BUILDING THE EUROPEAN AI ON-DEMAND PLATFORM

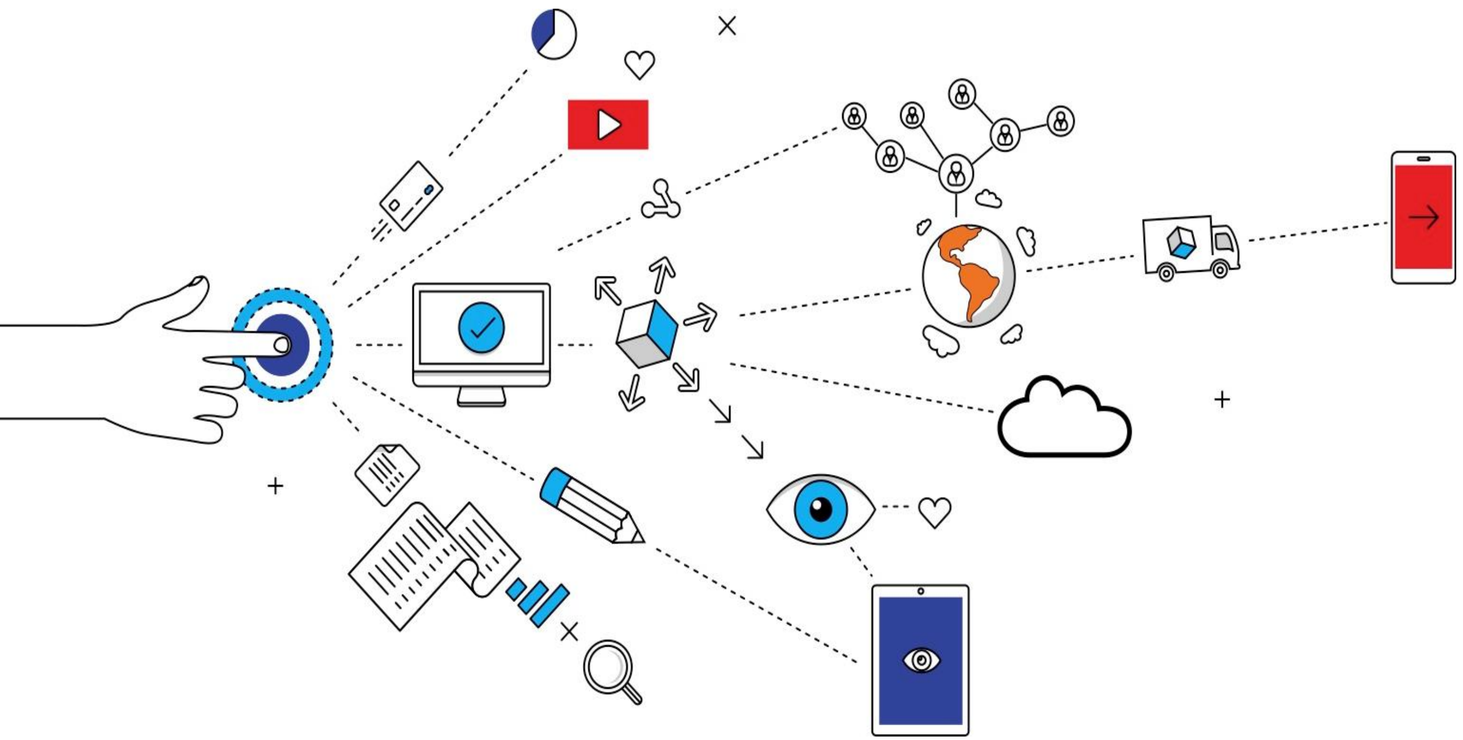
Event,

Date, place

www.ai4eu.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 825619

“ What is AI4EU?



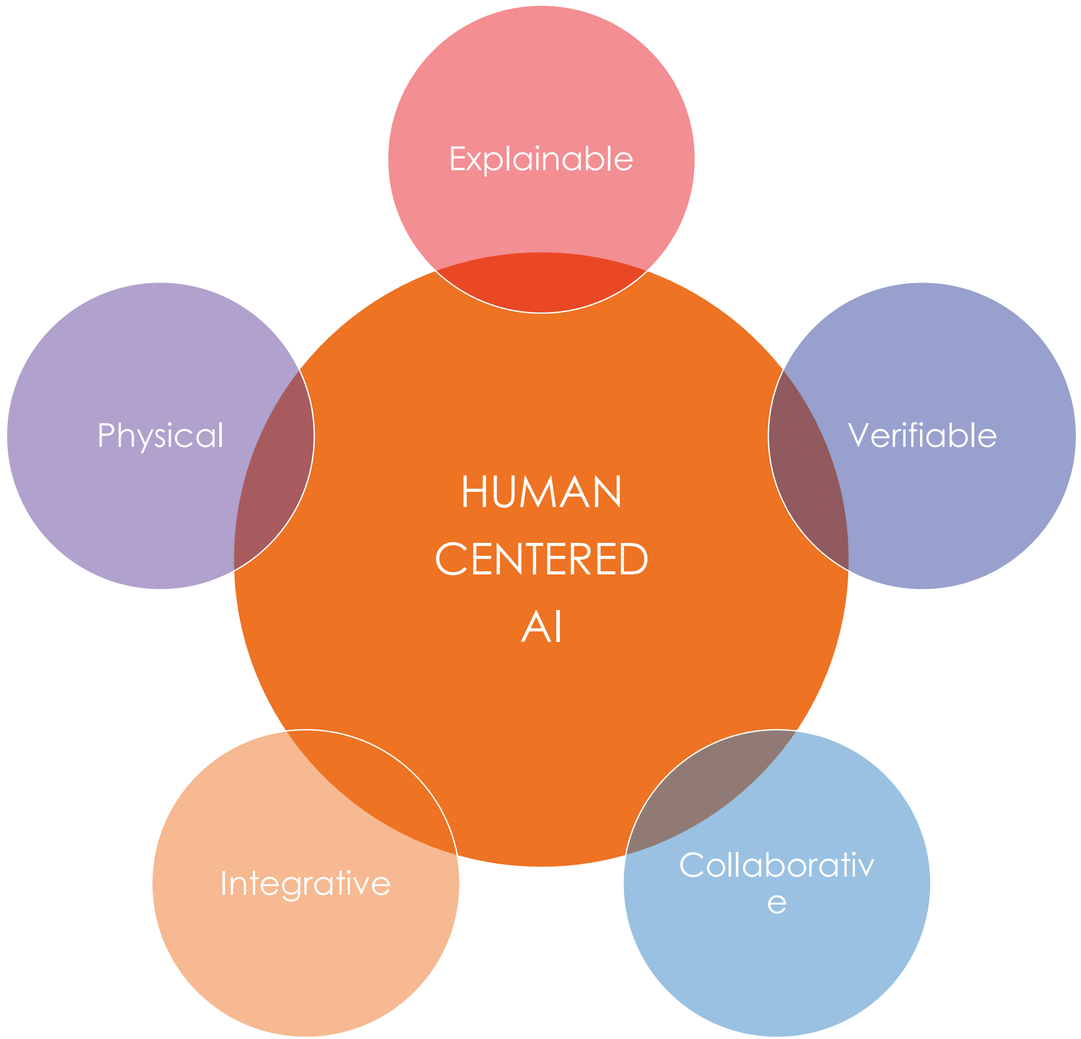
AI4EU is a collaborative H2020 Project that aims to

- **Mobilize the entire European AI community** to make AI promises real for the European Society and Economy
- **Create a leading collaborative AI European Platform** to nurture economic growth

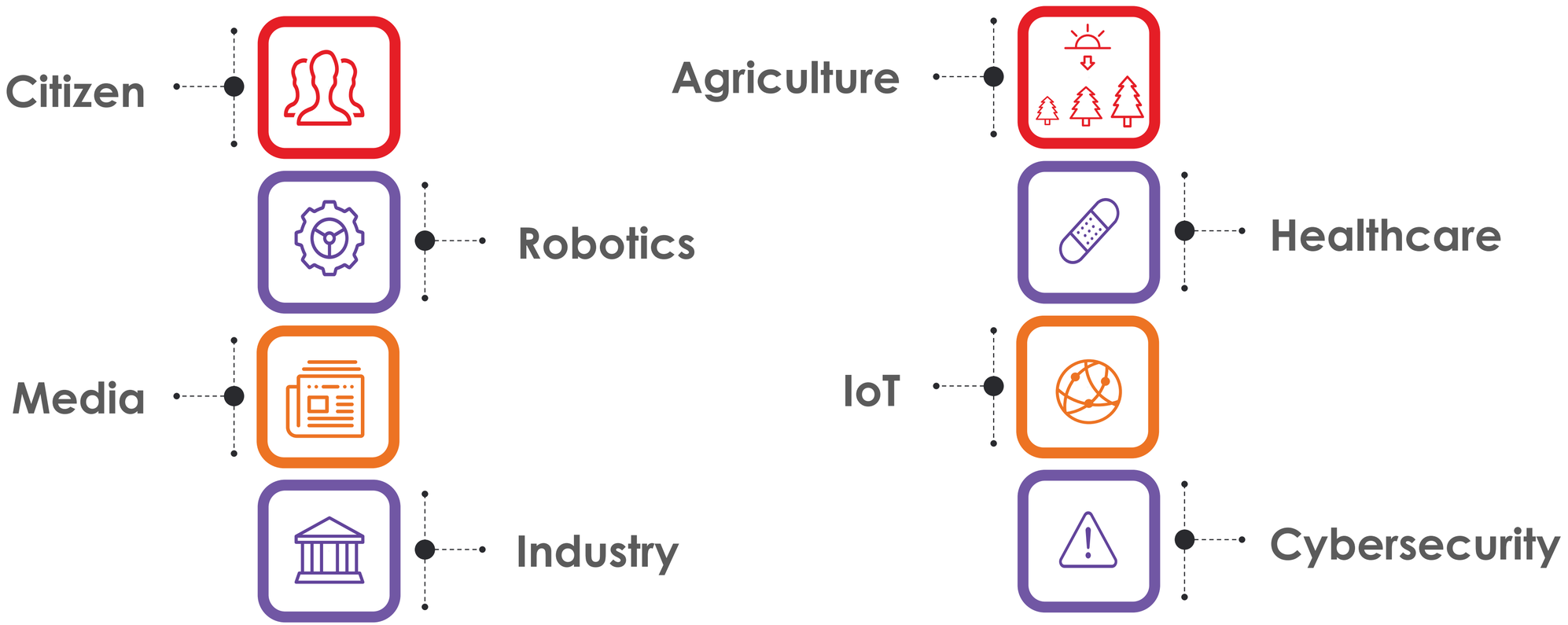
“ Based on 5 research areas

Establishing an Ethical Observatory

Feeding into the Strategic Research and Innovation Agenda



Fed by 8 pilot experiments



Supported on an EU level

81 members

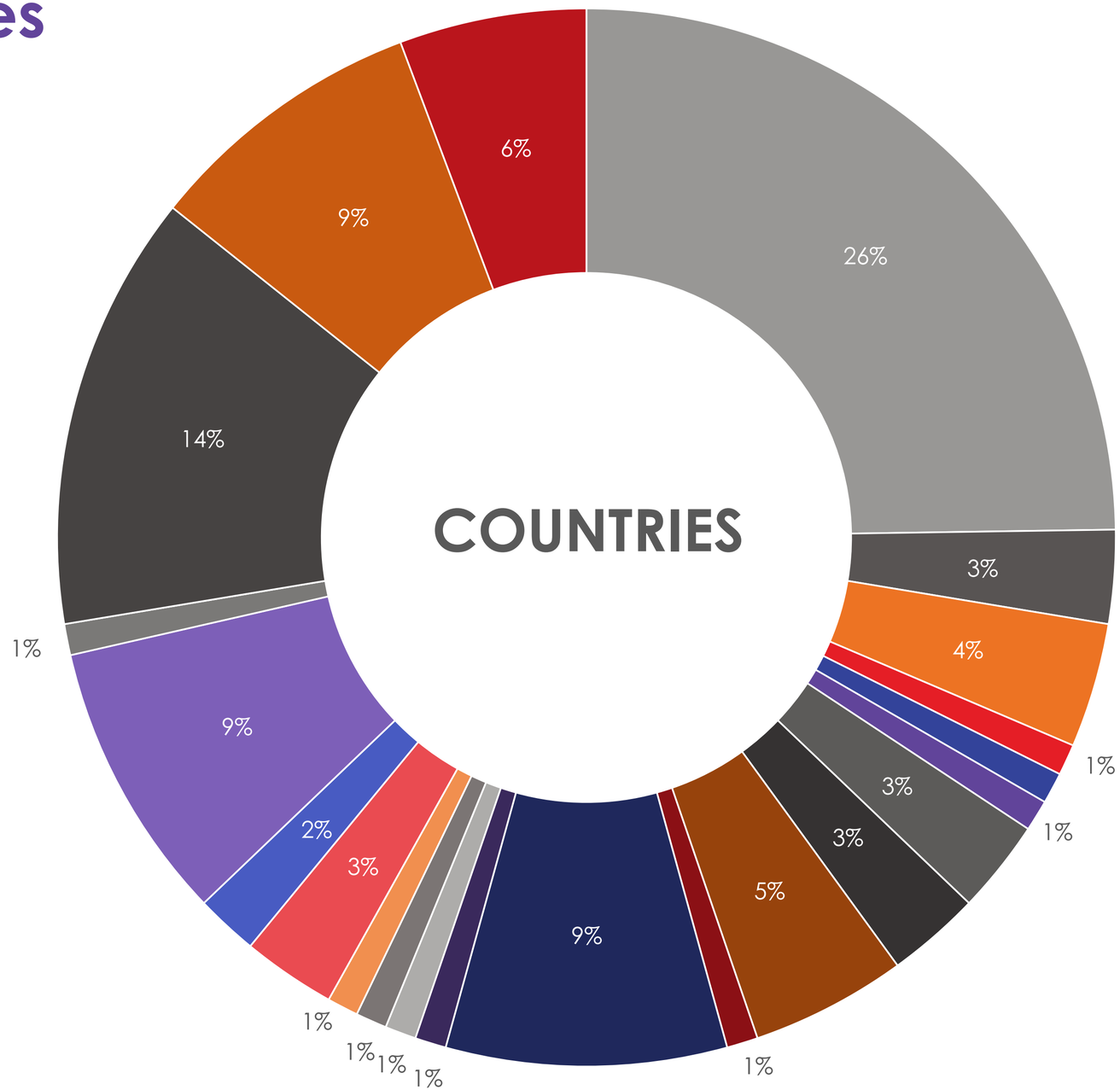
60 leading research institutes

21 partnering countries

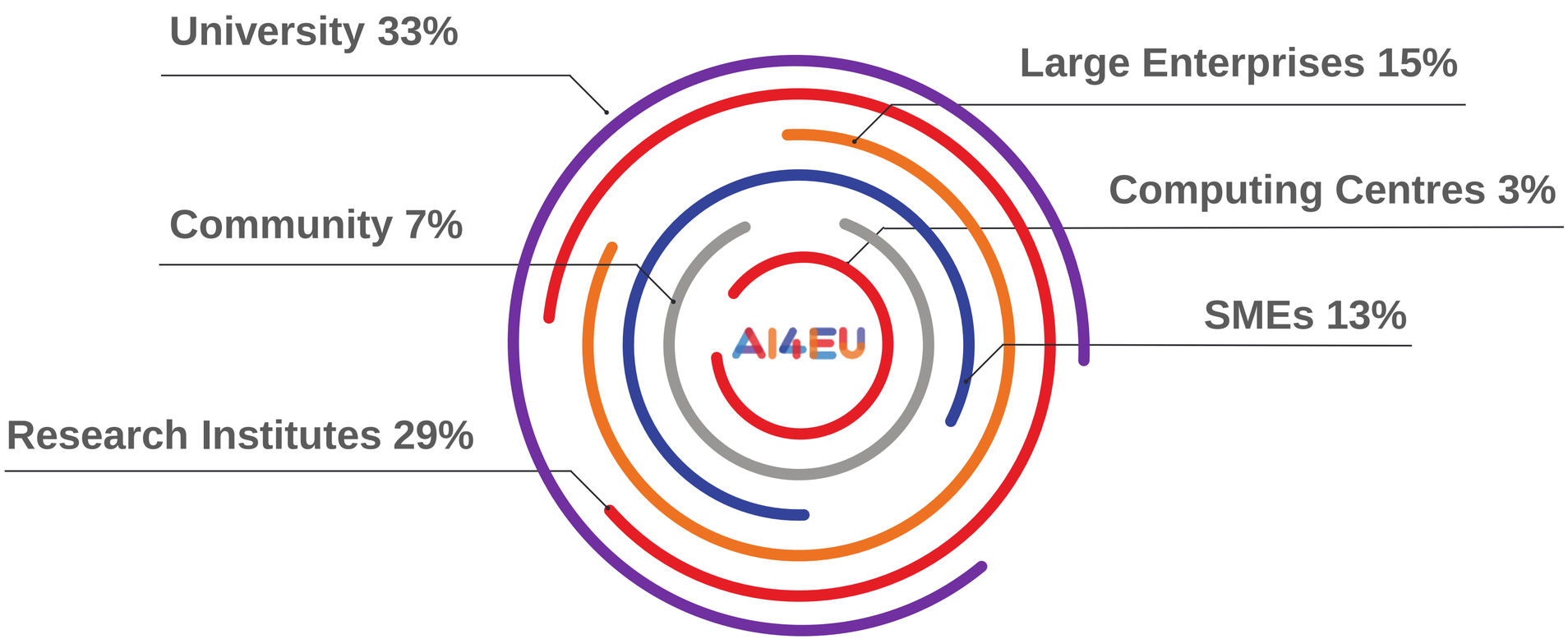
€3M cascade funding

81 Members – 21 Countries

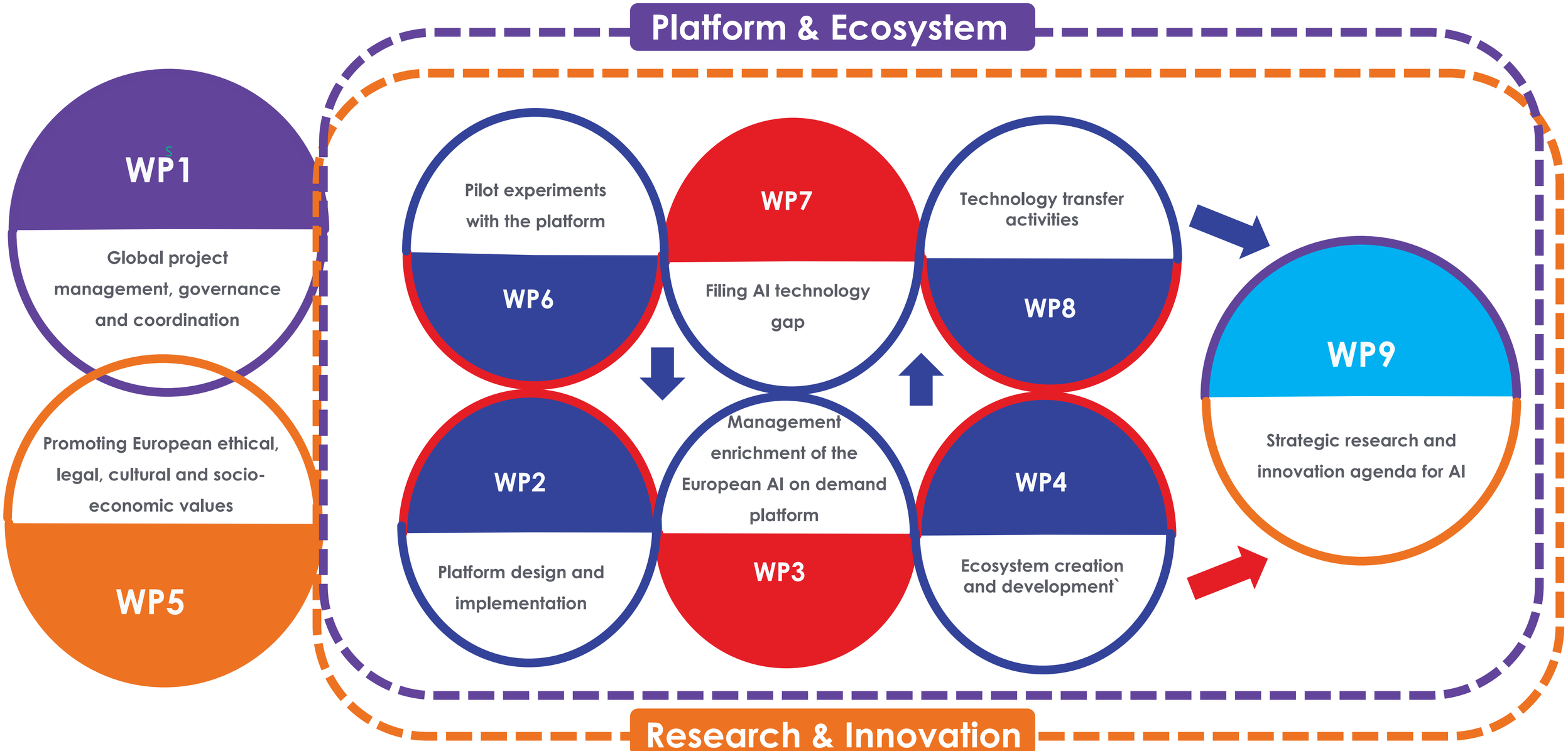
- France
- Belgium
- Switzerland
- Austria
- Norway
- Netherlands
- Luxembourg
- Latvia
- Slovakia
- Czech republic
- Italy
- Hungary
- Poland
- Ireland
- UK
- Sweden
- Slovenia
- Finland
- Portugal
- Spain
- Germany
- Greece

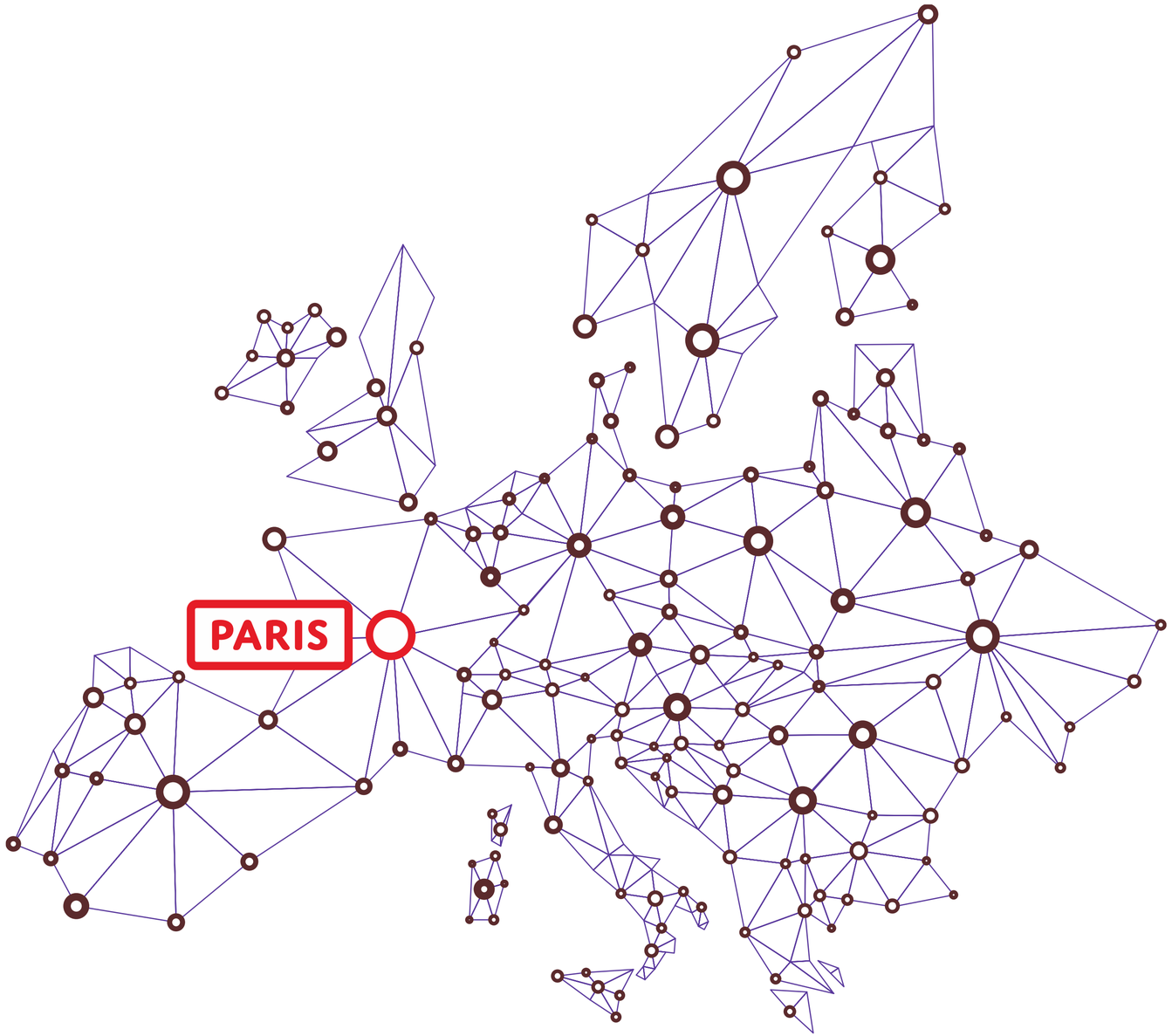


“ A balanced consortium of research and industry



Work Packages at a glance





A European Ambition

- **Mobilize the entire AI community** to make AI promises real for the European society and economy

- Create a leading **collaborative AI European platform** to nurture economic growth

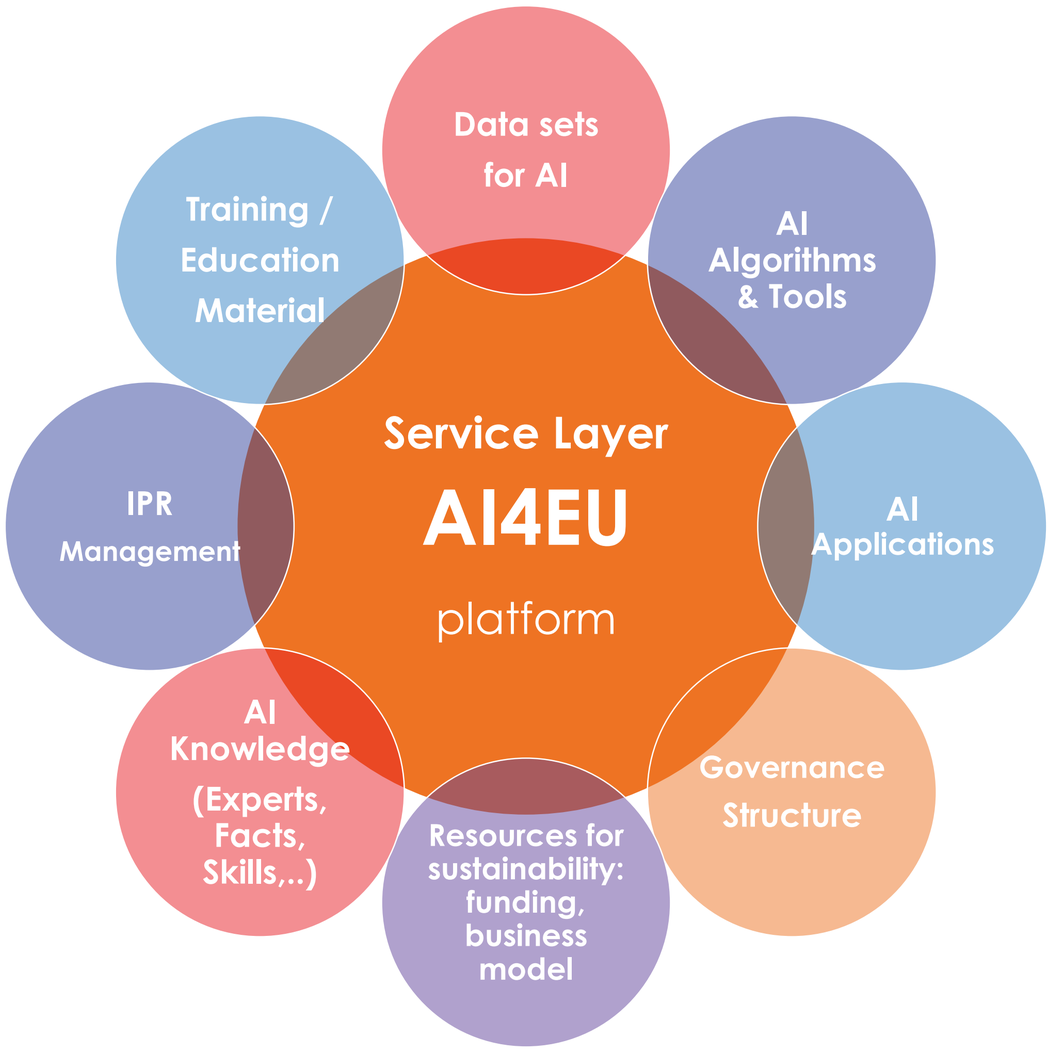
A European Ambition

“How?

- **Build a sustainable Open AI On-Demand-Platform** to make available expertise, knowledge, algorithms and tools to all users from all sectors.
- **Bring all stakeholders together** by organising 6 major community events, by setting up the Open AI On-Demand-Platform and by founding the AI4EU Association.
- **Position the European AI stage as a leader** thanks to an AI fully embedded in **human values and ethics**. Create an **AI4EU Ethical Observatory** so that AI is used in fair, transparent and responsible ways.
- **Fill important technology gaps** through dedicated research, innovation and scale up start ups efforts.
- **Boost AI Research**. Reinforce European excellence and leading position worldwide in major AI research and application domains.
- **Draw a strong and comprehensive Strategic Agenda for European AI** research based on engagement with the community

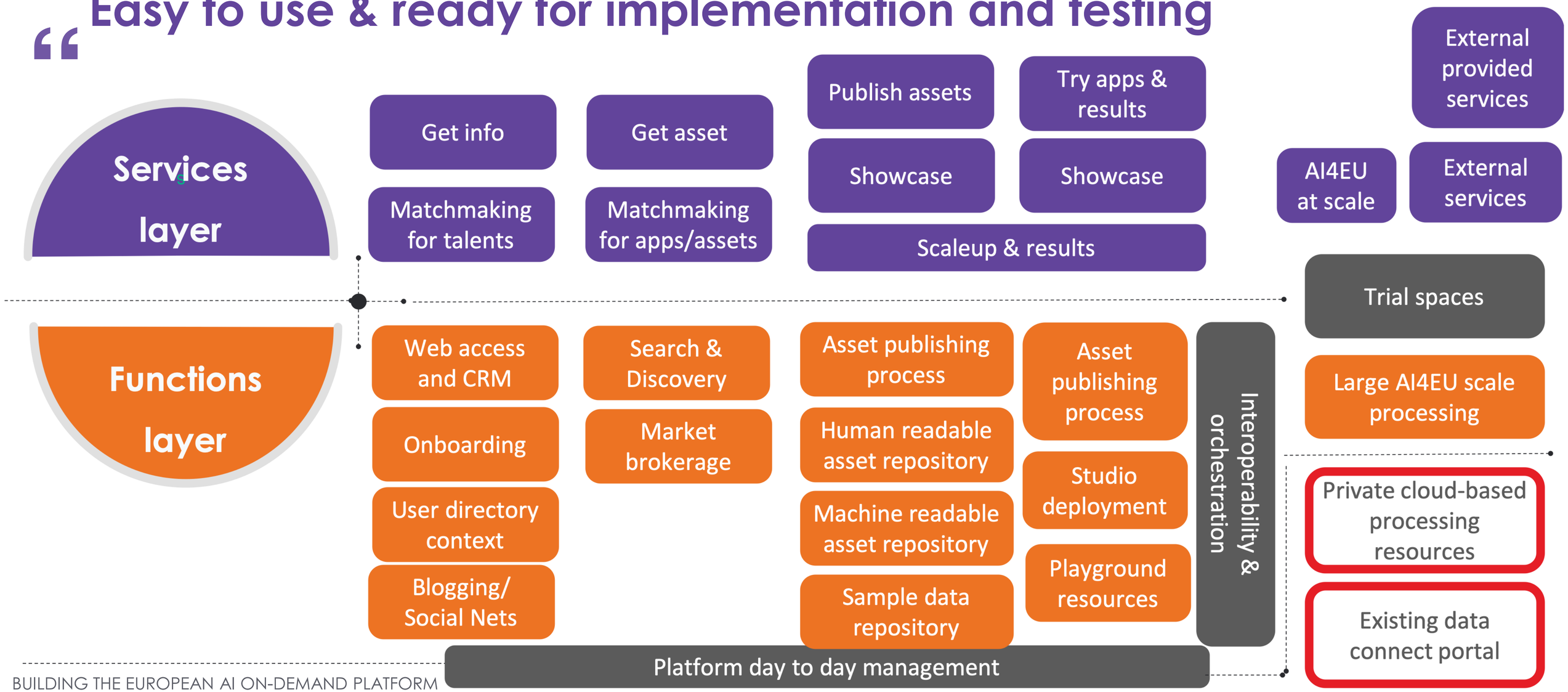
Platform providing services for many actors

- Industry: Large companies
- Startups
- PPP Initiatives
- Researchers
- Developers
- Teachers/Educators
- Society



AI4EU Platform

“Easy to use & ready for implementation and testing



AI4EU Events

- **Bring all stakeholders together** around specific **themes** (Healthcare &AI, Industry 4.0&AI, Environment&AI, IoT&AI…) by organising six local community events in nine different countries.

- **Two events in 2019 :**
  - Paris: April 18th (Palais de Tokyo)
  - **Athens: November 21st – 22nd (Royal Olympic Hotel, Athens, Greece)**

- **Four events in 2020-2021**: a call for applications to consortium members is in place to select the next six cities that will host these events.

Linking AI4EU and European national initiatives

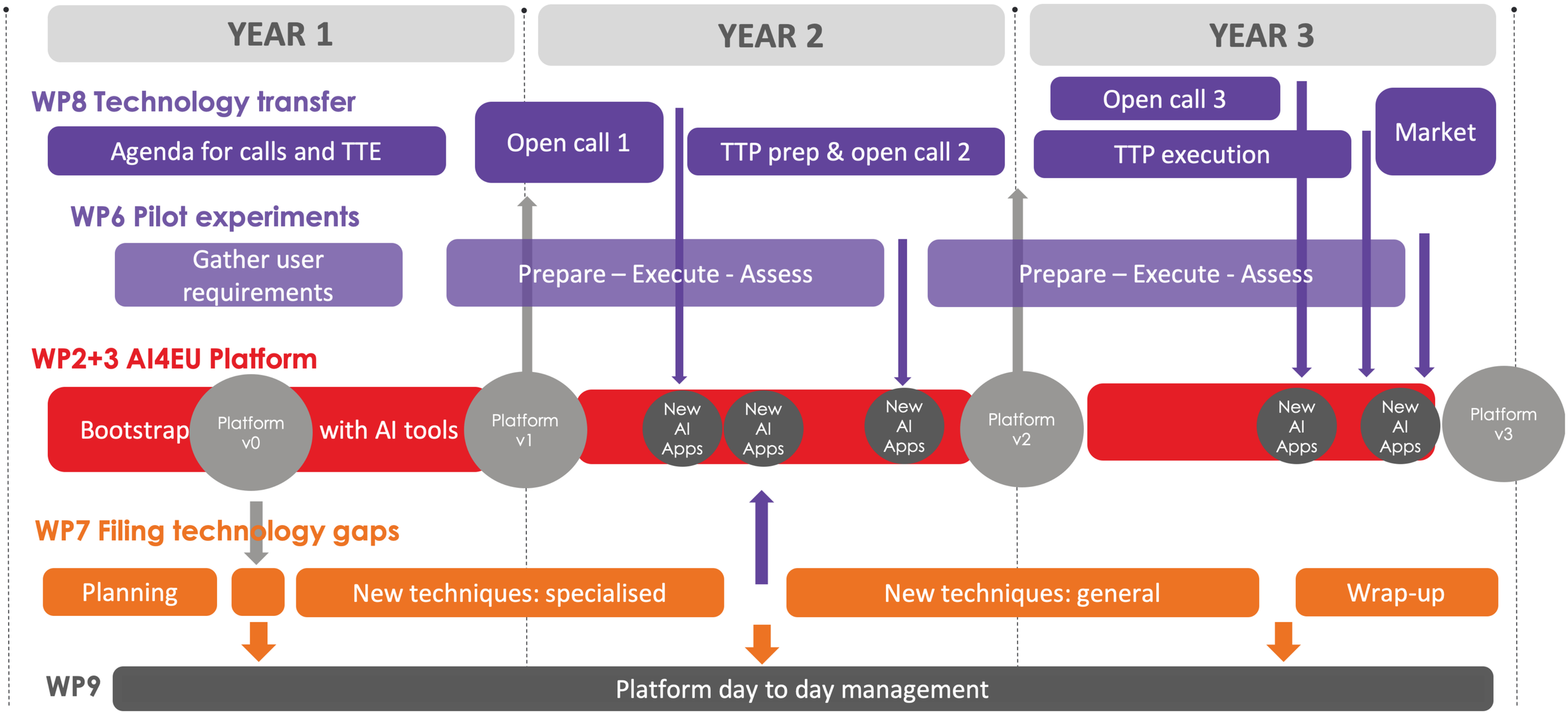
AI4EU will create a **network across European member states.**

AI4EU will create **national nodes** for the AI4EU community based around academic and industry contact points that will act as a conduit for information about national initiatives to the European-wide network

Country	NCP representatives	Partner
Austria	Dr. Roman KERN	KNO
Belgium	Dr. Tom LENAERTS	VUB
Czech republic	Dr. Marek HAVRDA	AGI
Finland	Dr. Roope RITVOS	FVI
France	Dr. Jerome KODJABACHIAN	THA
Germany	Dr. Joachim KOEHLER	FHG
Greece	Dr. Costas D. SPYROPOYLOS	DEM
Hungary	Dr. Németh GEZA	BME
Ireland	Dr. Barry O'SULLIVAN	UCC
Italy	Dr. Amadeo CESTA	CNR
Latvia*	Dr. Aivars BERZINS	TIL
Netherlands	Dr. Milan PETKOVIC	PHI
Norway	Dr. Ieva MARTINKENAITE	TEL
Poland	Dr. Xavier CHAO	FBA
Portugal	Dr. Joao Paulo COSTEIRA	ISTR
Slovakia	Dr. Marek BUDZEL	TUK
Slovenia	Dr. Spela STRES	JSI
Spain	Dr. Javier VAZQUEZ	UPC
Sweden	Dr. Alessandro SAFFIOTTI	ORU
Switzerland	Dr. Hervé BOURLARD	IDI
United Kingdom	Dr. Antony COHN	LDS

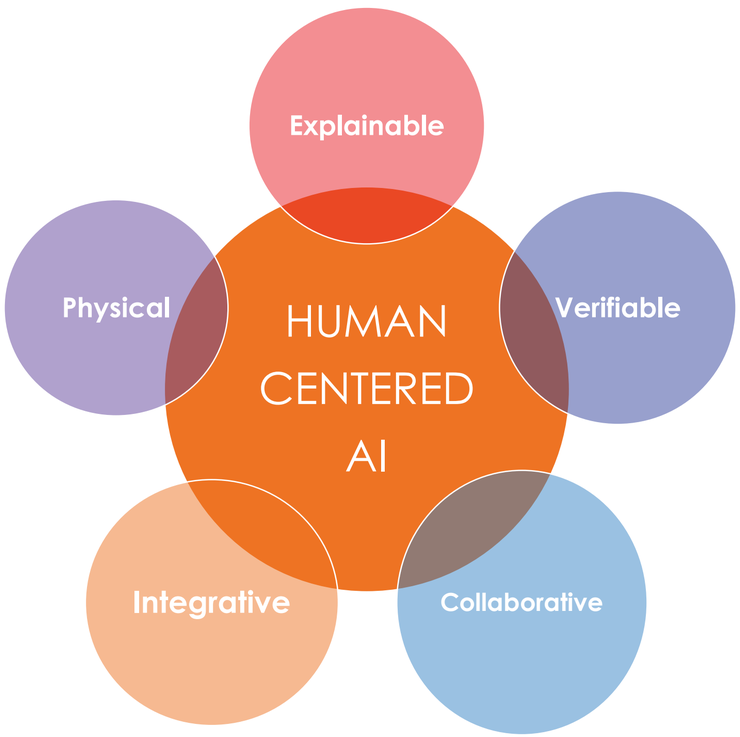
*acting initially for Latvia, Estonia and Lithuania

An ambitious timeline



Innovation and research activities nurturing pilots

“ Five research areas



Eight pilot experiments

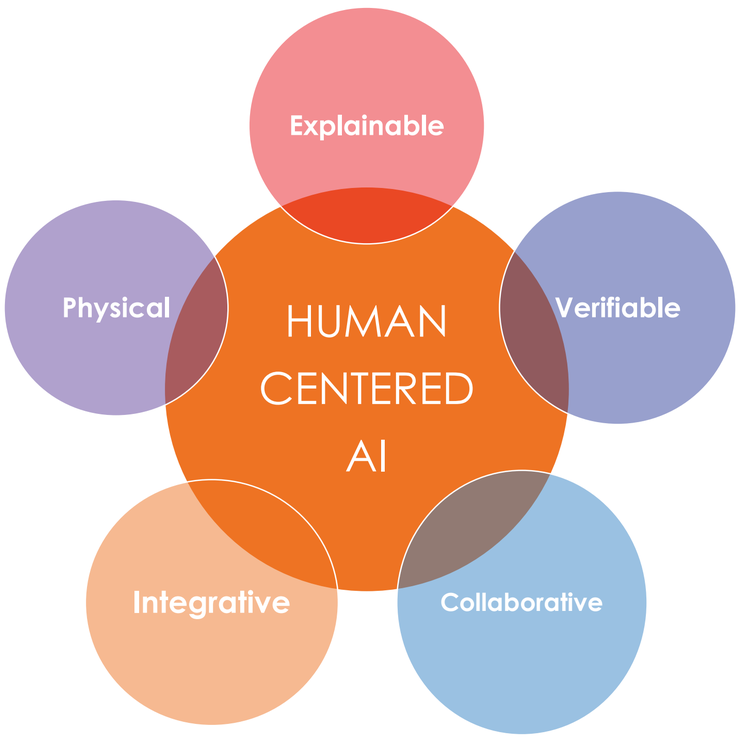
Pilot experiments	Description	Research areas
P1 AI4 Citizens	An AI-powered advisor for EU Citizens (focus on higher education)	Collab. AI, Explain AI
P2 AI4 Robotics	Intelligent performance Analytics for industrial robots	Verif. AI, Explain AI
P3 AI4 Industry	AI-drive digital companion for productino facility	Hybrid AI, Verif. AI
P4 AI4 Healthcare	Fostering confidence by estimating model uncertainty	Explain AI, Physical AI
P5 AI4 Media	AI-based 3D-generation of animated video	Collab. AI
P6 AI4 Agriculture	Crop quality assessment through computer vision	Hybrid AI, Explain AI
P7 AI4 IoT	Advanced analytics on air quality monitoring	Physical AI
P8 AI4 Cybersecurity	AI-driven attacks learner	Hybrid AI, Explain AI, Collab. AI, Verif. AI

Coupled with an ambitious Technology Transfer Program

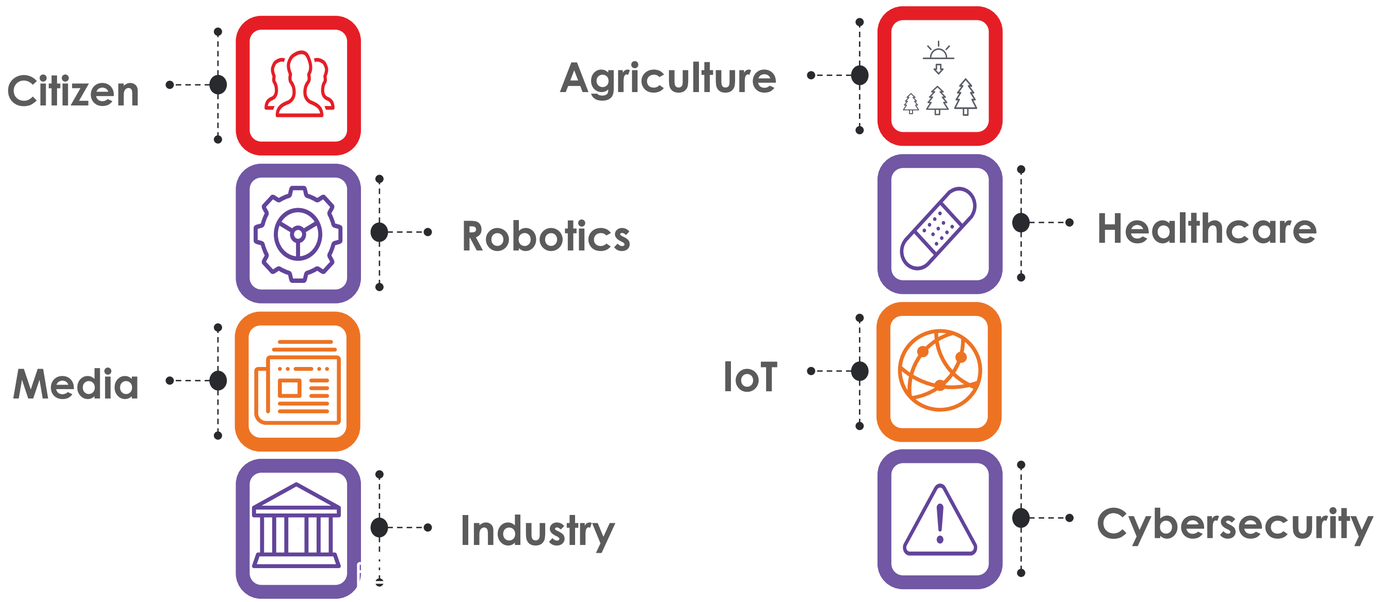
(3 open calls foreseen, major Ecosystem Development)

Innovation and research activities nurturing pilots

“ Five research areas



Eight pilot experiments



Coupled with an ambitious Technology Transfer Program

(3 open calls foreseen, major Ecosystem Development)

Filling technology gaps to create leadership

Pilot owner:	SAP	ABB	Siemens	[Thales]	Technicolor	ATOS	Telenor	Thales
Research partner suggested by pilot owner:	IAA, FBK	SRL, UCC	UOX, FHF, TUV	UPM	INR, UPC	DLR, UPC	NTNU, ITI	INR, SRL

Horizontals			Verticals							
Topic	**Partners**	**Focused research problems**	**Citizens Task 6.2**	**Robotics Task 6.3**	**Industry Task 6.4**	**Healthcare Task 6.5**	**Media Task 6.6**	**Agriculture Task 6.7**	**IoT Task 6.8**	**Cybersec Task 6.9**	**Platform**
Explainable AI	CNR-ISTI, AUTH, U.Sorbonne	Explain the results obtained from data-driven methods for image interpretation and classification				●		●			
		Explain in a linguistic form the results obtained from statistical models for anomaly detection		●	●						
Verifiable AI	Fraunhofer, LAAS, Sorbonne	Validate models learned by data-driven approaches against apriority knowledge-based information		●	●					●	
		Steps towards automatic certification of AI assets in the AI4EU ecosystem									●
Collaborative AI	UPC, BME, INRIA, U.Leeds	Social models of interaction	●				●			●	
		Context, anticipation and adaptation in user-machine interaction	●				●			●	
Integrative AI	Unibo, GBK, U.Siena, TU Wien	Integrate data-drive approaches and knowledge-based methods for situation interpretation			●	●		●		●	
		Integrate predictive and prescriptive models							●	●	
Physical AI	IST, CNR-ISTI, Demokritos, TUB	Cross-media learning and cross-media querying					●		●		
		Integrate, classify and relate data of multiple types, multiple modalities, multiple time scales		●					●	●	

AI4EU Ethical Observatory

Tackling Ethical, Legal, Socio-Economical & Cultural issues

- **To stimulate reflection**, discussion and due consideration of ELSEC-AI issues within the EU AI community (researchers, educators and practitioners) and with the European Parliament, member states, and AI industry.
- **To provide resources** to educate the general EU public more accurately about state of the art in AI.
- **To survey legal issues** for the deployment of AI systems in the EU and identify sources of expertise for industries applying AI.
- **To identify/elicit and monitor values and societal acceptance** of decisions and policies.
- **To develop methodological guidelines** for the integration of ELSEC considerations in the design and development of AI systems.
- **To avoid negative bias**, such as on gender or other forms of discrimination, which implicitly play a role in AI decision systems.

Interconnection with many leading platforms in a seamless way

“ The AI4EU Platform will seamlessly interconnect with a large number of other Platforms :

- Human Brain Simulation Platform
- Copernicus Data Platform
- Beat (Idiap) Platform
- Bonseye
- Fiona Platform
- DIH’s Platforms

- **...and many more to come.**

Consortium members

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THANK YOU!

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