



International Conference

Museums paving the way in an AI-driven society

Brussels 20 March 2024

Policy perspectives

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DG RTD D4 Democracy, Equality and Culture

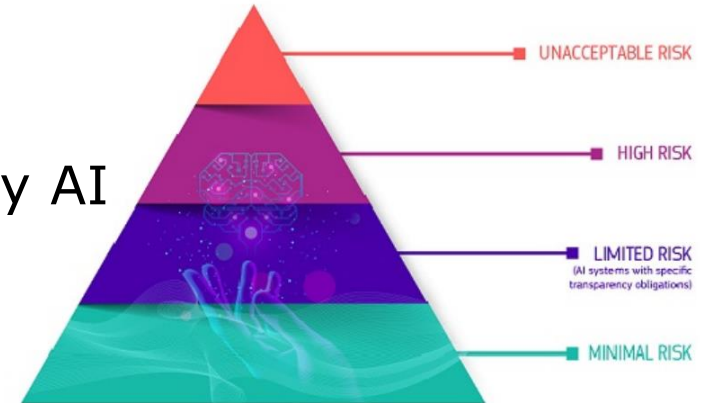
Research and
Innovation

AI Act

2024

A risk-based approach

The Regulatory Framework defines 4 levels of risk for AI systems:

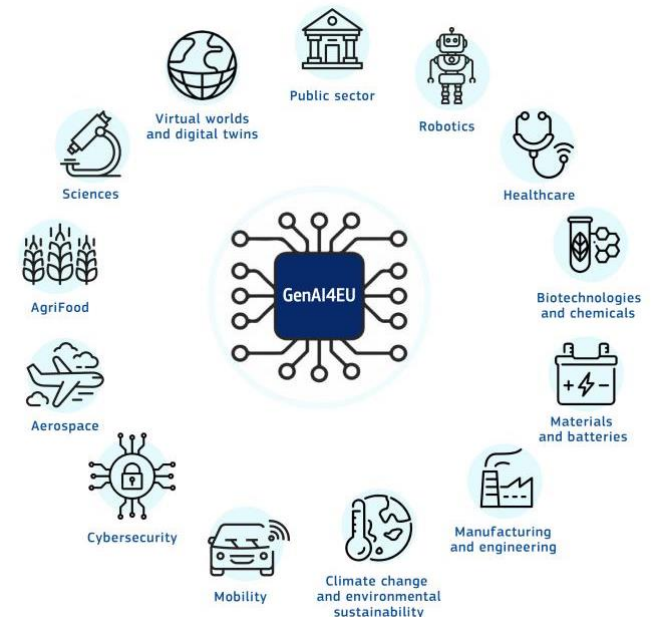


First legal framework on AI
Positions the EU in a leading role globally

- Development of excellent and trustworthy AI
- Risks to be addressed
- Transparency requirements

European AI Office

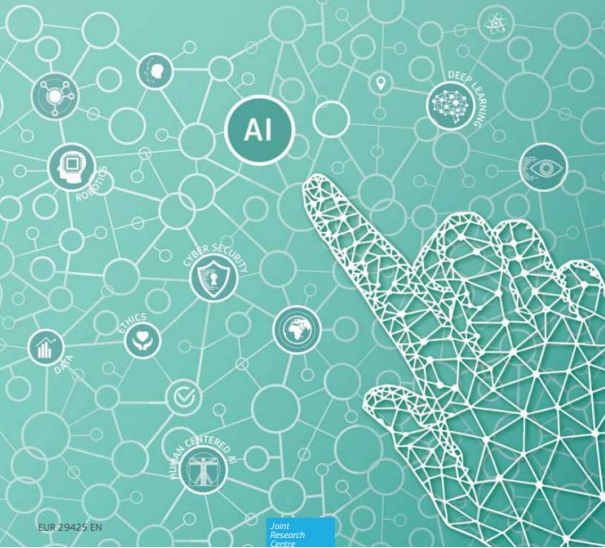
The European AI Office will be the centre of AI expertise across the EU. It will play a key role in implementing the AI Act - especially for general-purpose AI - foster the development and use of trustworthy AI, and international cooperation.





ARTIFICIAL INTELLIGENCE

A EUROPEAN PERSPECTIVE



EUR 29425 EN
Joint Research Centre

“The digital transformation of society has just begun: AI is central to this change and offers major opportunities to improve our lives.”

“Uncertainty about the impact of AI can be a concern but is also an opportunity: the future is not yet written. We can, and should, shape it.”

2018

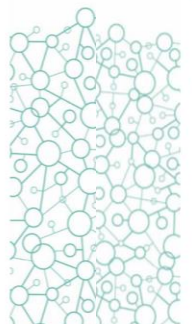
“We can **build on our areas of strength** including excellent research, leadership in some industrial sectors like automotive and robotics, a solid legal and regulatory framework, **and very rich cultural diversity** at both regional and subregional level.”

“**Technology is a social product** which **embodies** and replicates social norms, values, and other economic, ecological, political, or **cultural forces** at any given time.”

“In the longer term, there is a need to start to reflect in society on the extent to which the **digital data** that constitutes the cumulative knowledge about society should also be considered **a national asset**, in a similar way to cultural assets and landscapes.”

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European Commission

Research for CULT Committee - The Use of Artificial Intelligence in the Cultural and Creative Sectors

KEY FINDINGS

- 1: AI challenges the creative value-chain by shifting human services to algorithms and **empowering the individual creator**.
- 2: AI-generated content **challenges authorship**, ownership and copyright infringement.
- 3: AI has potential to create ways for a large audience to navigate through the rich cultural content by European cultural institutions.
- 4: AI for media content brings up **issues** regarding **cultural and linguistic diversity**. Public measures to prevent discrimination.
- 5: AI governance centralization impacts on the CCS. Support is needed for **less-centralised, human-centred AI**.
- 6: The **Union supports a rich environment for AI-Art**, resulting in the development of **critical discourse** on technology and AI by the public, which should be sustained in the long run.



February 2022



Opportunities and Challenges
of **Artificial Intelligence** Technologies
for the **Cultural and Creative Sectors**



technopolis



DANISH
TECHNOLIS



Research
Institutes
of Denmark



BOP
Consulting

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Re

- Identifies **opportunities** of AI for the CCS, considering the **challenges** they pose
- Suggests actions for CCS stakeholders and policymakers in **applying AI and promoting a culturally diverse offer** of European works.

- **Ten cultural and creative sectors** analysed including **museums**

- Opportunities
- Use cases
- Risks
- Key challenges

Recommendations on:

- Access to data
- Access to **skills**
- Transparency
- Collaborative ecosystems
- Access to finance



European
Commission



February 2022



Study on copyright and new technologies: Copyright data management and artificial intelligence



2022

1. Rights metadata in CCS. Key findings: challenges to rights data management persist, despite considerable progress. Need to improve efficiency and transparency, build awareness, master metadata, use new technologies, integrate existing rights data frameworks.

2. Implications of the use of AI within the CCI for copyright and related rights. New AI solutions are currently developed and applied also for tasks traditionally considered as involving creative choices. Challenges concern the scope of the reproduction right, text and data mining exceptions, false attribution of AI-created works to a human, reliance on related rights to circumvent the absence of copyright protection for this type of output.

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Artificial intelligence in the context of cultural heritage and museums

Complex challenges and new opportunities

SUMMARY

- **AI applications for cultural heritage and museums are promising** and would have seemed science fiction just a few years ago
- **Applying AI in the public cultural domain requires investment in infrastructure, equipment and highly qualified human resources.**
- **A critical mass of data is needed** to put AI at the service of cultural heritage and museums.
- **Human resources are essential**, as AI needs to be fed with high-quality data to be trained to perform its tasks.
- **Data** needs to be **interoperable** and properly described with **metadata**.
- **Copyright** issues must be resolved
- **Capacity building and skills** are key.



Horizon Europe

2021-2027

THREE PILLARS FOR IMPLEMENTATION



Pillar 1 EXCELLENT SCIENCE

European Research Council

Marie Skłodowska-Curie Actions

Research Infrastructures



Pillar 2 GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS

Clusters

- Health
- Culture, Creativity and Inclusive Society
- Civil Security for Society
- Digital, Industry and Space
- Climate, Energy and Mobility
- Food, Bioeconomy, Natural Resources, Agriculture and Environment

Joint Research Centre



Pillar 3 INNOVATIVE EUROPE

European Innovation Council

European innovation ecosystems

European Institute of Innovation and Technology

WIDENING PARTICIPATION AND STRENGTHENING THE EUROPEAN RESEARCH AREA

Widening participation and spreading excellence

Reforming and Enhancing the European R&I system



- Destination 1: “Innovative Research on Democracy and Governance”
- Destination 2: “Innovative Research on the European Cultural Heritage and the Cultural and Creative Industries”
- Destination 3: “Innovative Research on Social and Economic Transformations”



GREEN

Support adaption and mitigation and strengthen the role of CH&CCIs as drivers of a sustainable climate transition



DIGITAL

Support CH&CCIs to become leaders in the digital transition and contribute to innovative human-centric digital solutions



INNOVATIVE

Develop the capacity of CH&CCIs to contribute decisively to prosperous and sustainable societal development



**THE CULTURAL
HERITAGE CLOUD**



Work Programme 2023-2024

Example calls

- HORIZON-CL2-2024-DEMOCRACY-01-04: *The interrelation between **social, cultural and political identities**, as well as the sense of belonging, and democracies*
- HORIZON-CL2-2024-DEMOCRACY-01-07: **Digital democracy**
- HORIZON-CL2-2024-DEMOCRACY-01-08: *Culture, the arts and cultural spaces for **democratic participation and political expression, online and offline***
- HORIZON-CL2-2024-HERITAGE-01-03: **Leverage the digital transition** *for competitive European cultural and creative industries*
- HORIZON-CL2-2024-TRANSFORMATIONS-01-06: *Beyond the horizon: A **human-friendly deployment of artificial intelligence** and related technologies*
- HORIZON-CL2-2024-TRANSFORMATIONS-01-11: *Assessing and strengthening the **complementarity between new technologies and human skills***



Horizon Europe



MuseIT

Multisensory, User-centred, Shared cultural Experiences through Interactive Technologies
2022 - 2025

GAMIFYING THE PAST TO UNDERSTAND THE PRESENT.

MEMENTOES brings together museum experts and game developers to create gaming experiences that immerse players in the past. The project seeks to help users learn about historical injustice, develop empathy with marginalized groups, and draw conclusions about issues of today.

//MEMENTOES

Perceptive enhanced realities of colored collections through AI and virtual experiences

PERCEIVE aims at creating a new way to perceive, preserve, curate, exhibit, understand and access colored Cultural Heritage collections and Digital Artworks, promoting their re-appropriation.



The project

PERCEIVE

SHIFT

Metamorphosis of cultural Heritage Into augmented hypermedia assets For enhanced accessibility and inclusion





Funded by
the European Union

S + T + ARTS
SCIENCE + TECHNOLOGY + ARTS

S+T+ARTS is an initiative of the European Commission to foster alliances of technology and artistic practice that effectively implement European policymaking to nurture innovation and that benefit the art world as well. The focus is on people and projects that contribute to mastering the social, ecological and economic challenges this continent faces.



POLLINATOR
PATHMAKER



- Nexus with extraordinarily high potential for innovation
- Science and technology combined with an artistic viewpoint open valuable **perspectives for research and business**, through a holistic and human-centered approach

If pollinators designed gardens, what would humans see?

- An algorithmic tool that designs planting for pollinators' tastes, not human taste.
- **Working with horticulturalists, pollinator experts, and an AI scientist**, Alexandra Daisy Ginsberg created this tool to design with empathy for other species.
- The result is an unlimited edition of algorithmically-generated living artworks..

EUROPEAN DIGITAL DEAL

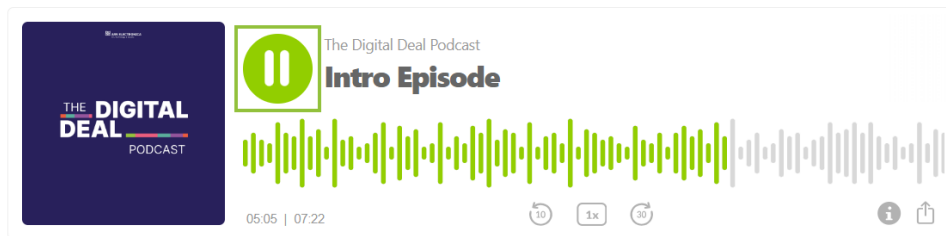


< All episodes

The Digital Deal Podcast

Intro Episode

NOVEMBER 21, 2023 ARS ELECTRONICA SEASON 1 EPISODE 0



LISTEN ON



SHARE EPISODE



- 3-year investigation on **how new technologies like AI can alter or undermine our democracies and the social fabric**, and how **artists, researchers, critical thinkers, cultural institutions** can help us make sense of these changes
- set up a new kind of **public forum to reflect on how to design fair, ethical and sustainable technologies** so that they are committed to democratic principles and benefit the many



Access to a **pool of AI-related resources, datasets, AI models, reusable tools** and **capacity building materials**.

Components will be **reusable** by cultural heritage institutions for:

1. multilingual text recognition in scanned documents;
2. multilingual subtitles generation and validation;
3. enrichment with information extracted from images and semantic linking;
4. machine translation for cultural heritage metadata.

AI4Culture Platform

Online capacity building hub for the application of AI technologies in the CH sector



AI4Culture Platform

ai4culture



AI Tools

Easily reusable and deployable



Open Datasets

Open labelled datasets amenable for training and testing AI models



Upskilling Material

Technical material (e.g. API documentation) and resources for professionals with lower IT skills (e.g. success stories)

All components will be interoperable with the common **European data space for cultural heritage** to facilitate data sharing and reusability of cultural content



Considerations

- ***Cultural diversity, creativity, cultural participation are paramount for human centric AI developments, promoted by the Commission in the EU and internationally***
- ***AI provides museums with innovative tools allowing to enhance and expedite practices such as cataloguing and engage with people in accessible, inclusive, and personalized ways.***
- ***Museums are trusted for their credibility and their dedication to accuracy and ethical considerations. As museums engage with AI, we ensure AI is integrated in ethical practices.***
- ***Museums and cultural institutions can play a key role to promote critical thinking and digital literacy, essential to counter misinformation and protect democracy***



Thank you for
your kind
attention!



ARTIFICIAL INTELLIGENCE

European Commission

DG RTD

Unit D4 Democracy, Equality & Culture

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