

# Value and Impact through Synergy, Interaction and coOperation of Networks of AI Excellence Centres

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## **Table of Contents**

Tabl	e of Contents5
Ex	ecutive Summary
1.	Introduction7
2.	National strategies and approaches for AI8
	UK
	USA
	China10
	Japan10
	Canada11
	Republic of Korea13
3.	Main AI networks / alliance outside Europe14
	USA
	China14
	Japan15
	Canada15
	Other associations
4.	Main players17
5.	Main Al conferences
	Other activities carried out by NoEs
6.	Benefits and lessons learned
	Coordination with the NoE
	What has been learned
7.	Conclusion
R	eferences



#### **Executive Summary**

Foreseen as the outcome of T6.2 International outreach, this deliverable "Updated International Outreach Report" (D6.6) is the final version and presents an updated analysis of how AI is perceived in some key countries and who are the main players, whose starting point was the analysis already carried out within D6.2. Starting from an overview of some of the National strategies and approaches for AI (see below), a breakdown has been presented of some of the main AI network / Alliances outside Europe. Additionally, it has analysed some of the main players in the field of AI and some of the main conferences of the sector, with a report of the activities carried out on internationalisation by the four ICT-48 NoEs. A final chapter is devoted to some lessons learned by the NoEs in their internationalisation efforts.



#### 1. Introduction

According to OECD and its worldwide live repository of AI policy initiatives<sup>1</sup>, many countries in the world are investing in research & development in Artificial Intelligence, their aim being to harness benefits and mitigating risks, to develop standards and AI policies, to ensure international cooperation, etc. By taking a look at the analysis carried out by the European Commission/OECD, the national AI policies and strategies analysed can be divided in four main areas, i.e., a) Governance (including National strategies, and plans, and an analysis of how AI is used in the public sector); b) Financial support (intended as project grants, financing for business R&D and innovation, and procurement programs for R&D and AI innovation; c) AI enablers and other incentives (including but not limited to networking and collaborative platforms, data access and sharing, and AI computing and research infrastructure); and d) Guidance and regulation and standards in the field of AI<sup>2</sup>.



Within this report, we provided an updated analysis of national strategies and approaches for AI, concentrating on some key countries (such as the UK, USA, China, Japan, Canada, and South Korea). We then provided an overview of some key AI networks and alliances outside Europe, as well as some of the main companies that are key players in the field of artificial intelligence. These initial sessions (2 to 4) provide an outline of the artificial intelligence situation globally.

We have then concentrated on the research sector, providing an overview of the main conferences on AI themes. Within section 5 we also showed the activities that the ICT-48 NoEs carried out towards internationalisation. We also wanted to add a section on benefits and lessons learned to show what has been achieved and learned in the internationalisation efforts carried out by NoEs, in attracting talents from the international community and in increasing the NoEs presence outside Europe.

#### 2. National strategies and approaches for AI

The creation and application of national AI strategies and policies are in varying stages of development and implementation among nations. Canada established its national AI strategy in 2017, and Japan, France, Germany, and the UK followed closely behind in 2018. Other nations are still formulating or organising their strategies according to the <u>AI Watch</u> report of 2021.

<sup>&</sup>lt;sup>1</sup> <u>https://oecd.ai/en/dashboards</u>

<sup>&</sup>lt;sup>2</sup> <u>https://oecd.ai/en/dashboards</u>





Worldwide, this is the situation (updated 2023):

Many strategies are adopted to implement policies, the most frequent and more widely used being:

- 1. **Investing in research & development on AI** to "support the establishment of national AI research institutes; consolidate AI research networks and collaborative platforms; prioritise AI investments in targeted sectors; pursue AI mission-oriented innovation policies; and procure AI systems for the public sector."<sup>3</sup>
- 2. Data access and sharing to expedite national adoption of AI.
- 3. Al Infrastructures and technologies, specifically the requirement for 5G networks and high-quality connectivity.
- 4. Shaping an enabling environment to support commercialisation or deployment of AI by a) providing funding and controlled environments for experimentation and testing; b) setting up platforms for networking and collaboration to connect businesses and business opportunities; and c) offering specialised advisory.
- 5. The transformation of AI skills, jobs, and the labour market to meet the new difficulties AI will bring about.

An outline of some significant nations' national AI strategies is provided below. As is evident from the following, every nation's primary goal is to strengthen its position within the AI industry, which is seen as a creative industry with room to grow.



The UK's ten-year plan to become an AI powerhouse is still in its early stages, with departments working together to fund the ecosystem's long-term needs, facilitate the shift to an AI-enabled economy, and establish governance frameworks. A coordinated strategy across the government and collaboration

with the AI Council is crucial to realise AI's potential and solidify the UK's position as a leader.

After the development of its national AI strategy in 2021<sup>4</sup>, in which the role of AI in increasing resilience, productivity, growth and innovation was acknowledged, in 2022 the "<u>National AI Strategy</u>-<u>AI Action Plan</u>" has been published. In this strategy, the UK government provided a plan to reach the

<sup>&</sup>lt;sup>3</sup> <u>https://goingdigital.oecd.org/data/notes/No14\_ToolkitNote\_AlStrategies.pdf</u>, page 9.

<sup>&</sup>lt;sup>4</sup> <u>https://www.gov.uk/government/publications/national-ai-strategv</u>



vision, a vision that is divided into 3 main pillars to guide the Strategy itself. Mainly, the UK planned to invest in the **long-term needs of the AI ecosystem** through a National AI Research and Innovation Programme, a policy framework, a diverse workforce, and funding for innovative firms. It is also working towards **ensuring AI benefits all sectors and regions** through a National Strategy for AI in Health and Social Care, an open repository of AI challenges, and a Ministry of Defence AI Strategy. Additionally, **effective governance of AI** will involve developing a national position, publishing the CDEI assurance roadmap, and piloting an AI Standards Hub.

The "<u>National AI Strategy - AI Action Plan</u>", to be updated yearly, provides "an overview of progress in the context of a rapidly evolving AI ecosystem within a similarly evolving global context".

#### USA



In 2021 in the USA, the <u>National AI Initiative Act</u> provided a coordinated program to hasten research in the field of AI<sup>5</sup>. The USA has made significant **investments in AI R&D**, guided by the <u>National AI R&D Strategic Plan: 2023 Update</u>. This plan, which is based on the National AI R&D strategic plans published in 2016 and

<u>2019</u>, reaffirms the eight existing strategies and includes an additional one to emphasise an ethical and coordinated approach to international collaboration in AI research.

The US is adopting a **long-term investment strategy** in responsible AI research, prioritising ethical innovation and improving fundamental AI skills. This includes enhancing AI's dependability, ease of use, and managing risks related to generative AI. To work with AI and humans effectively, the US is working towards developing **efficient procedures for AI-teaming and reducing human misuse** of AI-enabled apps. Recognizing and addressing AI's societal, legal, and ethical ramifications is crucial, including multidisciplinary research in AI explainability, privacy-preserving design, and technical processes.

**Security and safety** are also essential, with advanced understanding of the design of safe, reliable, and trustworthy AI systems. Public datasets and training environments should be shared for AI testing, promoting more creative and fair outcomes.

**Using benchmarks and standards** to measure and assess AI systems is essential, guided by the Administration's AI Risk Management Framework and Blueprint for an AI Bill of Rights. Boosting the national workforce for AI R&D is crucial, including education and fluency required for interaction with AI systems.

To hasten AI advancements, **public-private partnerships should be increased**, encouraging continued funding for ethical AI research and development. A cogent framework for cross-border AI research cooperation should be created, prioritising international cooperation to tackle global issues like manufacturing, healthcare, and environmental sustainability.

#### China



By 2030, China wants to emerge as the global hub for AI innovation, with a core AI industry valued at over 1 trillion yuan and allied industries valued at over 10 trillion yuan. The Chinese government is also planning to construct a USD 2.1 billion (EUR

<sup>5</sup> 

https://www.ai.gov/#:~:text=The%20National%20Al%20Initiative%20Act,economic%20prosperity%20and%20national%20s ecurity.



1.8 billion) technology park for AI research in Beijing, and it has partnered with domestic tech companies to foster research and industrial leadership in particular fields of AI<sup>6</sup>.

To address the main issues with artificial intelligence applications and industrialization, the nation has implemented **policies** in the areas of scientific and technological research and development, application promotion, and industrial development. In particular, within the "<u>14th five-year plan for</u> <u>national economic and social development of the People's Republic of China (PRC)</u>", China plans to increase the investment in AI R&D by at least 7% to enhance scientific and technological capability. Within China, Beijing has a large pool of talented AI professionals, excellent R&D and innovation skills, and a dynamic AI product iteration process. Guangdong, Shanghai, Jiangsu, Anhui, and Sichuan are among the other Chinese provinces that are grabbing Al's opportunities. Guangdong's Shenzhen intends to establish a national demonstration zone for AI applications as well as a national pilot zone for AI innovation, with AI being one of the main technologies endorsed by the local government. Shanghai is also cultivating an environment that supports large-model innovation and the high-quality growth of the AI sector<sup>7</sup>.

#### Japan



The public (the Japanese government) and private sectors (the Council for Science, Technology, and Innovation and the Strategic Council for AI Technology) are investing in the thriving AI ecosystem. Japan envisions AI as being a part of Society 5.0, which is its vision of the future and is described as "A human-centred

society that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace and physical space."<sup>8</sup>



In particular, the key to reach Japan' Society 5.0 are:

- The merging of virtual and physical spaces with human-centred social values.
- The creation of knowledge as a means of generating value through the design of a new society

<sup>&</sup>lt;sup>6</sup> <u>https://oecd.ai/en/dashboards/policy-initiatives/http:%2F%2Faipo.oecd.org%2F2021-data-policyInitiatives-24274</u> <sup>7</sup> <u>Source</u>.

<sup>&</sup>lt;sup>8</sup> Source.



• The development of human resources to support a new society.

The Japanese 2024's **AI strategy**<sup>9</sup> outlines an action plan to promote international collaboration and coordination (international collaboration based on the outcomes of the Hiroshima AI Process, etc.), assure the safety and security of AI (governance, safety considerations, countermeasures against falsehoods and misinformation, intellectual property, and so on), and accelerate innovation in and through AI. Additionally, the Strategy will carry out the ongoing initiatives to build an innovation ecosystem, bolster the foundation of knowledge (research capabilities), and strategically promote advanced science and technology.

#### Canada



Canada became the first nation to adopt a national AI strategy in 2017, aiming to establish one of the strongest national AI ecosystems by 2030. The **Pan-Canadian Artificial Intelligence Strategy** was based on 3 pillars: commercialisation, standards, and talent and research.

COMMERCIALIZATION	STANDARDS	TALENT & RESEARCH
<ul> <li>National AI Institutes (Amii, Mila, Vector Institute) to a) translate research into commercial applications, and b) raise these new technologies' adoption</li> <li>Financial support: \$60 million in 2021 + \$20 million each institute over 5 years</li> <li>Canada's <u>Global Innovation</u> <u>Clusters</u> to promote the adoption of Canadian AI technologies</li> <li>Financial support: \$125 million over 5 years (from 2021)</li> </ul>	<ul> <li>Efforts are devoted to advance development and adoption of AI standards, through the <u>Standards Council</u> of <u>Canada</u></li> <li>Financial support: \$8.6 million over 5 years (from 2021)</li> </ul>	<ul> <li>CIFAR, a global research organisation, to enhance programs to attract, maintain and foster academic research talent.</li> <li>Financial support: \$208 million over 10 years (from 2021)</li> <li>The <u>Digital Research</u> <u>Alliance of Canada</u>, a non-profit organisation funded by the Canadian government, to support the strategy objectives by providing computing capacity for Al researchers.</li> <li>Financial support: \$40 million over 5 years (from 2021)</li> </ul>

Additionally, and to promote scientific advancement, cultivate Canadian research talent, and draw in world-class researchers, the Canadian federal government has committed more than \$16 billion since 2016. Additionally, more than \$2 billion has been set aside to promote the expansion of Canada's digital infrastructure and AI ecosystem.

<sup>&</sup>lt;sup>9</sup> <u>Source</u>.



In the **Center for AI and Digital Policy's 2024 global report**<sup>10</sup>, Canada ranked first out of 80 countries, demonstrating its leadership in the responsible adoption of AI. The <u>Artificial Intelligence and Data</u> <u>Act (AIDA)</u>, which prioritises human rights, safety, and health, encourages the use of responsible AI systems in the commercial sector.

As well, the Canadian Government is investing \$2.0 billion in a new AI Sovereign Compute Strategy and AI Compute Access Fund as part of its Budget 2024. The strategy aims to develop long-term AI compute infrastructure and support Canadian researchers and developers in accessing affordable and cutting-edge infrastructure, ensuring Canada's global competitiveness<sup>11</sup>.

#### **Republic of Korea**



South Korea has become a prominent player in the global artificial intelligence (AI) landscape, driven by its strong focus on research and development, robust tech environment, and an energetic startup scene. The government's **National Strategy for Artificial Intelligence**, released in December 2019, outlined a comprehensive

plan for research, development, and commercialization, prioritising "trustworthy AI" and ethical development. The foundation of the Korean National Strategy for AI is the goal of enabling AI for all

citizens and for all societal sectors, as shown in Fig. 5.

In addition, the government's <u>Digital New Deal</u> initiative of 2020 placed AI at the core, with projects like the "AI Open Data Project" fostering collaboration and innovation.

South Korea has built a singular advantage with a dense network of AI-focused startups, known as "scaleups", which work alongside a dense network of academic, industry, and research institutes. In 2024, Korea' science ministry announced the opening of a massive data centre for AI studies, the Al Innovation Hub, in Seoul, which supports over 630 AI scholars and researchers from over 200 institutions participating in state-sponsored AI projects. Korean business conglomerates, or "chaebols," are increasingly looking overseas to build strong



Fig. SEQ Fig.\_ \\* ARABIC 4 – Korea's vision for AI.

<sup>10</sup> <u>https://www.caidp.org/</u>

<sup>&</sup>lt;sup>11</sup> <u>https://ised-isde.canada.ca/site/ised/en/public-consultations/consultation-artificial-intelligence-ai-compute</u>



networks with academia and industry while attracting international talent and experience. These companies recognise that Korean AI research needs to tap into larger talent pools than at home while working with national initiatives abroad.

The intense development of the Korean AI industry is intended to keep the country at the forefront of its global competitiveness across various sectors and drive innovation in areas such as language processing, computer vision, machine learning, and advanced robotics. The country ranks third globally in the number of AI patents filed between 2010 and 2021, with machine learning featuring in around 77% of patents filed.

#### 3. Main AI networks / alliance outside Europe

Since its establishment in 2018, the **European Al Alliance**<sup>12</sup> has worked to launch an open dialogue on Al with stakeholders such as citizens, business, academia, public authorities and experts in regular events and online form exchanges. Located under the <u>European Al strategy</u>, this community has the aims to promote the concept of trustworthy Al, and to build an ecosystem of Excellence and Trust in Al (through the publishing of a White paper).

Outside Europe, there are other networks/Alliances related to AI. In general, the approach seen is devoted to providing members an exchange place to discuss topics related to AI and exchange ideas between sectors and internationally; support the R&D and product development in the field of AI; accelerate the adoption of trusted, inclusive, and responsible AI; and offer participation to conferences, seminars, workshops, etc.

USA



To speed up the adoption of AI and vision, a number of technology providers (like Intel and Siemens) and end-product companies (like Nvidia) have joined forces in the USA to form the EDGE AI and VISION ALLIANCE. This goal is accomplished by encouraging end-product companies to use AI and vision technologies in their products and by offering them the support they need to use these technologies successfully. However, the Alliance's assistance doesn't stop here. In addition to early access to new markets and technologies, enhanced company visibility, conference attendance at the Embedded Vision Summit, and other networking opportunities are all provided. Furthermore, a program called the Vision Accelerator Program is provided to help businesses launch their innovative products more quickly.

#### China



China has worked very hard to advance AI and integrate it into the core of its industrial growth. This tactic has resulted in the formation of a few AI Industry

7/uigitai-strategy.ec.europa.eu/en/policies/european-ai-alliance



Alliances, which bring together and encourage cooperation between the public sector, private sector, and businesses to advance collaborative innovation in AI. Industrial Alliances are used to "support strategic emerging industries, encourage basic research and development, and set common goals to solve national problems." They are typically funded and supported financially by the government. With the establishment of these alliances in 2017, China's AI industry now has 190 industry alliances as of 2019.<sup>13</sup>

One notable example of these Alliances is the Artificial Intelligence Industry Alliance (AIIA) [中国人

工智能产业发展联盟]. Building a platform for cooperation between governments (21 entities), industry (511 members), universities (31 members), research institutions, and end users is its primary goal, along with promoting industrial cooperation and innovation. Its members (567 as of May 2021) receive support in relation to their AI development, attendance at 40 conferences and workshops in 2019, and AI talent training initiatives. The ten working groups of the Alliance gather feedback from partners in the public and private sectors and produce white papers.

#### Japan



The Japanese Society for Artificial Intelligence (JSAI), which was founded in 1986, supports the advancement and growth of science and industry in the field of artificial intelligence by providing a network of exchanges between its members and the academic research community and by funding AI research and

development through a variety of international initiatives, including: a) the bi-monthly Journal of JSAI and the Transactions of JSAI on J-stage; b) an annual international conference; c) seminars and special interest groups; and d) exchanges with academic societies abroad.

In addition to providing all Journal issues and the opportunity to present at the annual conference, JSAI provides its 500,000+ members with the opportunity to take part in other international events.<sup>14</sup>



#### Canada



A scientific society for AI and machine learning researchers, the **Ottawa Artificial Intelligence Alliance** aims to "build and strengthen a diverse, inclusive and impactful AI community in Ottawa." The Alliance aims to create an AI community, increase public, industry, and academic awareness of AI research,

serve as a networking platform for discussing real-world applications of AI, and host an annual workshop.

The AI Impact Alliance seeks to make ethical and responsible AI employment easier. The Alliance's members pool their diverse backgrounds and viewpoints to ensure that AI is used ethically. The Alliance offers programs for responsible AI



<sup>&</sup>lt;sup>13</sup> There were 83 industry alliances in 2017, 117 in 2018 and 190 in 2019; June 24, 2020, <u>http://www.nkear.com/UploadedFiles/file/2020%E4%B8%AD%E5%9B%BD%E6%96%B0%E4%B8%80%E4%BB%A3%E4%BA%80%E4%B8%80%E5%B1%95% %E6%88%A5%E5%91%8A .pdf (archived at https://perma.cc/GZ5V-6SWG).</u>

<sup>&</sup>lt;sup>14</sup> <u>https://www.eubusinessinjapan.eu/sites/default/files/artificial\_intelligence\_in\_japan.pdf</u>



strategies, analyses regulatory frameworks, helps members find data strategies and AI solutions to boost social impact, and develops tools to promote conversation and foster AI trust.

#### Other associations



The Association for the advancement of Artificial Intelligence (AAAI) is the premier scientific society devoted to expanding the knowledge of the mechanisms underlying intelligent

behaviour and thought processes in machines. The non-profit AAAI, formerly known as the American Association for Artificial Intelligence, was established in 1979 with the goal of expanding scientific knowledge regarding the mechanisms underlying intelligent behaviour and thought. The objectives of AAAI are to advance artificial intelligence (AI) research and responsible applications of it, as well as to improve AI practitioner education and training and public awareness of AI. Moreover, it aims to advise funders and planners of research on the significance and promise of recent advancements in AI as well as their future course.



**International Artificial Intelligence Industry Alliance (AIIA).** The Artificial Intelligence Association (AIIA) was voluntarily formed in 2023 by academics and scientists, government agencies, associations and social organisations, businesses,

international universities, research institutions, and related consulting firms. All these entities are actively involved in the field of artificial intelligence, including science education, application, and research and development of AI technology. The AIIA's goals are to advance the global artificial intelligence industry's rapid growth, encourage the innovation and application of AI technologies across a range of industries, advance the deep integration of AI with the economy and society, and advance human society's advancement and development. establishing a foundation for close collaboration between business, academia, and research, and emerging as the central figure and major engine of the global AI industry.



#### 4. Main players

In 2024, the artificial intelligence market surpassed 184 billion US dollars, a significant increase of nearly 50 billion over 2023. It is anticipated that the market will continue to grow at an astounding rate, surpassing 826 billion US dollars in 2030<sup>15</sup>.

In addition, the machine learning segment of the market is foreseen to reach a 36.08% annual growth rate (CAGR 2024–2030) that will lead to a US\$503.40 billion market size by 2030<sup>16</sup>, while the deep learning (DL) market is expected to grow at a compound annual growth rate (CAGR) of 36.7% from 2024 to 2032, from a valuation of USD 17.60 billion in 2023 to USD 24.53 billion in 2024<sup>17</sup>. Additionally, we still observe the rising deployment of cloud-based computer platforms.

The main companies currently investing in AI in 2024, according to U.S. News and Datamation, are:



Amazon.com has built AI into its ecommerce business and Amazon Web Services. AWS offers a variety of consumer and business-oriented AI products and services, such as:

- Amazon Echo, to bring AI into the home through Alexa
- Lex, a business version of Alexa
- **Polly**, to turn text into speech
- **Rekognition**, an image recognition service
- Etc.

Alphabet Inc. is one of the leaders in the AI sector related to retail banking and lending. It is a collection of different companies, the largest of which is Google. Alphabet Inc. will be switching with Google as the publicly traded entity.



In addition to using AI to improve its services, **Google Cloud** sells several AI and machine learning services to businesses. Additionally, Google has **TensorFlow**, an industry-leading software project and its own **Tensor AI** chip project.



Nvidia Corp. produces both hardware and software, and in particular CPUs and graphics processing units. According to Nvidia themselves, "Our work in AI and digital twins is transforming the world's largest industries and profoundly impacting society"<sup>18</sup>. Nvidia is currently developing **Eos**, the world's fastest AI supercomputer and the **NVIDIA Omniverse™ platform**.

<sup>&</sup>lt;sup>15</sup> Source.

<sup>&</sup>lt;sup>16</sup> Source.

<sup>&</sup>lt;sup>17</sup> <u>Source</u>.

<sup>&</sup>lt;sup>18</sup> <u>https://www.nvidia.com/en-us/about-nvidia/</u>



"Microsoft AI has the potential to enable anybody to use, develop, and innovate with artificial intelligence in meaningful and relevant ways"<sup>19</sup>. It offers a mix of consumer-facing and business/IT AI projects and is going deeper into the AI sphere through its cloud computing program. The **Azure cloud service** sells AI services such as bot services, machine learning, and cognitive services to corporations, becoming a global leader in cloud computing and software development.





**Meta Platforms Inc.** is an American technology multinational owning, among others, Facebook, Instagram, and Whatsapp. Machine learning, a basis of Facebook business model with algorithms to connect people and interests, is now exploited more and more by Meta, such as the possibility to translate 200+ languages with 44% more accuracy.

**IBM (International Business Machines Corp.)** has been at the vanguard for the development of data storage and computing technologies.

**IBM Watson**, an AI-based cognitive service, AI software as a service, and scale-out systems designed for delivering cloud-based analytics and AI services, aims to revolutionise how AI is used as part of business everyday operations. It can even operate together with Azure and AWS.







**Taiwan Semiconductor Manufacturing Co. Ltd. (TSM)** is the world's largest pure-play semiconductor foundry. Taiwan Semi manufactures all the advanced AI semiconductors for Nvidia and other AI chipmakers.

Alibaba Cloud is the leading cloud platform in Asia and offers a sophisticated machine learning platform for AI to optimise the supply chain, and to provide customers a personalised experience. Additionally, Alibaba provides cloud-based AI to be used by all and an AI chip available through the Cloud. Alibaba also has seven different research labs to focus on AI, machine learning, natural language processing, and network security.





Adobe Inc. develops applications for marketing and e-commerce in addition to creative content software. Customers are showing interest in the company's Firefly generative machine learning model on platforms like Photoshop and Illustrator. Additionally, Adobe has integrated machine learning and artificial intelligence

<sup>&</sup>lt;sup>19</sup> <u>https://www.greyb.com/artificial-intelligence-companies/</u>



(AI) into its Adobe Analytics, Campaign, and Target products. Adobe unveiled Acrobat AI Assistant in May for business users, a conversational engine driven by generative AI that can increase document productivity.

ASML Holding NV produces photolithography systems and other processing equipment used in semiconductor fabrication. The only significant manufacturer of the extreme ultraviolet (EUV) lithography tools required to create cutting-edge AI chips is ASML. Roger Dassen, the CFO of ASML, recently forecast that the opening of new CHIPS Act-subsidised chip manufacturing facilities in the United States would contribute to a sales rebound.





**Arista Networks Inc.** supplies cloud networking solutions to internet companies, cloud service providers and enterprise data centres. High-throughput data centre switches and high-performance cloud networking solutions from Arista are essential for supplying the processing power needed for demanding AI workloads.



#### 5. Main AI conferences

There are many AI conferences available worldwide, as highlighted within D6.2. Within the same document we presented the main AI conferences divided per type and relevance, according to <u>AMAI</u>. Herewith we concentrated on presenting the conferences in which the NoEs participated to.



The International Joint Conferences on Artificial Intelligence Organization (IJCAI) is organised by the International Joint Conferences on Artificial Intelligence, a non-profit corporation founded in California for scientific and educational purposes on Artificial Intelligence. IJCAI conferences present premier international gatherings of AI researchers and practitioners.



*Type*: Conference *Date*: August 19-25, 2023 *Place*: Macao, SAR *Description*: Within the IJCAI 2023 conference in Macao, TAILOR presented:

- 12 papers. The full list is available <u>herewith</u>.
- 1 tutorial: "<u>T23: Combinatorial Solving with Provably Correct</u> <u>Results</u>", by Bart Bogaerts, Jakob Nordström, and Ciaran McCreesh.
- IARLM@IJCAI 2023 Workshop. The purpose of the workshop was to bring together AI researchers at the crossroads of machine learning, natural language processing, knowledge representation and reasoning, who are interested in the various applications of analogical reasoning in machine learning or, conversely, of machine learning techniques to improve analogical reasoning.
- Wen Chi Yang, Gavin Rens, Giuseppe Marra and Luc De Raedt, IJCAI 2023 <u>Distinguished Paper Award</u>. The paper is a typical TAILOR style of work, positioning itself at the intersection of WP4 (Unifying Paradigms) and WP5 (Action).
- IJCAI-23 Awards for Research Excellence to prof. Sarit Kraus. The IJCAI-23 Award for Research Excellence, the John McCarthy Award and the Computers and Thought Award are awarded by the IJCAI Board of Trustees, upon recommendation by the IJCAI-23 Awards Selection Committee. The Research Excellence award was given to Sarit Kraus who has carried out a program of research of consistently high quality throughout an entire career yielding several substantial results. Professor Kraus is recognised for her pioneering work of the study of interactions among self-interested agents, creating the field of automated negotiation, and developing methods for coalition formation and teamwork, both as formal models and real-world implementations.

Participating NoEs: TAILOR





The <u>AAAI Conference on Artificial Intelligence</u> has the aim to promote research in the field of AI and to promote discussion between researchers and experts.

*Type*: Conference *Date*: February 22- March 01, 2022 *Place*: Online *Participating NoEs*: TAILOR

*Type*: Conference *Date*: February 7-14, 2023 *Place*: Washington, USA *Description*: At least 29 papers have been submitted and accepted at the 37<sup>th</sup> AAAI 2023 conference. See the full list <u>here</u>.

Participating NoEs: TAILOR

*Type*: Keynote and Conference papers *Date*: February 20-27<sup>th</sup>, 2024 *Place*: Vancouver, Canada *Description*: Two tutorials have been organised:

- Bart Bogaerts (Artificial Intelligence Lab, Vrije Universiteit Brussel, co-author) – <u>Combinatorial Solving with Provably</u> <u>Correct Results</u>.
- José Hernández-Orallo (TU Valencia, co-author) LH3: <u>Measurement Layouts for Capability-oriented AI Evaluation</u>

Additionally, a whole series of papers have been presented. See the full list <u>here</u>.

Participating NoEs: TAILOR



#### The Conference on Neural Information Processing Systems

(NeurIPS) is a machine learning and computational neuroscience conference, also focusing on cognitive science, psychology, computer vision, statistical linguistics, and information theory. Over the years, the 'Neural' part has been reduced, but the resurgence of deep learning has led to achievements in speech recognition, object recognition in images, image captioning, language translation and world championship performance in the game of Go, based on neural architectures inspired by the hierarchy of areas



in the visual cortex (ConvNet) and reinforcement learning inspired by the basal ganglia (Temporal difference learning).

*Type*: Conference *Date*: December 8-14, 2019 *Place*: Vancouver, Canada *Description*: An ELLIS Assembly was held on December 10th in the morning during the NeurIPS Conference in Vancouver. The meeting provided an opportunity to provide an update on ELLIS programs. A Letter of Intent concerning the establishment of an association between ELLIS and LMB was signed during the event with the CIFAR Learning in Machines and Brains (LMB) program. In addition to organising focused workshops in the field and engaging in student education through summer school operations, LMB and ELLIS share a vision for exceptional basic research in learning systems with different geographical focus. *Participating NoEs*: ELISE

*Type*: Conference *Date*: November 28 – December 9, 2022 *Place*: New Orleans, USA *Description*: TAILOR has participated with 5 approved <u>papers</u>. *Participating NoEs*: TAILOR

*Type*: Conference *Date*: December 10-16, 2023 *Place*: New Orleans, USA

Description: TAILOR researcher Joaquin Vanschoren organised the NeurIPS 2023 Dataset and Benchmark track. The Datasets and Benchmarks track serves as a venue for high-quality publications, talks, and posters on highly valuable machine learning datasets and benchmarks, as well as a forum for discussions on how to improve dataset development. Datasets and benchmarks are crucial for the development of machine learning methods, but also require their own publishing and reviewing guidelines. For instance, datasets can often not be reviewed in a double-blind fashion, and hence full anonymization will not be required. On the other hand, they do require additional specific checks, such as a proper description of how the data was collected, whether they show intrinsic bias, and whether they will remain accessible. Additionally, 14 papers have been submitted by TAILOR (see full list) and around 500 papers have been contributed to by members of the ELLIS network. Participating NoEs: TAILOR, ELISE



Other interesting and international conferences have been:

#### **Computer Vision (CV) conferences**



The <u>Computer Vision and Pattern Recognition Conference (CVPR)</u> is the premier annual computer vision event and provides an exceptional value for students, academics and industry researchers.

Type: Conference

Date: December 10-16, 2023

Place: Vancouver, Canada

*Description*: At CVPR 2023 (the Conference on Computer Vision and Pattern Recognition) that will be held in Vancouver, Canada, TAILOR scientists have showcased their work on image and video analysis, machine learning, and deep learning. <u>4 papers</u> have been submitted.

Participating NoEs: TAILOR



*Type*: Conference *Date*: June 17, 2024 *Place*: Seattle, USA *Description*: The premier annual computer

vision event, the IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR), consisted of several co-located workshops and short courses in addition to the main conference. Al4Media made a presentation. In addition, a co-workshop has been organised, the "2nd Workshop and Challenge on DeepFake Analysis and Detection", with the support of ELSA and ELLIS. The workshop's main objectives were to protect against visual disinformation and the improper use of generated text and images, as well as to track the advancement of both suggested and current detection solutions. Benchmarks and tools for fake data understanding and detection were also developed. *Participating NoEs*: Al4Media, ELSA.



The **IEEE/CVF International Conference on Computer Vision (ICCV)** is the premier international conference in the field of computer vision.



*Type*: Conference



Date: January 3-7, 2023 Place: Waikoloa, Hawaii Description: Al4Media participated in the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), the premier international event in the field of computer vision, featuring the main conference alongside several co-located workshops and tutorials. A junior research fellow from Al4Media presented a paper detailing their innovative work, contributing significant insights and advancements to the computer vision community.

Participating NoEs: AI4Media



*Type*: Conference *Date*: January 4, 2024 *Place*: Waikoloa, Hawaii *Description*: IEEE/CVF Winter

Conference on Applications of Computer Vision (WACV) 2024 saw a presentation of a Junior Research Fellowship conference article. *Participating NoEs*: AI4Media

#### Agent technologies conferences



The International Conference on Autonomous Agents and Multiagent Systems (AAMAS) is the largest conference in the area of agents and multiagent systems, bringing together researchers and practitioners in all areas of agent technology and providing and internationally renowned high-profile forum for publishing and finding out about the latest developments in the field. The 22<sup>nd</sup> edition will take place 29 May – 2 June 2023 in London, United Kingdom.

*Type*: Conference *Date*: May 29 – June 2, 2023 *Place*: London, UK *Description*: At AAMAS 2023 (the 22nd International Conference on Autonomous Agents and Multi-Agent Systems) in London, UK, scientists have presented groundbreaking research on multi-agent

on Autonomous Agents and Multi-Agent Systems) in London, UK, scientists have presented groundbreaking research on multi-agent systems and their applications in various domains. <u>4 papers</u> have been submitted.

Participating NoEs: TAILOR



#### Human-computer and robot interaction (HCI) conferences



The <u>ACM Conference on Human Factors in Computing Systems</u> (<u>CHI</u>) is generally considered the most prestigious conference in the field of human–computer interaction (HCI) and is one of the top-ranked conferences in computer science. It brings together researchers and practitioners who have the goal to make the world a better place with interactive digital technologies.

*Type*: Conference *Date*: May 14, 2023 *Place*: Honolulu, Hawaii *Description*: HumanE-AI-Network participated in the CHI' 24 SIG (Special Interest Group) on Transforming HCI Research Cycles using Generative AI and "Large Whatever Models" (LWMs). The aim of the event was to explore the transformative impact of Generative Artificial Intelligence (GenAI) on Human-Computer Interaction (HCI) research processes. Additionally, Humane-AI-Network organised a series of workshops, whose full list can be accessed <u>herewith</u>. *Participating NoEs*: HumanE-AI-Network

# HHAİ

The goal of HHAI conferences is to create AI systems that support humans and vice versa. It emphasises the need for intelligent systems that are human-centred, collaborative, accountable, interactive, and adaptive.

*Type*: Conference *Date*: June 13-17, 2022 *Place*: Amsterdam, The Netherlands *Description*: The first international conference on the study of artificial intelligence systems that work in concert, proactively, and with purpose with humans—enhancing rather than substituting human intelligence—was called Hybrid Human Artificial Intelligence (HHAI 2022). HHAI2022 is the inaugural conference of a planned series of conferences on Hybrid Human Artificial Intelligence, organised by the European HumanE-AI-Network and the Dutch Hybrid Intelligence Centre.

Participating NoEs: HumanE-AI-Network





Type: Workshop Date: June 26-30, 2023 *Place*: Munich, Germany Description: An international conference co-initiated with the Dutch hybrid intelligence consortium. 3 iterations have been held in Europe, but it is attended internationally. Participating NoEs: HumanE-AI-Network



Type: Workshop Date: June 11, 2024 Place: Malmo, Sweden

Description: An international conference that we co-initiated with the Dutch hybrid intelligence consortium. We had 3 iterations in Europe but it was attended internationally, especially this last edition in Malmo, which had strong global south engagement through a discovery half-day workshop dedicated to AI in Africa, called "AI in Africa & SDGs: Bridging Networks and Fostering Climate Action". This workshop aimed to strengthen networks for AI and SDGs in Africa, provide practical methods for utilising AI in climate action, and support the accomplishment of SDGs through cutting-edge technological applications. It does this by showcasing successful AI projects and encouraging knowledge exchange. The workshop, which was open to a broad spectrum of attendees, aimed to bridge the gap between AI technology and sustainable development in Africa to create a sustainable future. Participating NoEs: HumanE-AI-Network

Other activities carried out by NoEs

# WiC'24: Women in Computing Workshop Date: July 4, 2024

*Type*: Workshop

#### Place: Munich, Germany

Description: HumanE-AI-Network participated in the closing event organised by AI4Media, in which they assembled an impactful panel about inclusive global AI education using GenAI. Some of the key leaders from the global south were present (e.g. Prof. Slim Abdennadher, president of the German International University in Egypt and Prof. Anicia Peters, the CEO of the national science foundation equivalent in Namibia who attended the event in person). This



is leading to several collaboration initiatives like expanding the AIDA collaborators to Africa, sending exchange students from the global south to European labs, co-authoring research proposals and future events.

Participating NoEs: AI4Media (organiser), HumanE-AI-Network

# 4th AI Community Workshop (GenAi Type: Workshop workshop & education panel)

Date: June 26-27, 2024 Place: Thessaloniki, Greece

Description: This hackathon was dedicated to immigrants in Germany, especially parents and non-technical users to make them use GenAI to create parenting solutions. The event is also organised by an Egyptian external collaborator (Hend Eldamaty) whom we scouted from the winners of another hackathon we organised (LWH HAckaton in Kaiserslautern, Germany) and the speakers are mostly from the global south (India and Bangladesh) and from the USA. The attendees were mostly exchange students in DFKI from outside Europe. Participating NoEs: HumanE-AI-Network



Type: Conference Date: June 4-6, 2024 Place: Washington, USA Description: Trustworthy AI as a requirement for Applied AI prototypes, a workshop on trustworthy AI in the context of System Engineering. Interaction with researchers from SERC (Systems Engineering Research Centre), a collaboration between 26 universities. The workshop is a collaboration between KTH, DLR, TNO and SERC. Presentation

addressed how the 7 trustworthy AI principles are the background for TAILOR, and the Handbook was presented. Further examples presented were from TNO research activities. Participating NoEs: TAILOR

### LWM Hackathon: Enhancing Research Productivity

Type: Conference and Exhibition Date: March 4-5, 2024

#### Place: Kaiserslautern, Germany

Description: HumanE-AI-Network conducted a hackathon and a special interest group to create solutions for increasing research productivity using GenAI. The hackathon happened in Germany with an international audience and participants travelling from the global south to join. The speakers had international backgrounds (e.g. China) although they work in European institutes.

Participating NoEs: HumanE-AI-Network



Type: Conference and Exhibition Date: March 18, 2024 Place: San José, USA



*Description*: Al4Media was represented at the GPU Technology Conference 2024 by Hannes Fassold from Joanneum Research, who presented a poster titled "<u>Do the Frankenstein! Or, How</u> to Achieve Better Out-of-Distribution Performance with Manifold Mixing Model Soups". This presentation showcased innovative techniques to enhance AI performance beyond standard training distributions. For more details, click <u>here</u>. *Participating NoEs*: Al4Media



*Type*: Conference *Date*: March 18, 2024 *Place*: San Francisco, USA *Description*: Al4Media at the Game Developers Conference 2024,

hosting a booth showcasing their latest AI technologies, attracting game developers and industry professionals with live demonstrations. Experts from AI4Media delivered talks on AI integration in game design and procedural content generation, sharing cutting-edge research and insights. This was also a great networking opportunity and meetings to explore partnerships and collaborative opportunities, enhancing their visibility and impact in the gaming industry.

Participating NoEs: AI4Media

*Type*: Workshop *Date*: October 25, 2023 *Place*: Online *Description*: AI4Media organised an insightful AI Café session titled "<u>AI-Café: The effect of</u> <u>No-Code-Low-Code AutoML solution on the AI Computer Vision Industry</u>". The event featured Mahmoud AbdelAziz, the renowned Founder and CEO of DevisionX from Egypt. AbdelAziz shared his expertise on how No-Code and Low-Code AutoML platforms are revolutionising the AI Computer Vision industry, making advanced technology more accessible and driving innovation.

Participating NoEs: AI4Media



*Type*: Conference *Date*: October 19, 2023 *Place*: Singapore

*Description*: The largest and most prestigious regional news media industry event on digital trends, revenue, and technology in Asia-Pacific is called Digital Media Asia (DMA). Since its founding in Singapore in 2009, DMA has led the way in the transformation of the news media industry. Each year, hundreds of the industry's most eminent publishers, editors, and digital executives come together to exchange best practices, business models, case studies, solutions, and their personal experiences in the news media sector. In 2023, Al4Media seized this platform to showcase their innovative work and achievements in Media AI, thereby expanding their global reach. Their participation included a booth, engaging talks, presentations, informative videos, and leaflets distribution, effectively highlighting their contributions and advancements in the field of AI for media.

Participating NoEs: AI4Media





*Type*: Conference *Date*: October 08, 2023 *Place*: Kuala Lumpur, Malaysia *Description*: The IEEE Signal Processing Society (SPS) held its flagship conference in person at the Kuala Lumpur Convention Centre. IEEE ICIP is the largest and most thorough technical

conference in the world devoted to computer vision and image and video processing. This conference offered a great platform for encouraging innovation and entrepreneurship with its lineup of top-notch plenary speakers, tutorials, exhibits, special sessions, industry sessions, and a women-in-engineering event. Al4Media actively participated by presenting a paper titled "Selecting a Diverse Set of Aesthetically-pleasing and Representative Video Thumbnails using Reinforcement Learning". This presentation highlighted Al4Media's advancements in leveraging reinforcement learning to improve video thumbnail selection, showcasing their innovative contributions to the field.

Participating NoEs: AI4Media



*Type*: Conference *Date*: September 11-15, 2023 *Place*: Istanbul, Turkey *Description*: The 54th IASA Annual Conference and the 4th ICTMD Forum included spoken papers, posters, panel discussions, keynotes, exhibitors, the General Assembly, and Committee & Section meetings; professional tours, and a social programme including an opening

reception, a conference dinner, workshops and tutorials. AI4Media organised the panel "<u>My AI is Not Your AI</u>", which focused on the challenges of applying AI in very different cultural settings and on the questions that audiovisual archives might face when adapting AI tools for their organisational needs. *Participating NoEs*: AI4Media



*Type*: Conference *Date*: November 7-11, 2022 *Place*: Bengaluru, India

Description: The International Conference on Multimodal Interfaces (ICMI) is the premier international forum for multidisciplinary research on multimodal human-human and human-computer interaction, interfaces, and system development. Al4Media was prominently represented by the University of Trento, which served as a co-organiser of the conference.

Participating NoEs: AI4Media

#### Type: Workshop Date: June 27, 2022 Place: Newark, NJ, USA / Online



*Description*: Al4Media played a pivotal role in organizing the <u>1st ACM International Workshop</u> on <u>Multimedia AI against Disinformation (MAD 2022)</u>. This workshop was held in conjunction with the ACM International Conference on Multimedia Retrieval (ICMR' 22) in Newark, NJ, USA, from June 27-30, 2022. The event focused on leveraging multimedia AI technologies to combat disinformation, highlighting Al4Media's commitment to addressing critical challenges in the media landscape through innovative AI solutions.

Participating NoEs: AI4Media



*Type*: Faire *Date*: October 8-10, 2021 and <u>October 7-9, 2022</u> *Place*: Rome, Italy

Description: Maker Faire Rome is a platform that connects

companies, academia, individuals, and ideas by facilitating and discussing technological innovation in a clear and understandable manner. It's a trade show where makers, innovators, and industry experts come together to present their projects to the public. Maker Faire is the biggest showcase of innovation and creativity in Europe. Every year, it brings together scientists and inventors with the public. ELISE members took part in the event as organisers. *Participating NoEs*: ELISE



*Type*: Symposium *Date*: June 25-26, 2020 *Place*: Freiburg, Germany *Description*: "Global perspectives on responsible AI - An international and interdisciplinary online research symposium"

covered some of the most important technical, philosophical, ethical, and legal issues facing artificial intelligence (AI) and AI systems over the next ten years from a transdisciplinary and global viewpoint. Lawmakers, academics, professionals from a range of disciplines, and researchers discussed general and essential components of responsible AI. Finding a common ground and fresh perspectives on urgent issues of AI governance and regulation was made possible by the interaction with participants from various disciplines (AI, computer science, medicine, neurosciences, philosophy, and law) and continents (Africa, Asia, Australia, USA, and Europe).

Participating NoEs: ELISE

# QPhML2020

*Type*: Online workshop *Date*: July 6-8, 2020 *Place*: Virtual

*Description*: With the goal of realizing novel future hardware implementations that may be energy efficient, the **ELLIS program Quantum and Physics based machine learning (QPhML)** aimed to develop novel machine learning algorithms using concepts from Quantum Physics and Statistical Physics.

Participating NoEs: ELISE



#### 6. Benefits and lessons learned

Creating an international outreach plan is essential in a lot of ways. Gaining a global perspective makes it possible to engage communities, navigate complexity, and grow a business. The ability to share ideas, values, and technologies as well as improved online visibility are the key advantages. Numerous national strategies and approaches for AI have as one of their goals international cooperation, as was previously demonstrated. Understanding languages, as well as the markets, cultures, societies, and other aspects of other countries, along with their technologies and strategies, is crucial to accomplishing this.

A valuable way to accomplish this is by going to an international conference. Naturally, attendance is primarily determined by whether the conference is held. If it is, attendance fees, which typically range from 0.4 to 2K dollars, travel and lodging expenses, and booth costs—should the attendee choose to have one—also play a role in attendance. While attending a conference of this kind can be costly, there are many advantages, including the opportunity to network with other businesses and international au pairs, learn about the newest research and technological advancements, and present oneself.

#### Coordination with the NoE

The involvement of the NoEs (European network of AI excellence centres) established under ICT-48-2020 RIA) was the main component of the VISION project itself. With VISION's organisational support, the NoEs' already-implemented activities have been able to be more effective. Deliverable D6.2, <u>"International Outreach Report,</u>" which provided a thorough analysis of potential conference locations as well as the major AI Alliance and players outside of Europe, was provided to the NoEs in support of their international outreach initiatives. Furthermore, by participating in VISION's "Communication Clubs - Networks of AI Excellence Centers," the NoEs and VISION representatives were able to maximise their efforts and keep all the projects involved and informed about global activities.

#### What has been learned

Herewith we present the lessons learned by the ICT-48's NoEs within their internationalisation activities.

Lesson learned #1	
What went well? What did not go well?	Internationalisation activities helped increase recognition and visibility. Participating in international outreach activities (such as international conferences) provided the NoEs with a good venue to initiate and increase their collaboration with international researchers is an efficient way.



	The participation in international conferences and scientific publications in renowned journals significantly increased the project's visibility and impact on a global scale.
What is the recommendation?	One recommendation to increase the positive outcomes of internationalisation activities in a more efficient way is to be involved in conference organisation. This allows to boost collaboration with international researchers and increase visibility to the NoE. Additionally, there is the need to be adaptable in planning and execution of activities, being ready to adjust strategies based on feedback and changing circumstances.

Lesson learned #2	
What went well? What did not go well?	The Mobility program for PhD students is an asset as it encourages collaborations.
What is the recommendation?	A mobility program especially targeted to PhD students allows them not only to establish connections and collaborate with other students, but it also allows the students to serve as ambassadors of the excellent research done within the [NoE's] project(s).

Lesson learned #3	
What went well? What did not go well?	Finding event themes with international relevance to the target local communities.
What is the recommendation?	Always involve local research institutes/influencers as organisers. This will help in the organisation because planning international events without local connections in the selected location can be tricky.

Lesson learned #4	
What went well? What did not go well?	The engagement with international institutions and media, along with the involvement of international organisations as associate members, expanded the



	project's network, which facilitates future collaborations and opportunities.
What is the recommendation?	It is important to maintain a sustained effort in building and maintaining relationships with international organisations and initiatives to long-term collaborations and mutual benefits.

Lesson learned #5	
What went well? What did not go well?	The junior fellows exchange program and other international engagements provided valuable cultural exchange and learning opportunities for team members, enhancing personal and professional development.
What is the recommendation?	Possible recommendations for this lesson learned are: - Clear communication to raise awareness and interest, along with close collaboration and regular updates, to overcome the barriers of distance and cultural differences.

Lesson learned #6	
What went well? What did not go well?	Outside EU: Publicising the events widely so that they reach an international audience.
What is the recommendation?	Besides the regular approach of publicising the event on social media and the website, HumanE-AI-Network asked core contributors in the network to always publicise their upcoming events at the end of all their international talks with a call for action to participate. They also used their meetings with the leaders of the other NoEs to promote the events. Personal connections from the organisers in designated countries were also used to hire participants from labs to increase the internationalisation of the events.

Lesson learned #7	
What went well? What did not go well?	It was difficult to schedule time to attend the events. Indeed, participating in international events can take up time, both for organisational reasons (visa request, travel



	organisation, etc.) and for the time needed to participate in the event itself.
What is the recommendation?	<ul> <li>Possible recommendations for this lesson learned are:</li> <li>Going to several events at the same time, to optimise the travelling time.</li> <li>Choosing international conferences when they are in Europe, to reduce travel but with the plus of attending an international event.</li> <li>Plan which conferences to attend already at the proposal phase and devote enough resources to increase the possibility to attend. Additionally, make sure that the proposal can cover the participation in events located outside Europe.</li> </ul>

Lesson learned #8	
What went well? What did not go well?	The budget to attend the events was important and the projects did not have enough budget for travelling. The difficulty was therefore on securing funding for travel and participation in international events. Indeed, participating in international events can require a higher budget than what is usually available in European projects.
What is the recommendation?	<ul> <li>Possible recommendations for this lesson learned are:</li> <li>Going to several events at the same time, to optimise the travelling time.</li> <li>Choosing international conferences when they are in Europe, to reduce travel but with the plus of attending an international event.</li> <li>Meeting international researchers when they are in Europe.</li> <li>Inviting international researchers to NoE's organised conferences.</li> <li>Plan which conferences to attend already at the proposal phase and devote enough budget for travel.</li> <li>Additionally, make sure that the proposal covers participation in events outside Europe.</li> <li>Allocate specific funds for international outreach activities, seek additional funding support internally from the organisation, or establish sponsorships or partnerships with international entities.</li> <li>Ensure that there are enough financial and administrative resources for international exchange (VISA</li> </ul>



support, travel grants, institutes match-making, mentoring, etc.).

Lesson learned #9	
What went well? What did not go well?	The main difficulties encountered in the scope of international outreach activities included challenges such as logistical issues related to coordinating across different time zones and languages, and issues on adapting presentations and content to various cultural contexts.
What is the recommendation?	<ul> <li>Possible recommendations for this lesson learned are to:</li> <li>Define a clear plan with set goals and timelines to help manage activities across different countries and time zones.</li> <li>Ensure regular and effective communication and engagement with international organisations to raise interest, build relationships and identify collaboration opportunities.</li> <li>Utilise virtual meetings to strengthen connections and keep all parties updated.</li> <li>Align goals with the international organising team especially when there is high variance in culture and stakeholder interests.</li> <li>Increase a collaborative proposal writing with international partners (specifically from the global south) during organised events.</li> </ul>

Lesson learned #10	
What went well? What did not go well?	Difficulties has been encountered in the scope of international outreach activities included challenges such as identifying opportunities in an international context, and establishing relationships and collaborations.
What is the recommendation?	Possible recommendations for this lesson learned are: - Leverage local contacts and expertise whenever possible to adjust and adapt communications and presentations to align with local norms and expectations. - Ensure regular and effective communication and engagement with international organisations to raise



interest, build relationships and identify collaboration
opportunities.
<ul> <li>Additionally, and regarding external communications, it</li> </ul>
is important to attract the general audience's attention
with engaging success stories and attentively monitor
social media metrics (impressions, number of likes) to
keep this information in the records.

Lesson learned #11	
What went well? What did not go well?	The use of free registration events with the aim to increase the accessibility to diverse audiences, unfortunately resulted in high last-minute dropout rates. This complicated the planning of the logistics.
What is the recommendation?	<ul> <li>HumanE-AI-Network has worked towards defining a formula for planning these events. They expect a 50% dropout rate for open call recruitments and a 30% dropout rate with events recruited from sister institutes. This holds mostly for smaller events (&lt;50 persons). The recommendations are to: <ul> <li>over-recruit and under-plan logistics like catering;</li> <li>have a core set from personal contacts who confirmed attending the event;</li> <li>try to do catering on the fly (e.g. order pizza) rather than pre-plan to minimise financial damages in high-risk events.</li> </ul> </li> </ul>

Lesson learned #12	
What went well? What did not go well?	These have been some VISA issues when involving international collaborators especially if the event is within the EU or USA.
What is the recommendation?	<ul> <li>HumanE-AI-Network fully supported their project partners in this issue. Unfortunately, this limited the selection of potential external speakers and contributors.</li> <li>Anyhow, it is recommended to: <ul> <li>try to plan in advance to try circumventing this issue;</li> <li>allocate extra travel funds to support speakers / attendees to account for last-minute travel planning because of VISA processes and extra costs incurred;</li> </ul> </li> </ul>



<ul> <li>develop and document a template process for VISA support using the resources from partners who are heavily involved in conference organisation.</li> </ul>
<ul> <li>the location can significantly add to the logistical complications of the planning; therefore, organisers should be mindful and plan the event accordingly.</li> </ul>
- For travel grants: the acceptance must be sent at least 3 weeks before the event to account for possible VISA problems with international audiences.

Lesson learned #13	
What went well? What did not go well?	It usually occurs that research personnel are not trained to do management or planning processes and/or there is no carry-over of trained expertise across events.
What is the recommendation?	The suggestion is to pipeline planning processes as there are a lot of details for each event that must be kept in mind and that are replicated in many events. The expertise in planning scientific events of the network has then been put in good use by pipelining the process, and by having experienced personnel available as support personnel for all international events whenever needed.

Lesson learned #14	
What went well? What did not go well?	Outside EU: Publicising the events widely so that they reach an international audience.
What is the recommendation?	Besides the regular approach of publicising the event on social media and the website, HumanE-AI-Network asked core contributors in the network to always publicise their upcoming events at the end of all their international talks with a call for action to participate. They also used their meetings with the leaders of the other NoEs to promote the events. Personal connections from the organisers in designated countries were also used to hire participants from labs to increase the internationalisation of the events.



#### 7. Conclusion

It is clear from this report that artificial intelligence is permeating more and more facets of society and industry. Numerous nations and businesses have translated Al's success and growth into policies, plans, and strategies to maximise its potential. Basically, every nation under consideration aspires to be a leader in some artificial intelligence field.

The emphasis on developing reliable and moral AI is noteworthy; this is a shared goal among nearly all nations, so it is critical to consider the ethical, legal, and societal ramifications of AI as well. This also entails evaluating AI's advantages and disadvantages while keeping an open mind to recognise and reduce its risks. Education, training, and R&D are essential to achieving this, as it is maintaining an open and fruitful collaboration with external partners. This has been highlighted with the NoEs participation in and organisation of international events. The main goal was to increase recognition and visibility of each NoE on the international stage. With the secondary goal of exchanging and drawing talent from the global community, taking part in international outreach events (like conferences) gave the NoEs an excellent setting to start and expand their collaboration with researchers around the world. In fact, the projects' global impact and visibility were enhanced by their participation in international conferences and their scientific publications in valued journals.

The project proposal phase outlined initial activities such as a) promoting international standardisation, b) attracting talents from the international community, and c) organising news coverage by traditional media outside the EU. These activities were not completely covered by the NoEs; however, international standards on AI are still being developed to address ethical concerns and maintain control over technology and this will require additional time and resources. The same applies to the organisation of news coverage outside the EU. This was difficult for NoEs also because EU funding is usually limited to European partners, making it also hard for NoEs to invite or involve foreign participants. However, the ICT-48 NoEs have worked their best towards reaching an international stage, with many events publicised on an international stage that have significantly increased recognition and visibility for the NoEs, as well as a platform for collaboration with international researchers (as it has been highlighted within section 6).

The difficulties encountered, such as scheduling time for attending the events or facing logistical issues, could be solved by attending multiple events simultaneously, choosing international conferences that are organised in Europe, and meeting international researchers in Europe (even better by inviting them to attend NoE's organised conferences). Budget issues could be solved by allocating more funds for international outreach activities or seeking additional funding internally (within the NoEs). Publicising events widely outside the EU and involving local research institutes/influencers can also help in organising successful international events.



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