The AI Data Robotics Association

Accelerating European AI, Data, and Robotics sovereignty and competitiveness to address shared challenges.

EUINDTECH

03.06.2025

The AI Data Robotics Association

adr-association.eu

Co-funded by the European Union

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Standing at the crossroads of Tech leadership

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The future of European competitiveness

Part A | A competitiveness strategy for Europe

SEPTEMBER 2024

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Time for a major shakeup of how the EU funds research, expert group says

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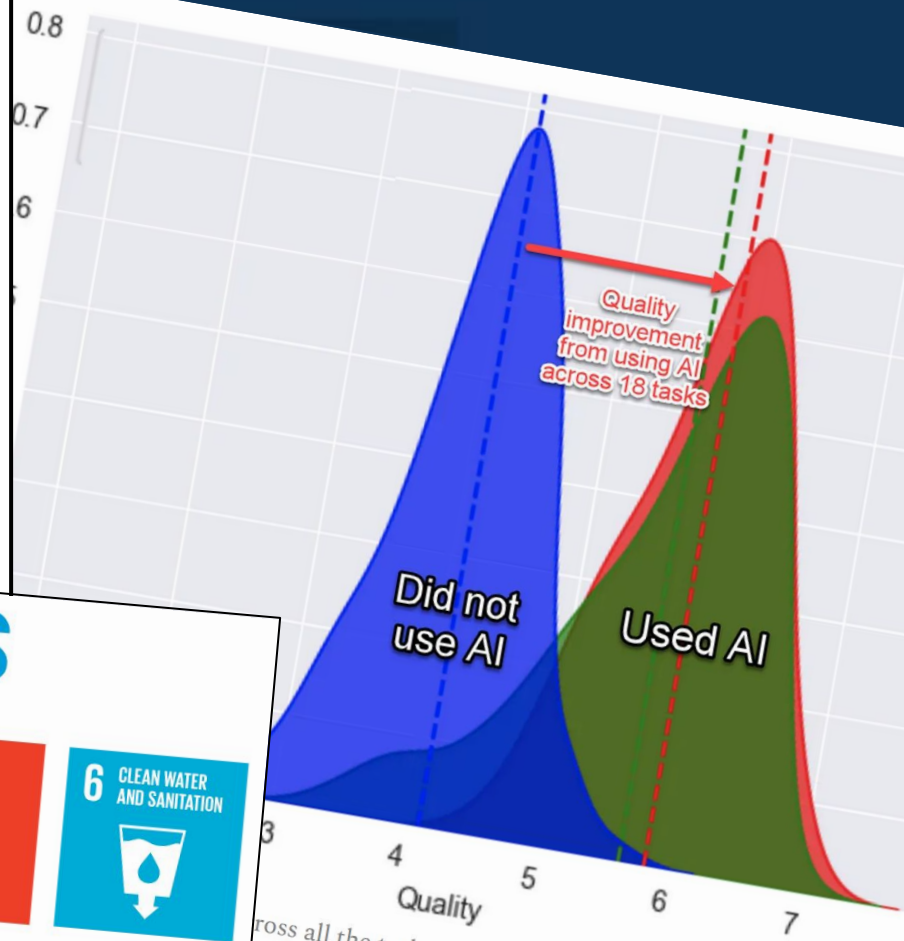
FP10 | Planning FP10 | Horizon Europe | R&D Policy

The chair of the Commission's FP10 advisory group says each part of the next Framework Programme should be run by independent councils

By Martin Greenacre and Florin Zubașcu

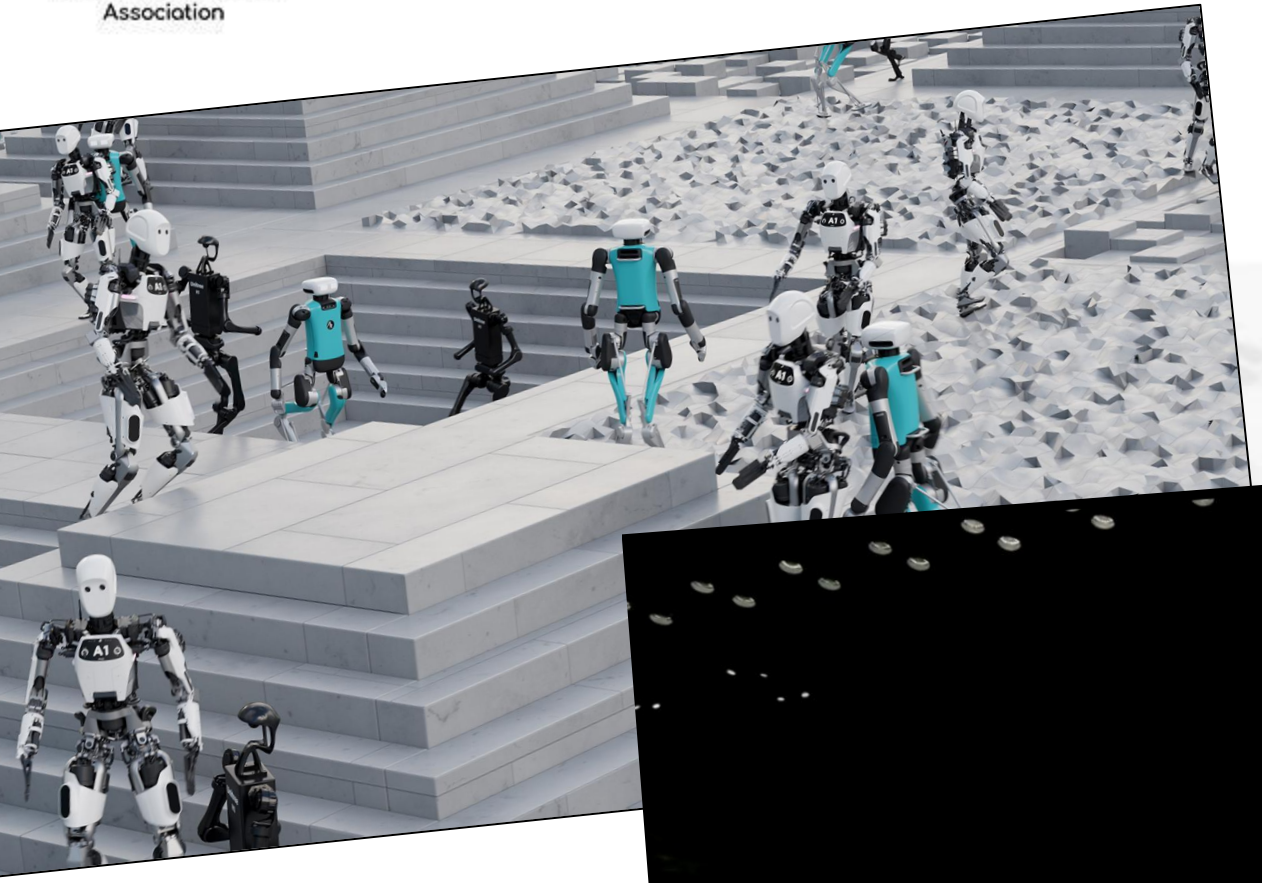


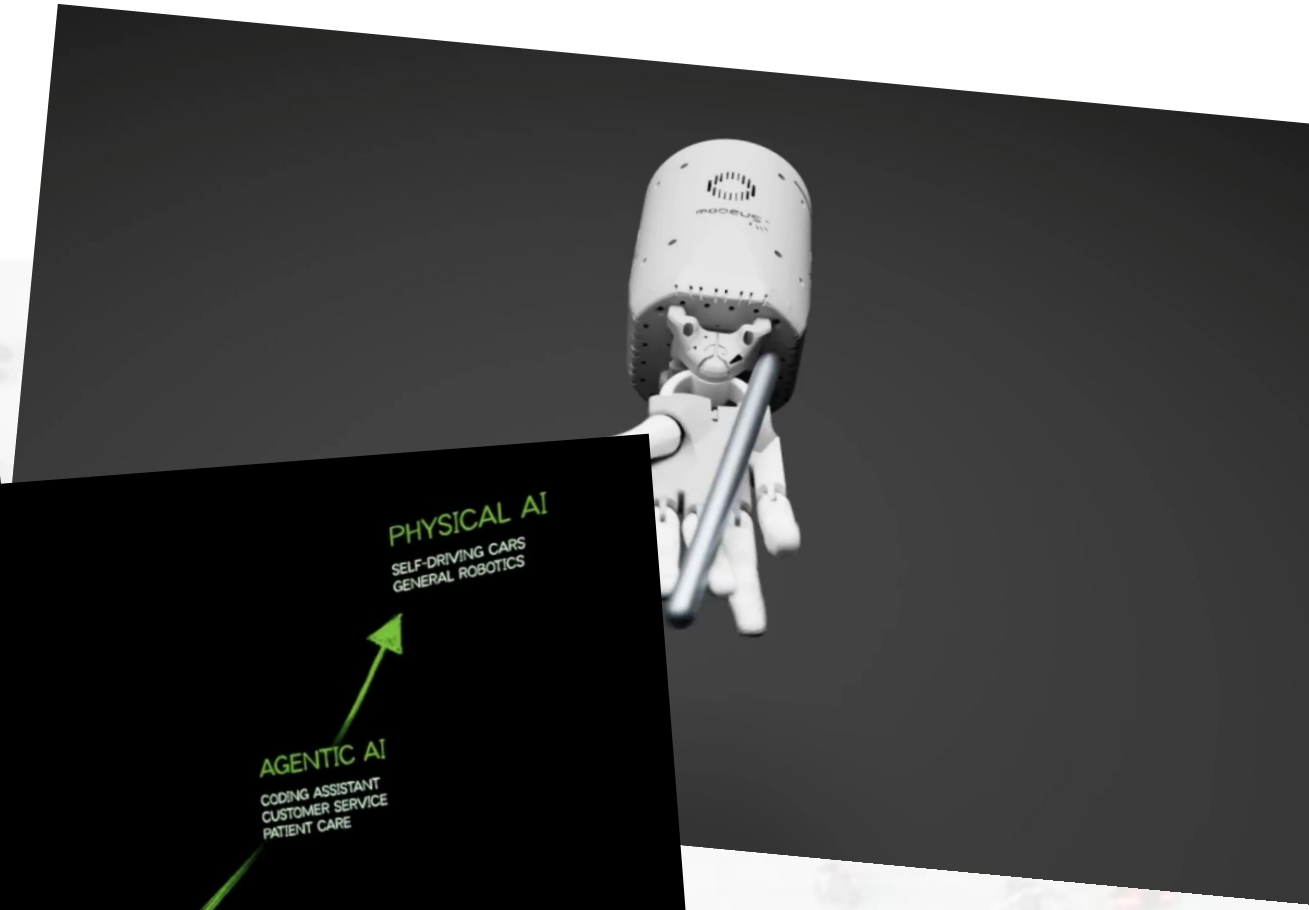
ross all the tasks. The blue group did not use AI, the e red group got some additional training on how to use AI.

SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS

AI – powered robotics





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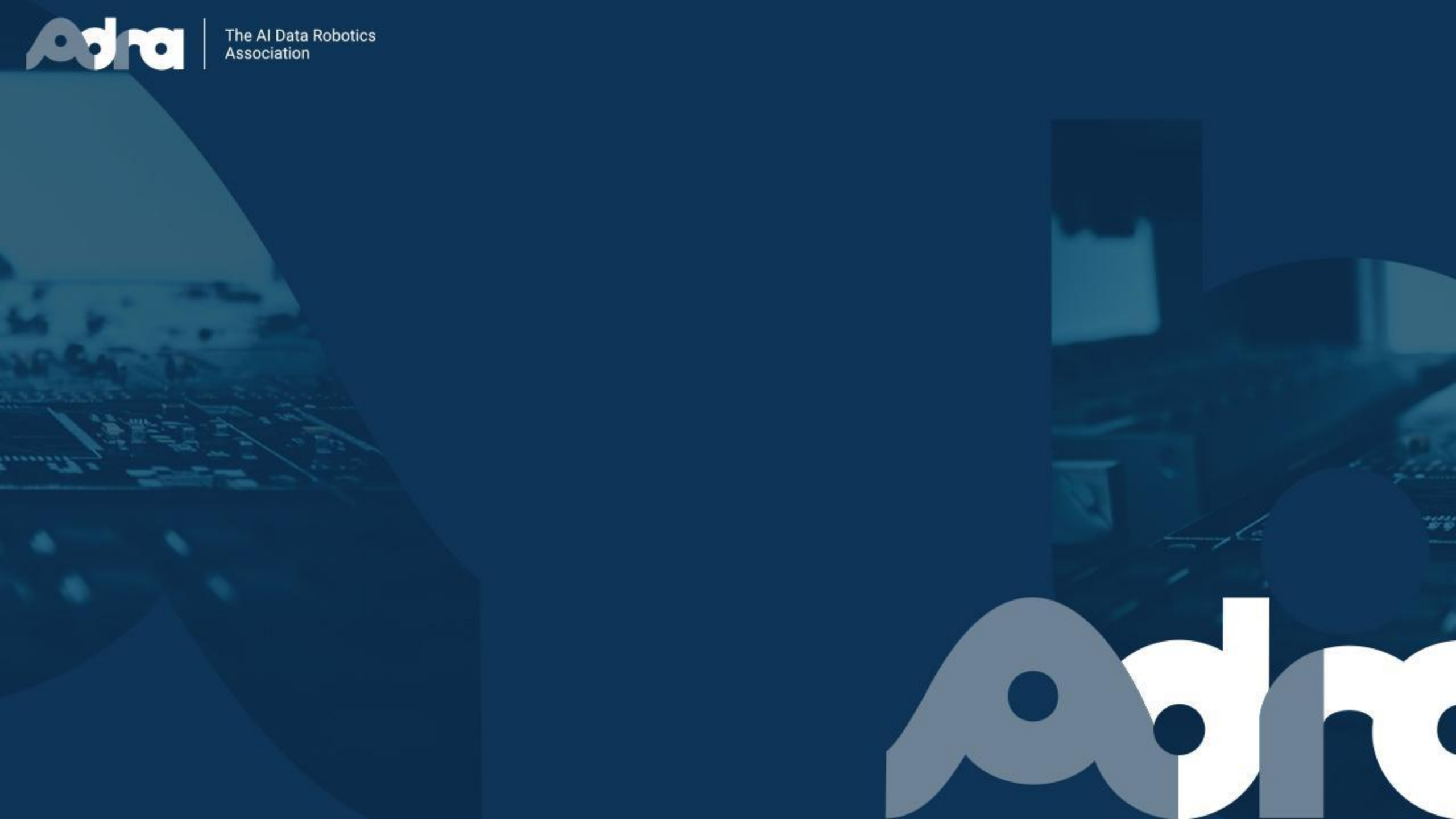
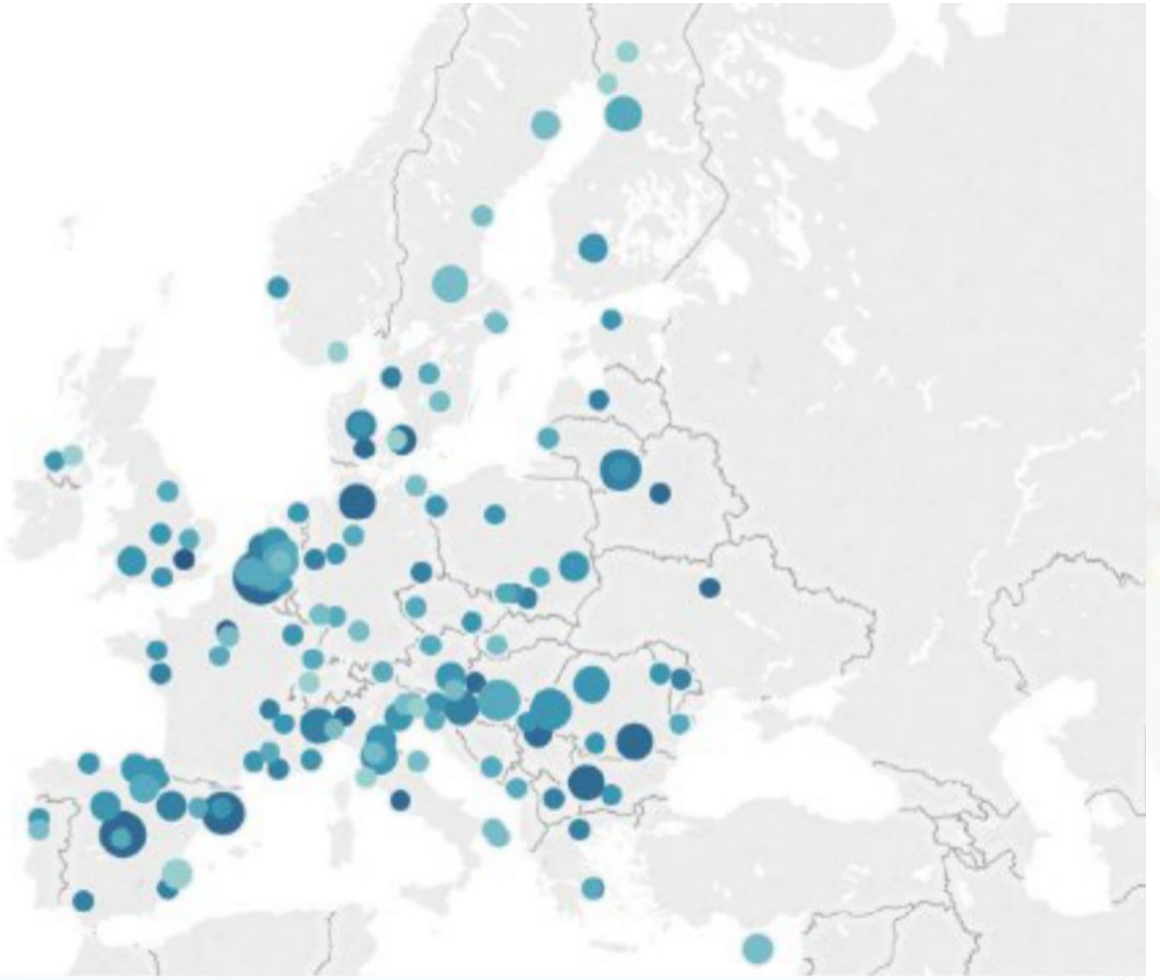


BMW
UPDATE

Building Europe’s ADR Innovation Ecosystem

A United Community of Excellence

- **Single point of contact:** Adra is the EC’s primary partner for advancing AI, data, and robotics R&I in Europe
- **Integrated Network**: Connecting AI, Data & Robotics expertise across Europe
- **Multi-Stakeholder Collaboration**: Industry + Research + Academia + Government
- **Research Excellence**: Europe's top minds in ADR technologies
- **Industry Bridge**: Transforming research into market solutions
- **Geographic Reach**: Active presence across Member States
- **Rapid Mobilisation**: Ready expertise for strategic initiatives



AI, Data and Robotics public-private partnership (2021-2030)

Co-Programmed Partnership

Adra Association
Private Side

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Sovereignty
Secure European autonomy in AI, Data & Robotics

Industry
Boost competitiveness through digital & green transformation

Research
Achieve global research excellence

Social Impact Drive solutions for climate, health, energy & security

Focus Areas

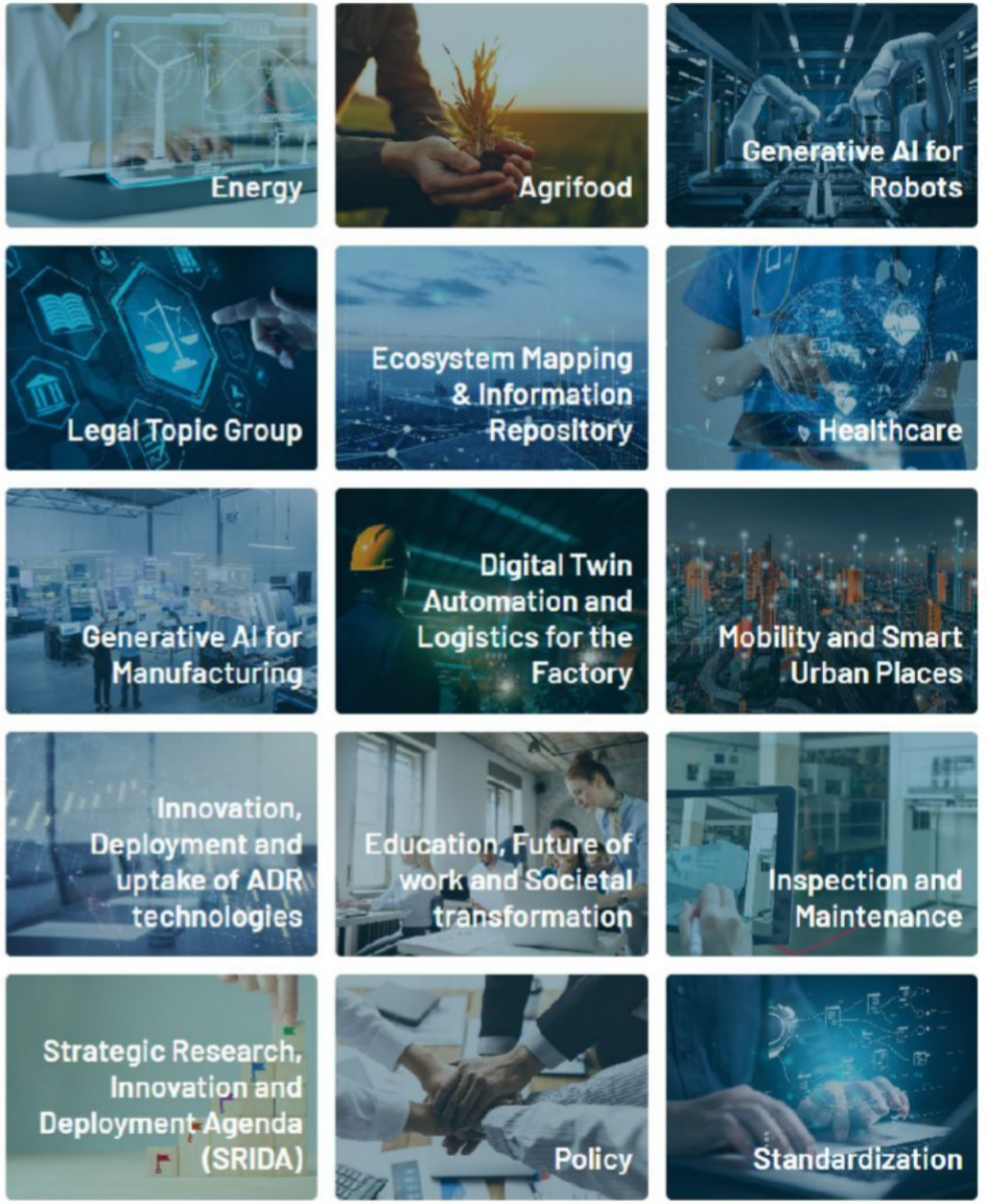
Core Innovation Areas
Generative AI Applications
- Manufacturing
- Robotics

Sector-Specific Taskforces
- Energy & Sustainability
- Agrifood Systems
- Healthcare Innovation
- Legal & Regulatory
- Digital Manufacturing (Factory Automation, Digital Twin, Logistics)

Cross-Cutting Groups
- Ecosystem Mapping & Information Repository
- Mobility & Smart Urban Solutions
- Innovation & Technology Uptake
- Education & Work Transformation
- Inspection & Maintenance
- Policy
- Standardization

Strategic Coordination
- SRIDA Implementation

15 Topic groups



Strategic Research Innovation and Deployment agenda (SRIDA)

Big Tickets

#1: **Ground-breaking technological foundations** in ADR

#2: **Effective and Trustworthy General-Purpose ADR**

#3: An interoperable and integrated framework for **data and model ecosystems**

#4: Next generation **smart embodied robotic systems**

#5: Developing **ADR technology** for the **sciences**

#6: Research, innovation, and tools for **compliance**

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Align, Act, Accelerate

Five Strategic Pillars to Enhancing European competitiveness and productivity

Strategic Research Innovation and Deployment Agenda (SRIDA)

- Vision (North Star) for Europe's Research and Innovation orientations
- Roadmap for developing a resilient European ecosystem

High-impact pilots for industry: accelerating AI (software) – robot (hardware) convergence

- Spur the development of sovereign AI technologies, foundational models and intelligent machines
- European control over full technology stack

Challenge-based(stage-gate) approach to grow champions

- Accelerate progress through early TRL levels, application discovery and quicker deployment
- Bridge gap between applied Research and Industry (end-user) needs and drives skills development

Leading on Harmonised/International Standards for Gen(AI) in robots

- Currently no international standards, yet growing number of use-cases and market worth 10s billions EUR
- Huge opportunity for European manufacturers to create and certify quality products and structure value chains.

Creating consonance across member state policies and ecosystems

- Overcome fragmentation in priorities, funding, and policy to concentrate focus and investments
- Achieving multi-level alignment of objectives across layers of European governance

Strategic Direction: SRIDA

Focus Areas

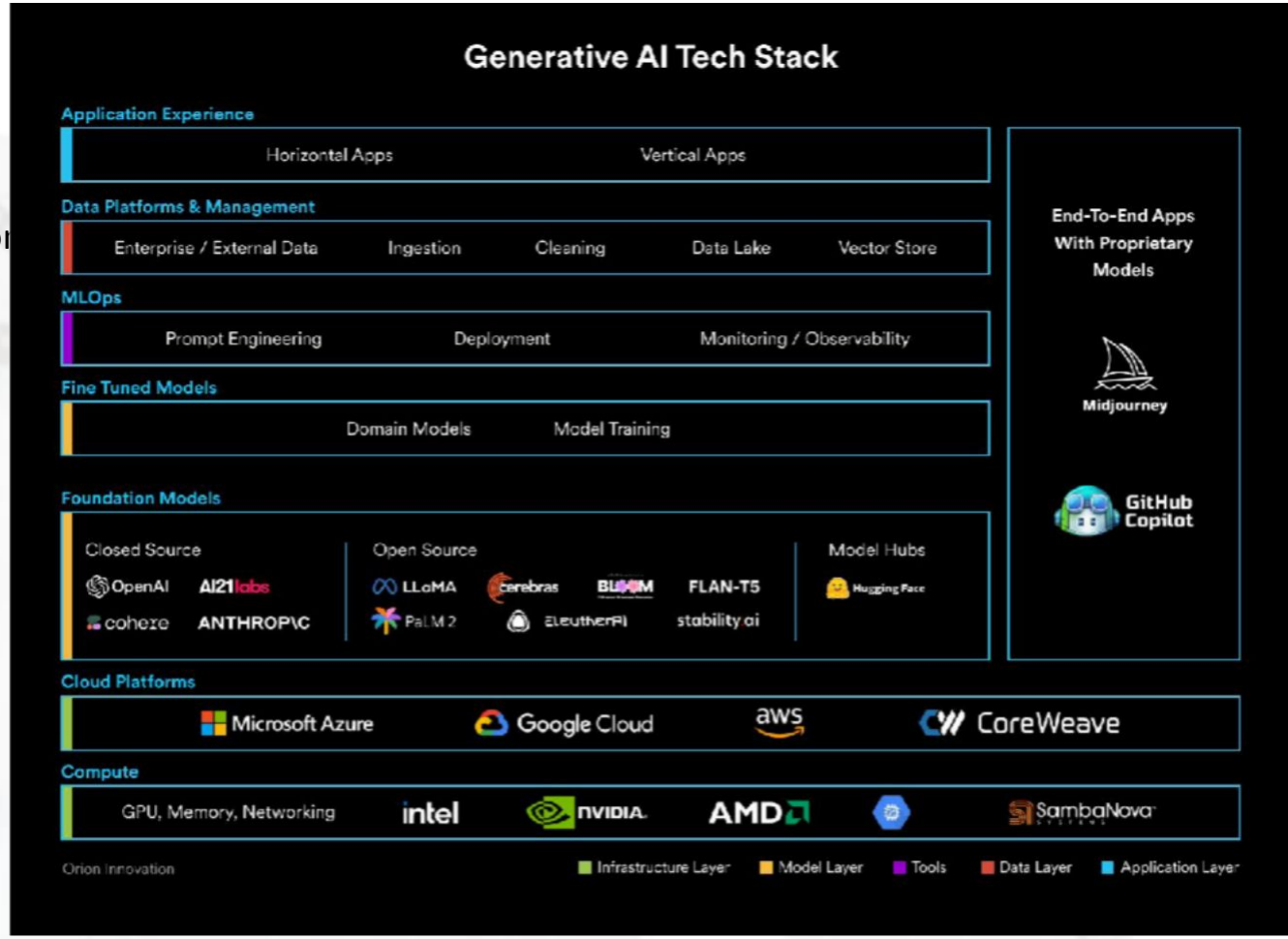
- The **full AI stack** sovereignity
- Trustworthy GenAI development
- Robotics – AI ecosystem integration
- Advanced R&D Research: Neurosymbolic AI – Learning and reason

Industrial Strategy

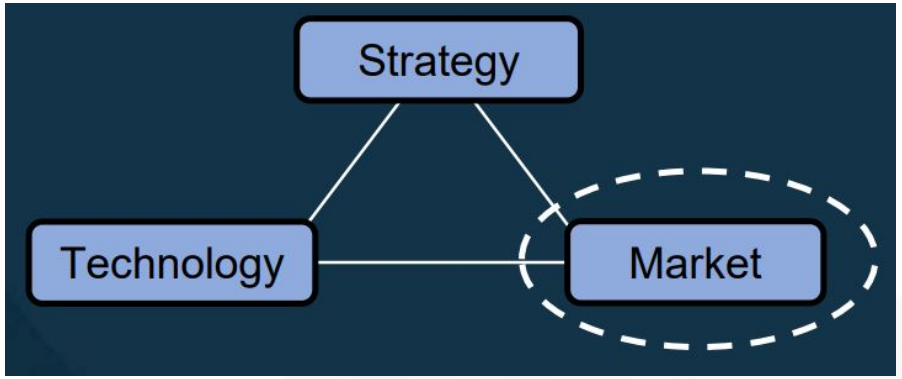
- Strengthening EU competitiveness
- Build comprehensive **AI Factories**
- Support supply chain resilience
- Foster **research-industry collaboration**

Key Investments

- Large-scale testbeds and deployment
- **Foundation models reflecting EU values**
- Human-centric innovation and skills
- **Cross-border coordination**



High-Impact Pilots & Applications: Embodied intelligence for industry



Objective

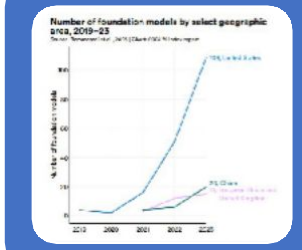
Identify high-impact applications of (Gen)AI-enabled robotics in the manufacturing industry to serve as reference points for Europe's Intelligent Robotics Roadmap

Deliverables

- Broad **consultation** on representative industrial ecosystem (end-users !)
- **Market Pull** in complement to Technology Push
- High-impact **challenges** for competitiveness, societal development, and European autonomy
- Required pre-competitive technology **capabilities & infrastructures**

A challenge : improving productivity of manual work in the manufacturing industry through AI-powered robotics !

The European Challenge: Sovereign Foundation Models



Strategic Imperative

- Foundation models are becoming critical infrastructure
- Current dependency on non-EU technologies creates risks
- Need for European values-aligned AI development
- Establishment of **Adra Generative AI Taskforce in 2023**

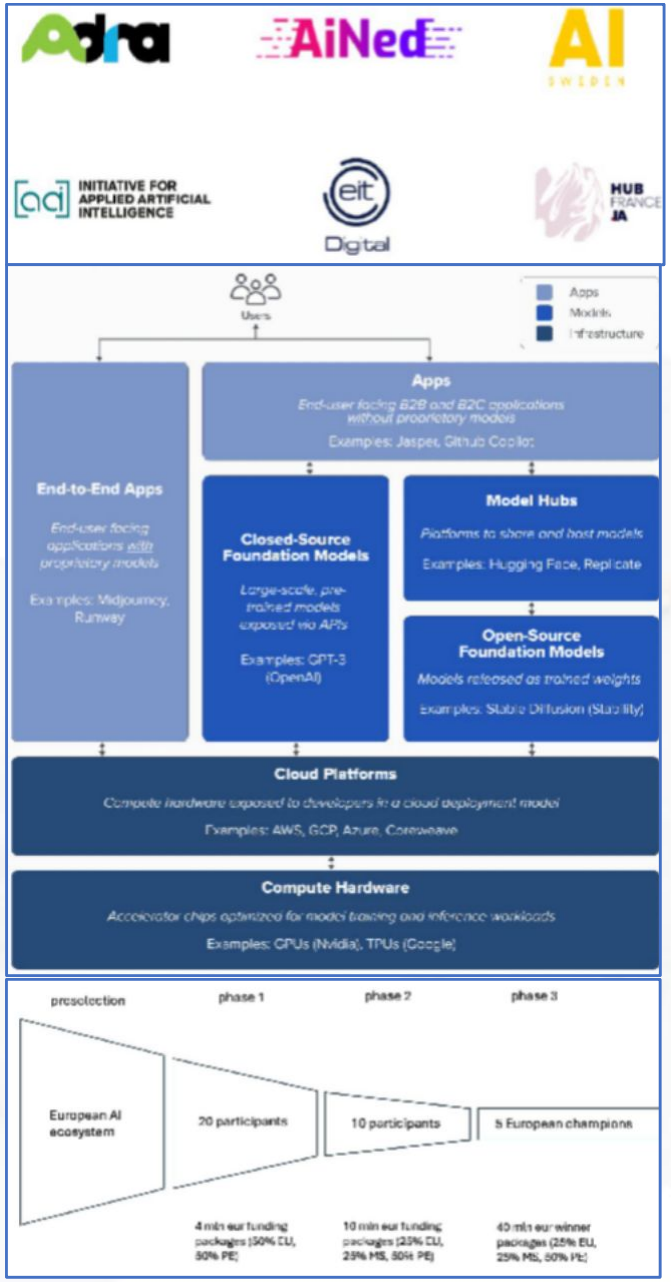
Key Insights

- Fostering a more open and competitive market requires **investable European champions in generative AI**
- Downstream effects, enabling rise and development of large AI-based industrial ecosystems in Europe
- Challenge-based instruments create delivery-based competitiveness

Key Results of GenAI Taskforce

- Support for launch of the AI Innovation package (January 2024)
- Alignment with Draghi report “Future of European Competitiveness”
- Support for AI BOOST challenge mechanism
- Proposal for establishing a **challenge-based generative AI incubator in**

Building Europe's AI future through sovereign foundation models



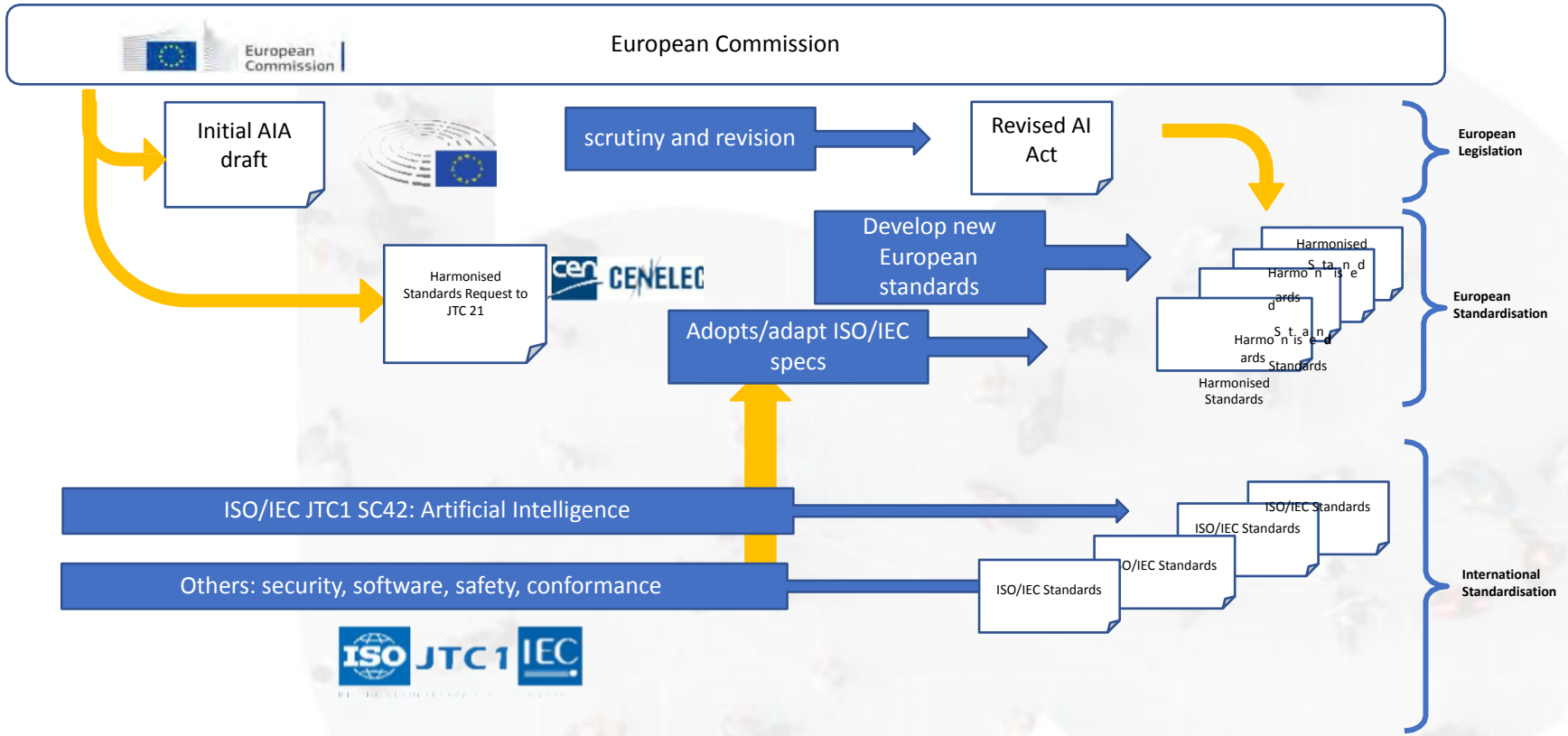
Supporting AI Act Implementation and international standards

Harmonised Standards (HS) under development

Compliance to HS by Providers conveys presumption of conformity

ADRA's Strategic Role

- Create **awareness** on the importance of standard
- Bridging **industry expertise with regulatory requirements**
- Supporting development of domain-specific standards
- Facilitating consensus between stakeholders



Member state initiatives to innovate and secure global competitiveness of the EU

Long term aspiration

- **Overall economic growth and prosperity**
- **Global competitiveness**
- **Sovereignty**
- **Common Health and Wellbeing**
- **Sustainability**
- **Safety and European Values**

Requires EU's digital success

1. Create a **compelling goal for EU's digital future,** embraced by Europe's citizens
2. Encourage **public procurement of EU-based AI** to accelerate adoption and drive innovation
3. **Boost European investments** in ADR, securing EU-based ownership and command
4. **Strengthen the digital single market** to ensure fast scaling of AI offerings across EU member states
5. Ensure **consistency of AI Act standardization with sector-specific** regulation and standards
6. Ensure the **completeness of the entire AI value chain** to enhance the EU´s sovereignty

Details in backup

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AI for Science

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AI for Science: An EU-Wide Mission for Accelerated Discovery

- **Galvanize Europe:** Build consensus and energy for an EU-wide "AI for Science" initiative.
- **Accelerate Discovery:** Leverage AI to dramatically speed up scientific progress across all disciplines.
- **Build on Strengths:** Capitalize on Europe's scientific heritage, world-class lab instrument sector, and leading AI/basic science research institutes.
- **Global Context:** Act decisively as international centers advance automated "design-make-test-analyse" platforms.

AI's Transformative Impact:

- **Across the Lifecycle:** Revolutionizing hypothesis generation, structural design (e.g., AlphaFold), synthetic making, experimental optimization, and large-scale data analysis.
- **Inspiration & Learning:** Building on insights from initiatives like the Nobel-Turing Challenge.

Strategic Pillars:

1. **Identify & Champion Use-Cases:** Pinpoint promising applications and consider launching "challenges" to drive innovation in accelerating fundamental research with AI and lab automation.
2. **Forge a Powerful Coalition:** Unite diverse stakeholders:
    1. **Lab Users:** Pharmaceutical, Chemistry, Materials (e.g., Novo Nordisk, GSK, AZ)
    2. **Lab Suppliers:** Instruments, Robotics
    3. **AI Ecosystem:** Academics (e.g., CUT Ross King, BIGMAP), RTOs, Startups

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The Adra Team

Representing EU and Horizon Europe associated country innovation ecosystems

Team Adra - Secretariat

Philip Piatkiewicz
Secretary General

Thibauld Jongen
Head of technology futures

Mei Shan Krishnan
Campaigns and Events Manager

Amaya Garmendia
Membership ecosystem

Michal Rybacki
Project Manager

Ramona Draghici
Finance and operations Manager

Tia Van Renterghem
Accounting and organizational efficiency

Summary

✔ 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.

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