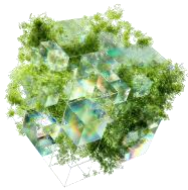


# Project Report

## Managing AI Responsibly and Sustainably — A Workshop to M.A.R.S.

### *Challenge by Deutsches Forum für Ethisches Maschinelles Entscheiden e. V.*

#### Introduction

Artificial Intelligence (AI) applications have gained prominence in society, though many users and developers of such applications remain uncertain regarding ethical considerations in the context of AI. As a 2023 representative survey finds, one in three Germans has used ChatGPT, with the usage having rapidly increased since the start of the year (VdTÜV-Verband der TÜV e.V, 2023). Yet, more than three fourth of respondents believed there are unpredictable risks associated with the use of AI (VdTÜV-Verband der TÜV e.V, 2023). This highlights the critical need to incorporate ethical considerations in deploying AI technology and using them. To do this, it is imperative to train people – especially in decision making roles within politics and industry – on the intersection of ethics and AI.

To bridge the gap between AI implementation and uncertainties regarding ethics, our group conceptualized a one-day workshop to transmit knowledge on AI ethics to politics and industry leaders. Our challenge provider, the *Deutsches Forum für Ethisches Maschinelles Entscheiden e. V.* (EME) required that knowledge should be disseminated efficiently and effectively throughout the workshop. Hence, our group set out to utilize innovative didactical methods to help participants develop awareness on ethical challenges of AI.

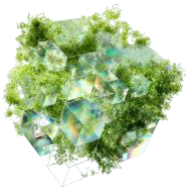
In the following, this report maps out the process of tackling the challenge provided. At first, the challenge and problem are outlined, whereafter the process of building the workshop design is set out. Furthermore, we detail the solution which our group has arrived at, finally providing an outlook of the challenge solution.

#### Challenge

An ethical, human-centric AI must be designed and developed in a manner that is aligned with the values and ethical principles of a society. Ethical decision-making is a socio-technological challenge, therefore, our workshop is designed with the aim of providing awareness to participants while reflecting on application of ethical AI in their respective organization and building retention on the gained knowledge.

With our target audience comprising mainly of professionals from politics and industrial sectors, our workshop will assess the challenges that arise during the development of "ethical" or "trustworthy" consumer offerings (ranging from practical issues with most common data acquisition approaches to foundational questions regarding most of the currently popular digital business models) and discuss what it means for a company and its management to make "ethics" a core value of their AI work.

In 2022, 35% of industries in the IT sector within Germany utilized AI tools as part of their operations, optimizing workflows, and enhancing data analytics for informed decision-making (Bitkom, 2022). Whereas, if implemented effectively, AI can benefit public-sector organizations by aiding in smarter policymaking, reimagined service delivery, and more efficient operations (Patel et al., 2021). The workshop is envisioned to be organized twice a month, comprising 20-25 participants, with an estimated 400 professionals per year.



## Process

Our group proceeded systematically to address the various sections of the challenge, always following the guidance provided by Helene and Charlotte. In order to ensure the accomplishment of the challenge as a whole, we brainstormed ideas for the workshop and schematized them by deducing a series of sub-tasks needed to reach the end result. These were the following:

- A timeline for the workshop, outlining the different workshop phases to have a clear structure.
- A tool to evaluate the workshop's outcome, to guarantee the explicit challenge goal of efficient and effective knowledge dissemination
- Research on state-of-the-art didactical methodology for adults to align to scientific best-practices
- Benchmarking, by researching the market of existing AI-related workshops from which to draw inspiration,
- Interviews with research and teaching personnel, to distill best practices of knowledge transmission in adult learning formats.

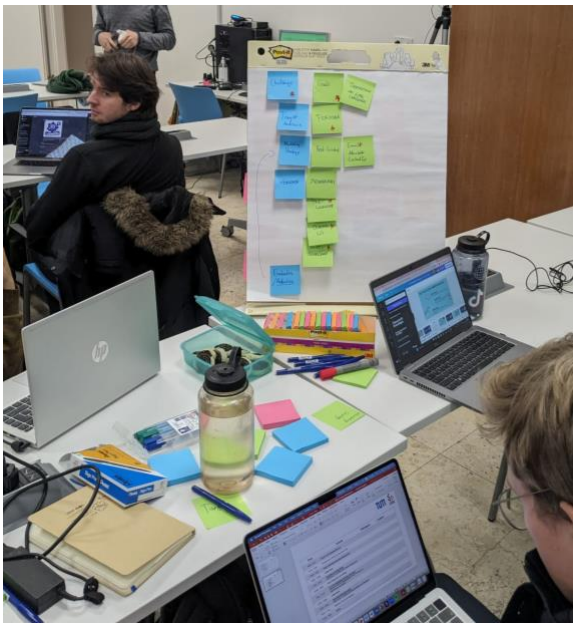
To secure an optimal allocation of the tasks according to each member's area of expertise, we mapped the personal know-how of each group member and assigned the tasks accordingly. This resulted in the following distribution:

**Thilo**: Workshop timeline, because of his experience in seminar organization as well as execution.

**Mira**: Content clustering and group organization, because of her experience in project management and product design.

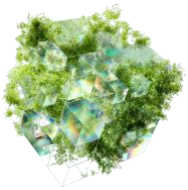
**Bisma**: Benchmarking, because of her experience in project management and sustainability.

**Alonso**: Didactical Methodology and Project Evaluation Tool, because of his experience with educational workshops.



Throughout the preparation, each member worked on their assigned tasks, periodically sharing insights with the rest of the team to foster the flow of ideas.

Thilo, with his expertise in seminar organization and project execution, crafted the workshop timeline drawing inspiration from the different group members and constantly implementing new ideas. His role was crucial in specifying the sections of the workshop, e.g. implementing our initial brainstorm ideas about expert inputs in the workshop and providing concrete examples. Thilo's work was complemented by Mira's, who clustered the brainstorm ideas and implemented them into the workshop structure. By doing so, Mira articulated the content of the workshop by harnessing the group's creativity and organizing the group tasks.

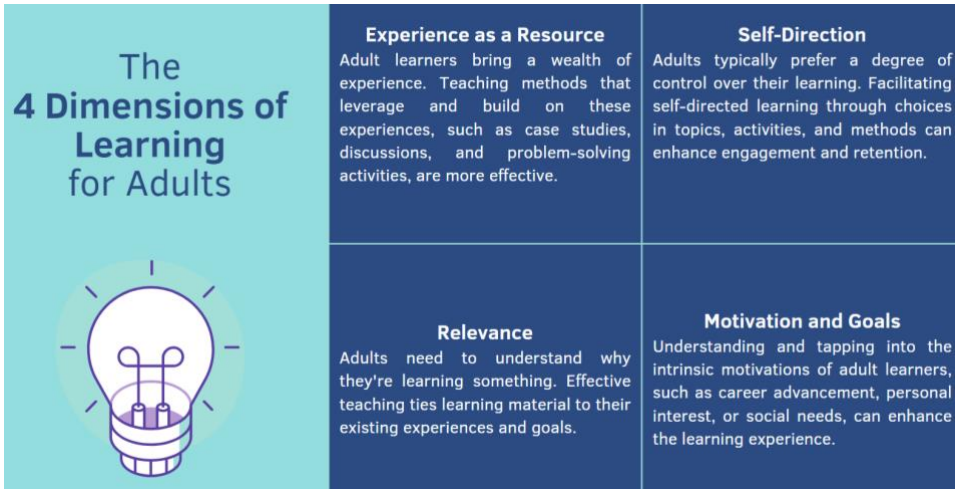


Bisma, leveraging her background in project management and sustainability, undertook the task of benchmarking with a keen analytical eye. She conducted research into existing AI-related workshops and following the advice of our challenge giver, identifying key elements for AI related workshops, strengths, and areas needing improvement. Her findings were instrumental in differentiating our workshop.

Alonso's role in devising the didactical methodology and project evaluation tool was central to the challenge's objective of effective and efficient knowledge dissemination. By resorting to pedagogical literature on didactical methodologies for adult learners, he outlined four dimensions to include in the workshop sections and core elements. His research provided foundations for the choice of didactic tools for the workshop, aligning with Knowles' (1980) emphasis on the importance of experience, self-direction, and application in adult education. His methodologies were designed to cater to our target group, ensuring the workshop's effectiveness across both groups of participants of industry and politics.

## Solution

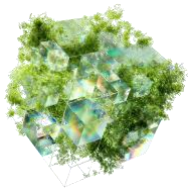
Based on the identified methodology and the benchmarking as well as the creative brainstorming session we incorporated six didactic tools into the workshop. Through these didactic tools the participants shall develop (1) awareness on ethical challenges of AI, (2) reflect how and where they could use ethical AI approaches in their work streams to develop first application ideas and (3) build retention on the gained knowledge.




The didactic tools are implemented into the workshop timeline in combination or as individual elements to establish a reinforcing and sustainable knowledge curve for the participants:

### 1. Survey

When registering, participants already engage with the first didactic tool. With a pre-workshop survey on the topic of ethical challenges of AI the level of knowledge will be collected to align the workshop content if required. In a post-workshop survey the group is again asked a set of awareness questions to detect potential changes. Further, we include questions to evaluate the retention of the learning content with the participants. This provides EME with data to improve and adapt the workshop concept.



### 2. AI-Expert-Bot

We envision a customized AI-Expert-Bot as an innovative learning concept to create a touchpoint to the issue of ethics and AI for the participants. The Expert-Bot shall be trained and controlled by EME to ensure a valid source of information and ensure a regular update with building expertise and advancement in the area of ethical AI. The digital AI-Export-Bot is reachable at any time and allows the participant's self-directed learning.

### 3. Group Work

Through group work, the participants learn to reflect on different perspectives and incorporate interdisciplinary approaches. During the group tasks, the participants are encouraged to engage in a collaborative environment, which often leads to a deeper understanding of the material. Usually, learners benefit from the varied experience of their peers (Reimschisel et al., 2017). This is especially relevant in the highly interdisciplinary AI-ethics nexus.

### 4. AI-Companion

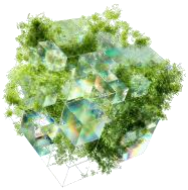
Through an AI-Companion, participants shall learn to incorporate AI-tools into their work streams to accelerate processes. The companion is envisioned to consist of generative AI for text, image and sound creation. Importantly, the tool aims to elevate consciousness on the risks of uncontrolled AI-tools and enable the participants and reflective usage of AI technology. The active integration of the AI-Companion into the group tasks, fosters an engaging and motivating learning environment.

### 5. Card Game

During the EthicsAI card game the participants need to draw various role cards and quest cards. In the collaborative game, participants explore ethical dilemmas and challenges of AI from different perspectives. Gamification in education is a method which is particularly effective in fostering motivation and engagement of the group (Gul & Bilgin, 2021). Further, the game is especially relevant for homogenous groups as it builds up discussion and outlines the relevance of the workshop topic.

### 6. Use Case Development

Use case development in adult education is known for its ability to make learning more motivational and engaging. Participants learn to apply their knowledge to real-world scenarios, which not only builds on experience as a resource but helps in bringing reality into the workshop, thereby enhancing the relevance and applicability of the learning material (Schmidt, 2010). Through the combination of motivational use cases, practical application and real-world relevance, use case development is an effective tool to retain information.

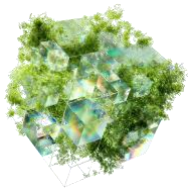


EME

| Time | Activity | Leader | Location |
|---|---|---|---|
| **8:45 – 9:15** | **Check-In and Opening Remarks** | **EME** | Lorem ipsum dolor sit amet |
| 9:15 – 10:00 | Energizers and Getting to Know Each Other | | Lorem ipsum dolor sit amet |
| 10:00 – 10:45 | Expert Theoretical Input About Ethics and AI | Prof. Lorem Ipsum | Lorem ipsum dolor sit amet |
| **10:45 – 11:00** | **Coffee Break** | | Lorem ipsum dolor sit amet |
| 11:00 – 12:30 | Use Cases in the Real World<br>Combining AI and Ethics with Personal Experiences | Group Work | Lorem ipsum dolor sit amet |
| **12:30 – 13:45** | **Short Recap and Lunch Break** | | Lorem ipsum dolor sit amet |
| 13:45 – 15:15 | AI in Your Organisation And New Use Cases<br>Aligning AI with the organizational culture and including AI in organizational processes | Group Work | Lorem ipsum dolor sit amet |
| **15:15 – 15:30** | **Coffee Break** | | Lorem ipsum dolor sit amet |
| 15:30 – 16:45 | Developing Ethical Use Cases<br>Expert Input on Applying Existing Guidelines and Regulation | Prof. Lorem Ipsum | Lorem ipsum dolor sit amet |
| 16:45 – 17:15 | Reflection Round and Feedback | | Lorem ipsum dolor sit amet |
| **17:15 – 17:30** | **Ending** | | Lorem ipsum dolor sit amet |

The introduced didactic tools are incorporated into each of the workshop modules. Depending on the participant and their knowledge, which is queried within a survey directly after registration, the content can be customized to the group's needs.

| **Workshop Module** | **Content** |
|---|---|
| Expert Input About AI and Ethics | Theoretical expert input on basics of AI to align participants on the technology perspective<br>Theoretical expert introduction to ethical foundations to ensure a basic understanding of the philosophical dimension<br>Introduction of the **AI-Expert-Bot** as a tool that can be used throughout the workshop for questions on ethical challenges of AI<br>Distribution of the participants into diverse groups for the rest of the workshop day<br>Introduction of the **AI-Companion** as an additional group member, which shall be involved in group tasks |
| Use Cases in the Real World | **Group work** to collect where participants use AI technology in their life, with a presentation of one use case per group<br>Explanation and playing of the **card game** to introduce ethical AI dilemmas and let participants explore various perspectives<br>Collective brainstorming of ethical challenges of AI |

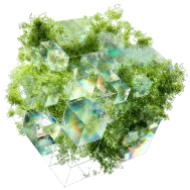


| | |
|---|---|
| AI in Your Organization and New Use Cases | **Group work** to develop a **use case** where AI can be used in the organization/company based on the organization's mission, utilizing design thinking methodology |
| Developing Ethical AI Use Cases | Theoretical expert presentation about AI regulations and ethical guidelines<br>**Group work** to improve the **use case** idea based on the newly gained knowledge on regulations and ethics<br>Group presentations of the **developed use case** |
| Reflection and Feedback | Reflection round by participants on the workshop<br>Mandatory **survey** to receive workshop certificate and get access to the take home material<br>Take home material<br>● DALL·E visualization of the expert input into images (to showcase in the office or as a visual reflection)<br>● PDF with expert input<br>● Link to digital learning platform, including the AI-Expert-Bot and a download link to the card game<br>● Invitation to join the community platform |

**Outlook**

Whereas the goals of awareness and application regarding ethical challenges of AI are mostly conveyed during the workshop day, retention of the material is envisioned to be a lasting process, achieved by connecting participants beyond the workshop.

To aid retention of the knowledge after workshop completion, our group conceives the creation of a learning community, helping EME establish itself as the expert in the intersection of ethics and AI training. Notably, this learning community would consist of previous participants of the workshop and experts in AI as well as ethics from EME's network. With increased digital connectivity, many communities and networks have established themselves online, allowing participants to share insights and learn from each other (Robinson et al., 2021, pp. 352, 357). Provided that most participants are expected to come from professional environments, we considered LinkedIn as a potential platform to engage with participants. On the platform, moderated content related to the field can be distributed by EME and participants. Potential content may include expert talks on the topic ethics and AI, or recent developments in the field of AI. With this outlook on a platform of expert connections, EME can channel its expertise and engage with participants, thereby assisting participants to have lasting engagement with the topics of ethics and AI, beyond the workshop.



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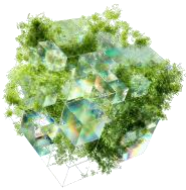

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