



The AI Data Robotics
Association



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Association

adr-association.eu

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

CANADA

20.05.2025



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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

Search...

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

16 Oct 2024 | News

FP10

Planning FP10

Horizon Europe

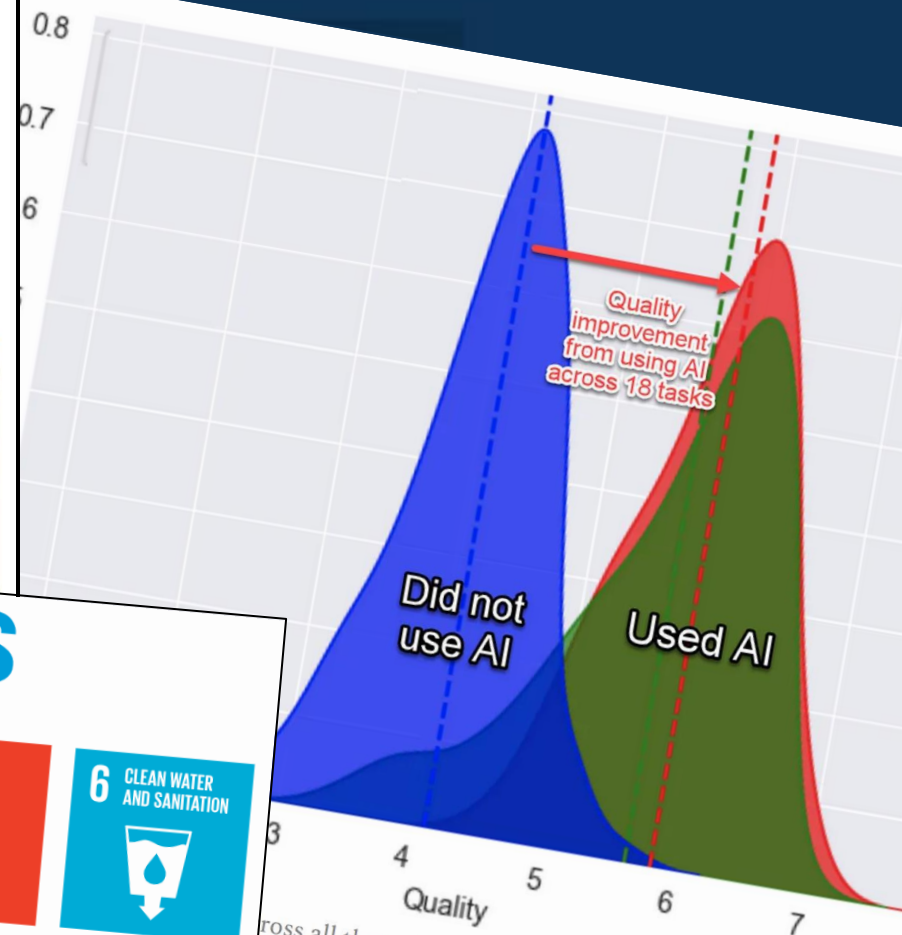
R&D Policy

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

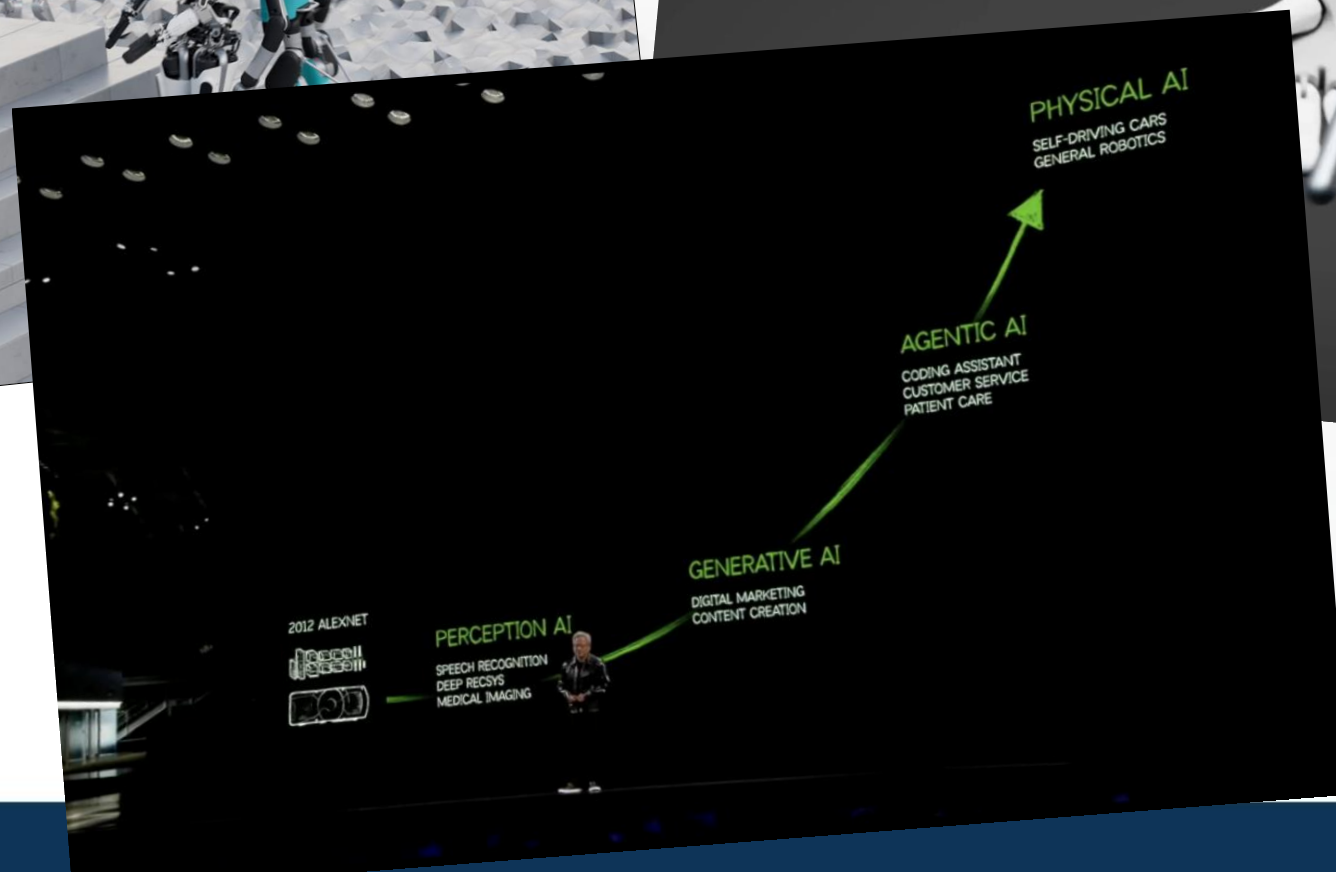
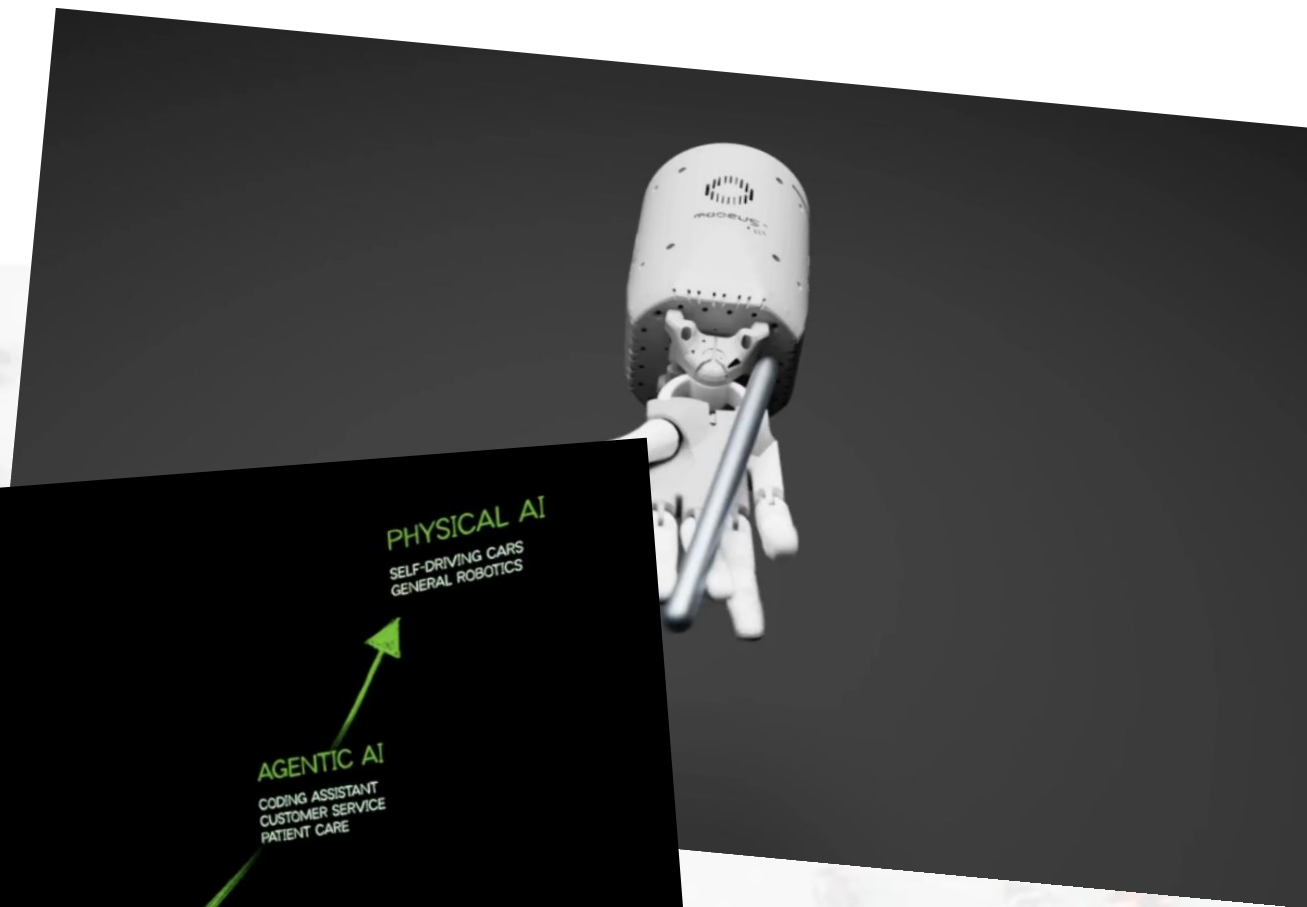
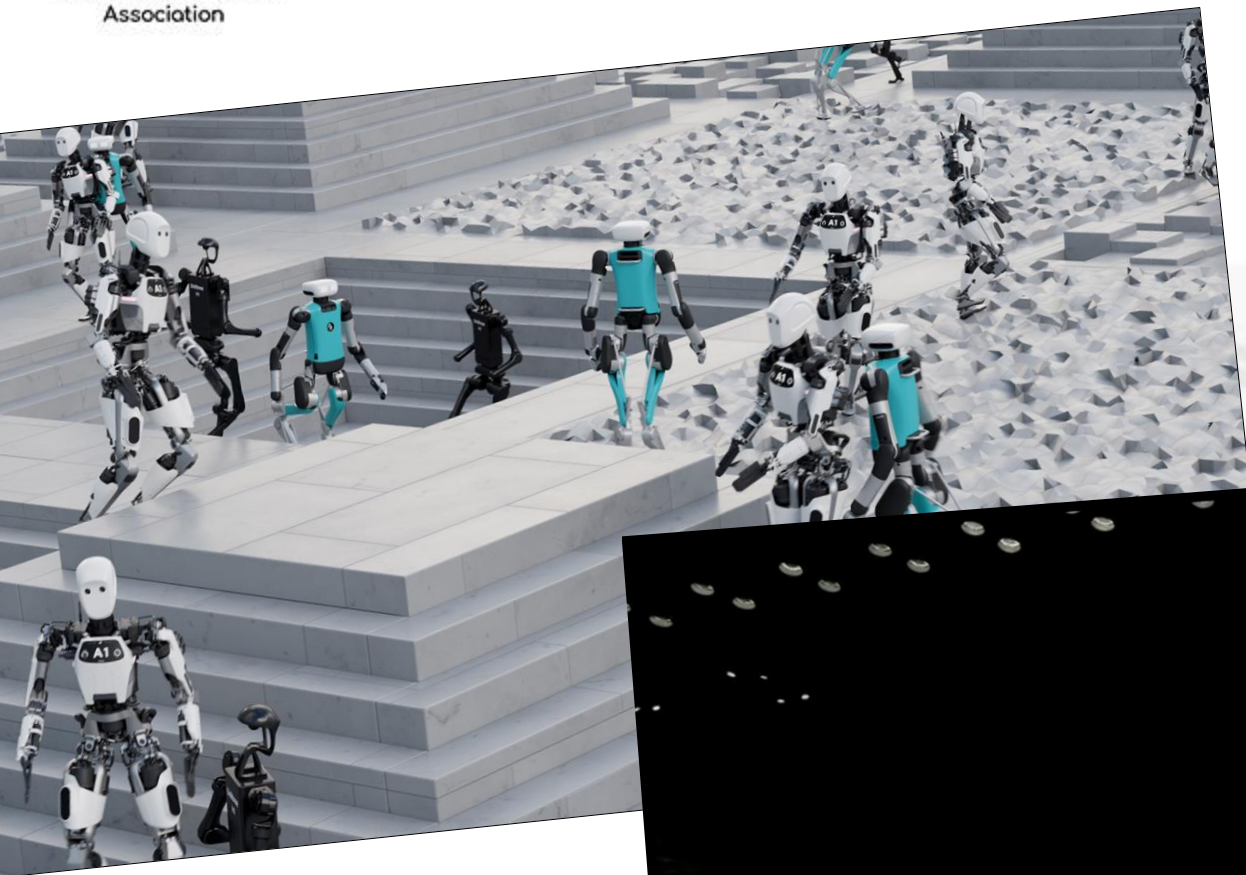
By Martin Greenacre and Florin Zubaşcu



SUSTAINABLE DEVELOPMENT GOALS



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



Building on Strength: Vision, Mission, Goals



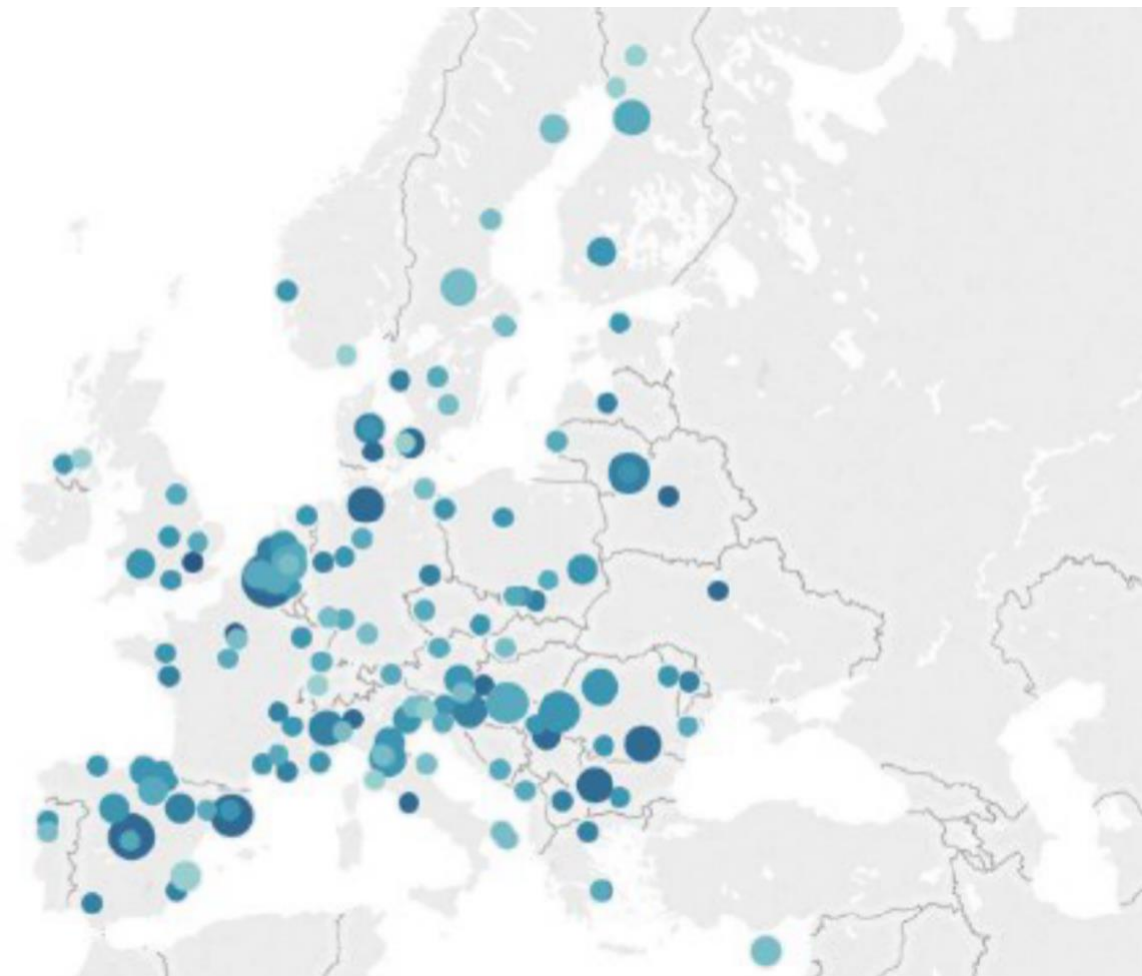
BMW UPDATE



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)



Support European Commission's AI, data & robotics agenda

Strategic Community Mobilisation & Implementation Support

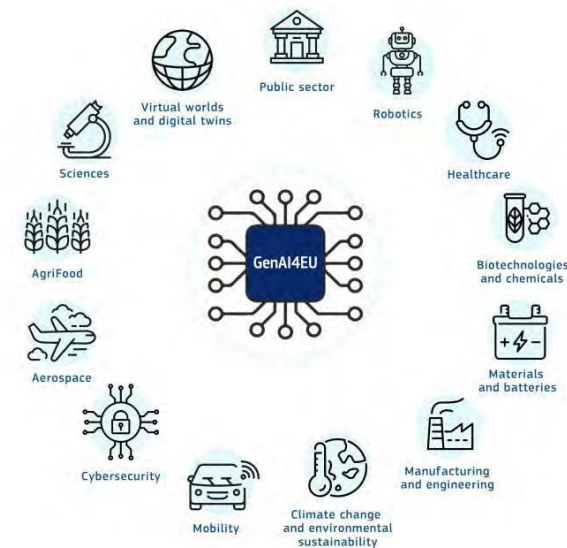
GenAI4EU

Applied AI



Key Actions

- Bridge between Commission and ADR community
- Knowledge dissemination to stakeholders
- Community engagement facilitation
- Expert feedback coordination
- Call participation coordination
- Connecting domain experts with implementers
- Rapid expert mobilisation for critical topics



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**



GenAI for Robotics policy paper and technology roadmap

Empowering Europe Through GenAI & Robotics

Critical Convergence

- **GenAI** enhances robot capabilities: environment understanding, natural interaction, adaptation
- **Robots** give GenAI physical presence: real-world data, testing, embodied intelligence

European Opportunity

- Focus on **trustworthy, safe, frugal** solutions
- Bridge **research-to-market gap**

Strategic Actions

- Build sovereign foundation models reflecting **EU values**
- Invest in physics/**mechatronics** for real-world impact
- Develop **integrated HW/SW** approaches
- Create European **standards** for safe deployment



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

The Adra Team



Representing EU and Horizon Europe associated country innovation ecosystems



AI



Data



Robotics



Team Adra - Secretariat



Mei Shan Krishnan
Campaigns and Events Manager



Amaya Garmendia
Membership ecosystem



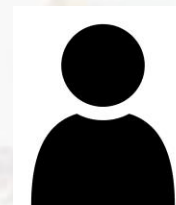
Philip Piatkiewicz
Secretary General



Thibauld Jongen
Head of technology futures



Michal Rybacki
Project Manager



Ramona Draghici
Finance and operations
Manager



Tia Van Renterghem
Accounting and
organizational efficiency

✓ 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.



Workprogramme 2025

| | |
|---|--|
| <u>GenAI4EU central Hub (CSA)</u> HORIZON-CL4-2025-03-HUMAN-18 | <u>GenAI4EU: Generative AI for Virtual Worlds: Advanced technologies for better performance and hyper-personalized and immersive experience (IA)</u> HORIZON-CL4-2025-03-HUMAN-15 |
| <u>Challenge-Driven GenAI4EU Booster (RIA)</u> HORIZON-CL4-2025-03-DIGITAL-EMERGING-09 | <u>Sectoral digital skills academies: Digital Skills Academy in GenAI (DEP)</u> DIGITAL-2025-SKILLS-08-GENAI-ACADEMY-STEP |
| <u>Enhanced Learning Strategies for General Purpose AI: Advancing GenAI4EU (RIA)</u> HORIZON-CL4-2025-04-DIGITAL-EMERGING-07 | <u>Empowering AI/generative AI along the Cognitive Computing continuum (RIA)</u> HORIZON-CL4-2025-04-DATA-02 |
| <u>Assessment methodologies for General Purpose AI capabilities and risks (RIA)</u> HORIZON-CL4-2025-04-DIGITAL-EMERGING-04 | <u>Software Engineering for AI and generative AI (RIA)</u> HORIZON-CL4-2025-04-DATA-03: |
| <u>Robust and trustworthy Generative AI for Robotics and industrial automation (RIA)</u> HORIZON-CL4-2025-03-DIGITAL-EMERGING-07 | <u>Fostering Innovative and Compliant Data Ecosystems (IA) including Q/A</u> HORIZON-CL4-2025-03-DATA-13 |
| <u>Soft Robotics for Advanced physical capabilities (IA)</u> HORIZON-CL4-2025-04-DIGITAL-EMERGING-05 | |




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 [@adra_eu_](https://twitter.com/adra_eu)

 [/company/adr-association/](https://www.linkedin.com/company/adr-association/)

 secretary-general@adr-association.eu



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Focus Areas

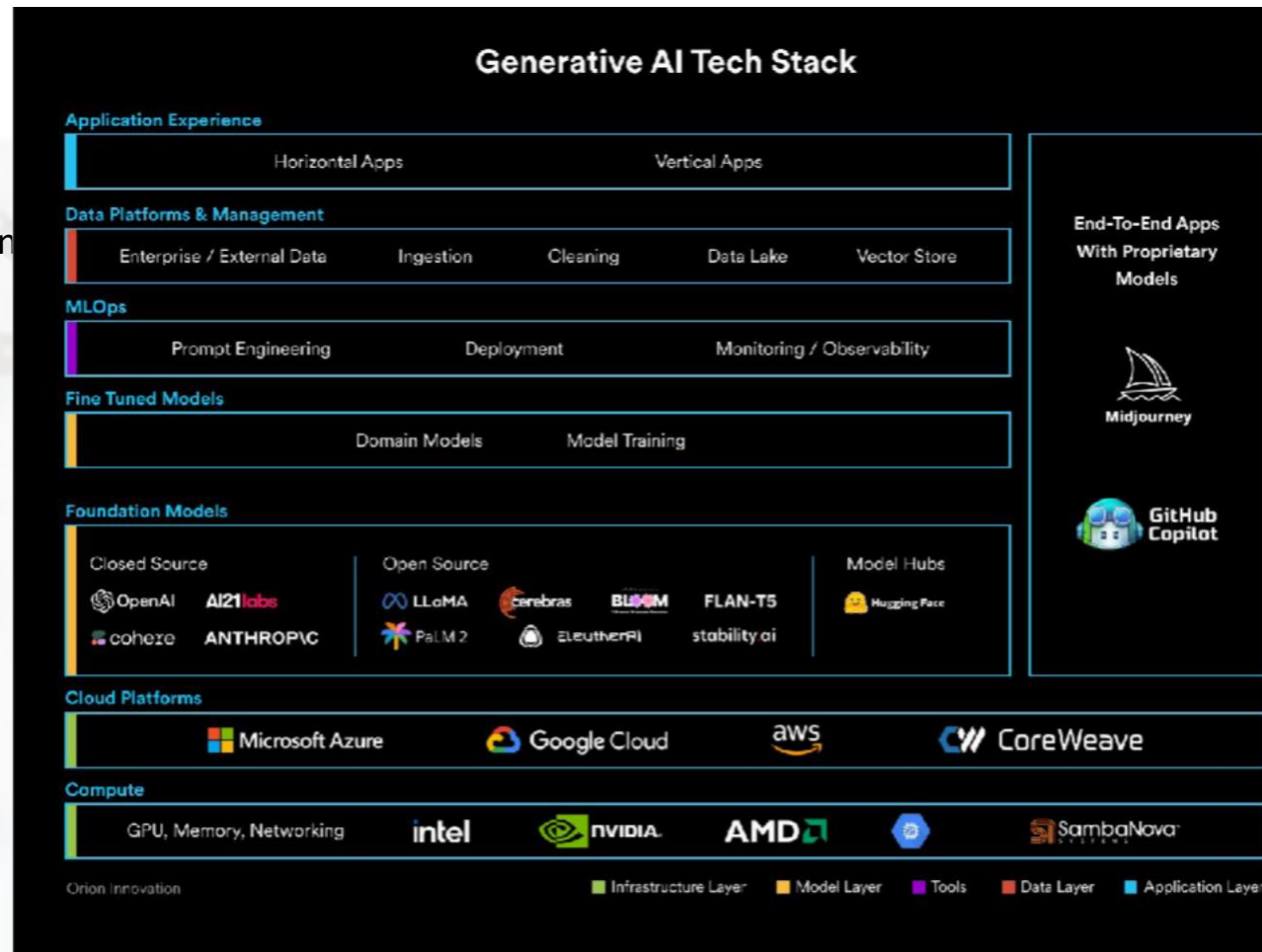
- The **full AI stack** sovereignty
- Trustworthy GenAI development
- Robotics – AI ecosystem integration
- Advanced R&D Research: Neurosymbolic AI – Learning and reason

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**



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

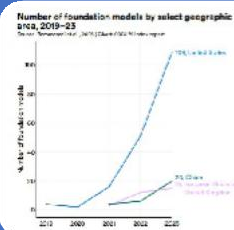
Deliverables

- 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 ALT-EDIC (LLM-BRIDGE)**

Building Europe's AI future through sovereign foundation models



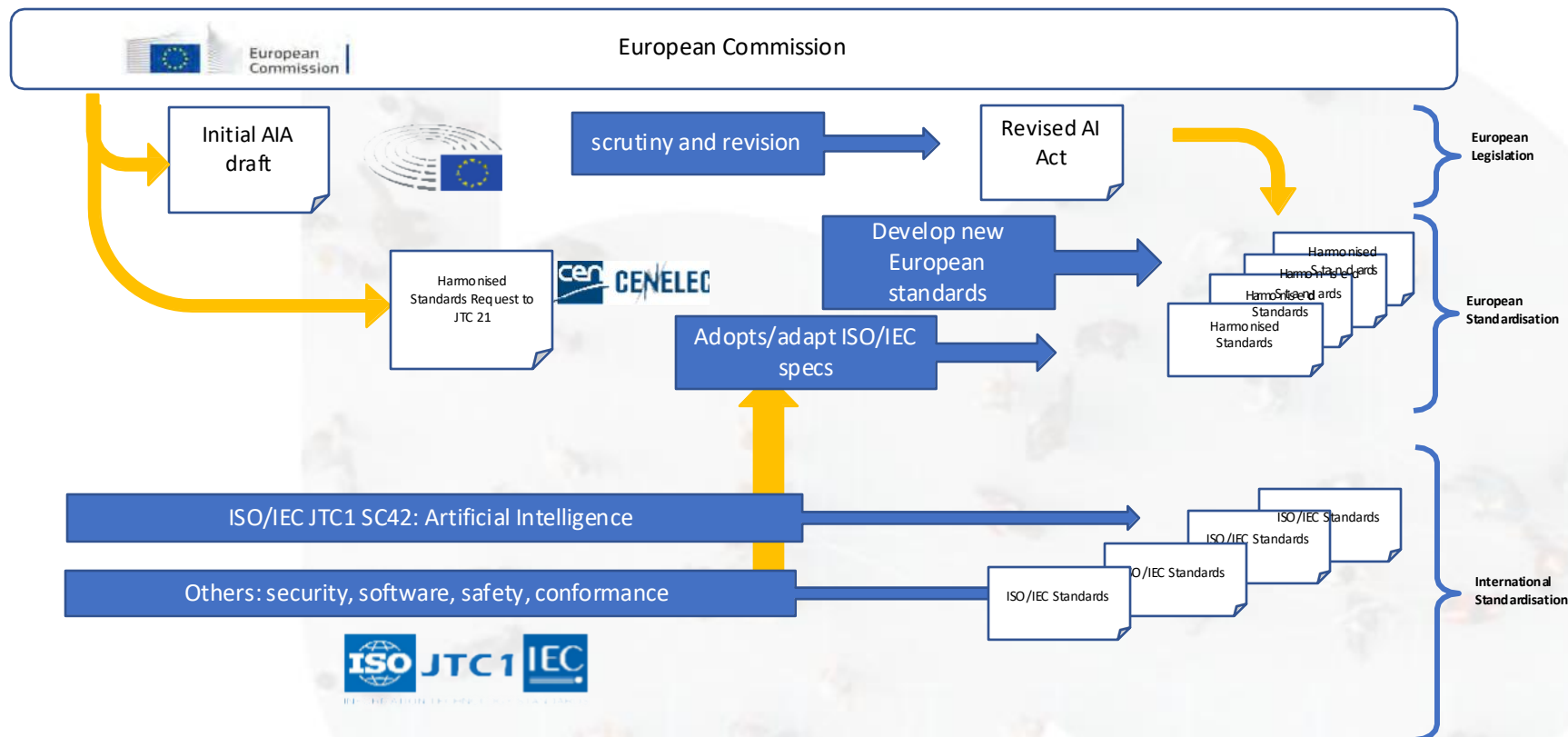
Supporting AI Act Implementation and international standards

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

