubs	Simple Grant	50%	8M€
	<u>DIGITAL-2026-EDIH-EU- EEA-09-CONSOLIDATION- STEP</u>	Consolidation of the Network of European Digital Innovation Hubs (EDIHs with reinforced AI focus)	Simple Grant	50%	79,2M€

# Présentation du programme Digital Europe

## Deuxième vague d'appels à projet en 2026 (4/4)

Call	Topic	Titre	Type d'action	Taux de financement	Budget
<u>DIGITAL-2026-DSM-AI-09</u>	<u>DIGITAL-2026-DSM-AI-09-DS-MANUFACTUR-STEP</u>	Data Space for Manufacturing	SME Support Action	50% (75% pour les PME)	9M€
<u>DIGITAL-2026-BESTUSE</u>	<u>DIGITAL-2026-BESTUSE-TECH-EDMO-09-HUBS</u>	European Digital Media Observatory Hubs	SME Support Action	50% (75% pour les PME)	6M€
<u>DIGITAL-2026-SKILLS-09</u>	<u>DIGITAL-2026-SKILLS-09-COMPETITIONS</u>	European Advanced Digital Skills Competitions	CSA	100%	7M€
	<u>DIGITAL-2026-SKILLS-09-LEAGUE-OF-ACADEMIES</u>	ELEVATE: European League of Advanced Digital Skills Academies	CSA	100%	7,2M€
<u>DIGITAL-2026-SUPPORT-09</u>	<u>DIGITAL-2026-SUPPORT-09-NCP-NETWORK</u>	Supporting the Network of National Contact Points (NCPs) of the Digital Europe Programme	CSA	100%	1,8M€

# Présentation du programme Digital Europe

## Calendrier des appels à projet

Publication sur le portail Funding & Tenders

- DIGITAL-2025-EDIH-EU-EEA-08 : 4 novembre 2025 – 3 mars 2026
- DIGITAL-2025-EDIH-AC-08 : 4 novembre 2025 – 3 mars 2026
- DIGITAL-2025-AI-09 : 4 novembre 2025 – 3 mars 2026
- DIGITAL-2025-SKILLS-08 : 4 novembre 2025 – 3 mars 2026
- DIGITAL-2025-BESTUSE-08 : 4 novembre 2025 – 3 mars 2026

# Présentation du programme Digital Europe

Précision sur les garanties de sécurité (article 12.6 du règlement)

## Restriction de participation pour les entités non situées dans l'UE ou l'EEE



Garantir la protection des intérêts de l'Union et des États membres



Protéger l'intégrité des infrastructures critiques



Réduire le risque de fuite technologique

# Présentation du programme Digital Europe

## Quelques projets lauréats

[DIGITAL-2021-CLOUD-AI-01-TEF-EDGE](#)

[DIGITAL-2021-SKILLS-01-SPECIALISED](#)

[DIGITAL-2022-SKILLS-03-SPECIALISED-EDU](#)

[DIGITAL-2023-CLOUD-AI-04-AEROSSEC](#)

[DIGITAL-2024-AI-06-LANGUAGE-02](#)

[DIGITAL-ECCC-2023-DEPLOY-CYBER-04-EULEGSLATION](#)

[DIGITAL-EUROHPC-JU-2022-APPSUPPORT-01-01](#)

[PREVAIL](#) (Commissariat pour l'énergie atomique)

[AI AND HEALTH](#) (Université d'Aix Marseille)

[AI4CI](#) (Conservatoire national des arts et métiers)

[AEROSSEC](#) (Dassault Systèmes)

[ALT EDIC4EU](#) (Alliance pour les technologies des langues)

[TRUSTBOOST](#) (Red Alert Labs)

[EPICURE](#) (Grand équipement national de calcul intensif)

# Direction générale des Entreprises

Au service de la compétitivité  
des entreprises

Aliénor THOUVENOT [alienor.thouvenot@finances.gouv.fr](mailto:alienor.thouvenot@finances.gouv.fr)

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**6.7**

# **GUIDE DES APPELS 2026-2027 CALLS CONNEXES**

## Appels HE cluster 4 Industrie avec composante numérique

Destination	Code Topic	Nom du Topic	Type d'action	Budget total (M€)	Budget par projet ( M€)	Nombre de projets attendus	Date d'ouverture	Date de clôture
Destination 4 - 2026	HORIZON-CL4-2026-02-DIGITAL-EMERGING-51-two-stage	AI improved advanced manufacturing and production processes in factories	RIA	30	4 to 6	5	16 Dec 2025	17 Mar 2026 (First Stage) 13 Oct 2026 (Second Stage)
Destination 4 - 2026	HORIZON-CL4-2026-02-DIGITAL-EMERGING-53-two-stage	Innovative AI methods and technologies for the process industries	RIA	30	4 to 6	6	16 Dec 2025	17 Mar 2026 (First Stage) 13 Oct 2026 (Second Stage)
Destination 4 - 2027	HORIZON-CL4-2027-02-DIGITAL-EMERGING-52-two-stage	New approaches for Human/AI collaboration for the workforce of the future	RIA	30	4 to 6	5	22-sept-26	02 Feb 2027 (First Stage) 02 Sep 2027 (Second Stage)
Destination x - 2026	HORIZON-CL4-2026-05-MAT-PROD-25	New or enhanced Innovative Advanced Materials (IAM) enabled sensing functionality	RIA	22,5	7,5	3	06-janv-26	15-avr-26

# EIC (pilier 3) Pathfinder Challenges

Appels 2026	Budget
Advanced Materials for Miniaturised Energy Harvesting Systems	96 M€****
Biotechnology for Healthy Ageing	
DeepRAP: Deep Reasoning, Abstraction & Planning towards trustworthy Cognitive AI Systems	

\*\*\*\* : 8 projets financés par thématique de 4 M€ chacun.

Candidats	(Mono-déposant***, Petit consortium**) Consortium*
Montant	4 M€
Taux de financement	100%
TRL	1 - 3/4
Durée du projet	36 à 60 mois
Deadlines	28 Octobre 2026

\* : 3 organisations issues de 3 pays différents (Etats membres ou associés et a minima un Etat membre)

\*\* : 2 organisations issues de 2 pays différents (Etats membres ou associés et a minima un Etat membre)

\*\*\* : sauf ETI/ grands groupes

## **Challenge #2 : Biotechnology for Healthy Ageing.**

### **Attendus**

Traduire les “marques du vieillissement” en **solutions biotech/pharma** pour prévenir/retarder/inverser maladies liées à l'âge.

### **Objectif : Projet dans 1 des 3 thématiques suivantes :**

- **Intervention thérapeutique/préventive** validée sur **modèle vertébré âgé** (clinique exploratoire possible).
- **Outil biomarqueur** basé sur clocks existantes, robuste, multimodal, validé sur cohorte.
- **NAM (Non-Animal Methodology)** capturant l'état “âgé” systémique, benchmark vs animal.

Objectif : construire un **PoC TRL3** + intégration éthique/sociétale et sexe/genre.

### **Autres considérations dites de portefeuille pour la sélection :**

Les projets sélectionnés pris dans leur ensemble couvriront les domaines avec une diversité recherchée : finalité des interventions, processus du vieillissement ciblés, maladies, types de biomarqueurs/mesures, tissus & use cases NAM.

## **Challenge #3 : DeepRAP: Deep Reasoning, Abstraction & Planning towards trustworthy Cognitive AI Systems.**

### **Attendus**

Viser une IA cognitive **fiable** en renforçant :

- **Deep Reasoning (DR)** : causalité, logique/proba, multimodal, explicable.
- **Deep Abstraction (DA)** : généralisation low-data, concepts, analogies, world models.
- **Deep Planning (DP)** : planification hiérarchique/adaptative long terme, re-planning continu.

Approches **neuro-symboliques / hybrides** encouragées + mécanismes de trustworthiness.

**Objectif : Démonstration TRL4** sur tâches réelles et nouvelles métriques d'évaluation

### **Autres considérations dites de portefeuille pour la sélection :**

Les projets sélectionnés pris dans leur ensemble couvriront les 3 capacités RAP via les catégories :

**Capacité visée** DR / DA / DP / multi-capability.

**Approches techno** (NeSy, ADL, RL, architectures cognitives, méthodes formelles, multimodalité, trustworthiness).

**Domaines d'application variés** pour impact large.

Sélection = **équilibre & complémentarité**, projets redondants pouvant être écartés.

# EIC Advanced Innovation Challenges

	Etape 1 (2026)	Etape 2 (2027)
Budget	6 M€	25 M€
Candidats	Mono-déposant***	Consortium* Petit consortium** Mono-déposant***
Montant	0,3 M€	2,5 M€
Taux de financement	100%	
TRL	4-6/7	
Durée du projet	9 mois maximum	30 mois maximum
Deadline	26 Février 2026	18 June 2027



\* : 3 organisations issues de 3 pays différents (Etats membres ou associés et a minima un Etat membre)

\*\* : 2 organisations issues de 2 pays différents (Etats membres ou associés et a minima un Etat membre)

\*\*\* : Sauf les ETI et grands groupes



# EIC Advanced Innovation Challenges

## Action pilote

Cycles d'innovation plus efficaces du TRL 4 vers le TRL 6/7  
Plus grande adoption par le marché

## Projet deep-tech

Potentiel de transformation : recherche suffisante, manque d'application commerciale  
Implication des utilisateurs finaux

## 2 étapes

- 1- (2026) Etude de faisabilité et benchmarking des solutions disruptives proposées – mono-bénéficiaires
- 2- (2027) Développement et preuve des solutions les plus prometteuses – mono-bénéficiaires/petit consortium/consortium

## Candidats

Organismes de recherche/Universités  
Entreprises: PME/start-up ou grand groupe\*\*

### Appels 2026

Budget  
étape 1

Budget  
étape 2

Accelerating Physical AI: Embodied Intelligence for the Next Frontier of AI-Powered Robotics

6 M€\*

25 M€\*\*

Translating Disruptive New Approach Methodologies (NAMs) into Practice

\* : 10 projets financés par thématique

\*\* : 5 projets financés par thématique



## ***Challenge #1 : Accelerating Physical AI***

### **Attendus**

Accélérer le développement, le déploiement et la commercialisation de solutions de physiques d'IA pour robots et machines autonomes.

Répondre aux contraintes du monde physique : perception-action sûre, robustesse, interaction en environnements ouverts.

Adresser au moins 2 aspects techniques : perception/cognition, apprentissage adaptatif, décision autonome/collective, interaction humain-IA.

Tester sur un cas d'usage réel (ex. sécurité civile/réponse à catastrophe, labos autonomes, robots assistants pro/perso).

**Pré-requis de l'étape 1** : prototype TRL4 validé en labo + lettre d'intention d'un utilisateur/intégrateur.

### **Autres considérations dites de portefeuille pour la sélection :**

Sélection finale par portefeuille : diversité et cohérence stratégique au-delà du score individuel.

Diversité recherchée sur : (1) couverture des 4 aspects techniques, (2) domaines d'application, (3) approches techno/niveaux d'autonomie.

Priorité aux projets complémentaires générant synergies (benchmarks, briques réutilisables, pilotes conjoints).



## ***Challenge #2 : Translating Disruptive NAMs (Non Animal Methodologies) into Practice***

### **Attendus**

Faire passer des méthodes de test non-animales et disruptives du PoC labo à l'adoption clinique/industrielle et réglementaire.

Cibler la préclinique et/ou les tests de sécurité/efficacité/qualité (médicaments ou MedTech).

NAMs en scope : organoïdes/organ-on-chip, jumeaux numériques/patients virtuels, modèles IA prédictifs, plateformes multi-omiques

**Pré-requis de l'étape 1:** TRL4 atteint (in vitro ou in silico) + lettre d'intention d'un industriel ou régulateur.

**Objectifs :** besoins réglementaires, méthode d'évaluation, faisabilité + benchmarking initial, éthique/données/scale-up.

### **Autres considérations dites de portefeuille pour la sélection :**

Portefeuille couvrant : (1) types de NAM (in vitro, organ-on-chip, in silico/IA, hybrides), (2) secteurs d'usage, (3) trajectoires d'adoption.

Priorité aux projets apportant preuves de confiance et plan crédible de transition vers la pratique.

Implication précoce d'utilisateurs/régulateurs pour accélérer qualification et standardisation.



# PCN EIC Pathfinder & Transition-EIE



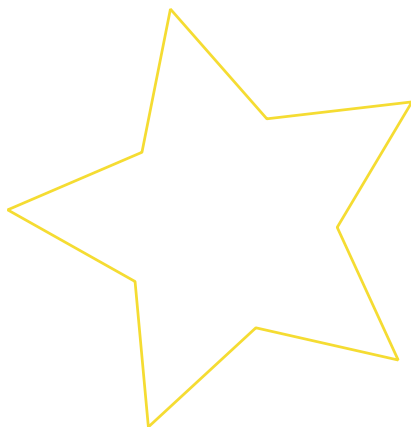
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[Site internet](#)



[PCN Conseil européen de l'innovation \(EIC\)](#)



[S'inscrire à la liste de diffusion](#)

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# INFORMATIONS PRATIQUES ET ACCOMPAGNEMENT

# LES SITES DE RÉFÉRENCE

- **Contact PCN numérique:** [pcn-numerique@bpifrance.fr](mailto:pcn-numerique@bpifrance.fr)
- **Site Horizon Europe (Commission Européenne) :** [Horizon Europe - European Commission](#)
- **Portail des financements et des appels d'offres de l'UE :** [EU Funding & Tenders Portal](#)
- **Site PCN numérique :** <https://www.horizon-europe.gouv.fr/le-point-de-contact-national-numerique-28387>

# IDENTIFIER DES PARTENAIRES POUR LES APPELS NUMÉRIQUE

- Réseau et contacts d'affaires en France et en Europe et pays associés
- Participants aux projets déjà financés sur des thématiques proches

<https://cordis.europa.eu/projects/fr>

- Les membres des partenariats du domaine numérique

Les partenariats sont structurés sous forme d'associations dont les membres sont régulièrement impliqués dans les projets soumis

Destination	Partenariat	Thématiques	Site du partenariat
3	High Performance Computing (EuroHPC)	Calcul Hautes Performances	<a href="https://eurohpc-ju.europa.eu/index_en">https://eurohpc-ju.europa.eu/index_en</a>
4	Smart Networks and Services (SNS)	Télécommunications	<a href="https://smart-networks.europa.eu/">https://smart-networks.europa.eu/</a>
4	Chips Act JU	Semiconducteurs	<a href="https://www.chips-ju.europa.eu/">https://www.chips-ju.europa.eu/</a>
4	AI Data Robotics	IA Données Robotique	<a href="https://adr-association.eu/">https://adr-association.eu/</a>
4	Photonics	Photonique	<a href="https://www.photonics21.org/about-us/photonics-ppp/">https://www.photonics21.org/about-us/photonics-ppp/</a>
6	Virtual Worlds	Metaverse	<a href="https://open-verse.eu/2025/04/28/the-virtual-worlds-partnership/">https://open-verse.eu/2025/04/28/the-virtual-worlds-partnership/</a>

- Le portail du participant

Fonction recherche de partenaires sur chaque appel:

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/partner-search> ?



# IDENTIFIER DES PARTENAIRES POUR LES APPELS NUMÉRIQUE

- **PME : Enterprise Europe Network**

<https://een.ec.europa.eu/partnering-opportunities?f%5B0%5D=p%3A4320&f%5B1%5D=p%3A4355>

<https://www.een-france.fr/>

- **Cabinets Conseil**

Association française: <https://www.asso-conseils-innovation.org/>  
liste qualifiée par domaine dans le cadre du Diag PTI disponible auprès du PCN.

- **PCN Numérique**

Mises en relation ciblées en liaison avec nos homologues européens

- **Site de recherche de partenaires Numérique**

<https://www.ideal-ist.eu/partner-search-home>



# PME: DIAG PARTENARIAT TECHNOLOGIQUE INTERNATIONAL



## Candidater à un AAP européen/ international collaboratif

Le dispositif Diag PTI propose un **accompagnement personnalisé** dans la participation aux appels à projets R&D collaboratifs intergouvernementaux, européens ou transnationaux.

## POURQUOI ?

Le Diag PTI s'adresse aux dirigeants souhaitant être accompagné dans:

- la **préparation du partenariat technologique** (recherche de partenaires européens/internationaux)
- **Rédaction et dépôt** du dossier de candidature
- **Négociation de l'accord de consortium et/ ou assistance juridique.**

## COMMENT ?

Bpifrance met à disposition des entreprises une liste de **consultants spécialisés dans le montage de projets collaboratifs.**

## POUR QUI ?

- **Start-ups, PME** de moins de 250 salariés au consolidé
- Entreprises **innovantes**
- **Sur le territoire français et/ou dans les DROM-COM**
- Exclusion : entreprises en « difficulté » selon la définition européenne.

## QUEL PRIX ?

- **Prise en charge à 50%** du montant total de la prestation par Bpifrance
- Jusqu'à **25 000€ HT** si l'entreprise bénéficiaire est **chefe de file du consortium**, et jusqu'à **5 000 € HT** si membre d'un consortium



Contact : [diagpti@bpifrance.fr](mailto:diagpti@bpifrance.fr)

# ACTEURS ACADEMIQUES : MRSEI – OPÉRÉ PAR L'ANR

## Montage de Réseaux Scientifiques Européens ou Internationaux à un AAP européen/ international collaboratif

### POURQUOI ?

Le programme MRSEI a été créé pour donner les moyens aux scientifiques travaillant dans des laboratoires français de déposer en tant que coordinatrice/coordonateur un projet de recherche à des appels collaboratifs européens (Horizon Europe) ou internationaux et de leur donner ainsi la possibilité de développer des projets interdisciplinaires ambitieux et de renforcer leur visibilité au niveau international.

### COMMENT ?

L'ANR propose une soumission en continu avec deux sessions de sélection.

### POUR QUI ?

- Laboratoires de recherche publique français

### MONTANT ET FRAIS ELIGIBLES

- Aide maximum de 36k€ pour une durée de deux ans
- Frais de personnel, prestations de services, frais généraux non forfaitisés



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# QUESTIONS

# 9

# ANNEXES

### **Les modalités d'évaluation et la convention de subvention des projets *lump sum* (Financements par sommes forfaitaires) suivent autant que possible l'approche standard**

- Mêmes critères d'évaluation, même calendrier des paiements, obligations de reporting technique similaires, avec l'accent mis sur l'achèvement des work packages

### **Une somme est fixée dans la convention de subvention pour chaque work package et chaque bénéficiaire**

- L'achèvement du Work package entraîne le paiement de la somme forfaitaire
- Les paiements dépendent de la réalisation des activités, et non de l'obtention de résultats positifs
- Les work package peuvent être modifiés via des amendements

### **Deux options**

#### **Option 1 : L'appel à proposition définit le montant de la somme forfaitaire**

- Le budget demandé dans votre proposition doit être égal à ce montant
- Votre proposition doit décrire les ressources que vous comptez mobiliser pour ce montant

#### **Option 2 : Vous définissez le montant de la somme forfaitaire dans votre proposition**

- Vous être libre de définir le montant nécessaire pour mener à bien votre projet
- Le montant de la somme forfaitaire doit être justifié par les ressources que vous comptez mobiliser

Pour plus d'informations : [Webinaire Lump Sum](#)

## HORIZON-CL4-2026-04-DATA-03 : Open Internet Stack Support for Scale

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	15/04/2026	4	4	1	CSA	Yes		EU 27, General Annex B	YES

Expected Outcomes	<ul style="list-style-type: none"> <li>A common approach and hub for cataloguing, packaging, reviewing and validating Open Internet Stack components and projects.</li> <li>Long term viability by advising on Open Source sustainability and maintenance models including business and foundation; Promotion of the EU and Associated Countries as ideal location for Open Source Foundation sieges.</li> <li>A common branding, marketing, training and communication plan ensuring consistent perception and scale-up.</li> </ul> <p>A close interleave with policy development through a dedicated policy sandbox.</p>
Scope	<p>Applicants should devise a plan for:</p> <ul style="list-style-type: none"> <li>Cataloguing solutions in a structured and easy to discover way</li> <li>Performing security and accessibility audits on the selected solutions under the Open Internet Stack.</li> <li>Screening and selecting European funded Open Source projects, including by exploring the relevant Horizon Europe programmes, and devising a strategy for the Open Internet Stack to become a central hub for those solutions.</li> <li>Establishing links and mutual support with national, multi-country and pan-European initiatives supporting Open Source sovereign solutions.</li> <li>Advising on sustainability models (both for and non-for profit), on standardisation, licencing schemes, or localisation/internationalisation</li> <li>Elaborating a common branding with associated marketing and communication tool</li> <li>Developing training material on these solutions that stresses their value in terms of EU legislation compliance (GDRP, DSA/DMA, CRA...), security (e.g. reference to security audits, list of dependencies), use cases, funding/business model, deployment requirements (server side, user side), link to repository and community resource (maintainers, community manager, discussion board...). Training material will be tailored to each target audience: Operators of infrastructure, Integrators, Government &amp; verticals IT, end users.</li> <li>Implementing measures to identify/attract technology adopters (e.g. services providers, integrators, OSPOs in governments/verticals) to become promoters of these technologies.</li> <li>Developing sandbox tools for ensuring smooth compliance-by-design of the Open Internet Stack with relevant existing or futures EU policies.</li> <li>Supporting Open Source awards scheme and sustainability models after the action is finished.</li> </ul> <p>We consider that proposals with an overall duration of typically 36 months would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other durations.</p> <p>Beneficiaries that intend to transfer ownership or grant an exclusive licence must formally notify the granting authority (i.e. DG-CNECT and HaDEA) before the intended transfer or licencing takes place and the granting authority may up to four years after the end of the action object to a transfer of ownership or the exclusive licencing of results.</p>

## HORIZON-CL4-2026-04-DIGITAL-EMERGING-11 : Grand Challenge on Quantum Sensors for Inertial Navigation

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	15/04/2026	2	0,5 - 2	4	CSA	NO		EU 27+ ISL, NOR + pays associés : CAN, ISR, KOR, NZ, SW, UK.	YES

Expected Outcomes	<p><b>Phase 1</b> (ce sujet) : les projets devront établir une feuille de route technique et financière complète démontrant le potentiel des solutions Q-INS proposées et fournir au minimum des dossiers de conception et d'évaluation comparative fondés sur des données probantes pour des systèmes à échelle réduite (tels que documentation, rapports d'essais et preuves de prototypes préexistants) dans l'une des deux catégories suivantes : <b>Q-INS basé sur l'interférométrie à atomes froids</b> pour des démonstrations dans des applications maritimes ou aéronautiques ; <b>Q-INS à l'échelle de la puce</b> (Q-INS à faible encombrement) mesurant l'accélération, la vitesse de rotation et/ou le champ magnétique, destiné à la mise en œuvre de capteurs à l'échelle de la puce pour des applications telles que les petits satellites, les drones et les transports autonomes.</p> <p>Les propositions doivent cibler des systèmes suffisamment matures pour permettre une planification industrielle. Les résultats attendus sont les suivants :</p> <ul style="list-style-type: none"> <li>• Une feuille de route technique détaillée, incluant l'architecture système, la stratégie d'intégration, les étapes clés de performance, les évaluations des risques et un plan d'industrialisation pour une production à grande échelle.</li> <li>• Le plan d'industrialisation doit être validé au regard des exigences de la BEI, notamment en ce qui concerne les échéanciers de commercialisation</li> <li>• Une architecture Q-INS détaillée basée sur des techniques de détection quantique hybridées avec des interfaces classiques</li> <li>• Une évaluation de la conformité aux exigences SWaP-C, de la résilience environnementale et de l'intégration en situation réelle</li> <li>• Une évaluation des dépendances vis-à-vis des fournisseurs non européens de composants critiques et une proposition de mesures d'atténuation efficaces dans le cadre d'une chaîne d'approvisionnement souveraine</li> <li>• Une liste potentielle d'utilisateurs finaux afin de recenser les exigences du système et les contraintes liées aux cas d'utilisation</li> <li>• Une feuille de route financière complète et une évaluation de la viabilité couvrant les modèles économiques, les analyses de marché, les voies de commercialisation, les projections de revenus et les critères d'investissement.</li> <li>• Une stratégie d'application identifiant les secteurs cibles (maritime, aéronautique, spatial, systèmes autonomes) et les avantages quantifiables par rapport aux centrales inertielles classiques</li> </ul>
Scope	Faire progresser le développement de systèmes de navigation inertielle quantiques destinés aux environnements où le GNSS est indisponible ou contesté. La Q-INS combine des capteurs quantiques avec des sous-systèmes de mesure inertielle classiques afin d'offrir des capacités de positionnement fiables, résilientes et souveraines. Ce sujet soutient l'ambition de l'UE de renforcer sa souveraineté technologique dans les infrastructures de navigation stratégiques.
Other considerations	<p>Les propositions doivent être soumises par une seule entité juridique qui est une PME.</p> <p>Les projets financés dans le cadre de cette action devraient s'étaler sur environ six mois, avec une contribution de l'UE pouvant atteindre 0,5 million d'euros.</p> <p>Critères d'attribution (Annexe D) + critères d' : <b>Excellence</b> (crédibilité de l'approche technique pour la planification et l'analyse comparative ; pertinence des indicateurs de performance et de la méthodologie -résilience environnementale- et implication précoce des utilisateurs finaux pour définir les exigences ; <b>impact</b> (renforcement de la position de l'UE sur la navigation inertielle quantique sous différents angles, contribution à la souveraineté technologique de l'UE -y compris l'atténuation des dépendances vis-à-vis des chaînes d'approvisionnement non européennes)- et aux avantages sociétaux, industriels et économiques -crédibilité du plan de commercialisation et préparation des investisseurs ; <b>Qualité et efficacité de la mise en œuvre</b> (crédibilité du plan de travail, des ressources et de la gestion des risques, capacité à fournir les résultats spécifiés -feuille de route technique et financière, rapports de validation-, adéquation de l'équipe et accès aux installations pour la validation.</p>
Key actors	Cette feuille de route (Phase 1) jettera les bases d'investissements futurs via les instruments financiers de l'UE dans le cadre d'InvestEU qui bénéficie d'un financement complémentaire dédié d'HE. Les manifestations d'intérêt de partenaires utilisateurs finaux potentiels sont vivement encouragées. Des services de conseil personnalisés d'EIB Advisory peuvent accompagner la

## HORIZON-CL4-2026-04-DIGITAL-EMERGING-12 : Standards for Quantum Technologies

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	15/04/2026	1	1	1	CSA	NO		EU 27+ ISL, NOR + pays associés : CAN, ISR, KOR, NZ, SW, UK.	

Expected Outcomes	<p>Cette action soutiendra et accélérera le développement et l'adoption de normes européennes et internationales pour les technologies quantiques, renforçant ainsi l'interopérabilité, la qualité, la fiabilité et la confiance dans les systèmes quantiques. Elle consolidera le leadership européen dans le paysage mondial de la normalisation quantique et garantira que les priorités industrielles et de recherche européennes soient pleinement représentées et intégrées aux normes émergentes.</p> <p>Les résultats attendus sont les suivants :</p> <ul style="list-style-type: none"> <li>• Élaboration de normes « pré-normatives » de spécifications techniques concrètes et pertinentes pour l'UE dans les domaines de l'informatique, des communications et de la détection quantiques.</li> <li>• Contribution significative des acteurs européens, notamment des PME et des start-ups, au sein des organismes internationaux de normalisation (par exemple, ISO/CEI, UIT-T, ETSI), en adéquation avec les stratégies industrielles de l'UE.</li> <li>• Promotion de l'interopérabilité intersectorielle par le biais d'interfaces standardisées, de protocoles de contrôle, d'une fiabilité accrue en conditions d'exploitation et de méthodologies d'évaluation comparative, afin de réduire la fragmentation du marché et les obstacles techniques.</li> <li>• Création d'outils d'aide à la décision pratiques, tels que des guides d'utilisation, des modules de formation et des bonnes pratiques, pour accélérer l'adoption et la mise en œuvre des normes quantiques.</li> </ul>
Scope	<p>Les activités de normalisation des technologies quantiques dans des domaines tels que l'informatique quantique, les communications, la détection et le contrôle. Les propositions devront inclure :</p> <ul style="list-style-type: none"> <li>• S'appuyer sur les feuilles de route des organismes européens de normalisation pour : (i) normaliser les résultats des projets quantiques financés par HE, le programme Europe numérique et EuroHPC JU ; (ii) favoriser une communauté de normalisation industrielle active afin de promouvoir l'engagement et l'adoption au sein de l'industrie quantique européenne.</li> <li>• Permettre une large participation des parties prenantes (acteurs du secteur quantique) aux activités de normalisation internationales (par exemple CEN-CENELEC, ISO/CEI, UIT-T, ETSI), en promouvant les priorités de l'UE.</li> <li>• Soutenir l'interopérabilité et l'intégration des systèmes quantiques par la normalisation des interfaces, des protocoles et des méthodologies d'évaluation comparative.</li> <li>• Rédiger et élaborer des normes concrètes ou des spécifications techniques, en coopération avec les organismes de normalisation compétents (Européens et internationaux) dans des domaines tels que : Interfaces matériel-logiciel en informatique quantique, Protocoles de détection quantique et méthodes de métrologie, Électronique de commande et modularité des dispositifs pour les systèmes quantiques, Méthodologies d'évaluation des performances et d'analyse comparative.</li> <li>• Élaboration de supports tels que des guides d'utilisation, des modules de formation et des bonnes pratiques pour les normes développées et faciliter leur adoption et leur mise en œuvre.</li> <li>• Organisation d'ateliers et de consultations avec les acteurs du secteur quantique (PME, start-ups et grandes entreprises) afin de favoriser l'inclusion et la recherche d'un consensus.</li> </ul>
Other considerations	<p>La proposition doit présenter un plan clair de mobilisation des parties prenantes, les livrables attendus et la justification budgétaire, incluant le nombre de jours-personnes par tâche et les taux journaliers. Une seule proposition est attendue. Les organismes européens de normalisation (OEN) sont encouragés à diriger le consortium ou à y jouer un rôle clé.</p>
Key actors	<p>Acteurs du secteur quantique : PME, start-ups et grandes entreprises</p>

## HORIZON-CL4-2026-04-DIGITAL-EMERGING-14 : Networking and Future Photonics Strategy

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	15/04/2026	3	3	1	CSA	NO		EU 27+ ISL, NOR + pays associés : CAN, ISR, KOR, NZ, SW, UK.	YES

Expected Outcomes	<p>Projects are expected to contribute to the following outcomes:</p> <ul style="list-style-type: none"> <li>Continued coordination and strategic support to the broader European photonics ecosystem, fostering a transparent, inclusive governance model and bottom-up roadmap development.</li> <li>Strengthened engagement across the photonics ecosystem, including industry, academia, national platforms and end-user sectors.</li> <li>Improved alignment of regional, national and European R&amp;I agendas, enhancing coherence and impact across funding instruments.</li> <li>Effective monitoring and steering of Partnership-funded projects towards the achievement of Key Performance Indicators.</li> <li>Increased visibility of photonics as a critical enabling technology for EU priorities such as the digital and green transitions, industrial competitiveness and technological sovereignty.</li> <li>Enhanced collaboration with other European Partnerships and strategic initiatives to maximise synergies and streamline efforts.</li> <li>Improved access to private and blended finance for photonics innovation, growth and scale-up.</li> </ul>
Scope	<p>Proposals should include:</p> <ul style="list-style-type: none"> <li>Development and regular updating of the European Photonics Strategic Research and Innovation Agenda (SRIA) and associated roadmaps</li> <li>Coordination and monitoring of Partnership-funded R&amp;I and CSA projects, including tracking of Key Performance Indicators and recommending corrective actions where needed</li> <li>Outreach, advocacy, and stakeholder engagement, including alignment with national, regional, and European photonics strategies and input into broader EU policy initiatives</li> <li>Provision of a unified communication platform for the European photonics community and strengthened public communication on the impact of photonics</li> <li>Facilitation of collaboration with other European Partnerships, strategic initiatives, and financial institutions to identify synergies and improve access to innovation financing.</li> </ul>
Other considerations	
Key actors	<ul style="list-style-type: none"> <li>Clusters, associations, networks active in photonics, in particular integrated photonics</li> <li>R&amp;I stakeholders: universities, RTOs, research-intensive companies</li> </ul>
Link to other topics	<ul style="list-style-type: none"> <li>Photonics Partnership</li> <li>Chips Joint Undertaking - SRIA Roadmap</li> <li>Running CSA project Phorwards21</li> </ul>
Upcoming events	

## HORIZON-CL4-2026-04-DIGITAL-EMERGING-15 : Strengthening the cooperation of semiconductor-intensive EU regions (CSA)

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	15/04/2026	1	1	1	CSA	NO		EU 27+ ISL, NOR + pays associés : CAN, ISR, KOR, NZ, SW, UK.	YES

Expected Outcomes	<p>The topic's objective is to support semiconductor-intensive regions and regional industrial semiconductor clusters working with regional governments. The notion of semiconductors includes integrated circuits (chips) with electronic and photonic functionalities.</p> <p>Regions have an essential role to play in the implementation of EU policies in the field of semiconductors. Within their remit they facilitate establishing industrial activities related to semiconductor production and services by providing for example construction permits, energy, water, infrastructure and often funding. They help creating regional ecosystems around big fabs and contribute to structuring clusters of actors across the value chain.</p> <p>The expected outcomes are</p> <ul style="list-style-type: none"> <li>• Stronger cooperation of regions (governments and linked industrial clusters) which are active across the semiconductor supply chain</li> <li>• Contributions to the smart specialisation of regions in the semiconductor area</li> <li>• Maps of regional semiconductor ecosystems across the value chain and their connections amongst each other and identification of common needs</li> <li>• A joint strategy to link and strengthen regional semiconductor ecosystems which may possibly lead to increased effectiveness of the Competence Centres originating from the Chips for Europe initiative.</li> <li>• A sustainable online platform exchanging information on capabilities and best practices, guiding potential investors and supporting new entrants intending to specialise in semiconductor.</li> </ul>
Scope	<p>The action should pursue its objectives by means of</p> <ul style="list-style-type: none"> <li>• Identifying key local actors in the semiconductor supply chain and their common needs</li> <li>• Developing a joint strategy to strengthen the cooperation of semiconductor-intensive regions</li> </ul> <p>Exploring cooperation with the Chips Competence Centres established under the Chips JU</p> <ul style="list-style-type: none"> <li>• Evidence gathering on obstacles to semiconductor production investments related to framework conditions such as permitting</li> <li>• Collecting best practices on overcoming such obstacles and preparing guidelines and their dissemination to the respective regional and national public authorities for accelerating the construction of semiconductor production infrastructures in Europe.</li> </ul>
Other considerations	<p>The action should support networking and joint work of the involved stakeholders, such as e.g. those in the European Semiconductor Regions Alliance (ESRA).</p> <p>For the impact and needs of stakeholders</p> <ul style="list-style-type: none"> <li>• Network of Chips Competence Centres (aCCcess) &amp; • Industrial cluster project (Silicon Eurocluster, etc)</li> </ul> <p>For the focus on regional institutions</p> <ul style="list-style-type: none"> <li>• European Automotive Regions Alliance &amp; • European Chemical Regions Network</li> </ul>
Key actors	<ul style="list-style-type: none"> <li>• Regional governments</li> <li>• Regional industrial clusters active in the semiconductor value chain, insofar as they support the institutional actors</li> <li>• Clusters, associations, networks or regions and clusters</li> <li>• National entities and national clusters could be eligible for small Member States (if National level has relevant competencies that usually reside with regions)</li> </ul>

## HORIZON-CL4-2026-04-DIGITAL-EMERGING-17 : Fostering 2-Dimensional Materials (2DM) based emerging and enabling technologies (CSA)

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
		3	3	1	<b>CSA</b>	NO		EU 27+ ISL, NOR + pays associés : CAN, ISR, KOR, NZ, SW, UK.	YES

Expected Outcomes	<ul style="list-style-type: none"> <li>Maximize the impact of EU-funded R&amp;I in 2DM-based emerging and enabling technologies</li> <li>Reinforce the related R&amp;I community in Europe</li> </ul>
Scope	<ul style="list-style-type: none"> <li>Proposals should provide key support functions fostering a dynamic R&amp;I community in 2DM-based emerging and enabling technologies, facilitating synergies and collaboration among relevant EU-funded projects - including those of the Graphene Flagship - and associated entities.</li> <li>Proposals should provide support to the relevant actors in R&amp;I roadmapping, innovation, standardization activities in 2DM-based technologies</li> <li>Proposals should establish and keep up-to-date European and global R&amp;I and funding landscapes in 2DM-based technologies.</li> <li>Proposals should relay and amplify communication and dissemination activities of the actors in the domain of graphene and other 2DMs.</li> <li>Proposals should foster interactions and synergies with relevant national and regional initiatives, Partnerships, in particular the Innovative advanced materials for Europe partnership, projects such as InnoMatSyn, and infrastructures in the domain</li> </ul>
Other considerations	<p>Evolution from the Graphene: Europe in the Lead Coordination and Support Action (HORIZON-CL4-2022-DIGITAL-EMERGING-02-22)</p> <p>Interaction with RIAs from Graphene: Europe in the Lead call (<a href="https://graphene-flagship.eu/">https://graphene-flagship.eu/</a>) as well as synergies with Innovative Advanced Materials Initiative (<a href="https://www.iam-i.eu/">https://www.iam-i.eu/</a>), relevant projects on innovative advanced materials (to be) selected for funding under Horizon Europe WP 2025 destination 2 'Achieving technological leadership for Europe's open strategic autonomy in raw materials, chemicals and innovative materials' ..... '(non exhaustive list)</p> <p>Existing projects are relevant :</p> <p>Non exhaustive list:</p> <ul style="list-style-type: none"> <li>All projects including 2D materials for various applications e.g., photonics, optoelectronics, energy, composites, biomed devices ... such as 2D-PL,</li> <li>RIAs from Graphene: Europe in the Lead call ,</li> <li>ERC (POL_2D_PHYSICS, 2D-OPTOSPIN....)</li> </ul>
Key actors	Academia, RTOs
Link to other topics	<p>Graphene Flagship (<a href="https://graphene-flagship.eu/">https://graphene-flagship.eu/</a>)</p> <ul style="list-style-type: none"> <li>IAM4EU SRIA (<a href="https://www.iam-i.eu/wp-content/uploads/2025/02/SRIA-Innovative-Advanced-Materials-for-Europe.pdf">https://www.iam-i.eu/wp-content/uploads/2025/02/SRIA-Innovative-Advanced-Materials-for-Europe.pdf</a>)</li> </ul>
Upcoming events	

**HORIZON-CL4-2027-04-DATA-03 : New approaches for decentralized, federated and sustainable AI data processing**

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	<b>18/03/2027</b>	35	17,5	2	RIA	NO	3-7	EU 27, General Annex B	YES

Expected Outcomes	<p>Project results are expected to contribute to developing new approaches, tools and techniques that overcome the obstacles of today's centralised AI compute techniques: limits in the availability of energy and AI compute capacity in centralised standalone environments, limited availability of types of AI chips, data quality and security and latency in AI data processing. The ultimate objective is to help overcome EU's AI compute capacity bottlenecks by offering alternative decentralised and sustainable AI compute models that enable exploitation of diverse hardware processing architectures and scaling approaches.</p>
Scope	<p>This topic focusses on technologies and techniques that enable AI data processing to leverage distributed compute resources across the cloud and edge computing continuum throughout the whole AI model lifecycle from data collection, training, fine-tuning, and deployment. To overpass today's state of the art in the area, the considered research areas include:</p> <ul style="list-style-type: none"> <li>• To research on distributed, decentralised, and federated “compute continuum” enabled AI architectures beyond federated learning and integrating model compression tools and new mechanisms to enable AI data processing to scale across multiple and diverse computing infrastructures.</li> <li>• Development, deployment, and operation of AI workflows across heterogeneous and distributed infrastructures along the compute continuum (edge, cloud, HPC), including the possibility of incorporating innovative computing paradigms (neuromorphic and quantum computing) and hardware efficiency enhancements ((e.g., including in-memory computing, and hardware and software approximation).</li> <li>• Novel methods and techniques to improve data availability and consistency for decentralised AI data processing. These consider tools to ensure data quality (e.g. prevention of data sets imbalance or inconsistency across distributed data sources), volume optimisation for data transfers across environments, and distributed data management, all while preserving data privacy and preventing data leaks (e.g. via advanced cryptographic protection such as post-quantum cryptography for resistance to emerging quantum threats).</li> <li>• New tools and mechanisms to measure, monitor and improve end-to-end energy efficiency and sustainability of AI data processing across the compute continuum, including the exploration of energy and sustainability implications of the heterogeneous AI processing architectures and their impact in the compute infrastructure design and long-term sustainability.</li> </ul> <p>Successful project proposals should showcase proposed developments in at least two complementary use cases in different domains. These use cases should demonstrate the value gained and potential impact of project achievements in real-world situations, as well as address key applications and sectors critical to Europe's competitiveness. Use cases should provide compelling examples and scenarios and cater for the reproducibility of results' added value and impact in additional economic sectors.</p>
Link to other topics	<p>Applicants will detail any relevant previous projects on which the project will expand.</p> <p>Applicants will detail their plan to creating synergies with other topics such as those in the WP25 Open Internet Stack, 3C, Virtual Worlds/Web4.0 as well as like-minded initiatives on the same solution perimeter.</p>

## HORIZON-CL4-2027-04-DATA-08 : Demand-side 3C pilot demonstrators on converged Telco Edge Cloud Infrastructure

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	18/03/2027	38	19	2	IA	NO	6-8	EU 27 + IC, NO, CA, IS, KO, NZ, SW, UK	YES

Expected Outcomes	<ul style="list-style-type: none"> <li>Demand-side driven validation of open orchestration platforms across the telco-cloud edge continuum unlocking notably the transformative value of AI for European businesses, driving business growth in multiple industries strategic for Europe</li> <li>Enabling the path towards sustainability and competitiveness of key vertical sectors in the EU, exploiting the innovative features of 3C/ telco-edge-cloud, including network features such as API (Application Program Interface) aggregation, slicing, automation, latency, security, ISAC (Integrated Sensing and Communication), reconfigurability, to significantly improve quality of service, resilience, sustainability and other performance parameters of digital communications</li> <li>The demand pilots will have a clear sector relevance, with one pilot addressing the future of smart mobility including the automotive sector</li> <li>A vibrant ecosystem around 3C/telco-edge-cloud infrastructure, targeting SMEs and start-ups to develop innovative services and new business models validation and marketplace exploitation strategies, as well as paths to commercialization or replicability.</li> </ul>
Scope	<p>Up to two pilot demonstrators on below listed specific verticals are expected.</p> <ul style="list-style-type: none"> <li>One pilot demonstrator focusing on <b>Mobility covering specific areas of transport, logistics and the Automotive industry</b>. The pilot should support the strategy as developed by the Connected and Automated Vehicle Alliance identified in the <a href="#">Automotive Action plan</a>, in particular Pillars 3 (AI models) and 5 (Large-scale testing), which will be launched in 2025</li> <li>One pilot demonstrator focusing on <b>another vertical sector such as energy, smart communities, industrial virtual worlds, health, agrifood or manufacturing</b>.</li> </ul> <p>They would be driven by a consortium including partners both from the demand (user) and infrastructure supply side. The pilot demonstrators should take advantage of open application interfaces, explore the possibilities of AI, “virtual worlds”, and other innovative technologies for practical implementation in the referred vertical domains. They should leverage combined investments in network infrastructure, computing and connectivity infrastructure as an enabler for more extensive set of digital innovation, with cognitive cloud computing and swarm intelligence, generative AI and LLM, as well as on-boarding of XR/AR technologies, being ranked most important.</p>
Link to other topics	<p>The 3C Network large-scale pilot funded under topic HORIZON-CL4-2025-03-DATA-08: Large-scale pilots for supply end-to-end infrastructures integrating device, network computing and communication capabilities for Telco Edge Cloud deployments, as a basis for Connected Collaborative Computing Networks (3C networks)(RIA) is setting up end-to-end integrated infrastructures and platforms, bringing together players from different segments of the connectivity and compute value chain and beyond. The main target is to research and validate the integration of device, network, cloud and edge computing, and communication capabilities for telco edge cloud deployments to realize a ubiquitous mesh of computing and communication resources. As a main outcome the supply side pilot establishes an open orchestration platform across the telco-cloud-edge continuum, exploits the transformative value of AI and builds on the integration of solutions developed by the Open Euro Stack.</p> <p><b>Demand- side pilot demonstrators called in this topic will build on the above supply side large-scale pilot</b> and integrate future domain-specific applications and services with an emerging European 3Cs/ telco-edge-cloud infrastructure, leveraging different network features. Key features will include security and privacy solutions offering resistance to emerging quantum threats (such as via post-quantum cryptography), mobility, and service continuity across inter-domain and multi-cloud deployments and ecosystems.</p>

## HORIZON-CL4-2027-04-DATA-09 : Energy efficiency and sustainability of AI data processing in Data Centres

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	18/03/2027	39	~10	3	IA	NO	6-8	EU 27, General Annex B with the "restriction on control in innovation actions in critical technology areas"	NO

Expected Outcomes	<p>Improved availability, accuracy, privacy and interoperability of data</p> <ul style="list-style-type: none"> <li>• AI-driven compliance technologies and regulatory tools that reduce administrative burdens, promote regulatory efficiency</li> <li>• Agile regulatory processes, cross-border compliance and interoperability, transparency and trust</li> <li>• Enhance competitiveness, digital sovereignty, better public services through better (real/synthetic) data for AI</li> </ul>
Scope	<ol style="list-style-type: none"> <li>1. Direct on-chip cooling and thermal management, including novel and innovative cooling techniques applied at chip and module level (direct liquid cooling, heat spreaders, thermal interface materials, and advanced packaging) and multi-scale thermal management techniques.</li> <li>2. Energy-efficient power backup and storage systems: Innovations in early-stage energy storage concepts (graphene-enhanced batteries, supercapacitors, and other emerging battery chemistries) and approaches for net-zero backup.</li> <li>3. Sustainable data centre architectures and AI workload optimization: addressing AI-driven workload scheduling, adaptive power management, dynamic resource allocation and integration of data centre heat capture and reuse.</li> <li>4. Materials research for energy efficiency: Projects to make use of existing research in new materials and components supporting energy efficiency and thermal management, and to employ these for data centres benefit.</li> <li>5. Optimisation of data centre operation and functioning: explore AI solutions to optimize the Data centre functioning, computing architecture, and virtualization, minimizing its carbon and environmental footprint.</li> <li>6. Integration of data centres into energy systems and the wider region: including solutions that integrate Data centres into energy system planning and operation.</li> </ol> <p>Aside from these, the pilot demonstration site must allow to combine the outcomes supplied by the other funded projects in the topic and enable for showcasing, benchmarking, and promoting their results across interested industrial stakeholders, including the European data centre and collocation industry, as well as other AI data centre operators, such as cloud and edge computing providers.</p> <p>Overall, this topic is expected to fund four projects. Three projects are expected to address expected outcomes 1-3, while a fourth project is expected for expected outcome 4 (the open pilot demonstration site). For projects addressing expected outcomes 1-3 at least two use cases should showcase each project results.</p>
Link to other topics	Projects funded under this topic are encouraged to build synergies and leverage their outcomes with funded projects from Cluster 5 HORIZON-CL5-2027-05-D4-06: Thermal energy optimisation and waste heat recovery of high energy demand IT rooms in buildings or small edge data centres.
Upcoming events	WP 2026-27 v4

**HORIZON-CL4-2027-04-DIGITAL-EMERGING-03 : Advanced integrated photonic devices for extended features and ultra-low power consumption (RIA)(Photonics Partnership)**

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	18/03/2027	25	3 to 5	6	RIA	NO	3-6	EU 27+ ISL, NOR + pays associés : CAN, ISR, KOR, NZ, SW, UK.	NO

Expected Outcomes	<ul style="list-style-type: none"> <li>• Advanced integrated photonic devices and circuits with enhanced functionality and performance enabling wider application across multiple sectors including digital, automotive, industrial, health and security</li> <li>• Reinforced competitiveness of EU photonics actors by demonstrating advancements in representative system configurations and validating real-world applicability</li> <li>• Significantly improved performance of electro-optic systems in applications such as communication, computing, sensing, medical diagnostics, data processing, AI supporting the introduction of photonic elements into such systems</li> <li>• Low power consumption sensors with increased performance in application domains</li> </ul>
Scope	<p>R&amp;I should enhance the functionality, efficiency, and integration of photonic devices and circuits with a focus extended system performance. Action should address at least two of the following aspects.</p> <ul style="list-style-type: none"> <li>• Enhanced performance through improved spectral purity, wavelength coverage, output power and noise characteristics.</li> <li>• Increased modulation or detection speeds going beyond the capability of existing PIC material platforms, improved signal-processing capabilities, and integration of novel materials such as thin-film LiNbO<sub>3</sub>, BTO, graphene, silicon carbide, phase change materials and TMDCs.</li> <li>• Miniaturised, high-complexity photonic circuits (e.g. multilayer photonics, chiplets, multiple integrated functional elements), scalable interconnects and electronics-photonics integration (co-packaged, heterogeneous, or monolithic) to improve performance, reliability, and cost-efficiency.</li> <li>• Reduction of power consumption for example through improved electrical-to-optical conversion, lower optical losses, devices operable at higher temperatures to reduce cooling needs, and low-power circuit actuation and control.</li> </ul> <p>Proposals should consider system-level impact and demonstrate advancements in representative configurations relevant to one or more application domains.</p>

## HORIZON-CL4-2027-04-DIGITAL-EMERGING-04 : Challenge-Driven AI Innovation Booster in Apply AI prioritised sectors

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	18/03/2027	42	14	3	RIA	NO	2-5	EU 27, Annex B	YES

Expected Outcomes	<p>The Apply AI Strategy<sup>105</sup> proposes a comprehensive set of measures to notably harness the transformative potential of AI. It lays down targeted measures to boost AI use in key strategic sectors of the EU economy including healthcare, mobility and manufacturing for example. With challenges designed to spark breakthroughs in such strategic sectors, the current topic will directly support key activities of the Apply AI Strategy.</p> <p>Project results are expected to contribute to all of the following expected outcomes:</p> <ul style="list-style-type: none"> <li>• Significant technological progress and innovation in Apply AI Strategy's prioritised sectors driven by challenge-oriented, AI-powered solutions.</li> <li>• Increase competitiveness and visibility of the relevant AI community within key application domains, and promote collaborative approaches for AI development in these domains, fostering the ecosystem.</li> <li>• Increase adoption of AI technologies across the following three key application domains: healthcare, advanced manufacturing (including AI-powered robotics) and in-vehicle autonomous driving.</li> </ul>
Scope	<p>This initiative seeks to boost Europe's developer community and the adoption of powerful, trustworthy AI solutions in three strategic domains such as:</p> <ul style="list-style-type: none"> <li>• In healthcare - advanced AI will accelerate diagnostics and treatment plans, enhance robotic surgery, or improve patient care through predictive analytics.</li> <li>• In advanced manufacturing - advanced AI will optimize production processes, improve quality control and product design, or enable predictive maintenance.</li> <li>• In autonomous driving - advanced AI will enhance vehicle safety, improve navigation systems, or optimize traffic management. Provided sufficient quality of the proposals received, at least one selected project will focus on in-vehicle autonomous driving applications, in line with the Automotive Action Plan, ensuring coordination with the announced Connected and Autonomous Vehicle Alliance.</li> </ul> <p>Each proposal should focus exclusively on one of the three key sectors mentioned above.</p> <p>It is expected to focus primarily on the definition and organization of a multi-stage competition in the chosen sector, as well as on the accompanying support to the SMEs/teams taking part in each of the challenges.</p> <p>User-industry companies from the strategic sector targeted by the proposal should be core partners in each consortium.</p>
Stages	<p>For each proposal:</p> <p><b>Stage 1</b> - Open call: The consortium launches an open call for proposals. A challenge, open to all, will allow the selection for Stage 2 of the 10 highest-ranked proposals according to a pre-defined selection process and criteria. Each solution is expected to be submitted either by a single SME, developer of advanced AI solutions, or a small team of organizations led by such SME.</p> <p><b>Stage 2</b> - Competition among Stage 1 winners: The 10 teams or organisations selected from Stage 1 receive a EUR 300,000 FSTP grant each in accordance with their successfully selected proposal (which addresses the tasks and challenges defined for this stage by the consortium). At the end of Stage 2, the 4 highest-ranked solutions will be selected for the next stage according to a pre-defined selection process and criteria.</p> <p><b>Stage 3</b> - Grand finale (Competition among Stage 2 winners): The 4 teams or organisations selected from Stage 2 receive EUR 2,250,000 FSTP grants each in accordance with their successfully selected proposals to address the tasks and challenges for this stage. In conjunction, they will prepare for the grand finale that will identify the best performing solution at the end of Stage 3 according to the evaluation methodology defined by the consortium.</p>

## HORIZON-CL4-2027-04-DIGITAL-EMERGING-05: AI-Driven Robotics for Industry: Enabling System Integration and Adoption

Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
18/03/2027	18	18	1	IA	No	4-7	EU 27 + IC, NO, CA, IS, KO, NZ, SW, UK	Yes

Expected Outcomes	<ul style="list-style-type: none"> <li>Wider and faster deployment of robotics, bridging the gap between technology providers and end-users.</li> <li>Development and implementation of modular and interoperable integration frameworks and solutions, including standardized protocols for data, training and safety testing, evaluation and validation of robotic solutions in key use cases</li> <li>Improved competitiveness of European industries, notably SMEs via the development of advanced robotics systems, intelligent planning and control systems, user feedback rendering techniques and cutting-edge AI innovations</li> </ul>
Scope	The project will address the current European gap in system integration capabilities for robotics solutions addressing the various needs of industries. The project will aim at disseminating a deep understanding of state-of-the-art robotics components, including both hardware and software, and expertise in addressing interoperability issues for the upskilling of system integrators.
Must have	<ul style="list-style-type: none"> <li>A deployable, modular integration framework, validated through at least three real-world industrial pilots covering different reference scenarios to demonstrate that the approach can be adapted to varied industrial needs and company sizes, including both SMEs and larger manufacturers.</li> <li>An Integration Kit, building on this framework, which offers ready-to-use modules, example configurations and practical tools that help system integrators and companies to set up, test and run AI-enabled robotics solutions more quickly and with reduced technical effort.</li> <li>Where relevant, high-fidelity digital twin testbeds should be linked to each pilot, allowing safe and realistic testing and training before deployment, and supporting a smooth transition from virtual models to actual production lines.</li> <li>Reusable, datasets (compliant with relevant regulation and IP protection) and practical benchmark tasks</li> <li>A clear Step-by-Step Adoption Guide aimed at SMEs and other end-users, providing easy-to-follow instructions.</li> <li>Concrete contributions to relevant open standards and clear guidance on certification pathways, to help ensure compliance with European regulations and build trust in the safe use of AI in robotics.</li> </ul>
Stakeholders	<ul style="list-style-type: none"> <li>Academia, universities</li> <li>Industry</li> <li>industry partners</li> <li>End-users for validation,</li> </ul>
Follow-up funding	This topic implements the co-programmed European Partnership on AI, data, and robotics (ADRA), and all proposals are expected to allocate tasks for cohesion activities with ADRA

**HORIZON-CL4-2027-04-DIGITAL-EMERGING-06 : International cooperation in AI**

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	18/03/2027	3	1,5	2	IA	NO	5-7	EU 27, Annex B	YES

Expected Outcomes	<p>Project results are expected to contribute to one of the following outcomes:</p> <ul style="list-style-type: none"> <li>• Faster uptake of tailored and enhanced AI solutions at innovation hubs in low- and middle-income countries by training and optimising them with local data and applied research.</li> <li>• Easier large-scale deployment of local AI solutions in low and middle-income countries by increasing the efficiency of system demonstration in relevant, operational environments.</li> <li>• Strengthened local innovation ecosystems that foster sustainable socio-economic impact by addressing key societal challenges in areas such as education, healthcare, agriculture, and environmental sustainability.</li> </ul>
Scope	<p>System prototype, testing, validation, and demonstration in operational environment aligned to EU initiatives, such as the International Digital Strategy for the EU and the AI Continent Action Plan, to strengthen local AI ecosystems in African countries fostering responsible AI development, north-south digital cooperation on AI, and sustainable AI innovation. The main goal is to support the digital transition and foster inclusive economic and social transformation of partners globally by adapting and applying innovative solutions, research areas and capabilities developed in Europe to low- and middle-income countries.</p> <p>This Innovation Action will focus on accelerating the uptake of and access to AI solutions by local innovation hubs in these countries, better enabling their practical implementation and future market deployment in operational environments. Proposals should consider synergies and complementarity of ongoing research and innovation activities in the policy areas of international partnerships, digital and infrastructure like the Digital for Development Hub123 and AI for Public Good124, and may follow an approach like Living Labs. Proposals should also support the European Union’s Global Gateway strategy to boost smart, clean, and secure connections in digital, energy and transport sectors, and to strengthen health, education and research systems across the world. Proposals should enable AI technologies that are locally relevant and sustainable, empower local communities and platforms, and reflect the EU’s emphasis on sustainable and resilient global partnerships.</p> <p>The proposals must support digital partnerships and international digital cooperation to promote an approach to AI that enhances human well-being and societal progress through:</p> <ul style="list-style-type: none"> <li>• Support for gathering of and access to local data in line with EU’s data strategy for the training and optimisation of existing AI algorithms developed in initiatives like AI for Public Good and GenAI for Africa.</li> <li>• Establishment and support of Living Labs within local innovation hubs in low-income countries, fostering co-creation spaces where community members, researchers, entrepreneurs, and policymakers can collaboratively tailor, enhance, test, and iterate AI-driven solutions. These Living Labs will serve as platforms for experiential learning, inclusive participation, and sustainable technology adoption.</li> <li>• Tailored and contextualized AI-based solutions developed through a bottom-up approach, driven by the specific needs of low-income communities. These solutions will be trained and adapted using local data sources, enabling meaningful knowledge transfer and empowering local stakeholders with relevant and actionable technologies.</li> <li>• Contribution, where possible, to solving global sustainable development challenges, especially climate and agriculture, biodiversity, health and humanitarian needs, education.</li> <li>• Fostering an enabling innovation environment with reinforced talent pipelines and technological transfer of AI algorithms and solutions to local innovation hub.</li> <li>• Full testing and validation of the solutions in real-life with scenarios and initial support to large-scale deployment in low and middle-income countries.</li> </ul>

**HORIZON-CL4-2027-04-DIGITAL EMERGING-10: Horizon scanning and foresight in future enabling digital technologies**

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	18/03/2027	4	4	1	CSA	YES		EU 27 (restriction to European network)	YES

Expected Outcomes	<ul style="list-style-type: none"> <li>European leadership in foresight activities on future enabling technologies and their transformational potential in industrial, societal and environmental terms.</li> <li>Increased collaboration between academia, industry players and other relevant stakeholders in iterative and multidisciplinary approaches for co-creating the enabling technologies of the future.</li> <li>Alignment with national or regional initiatives creating an expanding innovation ecosystem, anchored in local contexts across Europe, for selected emerging technologies.</li> <li>Accelerating the pick-up of novel advanced technology by industry and society.</li> </ul>
Scope	<p>Proposals should establish a forum for emerging interdisciplinary areas and new technological visions.</p> <p>Proposals should enable and support a broad range of participants (across disciplines in science and engineering, RTOs, industry sectors, stakeholders) to meet, mutually inspire, cooperate and develop together innovative ideas for future enabling digital technologies covering from fundamental research up to proof of concept.</p> <p>Proposals should involve and be driven by representatives of the relevant actors of the field (e.g., academia, RTOs, industry including SMEs).</p> <p>Proposals should consider civil society engagement for seeking wider input.</p> <p>Proposals should connect with analogous EC-internal activities, either ongoing (e.g. FOSI4EIC involving EISMEA and JRC) or foreseen, such as the Competitiveness Coordination Tool and the technology observatory envisaged in the FP10 regulation.</p> <p>Beneficiaries that intend to transfer ownership or grant an exclusive licence must formally notify the granting authority (i.e. DG-CNECT and HaDEA) before the intended transfer or licensing takes place and the granting authority may up to four years after the end of the action object to a transfer of ownership or the exclusive licensing of results.</p>

**HORIZON-CL4-2027-04-DIGITAL-EMERGING-11 : Developing frontier AI solutions that are safe and computationally efficient within Apply AI**

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	<b>18/03/2027</b>	44	44	1	RIA	NO	2-4	EU 27, Annex B	YES

Expected Outcomes	<p>The Apply AI Strategy also seeks to bolster EU capabilities and achieve excellence in AI to support the development of European frontier models. As part of the Frontier AI Initiative, which brings together Europe’s leading actors in the field, this topic will support the development of sovereign frontier AI ensuring safety by design. This topic directly contributes to the Apply AI Strategy. Project results are expected to contribute to all of the following expected outcomes:</p> <ul style="list-style-type: none"> <li>• Strengthened European capabilities in the development of frontier AI models.</li> <li>• Improved computational efficiency of frontier AI models, resulting in reduced computational costs.</li> <li>• Enhanced safety of advanced AI systems based on frontier AI models through the development and implementation of safe-by-design principles and/or AI agents acting as safety evaluators.</li> </ul>
Scope	<p>To advance developments of frontier AI models towards highest-level performance, while ensuring energy efficiency, addressing computational constraints, and strengthening safety. The approach of this topic is twofold. First, it aims to advance the AI field through the development and training of a frontier AI model. The AI model should demonstrate state-of-the-art performance, have multimodal capabilities, and be optimized for agentic AI capabilities such as tool use, reasoning, and autonomous problem-solving. Second, this topic supports research on comprehensive methods to reduce the computational demands of frontier AI models and to ensure their safety, including technical methodologies such as automated testing and interpretability. The primary drivers behind computational efficient AI systems are the urgent challenges posed by the growing energy footprint of AI and current computational limitations. Modern AI models, especially frontier AI models, require substantial computational resources, with a significant impact in the environment. Additionally, they create barriers to entry to those interested in advancing the AI field. Key research areas include compression and distillation techniques aimed at reducing the complexity of large AI models. Innovations in AI architectures are also relevant, with a focus on innovative models that significantly lower computational demands for training and inference. Further, algorithmic approaches aimed at minimizing computational load during pre-training, post-training, and inference can also be considered.</p> <p>Ensuring the safety of AI systems is essential, especially as AI models become increasingly sophisticated and pervasive. Potential research areas to be considered include addressing misalignment, particularly the unintentional misalignment of large AI models. Work in this area could explore methods to detect and mitigate sophisticated misbehaviour, such as alignment faking, reward hacking of human oversight, and encoded reasoning in chain-of-thought (CoT). Additionally, research could focus on enhancing robustness against adversarial attacks, jailbreaks, and backdoors. Further potential areas for innovation include advancing AI models transparency and interpretability. Safety research could also consider risks that may arise when embedding frontier models within agentic AI frameworks, significantly contributing to the trust and safe adoption of powerful AI solutions.</p>
Link to other topics	<p>This topic contributes to the EU Frontier AI initiative. The project should establish strong links with the Resource for AI Science in Europe (RAISE), ensuring that its priorities inform the research topics addressed. Activities are expected to involve the European AI research community and attract and retain top AI talent working on frontier models and related areas. All proposals are expected to incorporate mechanisms for assessing and demonstrating progress, including qualitative and quantitative KPIs, benchmarking, and progress monitoring. When possible, proposals should build on and reuse public results from relevant previous funded actions. Communicable results should be shared with the European R&amp;D community through the AI-on-demand platform.</p> <p>The project selected in this topic should link to the resources offered by the AI Factories and the Data Labs. Where relevant, it could also establish links with European companies developing frontier AI models.</p> <p>All proposals are expected to allocate tasks for cohesion activities with the European Partnership on AI, data, and robotics (ADRA) and the CSA HORIZON-CL4-2027-DIGITAL-EMERGING-11: GenAI4EU central Hub.</p>

**HORIZON-CL4-2027-04-HUMAN-01 : Advanced and Innovative hardware components for Virtual Worlds**

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
-	18/03/2027	39	4.8 - 5.6	8	RIA	No	3 to 5	UE 27 Annexe B	No

Expected Outcomes	<ul style="list-style-type: none"> <li>Innovative and advanced XR hardware, advanced headsets, screens, wearables and haptic components, sensors and actuators, advanced chips for a deeper and closer-to-reality immersion, stimulating all human senses.</li> <li>Proposals should investigate novel scientific approaches or push the limit of existing ones to improve the synchronization and integration of the different modalities.</li> <li>Proposals will integrate various components in fully tested devices, demonstrating the usefulness and efficiency of their system in illustrative scenarios in the industrial and societal contexts.</li> <li>Proposals should focus on performant, reliable, miniaturised, interoperable advanced and innovative technologies, with inclusivity, energy consumption and energy efficiency at the centre of concerns.</li> <li>The Consortium should pay attention to developing solutions that are reliable, robust and interoperable. Proposals should leverage existing open standards and technologies in the domain of Virtual Worlds, while contributing to ongoing standardisation work.</li> <li>Proposals should involve the effective contribution of Social Sciences and Humanities (SSH) disciplines and SSH experts</li> </ul>
Do not want	<ul style="list-style-type: none"> <li>State-of-the-art applications</li> <li>Non suitable, unethical or unsafe solutions</li> <li>Research non-grounded into real world scenarios</li> <li>Non-transdisciplinary research</li> <li>Research that does not involve end-users</li> </ul>
Topic evolution	<ul style="list-style-type: none"> <li>This topic is in line with the previous XR calls since 2021 under Pillar 2, Cluster 4, DESTINATION 6: A HUMAN-CENTRED AND ETHICAL DEVELOPMENT OF DIGITAL AND INDUSTRIAL TECHNOLOGIES :</li> <li>2021 - 5 topics in XR (on innovation for media, haptics, modelling, collaborative telepresence and Ethics, Interoperability and Impact) / 2022 - XR Learning - Engage and Interact (IA) / 2022 - eXtended Reality Technologies (RIA) / 2023 - Next Generation eXtended Reality (RIA) / 2023 - eXtended Reality for Industry 5.0 (IA) / 2025 - GenAI4EU (IA) / 2025 - Core technologies for virtual worlds (RIA)</li> </ul>
Initiatives that proposers should be aware of	<ul style="list-style-type: none"> <li>AR-VR Industrial Coalition</li> <li>Virtual Worlds partnership</li> <li>HORIZON-CL4-2027-04-HUMAN-02 : Create A thriving and competitive Virtual Worlds and Web4.0 ecosystem</li> </ul>
Existing projects	<ul style="list-style-type: none"> <li>All the information on current projects is available at: <a href="https://europa.eu/!7kJMmJ">https://europa.eu/!7kJMmJ</a></li> </ul>
Stakeholders	<ul style="list-style-type: none"> <li>Research institutions and universities, SMEs and start-ups, Targeted industries, End-users, XR Community in general</li> <li>Special attention will be given to proposals including interdisciplinary research</li> </ul>
Additional background documents	<ul style="list-style-type: none"> <li>Strategic Research and Innovation Agenda (SRIA) of the Virtual Worlds Partnership</li> <li><a href="https://www.virtualworldsassociation.eu/actions/strategic-research-innovation-agenda-virtual-worlds-eu">https://www.virtualworldsassociation.eu/actions/strategic-research-innovation-agenda-virtual-worlds-eu</a></li> <li>Horizon Europe Cluster4 INFO DAYS - 29-30/01/2026</li> </ul>

**HORIZON-CL4-2027-04-HUMAN-02: Create A thriving and competitive Virtual Worlds and Web4.0 ecosystem**

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	Pays/restrictions	Restriction Telecom
	18/03/2027	3	3	1	CSA	No	EU 27 + IC, NO additional associated countries: Canada, Israel, the Republic of Korea, New Zealand, Switzerland, and the United Kingdom	Yes

Expected Outcomes	<ul style="list-style-type: none"> <li>Review and, if necessary, update the Strategic Research and Innovation Agenda (SRIA) for Virtual Worlds in Europe, for useful, open, interoperable, inclusive, sustainable and trustworthy virtual worlds systems and applications, ensuring these reflect EU values and principles. Smart digital assistants and 3D chatbots for a safe and inclusive navigation.</li> <li>Strengthening of the European Virtual Worlds Partnership by providing continuous support.</li> <li>Reinforcement of the competitive ecosystem, with European companies playing a leading role in the adoption and acceptance, and in the development and deployment of Virtual Worlds technologies.</li> <li>Reinforced links among initiatives in virtual worlds in Horizon Europe, Digital Europe Programme, and other programmes at EU, national and regional levels</li> <li>Widespread awareness and outreach programmes.</li> <li>Increased adoption of virtual worlds that are open, accessible and inclusive, interdisciplinary, safe and respect ethical values and European legal framework, including regarding privacy, security in all Member States and Associated Countries</li> <li>Strengthening and promotion of standardisation methods for virtual worlds technologies and in support of the EU regulatory framework.</li> </ul>
Topic evolution	<ul style="list-style-type: none"> <li>This topic is new in terms of its scope, complements activities in HUMAN-16 of WP 2025.</li> <li>Can leverage the strong and active communities of European Open Source innovators which were supported in previous NGI topics</li> </ul>
Initiatives that proposers should be aware of	<ul style="list-style-type: none"> <li>CSA: HORIZON-CL4-2025-03-HUMAN-17</li> <li>Virtual Worlds partnership</li> </ul>
Existing projects	<ul style="list-style-type: none"> <li>All the information on current NGI projects is available at: <a href="http://www.NGI.eu">www.NGI.eu</a></li> <li>Some of these projects are active in the targeted areas of this call even though not necessarily in the context of Web 4.0 / Virtual Worlds</li> </ul>
Stakeholders	<ul style="list-style-type: none"> <li>Proposals should involve and be driven by representatives of the relevant actors of the field (e.g., academia, RTOs, industry including SMEs).</li> </ul>

## HORIZON-CL4-2027-04-HUMAN-07: Facilitate the engagement of European stakeholders in international digital standardisation (CSA)

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum + FSTP	TRL	Pays/restrictions	Restriction Telecom
	18/03/2027	7M€	7M€	1	CSA	Yes		EU 27 + Participating countries	No

Expected Outcomes	<ul style="list-style-type: none"> <li>Increasing the participation and influence of European experts in digital standardisation to promote EU values and strategic interests, contributing to strengthen EU competitiveness in the digital field.</li> <li>Improvement of the skills of European experts, especially from SMEs, R&amp;I institutions, Open-Source community, academia and societal stakeholders, to successfully contribute and lead in the development of digital standards.</li> <li>Development and update of standardisation landscapes and gap analyses of key digital technologies as outlined in the Rolling Plan for ICT Standardisation.</li> <li>Provision of foresight analyses regarding standardisation in new emerging technologies.</li> <li>More awareness of the benefits and competitive advantages of standardisation, in particular for SMEs and researchers, and more visibility of the European digital standardisation ecosystem.</li> </ul>
Scope	<p>Contribute to the implementation of the EU Standardisation Strategy and other policy initiatives such as Europe's Digital Decade or the Competitiveness Compass, with an emphasis on supporting the EU's leading position in global standards-setting of key digital technologies.</p> <p>The goals are inter alia to 1) strengthen the EU competitiveness in the digital domain; 2) contribute to EU tech sovereignty and 3) promote EU values and interests internationally, by empowering and financially supporting the active participation of European stakeholders in the development of digital international standards.</p> <p>The objective is to reinforce the presence of experts from the EU and associated Horizon Europe countries in global digital standards setting, especially those coming from SMEs, R&amp;I institutions, Open-Source community, academia and societal stakeholders.</p>
Link to other topics	<p>The proposal should take into account the previous activities carried out at least in terms of educational material and facilities for funding experts within the topics ICT-40-2017 (implemented by the StandICT.eu project), ICT-45-2020 (implemented under StandICT.eu2023 project), HORIZON-CL4-2022-RESILIENCE-01-21 (implemented under StandICT.eu 2026) and HORIZON-CL4-2024-HUMAN-03-04 (implemented under StandICT.eu 2029).</p>

## HORIZON-RAISE-2027-01-01 : Automated Scientific Discovery

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	02/02/2027	29	10	3	RIA				

Expected Outcomes	<ul style="list-style-type: none"> <li>• Development of closed-loop scientific experimentation systems that integrate automation with AI-driven, trustworthy decision-making processes in existing laboratory environments;</li> <li>• Accelerated scientific discovery with increased efficiency and reproducibility;</li> <li>• Improved scientific productivity; • Advancement of laboratory automation, including development of best practices, challenges, and opportunities for accelerating R&amp;D;</li> <li>• Prototype functional demonstrators that showcase the integration of automation with AI-driven decision-making, enabling the development of closed-loop scientific experimentation systems.</li> </ul>
Scope	<p>This topic addresses the development of safe and trustworthy closed loop scientific experimentation systems through the integration of laboratory automation with AI-driven decision-making processes and robust data infrastructures.</p> <p>Funded projects will help scientific labs with an already advanced level of automation and digitalisation to design, develop, and test the intelligence layer that enables scientific instrumentation to semi- or fully autonomously plan, run, and analyse experiments, ideally in coordination/network with other labs and without requiring a complete redesign of existing laboratory outfitting.</p> <p>Proposals will incorporate comprehensive data management systems capable of handling the collection, storage, processing, and sharing of experimental data. This includes developing scalable and secure data storage solutions, efficient data processing and analysis tools, and mechanisms to facilitate data sharing and collaboration across labs, while ensuring data security and privacy. Systems could incorporate AI-driven resource optimisation modules, actively minimising energy, reagent, and material consumption during automated experimentation cycles. Systems should incorporate appropriate level of security and robustness by design.</p> <p>Proposals should demonstrate how an existing lab can be retrofitted with AI-driven systems to plan, execute, and analyse experiments in a closed-loop fashion, incorporating human oversight and interaction to ensure accuracy, safety, and ethical compliance.</p> <p>Proposals should demonstrate close interdisciplinary collaboration of computer/AI scientists and domain scientists.</p> <p>While the scope of this call prioritises software development, it does not exclude the justified purchase of complementary equipment necessary to implement the research targets of the project. An initial focus on materials science is put forward (Cluster 4). Impact areas of automated experimentation in this field could include (non-exhaustively) drug discovery, battery technologies, photovoltaics, carbon capture/storage, water purification, soil remediation, environmentally friendly fertilizers, development of alternative protein sources in food production, sustainable fabrics/dyes.</p> <p>The thematic focus of this topic can be expanded to include scientific disciplines and experimental settings of interest to collaborating clusters.</p>
Links to other topics	Proposals are expected to develop synergies with running Horizon Europe projects in the same field, for example with HORIZON-CL4-INDUSTRY-2025-01-DIGITAL-61

## HORIZON-RAISE-2027-01-02 : Automated Scientific Discovery – Food

Opérateur	Date limite candidature	Budget (M€)	Aide/projet (M€)	Nbre de lauréats	Type d'action	Lump sum	TRL	Pays/restrictions	Restriction Telecom
	02/02/2027	3	3	1	RIA				

Expected Outcomes	<ul style="list-style-type: none"> <li>• Development of closed-loop scientific experimentation systems that integrate automation with AI-driven, trustworthy decision-making processes in existing laboratory environments;</li> <li>• Accelerated scientific discovery with increased efficiency and reproducibility;</li> <li>• Improved scientific productivity;</li> <li>• Advancement of laboratory automation, including development of best practices, challenges, and opportunities for accelerating R&amp;D;</li> <li>• Prototype functional demonstrators that showcase the integration of automation with AI-driven decision-making, enabling the development of closed-loop scientific experimentation systems.</li> </ul>
Scope	<p>This topic addresses the development of safe and trustworthy closed loop scientific experimentation systems through the integration of laboratory automation with AI-driven decision-making processes and robust data infrastructures. The funded project will help scientific labs with an already advanced level of automation and digitalisation to design, develop, and test the intelligence layer that enables scientific instrumentation to semi- or fully autonomously plan, run, and analyse experiments, ideally in coordination/network with other labs and without requiring a complete redesign of existing laboratory outfitting.</p> <p>Proposals will incorporate comprehensive data management systems capable of handling the collection, storage, processing, and sharing of experimental data. This includes developing scalable and secure data storage solutions, efficient data processing and analysis tools, and mechanisms to facilitate data sharing and collaboration across labs, while ensuring data security and privacy.</p> <p>Systems could incorporate AI-driven resource optimisation modules, actively minimising energy, reagent, and material consumption during automated experimentation cycles. Systems should incorporate appropriate level of security and robustness by design.</p> <p>Proposals should demonstrate how an existing lab can be retrofitted with AI-driven software systems to plan, execute, and analyse experiments in a closed-loop fashion, incorporating human oversight and interaction to ensure accuracy, safety, and ethical compliance.</p> <p>While the scope of this call prioritises software development, it does not exclude the justified purchase of complementary equipment necessary to implement the research targets of the project.</p> <p>Impact areas of automated experimentation in biomass and precision fermentation could include the development of alternative protein sources in food production and alternative fats, bio-based materials, specialty carbohydrates, biotechnologies in food systems (such as biochemicals, microbial cultures, etc), food ingredients.</p> <p>International collaboration is encouraged.</p>



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