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

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Academic-Industry Collaboration Best Practices

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Acknowledgements

Introduction

The **Cross-network Working Group on Academic-Industry Collaboration** was established in 2022 to facilitate discussions and share best practices between the Networks of Excellences (hereafter referred to as NoEs) of the ICT-48 calls of the Horizon Europe programme. This working group consists of the four original NoEs (AI4Media, Humane-AI-Net, ELISE, and TAILOR) who will reach project completion in summer 2024, as well as two more recent projects (euRobin and ELSA) who were both nearly halfway through their projects as of publication of this report (Q1 2024).

Through the creation of this working group, the VISION project has, from a cross network perspective, coordinated and supported efforts to maximize innovation potential through academic and industry collaboration. This facilitation includes three primary activities:

- sharing best practices to support innovation and transfer of AI technology in the NoEs with a particular focus on the on-demand-platform (this report) ;
- scouting for novel ideas and technology with industrial and societal relevance ;
- support their integration and alignment with strategic roadmaps of the NoEs and the Adra SRIDA (see https://www.vision4ai.eu/sra/).

All projects have intentional **interaction and collaboration between academia and industry** which takes many forms. Typically, collaboration has been achieved through industrial partners directly involved in the project as full project partners, through open calls, workshops, or via existing relationships in an advisory capacity. This report provides further details on success stories to share with regards to collaboration between academia and industry, as well as recommendations, challenges, and outlooks to the future.

Methodology

A combination of physical meetings, online group discussions, individual interviews, and electronic communication (a mailing list and collaborative online documents), as well as publicly available documents (deliverables, articles, reports) from the NoEs were used to gather input to develop this report. Following three online meetings, the VISION project analysed the inputs from these meetings to develop a working document which outlined the common activities, challenges and recommendations.

This working document and a suggested calendar were then shared with the representatives of the NoEs at a physical session at the **3rd ICT-48 Community workshop** on June 7, 2023 in Siena, Italy. Two additional physical meetings took place in July 2024 (the SRIDA and SRA workshops in Brussels, Belgium on 4-5 July 2023) to ensure support of industry-research collaboration and sufficient alignment between research and innovation. Individual interviews with each of the projects (typically the project coordinator, the partner responsible for the industry-related work packages or activities, or both) were carried out with VISION partners **Inria** (responsible for this best practice activity) and **Intellera** (responsible for EDIH collaboration with NoEs).

The topics addressed during the interviews make up the bulk of the following sections and included questions related to methodology and processes established during proposal writing and during the project itself, interactions with industry, project activities with industry partners and success stories, challenges encountered and their mitigation, and recommendations for future projects including integration to the AI-on-Demand platform.

Categorization of project activities with Industrial collaboration

While European Research & Innovation projects are all of course unique, with their special *"je ne sais quoi"* that makes them stand out in a highly competitive arena, there are naturally common activities

to them all. Some of these may be more obvious than others (dissemination & communication activities, project management…), however project collaboration between academia and industry within R&I projects can often take on similar characteristics.

The activities related to industrial collaboration within the **Networks of Excellence** can be organised into **5 main categories:**

- **Testing and validation[1]**: which may take the shape of co-created use cases, hackathons, or industrial challenges
- **Financial support**: including cascade funding, microprojects, open calls, prizes, awards, or connectivity funds
- **Social interaction and networking**: including physical or online events such as conferences, workshops and panel discussions
- **Education[2]:** such as industry oriented PhD programmes, mobility funds, and industry tracks
- **Support to the R&I Ecosystem:** through the development or use of existing platforms, contribution to industrial roadmaps and Strategic Research Agendas, collaboration with existing networks

When it came to including industrial partners in Horizon Europe R&I projects, all of the NoEs designed **specific tasks or work packages** into the project work plan during proposal writing to specify how industrial partners would contribute to the project. This included industrial partners as full project partners, for example as leaders of use case development (often with an industrial partner and a research partner working in pairs) or contributors to tasks aiming to align industrial needs with EU research. The following sections describe the activities within the main categories described above, with a focus on success stories, followed by challenges and recommendations encountered during the project lifetime.

Testing and Validation

Use cases, hackathons, and industrial challenges were common activities to each of the NoE projects. The role of industry partners could be as that of a technology provider or as an end user. In the majority of NoEs, the industry sectors of the application domains were varied, including:

- Mobility (autonomous driving)
- Robotics and manufacturing
- Multimedia
- Cybersecurity
- Energy
- Smart industry
- Healthcare
- IT software and services
- Public sector

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[1] The research objectives and technical components of the testing and validation activities of the NoEs have been covered in detail in project deliverables and publicly available reports. In this report, we will consider only the best practices related to industrial partner involvement in these activities.

[2] Similarly, the activities related to Education and training will only be considered in this report through the lens of their inclusion and involvement of industrial partners. As such, activities such as Summer Schools and AIDA, will not be mentioned in detail even though their results were very significant. As Education and training related activities in the context of industrial collaboration tend to include an element of financial support, it will be included in this section of the report and not treated as a separate category.

A notable exception is in the case of AI4Media where the focus was on one sole industry: media (focusing, however, on different media industry sectors, including news, journalism, music, games, audiovisual archives, etc.). For a complete list of testing and validation activities carried out in the context of the NoE project activities, see Appendix I.

Challenges

Processes take time.

While it is crucial to clarify processes and ways of communicating at the beginning of the project, projects can easily fall behind schedule while setting everything up and this can be discouraging to everyone involved. Take the time needed to operationalize communication at the project level at the beginning, but be aware that taking too much time may result in missing important first deadlines. To mitigate this, include **operationalization planning in the project implementation plan** during proposal writing. When appropriate, adapt existing processes to fit your project.

Data and IP protection can be a major hurdle.

Industry involvement in R&I projects tends to stall due to **issues of data and IP protection**. This is a potential issue that should be considered from the very beginning of any collaboration as if it is not resolved it can block a project before it even starts. Be proactive, open and transparent and work together to find solutions.

Reach out to those outside of the existing R&I network.

Some of the NoEs highlighted that it was **not easy to get industry representatives from outside of the typical R&I network involved** in their project activities. Calls to action (even when disseminated through multiple outlets) and open workshops were not very successful, so further reflection is needed for how to better engage with "new" actors.

Consider existing roadblocks to participation.

Formal (administrative) roadblocks as well as a lack of resources (i.e., available man months) make it difficult for start-ups and SMEs to participate. To mitigate this, **easing bureaucratic overhead for start-ups and SMEs to participate** in projects would make a big difference. Another solution could be paid pilots as this would ease the resources needed to participate.

Recommendations

Build on existing relationships.

The inclusion of **industrial partners that have previously worked with academic or research partners** and with whom a relationship of trust has already been established can help jump start activities at the beginning of a project. **Be clear** with partners about what is expected during project duration, not only in terms of content but also their implication in the process, i.e., the timeline, expected resources (man hours and expertise), and what should be delivered. These early adopters can also help facilitate the involvement of other industrial partners who may not have been directly involved in the project from the beginning.

Be selective: define your criteria to include industry partners.

The industry partners involved in AI4Media for example, were **selected** on the basis of the four main criteria: industry profile, excellence in their area of expertise, relevance to project activities, previous experience / participation in EC-funded projects, and previous relationships and collaboration with other project partners.

Explore all avenues to reach new partners.

Disseminate information about public workshops and consultations through as many avenues as possible to engage with new contacts / organisations not directly involved in the EU research world.

Aim for balanced partner representation.

By including partners from research, industry, and the social sciences & humanities, the same issue can be addressed from different angles. Consideration must also be given to the **role an industrial partner could play** in a consortium i.e., as a technology provider or as an end user as this will inevitably imply different research needs.

Allow interaction to happen organically.

The European research world tends to be small, and often its major actors are already working together. Rather than forcing these interactions to happen in each project, they should be allowed to **happen organically** as much as possible. When it is necessary to "force" collaboration, such as the current need related to Generative AI and Large Language Models (LLMs), support from the European Commission would be very beneficial. Once the EU has formally supported a research topic, all networks will be encouraged to get behind the initiative.

Financial support to industry collaboration

Open calls

In part due to the difficulty for SMEs and start-ups to contribute meaningfully to a 3–4 year research projects, a trend in the current Horizon Europe Framework Programme has been to set aside a specific amount within the project budget for **financial support**, be it through **dedicated funding for short-term projects with specific objectives** (often called micro-projects, open calls, or cascade funding) as well as **dedicated funding for exchanges** (onsite) through what is often called mobility or connectivity funds.

The ELISE, ELSA, and euRobin projects developed open calls available to SMEs and start-ups, with the winners carrying out their research over 6 months and receiving 60 000 € (ELISE, euRobin, ELSA). As ELISE and ELSA are part of the ELLIS network, one of the conditions of their open call is the inclusion of a scientific advisor from the ELLIS network. HumanE-AI-Net funded micro-projects which ran for 2-6 months; a main difference to their approach is that micro-projects must include at least 2 partners and at least one of those partners should be an existing project partner. The project partners were also encouraged to apply with at least one external partner. The open calls developed by AI4Media were open to SMEs and Midcaps as well as academia and research organisations, with projects lasting 9 or 12 months and winners receiving up to 50 000 €. Applicants had to choose between a research track (12-month projects) or an application track (9-month projects) and were also supported and coached by a mentor coming from the AI4Media consortium.

Due to the funding set aside in the projects and how the open calls were set up, the total number of projects funded varied considerably by project; for example, HumanE-AI-Net financed over 100 microprojects, ELISE funded 2 opens calls with 16 selected projects, ELSA provided support to 6 SMEs in the first open call, and AI4Media held two open calls with 10 projects selected per call (5 Research and 5 Application track).

The **open calls** and the projects they financed were overall very **successful** with tangible and transferable advances to the AI domain and significant contributions to the European AI ecosystem. They were also highly competitive, with dozens if not hundreds of quality applications submitted for a limited number of spots. For example, 155 applications were submitted in the [two open calls](#) of AI4Media and 20 projects were selected for funding.

Mobility and exchange programs

While many of the mobility and exchange programs developed in the NoEs focused on exchanges between research institutions and universities, it was also possible for young students, PhD and post-docs to use this funding for an **industry placement**. Typically, these programs facilitated on-site

research visits or participation in conferences, to help young researchers gain experience and bring in expertise from outside the project networks. These programs included:

- **AI4Media:** Junior Fellows Exchange Program[3] (https://www.ai4media.eu/junior-fellows-program/)
- **TAILOR:** Connectivity Fund
- **ELISE:** PhD and postdoc program
- **ELSA:** Mobility programs
- **HumanE-AI-Net:** industrial Ph.D. postdoc and internship program
- **euRobin:** Industrial internships for PhD students

Challenges

Scalability and size of projects.

The main issue for SMEs and start-ups is **available resources**, i.e. they need to be able to pay man months for researchers to contribute to open calls or microprojects. It tends to be easier for research organisations to find the resources as they are already working on certain topics and have resources readily available. For industry to contribute at a higher level, the projects would need to be larger (more than 60 000 € over 6 months) to cover the man months necessary, but not as large as multiyear large scale European collaborative projects where resources can get bogged down in administrative burdens. Further reflection on a **middle ground and the right formula** is still needed.

Legal obligations cannot be overlooked.

While not as administratively heavy as a full partnership in a European project, there are still **legal obligations and declarations** needed for open calls, microprojects, and to a lesser extent, reimbursements for travel costs related to mobility projects. Planning buffer periods and anticipating extra time for unforeseen issues or emergencies should be taken into account during the funding rounds and expected start dates.

Travel restrictions.

As mentioned above, some of the mobility programs and connectivity funds for travel between institutions have been met with varying degrees of success due to the **Covid-19 pandemic**. While travel did pick up during the second half of the NoE projects, it took even more time to get people used to travelling again. Overall, these programs were not as frequently used as anticipated during proposal writing.

Recommendations

Leverage on existing synergies.

In the case of microprojects between two or more partners, this is a good opportunity for research organisations and industrial partners to **leverage on existing synergies** or build on projects they were already undertaking. Rather than starting something from scratch, think about what projects are already underway and how they could be supplemented or improved by additional funding from outside resources.

Don't forget other sources of funding.

The funding from an open call or mobility programme within an existing European project can not only be helpful to move an existing project forward, but also can be **combined with other sources of**

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[3] As of publication (Q1 2024) the AI4Media Junior Fellows Exchange Program has received 83 applications including 38 internal (between AI4Media partners), 45 external (collaboration with third parties), **11 with industry,** 71 between academic/research institutions, 1 other, and consisting of 23 female and 60 male Junior fellows.

funding. Applicants should investigate other sources such as local, regional or national initiatives, other European initiatives, all while ensuring double funding for the same activity does not take place.

Favour real interactions and frequent collaboration.

While the COVID-19 pandemic made physical collaboration and travel difficult at the beginning of the NoE projects, in order for mobility programmes and even micro-projects to be successful, it is crucial for there to be **frequent interaction between the partners** and hosting institutions. This can take place through different formats, such as Face to Face meetings, workshops, posters, or informal exchanges, and exchanges can be physical, virtual or hybrid.

Consider including a project partner specialised in open calls.

The AI4Media, ELSA and euRobin projects have included an **external partner specialised in the management of open calls** to carry out these activities within their projects. ELISE made the decision to do everything in-house at the coordinator's institution which was written into their work plan.

Social interactions and networking

When the NoEs were asked what they would consider to be a project success story, a number of them cited creating opportunities for all partners and interested stakeholders to meet, often in the form of a **workshop**. Workshops are ideal opportunities to **facilitate discussions** between academic and industrial partners who are both internal and external to R&I projects. Traditionally, in previous framework programmes, a "typical" EU R&I project workshop would have been written into a project proposal as a mid-project or end of year project milestone, and these workshops would bring together anywhere from 50 to 200 stakeholders at a major European city to highlight project achievements and future sustainability plans. While these project workshops could and should be considered successful project achievements and an opportunity to highlight successful technical progress, they did not typically allow for exchanges or in-depth discussions between academic and industrial partners.

To close this capability gap, the format in recent years has changed, including **co-creation with academic and industrial partner**s, and with a focus on **long term strategy and trends**. They also frequently take place online or in a hybrid format. This was originally due to necessity due to the COVID-19 pandemic, and while travel within Europe became possible about halfway through the NoE project lifecycles, online workshops have continued to be organised with much success. The format of collaborative workshops organised by NoEs have taken on different formats, notably:

- **Mini workshops** of no more than 10 to 20 people to facilitate a co-creation process with both industry and technical partners in attendance
- **Theme Development Workshops (TDWs):** where current hot topics in the field of AI (healthcare, manufacturing, energy) were discussed during an all-day online session, including keynote speeches and breakout sessions
- **Speculative workshops:** invite use case partners and technical partners to attend a workshop to come up with potential illustrative scenarios of new technologies or algorithms, if it is not possible to test them all in existing Use Cases.

Challenges

Marketing is crucial.

The European ecosystem has a myriad of online, hybrid and physical events happening every day and **marketing your event** to the right people is an art in itself. Start early, reach out using multiple communication channels and networks, and figure out how to make it attractive to the people you are trying to reach. Working with dissemination, communication and marketing experts is key.

Getting the right representative balance.

When brainstorming the objectives and agenda for workshops there are always a lot of ideas of topics and participants to be included. It is difficult to find the right balance between research and industry, applications, priorities, and profiles. It takes time to review, discuss, and make decisions. When it comes to industry profiles, large industry tends to have more resources available to get involved in these types of events and it was **harder to convince SMEs, start-ups and even the public sector to find the time**; not only to attend but also to participate in the planning and organisation of the event.

Finding common ground on short/mid/ and long-term priorities.

Workshops are an opportunity to move outside of the short-term priorities of collaborative research projects, and it is important to remember that industry is more interested in long-term trends than short-term advances. The **mid-term perspective** is also frequently missing from these discussions and should be taken into account. If all three perspectives are not included, industry representatives may be sceptical to attend or not see the interest that such an event can have for them.

Recommendations

Preparation is everything.

The preparation phase of workshops can be the most difficult; be sure to begin planning early and allow ample time for the follow-up. By planning early, the organisation committee will have enough time to ensure equal representation of industry and academic partners, as well as the right speaker profiles. Spending adequate time on preparation also ensures that the theme and topics are well considered; that they are appealing, digestible, and not too broad of a scope. **Co-organizing with both industry and academic partners** helps ensure the facilitation and exchanges of ideas and expertise as well as a broad representation of different profiles at the meeting, thanks to professional networks.

Consider the proper format for the objectives you wish to achieve.

While the online format was first utilised out of necessity, it proved very successful in particular for the TDWs. **Online workshops** can allow high level speakers to attend more easily, even if they are only able to give a short speech and then disconnect, and **representation can be broader** when participants are able to connect online. However, for **smaller groups** and more in-depth discussions (i.e., mini-workshops of just 10-20 people), **physical meetings** may be more effective.

Promote interdisciplinarity aspects when relevant.

The current trend at workshops tends to be the analysis of technical aspects of Artificial Intelligence. However, in larger events where there can be more room for different points of view or parallel sessions, it is beneficial to include other areas of expertise including legal / ethical / societal aspects and inviting relevant experts to join the discussion.

Keep it social, especially at the beginning.

Find opportunities for partners to meet: poster sessions at consortium meetings, demonstrations, evaluation phases… **Workshops** are easily digestible and it is the simplest way to get industry and research to come together. While social formats tend to work best, **hackathons** have also had a lot of success, notably for HumanE-AI-Net, even if they are more technical than social. The ELSA project agreed that success stories in the first year of the project were mainly related to networking and bringing research & industry partners together; **General Assemblies, poster sessions, workshops, town hall meetings** and **surveys.**

Support to the R&I ecosystem

Finally, a number of activities dedicated to the strengthening of the Research and Innovation ecosystem through the inclusion of the industry perspective were carried out during the course of the NoE projects. This included, but is not limited to: contributions to the Strategic Research Agendas (SRA) of each of the NoEs as well as Adra's Joint Strategic Research Innovation and Development Agenda 2025-2027 (SRIDA); collaborations with existing networks, NoEs, and initiatives, use or deployment or existing platforms and more specifically the AI-on-Demand Platform.

Contribution to Strategic Research Agendas and inclusion of Industry roadmaps

All of the NoEs attended the SRIDA and SRA workshops in Brussels, Belgium on 4-5 July 2023 to ensure support of industry-research collaboration and sufficient alignment between research and innovation. Break-out sessions during the TDWs were organised by TAILOR in collaboration with other NoEs to **discuss research agendas and included industry output to the roadmap working groups**. Overall, industry partners seem to be primarily interested in the **data and legal issues** surrounding data and how it would be included in research agendas. Finally, projects pulled from reports on use cases written by industry and research partners together (ELSA), as well as on the publication of white papers written from the industry perspective (AI4Media) to ensure alignment between AI research and media industry needs.

Collaboration with relevant networks

The projects were able to rely on existing networks, other NoEs, and the VISION project to reach out to extended networks, particularly for dissemination purposes. Having a unique point of contact through VISION helped in terms of numbers reached as well as having a unique point of entry for AI. This is equally true for Adra as a unique point of entry for AI, Data and Robotics. Similarly, some of the NoEs were able to **capitalise on existing networks** such as IRCIIM or euRobotics for euRobin, ELLIS for the ELSA, ELISE and ELIAS lighthouses, or CLAIRE for TAILOR. By building activities into the projects that strengthen the network, this ensures strategic alignment at a large scale as well as the involvement of industrial partners from inception.

Collaboration with European Digital Innovation Hubs (EDIHs)

The interviews with NoEs included specific questions to delve deeper into practical collaboration activities between NoEs and (European) Digital Innovation Hubs ((E)DIHs). According to the four original NoEs, (E)DIHs were **hard to engage with** since the beginning of the project mainly due to the timing of funding opportunities and concrete incentives to collaborate. According to one NoE, when engaging with DIHs, there was a general lack of information about what the Networks were and how they operated. More specifically, according to some DIHs, NoEs represented too high-level stakeholders focused on research and strategic topics in the field of AI rather than on industry-oriented outputs. One of the problems cited was related to the lack of funding for DIHs to participate in workshops or meetings involving NoEs, as they could not fully grasp their utility.

Nevertheless, aware of the challenges in fostering collaboration among these actors within the European AI ecosystem of excellence, these interviews were a useful opportunity to continue raising awareness especially with the "new" NoEs on potential collaboration opportunities with DIHs, emphasising the importance of connecting these entities to enhance knowledge transfer and sector-specific expertise. Indeed, **recently established NoEs** are in the process of **planning their collaboration activities with DIHs**. For example, ELSA representatives participated in an event hosted by a European Digital Innovation Hub on trustworthy AI and the transfer of AI knowledge towards regional companies.

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The AI-on-Demand Platform

Most of the NoEs interviewed recognized the importance of the AI-on-Demand platform as a one-stop shop for everything AI made in Europe. During the course of the project, many of the projects utilised it as an open access repository to publish their results and reports and to engage with the community.

Challenges

Translating industrial priorities to the research agenda.

It is no secret that industry partners do not, on average, contribute equally to the projects (typically there are more research or academic partners in a research project than there are industrial partners). Therefore, industry partners want to ensure that their outcomes will contribute to the research agenda. At the same time, company priorities can make this difficult as a low TRL product is only interesting to a certain kind of industrial company.

The easiest interactions remained high level.

Sometimes it was easier for projects to communicate at the higher level, i.e., for issues related to project management or communication activities, than to interact at the industry level as not all NoEs were targeting the same industry or working in the same research domains.

Don't forget outside competitors.

As AI-on-Demand is still under development, it remains to be seen what capabilities and services will be reached over time. However, one cannot ignore the fact that it will be difficult to compete with existing open-source repositories such as GitHub.

Planning and monitoring are crucial.

Managing collaborations within individual networks, comprising 30+ partners, and coordinating internal network activities is a complex task that poses inherent challenges. In this context, collaboration among different NoEs has certainly enriched the AI ecosystem of excellence, while, at the same time, adding another layer to this complexity. Beyond this, according to several NoE representatives, engaging with EDIHs introduced an additional tier that **demands extra resources and effort**. That is why, it is fundamental to plan this collaboration from the beginning of the project and eventually add specific KPIs to monitor its effective realisation.

There are other ways to reach the market.

"Collaboration cannot be forced". This was mentioned several times during the interviews. NoEs and their representatives often found it **easier to reach out to SMEs or start-ups** directly rather than passing through (E)DIHs. Often, engaging directly with these realities has been easier than collaborating with the Hubs. This poses inherent challenges to the role of (E)DIHs as mediators between research and industry. In this context, EDIHs should find the correct incentives to connect to the Networks in order to find the most up to date knowledge and expertise to be shared with their clients.

Recommendations

Related to the EDIHs

Earmark funding and indicate specific KPI.

Unless there are **specific indications and requirements within Grant Agreements**, DIHs and individual NoEs have few available resources and concrete incentives to establish connections and develop collaborative activities. Therefore, if the Commission wishes to foster this direct link in the future, then the specific Calls involving DIHs, NoEs and TEFs should emphasise the importance of this link and concrete actions to be developed between all the stakeholders that are part of the European Ecosystem of Excellence.

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Publicise successful collaborations.

Establishing the correct channels right from the project's outset ensures a seamless and structured collaboration, setting the foundations for successful partnerships between NoEs and EDIHs. For example, **creating awareness within consortia** about planned and ongoing collaborations or opportunities can help break down silos and incentivise different stakeholders to act in a similar way. It would be useful to find ways to **align incentives** for both researchers and DIHs to encourage sustained collaboration. This could involve external recognition and/or rewarding of successful partnerships or contributions to digitization efforts. **Showcasing successful collaborations** as case studies to inspire and guide other research institutions and DIHs by highlighting tangible outcomes can also motivate stakeholders to invest in similar collaborations.

Set up events with a specific focus on SMEs/Start-ups, DIHs and AI research.

Setting up workshops with real case studies can provide a practical understanding of the possibilities of collaboration between these two realities or of the hurdles which currently hamper it. Smaller "TDW" initiatives could be suggested to the Digital Transformation Accelerator (DTA) or to the Testing and Experimentation Facilities (TEF) Coordination Action to **exchange knowledge with EDIHs on the world of scientific research in AI** and foster the sharing of insights on this topic and broader connections. Involving DIHs in events organised to share research findings, discuss use cases, and disseminate industry-oriented research results in the field of AI can help increase awareness and interest in collaborations.

Choose the right people.

Among the plethora of actors typically involved in these projects, identifying **individuals working in interconnected projects** is recognized as a valuable factor in bridging gaps between these two realities. Often, one institution is involved both in academic research and in (E)DIHs without a mutual understanding or dissemination of relevant scientific knowledge. Individuals appointed to work with (E)DIHs (especially if coming from universities or research centres) should also be actively involved in research and/or contributing to the work of the NoEs so that meaningful connections are easily created.

Use the AIOD platform for networking and communication.

The AIOD should be the **go-to platform to enhance networking and encourage increased communication** among research institutions and DIHs. Enhancing collaboration between NoEs and EDIHs requires a focus on efficient communication and dissemination. The platform should be used to facilitate continuous interactions between research institutions and DIHs, e.g. through regular updates, newsletters, or dedicated channels where both parties can share opportunities and challenges in collaboration.

Related to Strategic Research Agendas and Industrial Roadmaps.

For future iterations of research agendas, consider other avenues to reach industrial partners that are outside of the projects, for example a public consultation process, inclusion of white papers written by industry, or open surveys.

Related to existing networks.

The main added value of existing networks and VISION was to disseminate upcoming activities or events and to get people involved outside of the project networks.

Related to the AI-On-Demand platform.

Consider what services or propositions will be offered in addition to the repository (possibilities mentioned included as a marketplace, benchmarking, supportive reporting,…), NoEs mentioned that the AI4Experiments service is very useful as this is something that does not exist elsewhere, and also

that they would like to use the platform to publish future open calls for financial support. Finally, ensuring interoperability with projects and their existing services and platforms is crucial to the AI-on-Demand's success.

Lessons learned

In the previous sections recommendations and challenges have been given for each category of activities. Below, lessons learned and recommendations that are globally relevant have been detailed.

Meet industry partners where their interests lie.

Industry tends to be interested in the long term; i.e., where is the journey going, what are the next trends, and how do we get there. Creating a single product through the implementation of a 3-year project is not necessarily their highest priority. It is therefore crucial to meet industry partners where their interests and research objectives converge, rather than pushing forward an agenda that is not compatible.

Don't reinvent the wheel.

Rather than developing processes that are project specific, pull from the experience of your partners and coordinators and adapt existing methodologies for your needs. Making these processes available and easily adaptable via a platform such as AI-on-Demand would be effective.

There is no "blank page".

All R&I projects have to compromise between what the partners are already working on within their institutions and needs defined by the industry. There is no such thing as starting from scratch. Project partners should consider existing gaps between researchers and end users from the very beginning (i.e., during proposal writing) rather than waiting until the project has gotten up and running to discover where the gaps are.

Active involvement is needed for success.

Effective involvement of industry partners requires active investment in the project. Be sure you have appropriate project management resources to manage partner involvement in addition to "regular" project management tasks. Similarly, if some partners are less active than others it can create an uneven dynamic. Getting everyone involved from the beginning of the project, and being sure to deliver to industry partners what was promised during proposal writing will help empower all partners to take ownership of the results and get effectively involved.

Conclusions and looking to the future

Each of the four original NoEs, whose projects will reach completion in summer 2024, were asked during their individual interviews what they consider to be a success story of their project and what activities could be sustainable or easily replicable by future projects. The responses tended to be similar; many cited mini projects and open calls as very successful ways to interact with industry on specific, targeted research objectives for a limited amount of time with a dedicated budget to provide personnel resources and on-site travel. Now that the processes have been established for submission, evaluation, and selection, future projects can easily replicate what has been done in previous projects with adaptations relevant for their specific needs. The AI-on-demand platform is an ideal place to host this information as well as online submissions for future open calls. Of the social formats, the Theme Development Workshops were mentioned many times as successful stand-alone events, with the potential to be replicated as originally designed or with variations (for example deep-dive TDWs which would take place with smaller groups and in person, or as a "mini TDW" for an industry partner who has requested further discussion on a specific topic.

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The two main issues for sustainability are resources and funding which have to be available over the long-term. This is why long-term relationships between academia and industry are so crucial, as getting research to market does not happen within the timeline of a 3-to-4-year research project. Long-term collaboration is necessary. At the same time the activities carried out during the NoE project lifetimes have facilitated discussions, developed results and technological advances on specific use cases over short periods of time, and contributed to the strengthening of existing and new relationships between academic and industrial partners.

Academic-Industry Collaboration Best Practices

Appendix I: List of Academia and Industry transfer activities by project

AI4media

Website: https://www.ai4media.eu/
Co-creation of use cases (demonstrators)
Network of Associate Members
AI4Media Open Calls for SMEs
Research Exchanges
White papers
Contribution to the Strategic Research Agenda

TAILOR

Website: https://tailor-network.eu/
Use cases and showcases
Theme Development Workshops
Hackathons and Industrial Challenges
Contribution to the Strategic Research Agenda
Connectivity Fund

elise — European Network of AI Excellence Centres

Website: https://www.elise-ai.eu/
ELLIS PhD & Postdoc Programme + Industry track
Cascade funding: open calls for SMEs or Startups
Contribution to the Strategic Research Agenda
Catalogue of AI Centers

HUMANE AI NET

Website: https://www.humane-ai.eu/
Microprojects
Matchmaking events
Hackathons
Industrial use cases

elsa — European Lighthouse on Secure and Safe AI

Website: https://www.elsa-ai.eu/
Use Cases
Grand Challenges
Contribution to the Strategic Research Agenda
Innovation lab including
Benchmarks Platform and Open calls for SMEs / Start-ups

euROBIN — THE EUROPEAN EXCELLENCE NETWORK ON AI-POWERED ROBOTICS

Official Website: https://www.eurobin-project.eu/
Technology and career match-making
Industrial internships
Cooperative Competitions and Hackathons
Cascade funding instruments
Contribution to the Strategic Research Agenda