Roadmap Factsheet

Potential of AI for Science in Europe

Purpose of the Roadmap

The EuroTPC Roadmap is a living strategic document that identifies critical scientific, technical, ethical and infrastructural challenges, and proposes actions to guide coordinated EU investment, policy and research directions in the context of the TPC.

This document summarises ongoing, upcoming and planned developments in European science communities applying large-scale generative AI (GenAI) to scientific use cases, and highlights collaboration opportunities and gaps across the European landscape.

Focus Areas

- Applications
- Infrastructure
- Talent
- Collaboration
- Policy

Key Stakeholders & Synergies

- EuroHPC AI Factories
- EuroHPC Advisory Groups (RIAG, INFRAG)
- ETP4HPC
- Big Data Value Association (BDVA)
- ADRA
- Data Spaces
- DARE FPA (RISC-V hardware)
- HPC Centres of Excellence (CoEs)
- TPC Office in Europe (BSC)
- Research centres and universities
- SMEs & industry players
- Non-profits

Main Objectives

- Identify emerging AI opportunities for science
- Map scientific use cases across European research communities
- Highlight infrastructure needs (HPC-AI convergence)
- Support EU policy development
- Recommend future research priorities and coordinated actions

Roadmap Development

- Led by BADW-LRZ with participation from all consortium partners
- Built through an iterative process involving EuroTPC experts, European AI Factories, domain scientific communities and SMEs & industry players
- Draws on input and recommendations generated across work on EU coordination & synergies and engagement and outreach
- Reviewed by the EuroTPC Advisory Board (EAB) for technical alignment
- Continuously updated to reflect fast-moving developments in AI and evolving domain-science needs

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