AI, Data, Robotics Forum

#ADRF23

Adra Strategic Research, Innovation, and Deployment Agenda (SRIDA)

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Secure **European's sovereignty over AI, Data and Robotics** technologies and knowhow

Establish **European leadership in AI, Data and Robotics** technologies with high socio-economic and environmental impact

Reinforce a **strong and global competitive position of Europe** in AI, Data and Robotics

"Adra Strategic Research, Innovation, and Deployment Agenda 2025-2027"

Adra 10-pager Timeline (2022 - 2023): Overview planning

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Nov 2022	Dec 2022	Jan 2023	Feb 2023	Mar 2023	Apr 2023	May 2023	Jun 2023

Preparatory work (1st iteration)

Process review Plan 2nd iteration

Coordination team
BoD
Editorial team
Adra-e

Priorities 25-27

Strategic orientations update Priorities 2025-2027 (2nd iteration)

Members, NoEs,
National Representatives
External communities

Coordination team
BoD
Editorial team
Reference group
Adra-e

(~10 pages private doc)

(~10 pages public doc Handover EC)

"Strategic Orientation towards an AI, Data and Robotics Roadmap 2025-2027" Public document
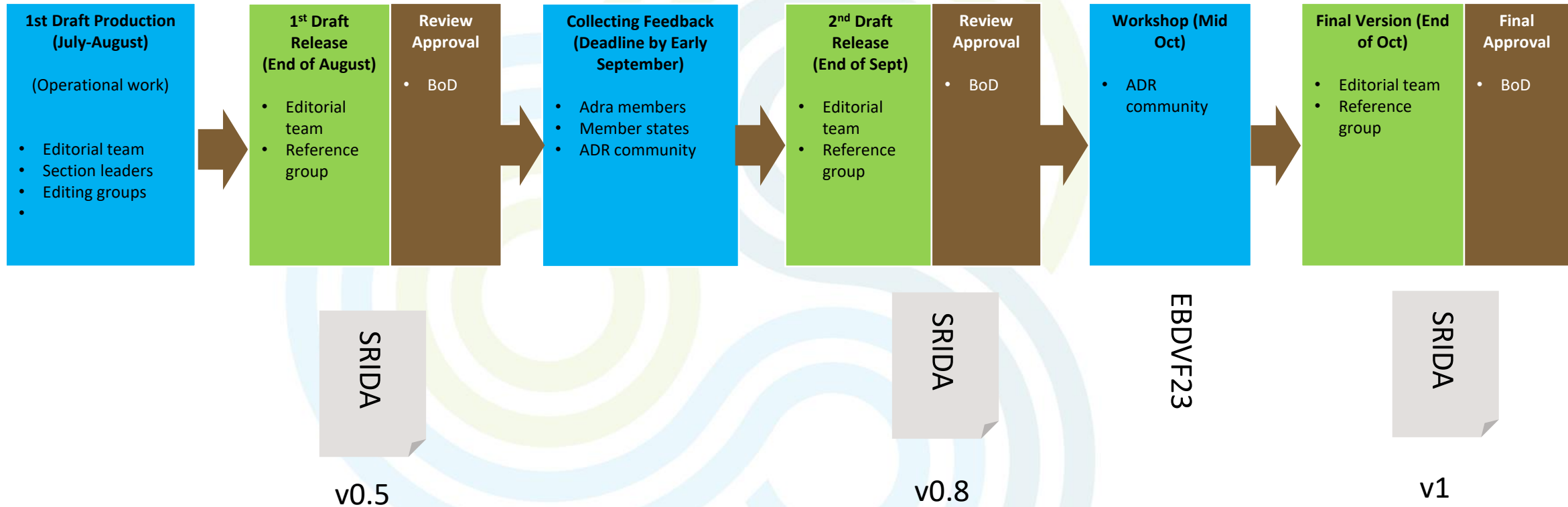
1. Creating a **strong, coherent, and effective ecosystem** for AI, Data, and Robotics (**ADR**)

2. Maintaining and strengthening European **industrial leadership** in robotics, computer vision and Trustworthy AI technologies

3. **Integrating and connecting** the European **research landscape** around AI, data, and robotics

4. Developing a powerful strategy for **skill development** and **attraction** to Europe

5. Developing ADR technologies with **high socio-economic impact** to reinforce a **strong and global competitive position** of Europe

6. Ensure **societal trust** in AI, data, and robotics

- Europe still has high living standards with a well-developed welfare system. However, it is under severe pressure. Three choke points are:

1. Europe's dependency on world supply for essential resources (e.g., energy) makes its society and industries vulnerable to global crises.

2. Europe's increasing workforce needs make it vulnerable to demographic changes and global competition.

3. Europe's dependency on the world supply of key technologies and materials (e.g., semiconductors, active pharmaceutical ingredients) makes its society and industries vulnerable to global disruptions.

   AI, Data, and Robotics (ADR) are essential elements that can enable sustainable security and strategic autonomy in Europe

- **Trustworthy ADR technology made in Europe in compliance with the regulation** including the AI Act, the Data Act, and the Data Governance Act. Meeting regulation with innovation.

- **European strategic autonomy in ADR technology and the use of ADR technology to support strategic autonomy in other areas**, e.g., to optimize production cost and relocate production to EC.

- **Increasing the resilience of our society to crisis, both natural and man-made**. Improved preparedness as well as rapid, fast, and efficient response in catastrophic situations. Security and cybersecurity.

- **Green deal, sustainable society, zero carbon emission**. Operation, maintenance, and inspection of the circular economy and resource management.

- **Education on AI, Data and Robotics**, with a focus on scaling-up educational capacity and scaling-out education to other professions and subjects.

- **Large-scale general purpose ADR technology**. For example, open Large scale GDPR compliant European language models handling both language and cultural differences in Europe.

- **Large-scale complex ADR testbeds together with end-users** for example in healthcare, food production, transportation, energy, or smart cities.

- **Multi-stakeholder development, verification, validation, and integration of automated decision making** in socio-technical systems both for public and private sector.

- **Collaborative autonomous systems** interacting with both the environment and people. This includes autonomous drones in controlled airspace, last mile delivery, and self-driving vehicles.

- **Metrics for measuring progress in ADR**, with a special emphasis on Trustworthy ADR technology.

Timeline (July – October 2023) for Completing the SRIDA

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July 2023 → **Aug 2023** → **September 2023** → **October 2023**

1st Draft Production (July-August)

(Operational work)

- Editorial team
- Section leaders
- Editing groups
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1st Draft Release (End of August)

- Editorial team
- Reference group

Review Approval

- BoD

Collecting Feedback (Deadline by Early September)

- Adra members
- Member states
- ADR community

2nd Draft Release (End of Sept)

- Editorial team
- Reference group

Review Approval

- BoD

Workshop (Mid Oct)

- ADR community

Final Version (End of Oct)

- Editorial team
- Reference group

Final Approval

- BoD

SRIDA — v0.5

SRIDA — v0.8

EBDVF23

SRIDA — v1

- ADR Vision 2030
  - ADR Missions
  - ADR Goals

- Major Trends and Gaps
  - Global Challenges
  - New considerations and instruments for synergies to missions

- The Next Strategic Plan 2025-27
  - **Big Tickets in AI, Data and Robotics for 2025-2027**
  - European AI Moonshot
  - Education, re-skilling and up-skilling

- Conclusions

- **#1**: **Ground-breaking technological foundations** in ADR (autonomy, high-performance and predictability)

- **#2**: **Effective and Trustworthy General-Purpose ADR** (generative AI, generality, continuous learning, trust, scale and complexity)

- **#3**: An interoperable and integrated framework for **data and model ecosystems** (operations, governance, privacy & security)

- **#4**: Next generation **smart embodied robotic systems** (soft robotics, autonomy, manipulation, configurability, human robot interaction/collaboration)

- **#5**: Developing **ADR technology** for the **sciences** (from data to knowledge to understanding)

- **#6**: Research, innovation, and tools for **compliance** (trust, privacy, security beyond compliance)

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Thank you

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