

# Group discussion

**Ethical, legal, environmental and societal  
issues related to AI**

## Case 1:

# Computer vision models for mammography screening

Most high-income countries have large screening programs for breast cancer detection in which all women of a specific age (40-74 years in Sweden) undergo regular (bi-yearly in Sweden) X-ray exams. X-ray images are then evaluated by specialized radiologists who decide whether the image is normal or potentially shows a tumor, with the latter leading to a follow-up examination. There is large interest in replacing this human evaluation with automated AI systems, because sufficient numbers of highly trained radiologists are not available everywhere and because AI systems could reduce costs and evaluation time and potentially avoid wrongful examination results.

## Case 2:

### Large language models and AI chatbots

Large language models power multi-purpose AI chatbots such as ChatGPT and Bard which can answer questions on a very large variety of topics and generate text or code. Image and sound handling is also being included. The models are trained on extremely large collections of websites, scientific literature, books and other inputs. They are then refined by humans who give feedback on the answers, both employees (typically in low-income countries) and end-users. Training data, procedures, and models are not made publicly available, but even if they were the work cannot easily be replicated as this requires extensive resources. Access to the best models is typically provided for a monthly fee whereas slightly less capable models are available for free.

# Discuss the ethical, legal, environmental and societal issues for each case

- Ownership of the training data, AI tools and AI output
- Sources and risks of bias
- Transparency regarding development and output
- Societal benefits and negative impact (e.g. on the job market)
- Environmental benefits and negative impact
- Accessibility (e.g. for non-English speakers, low-income countries, people with handicaps)
- Possibilities for abuse by malicious actors
- Responsibility for correctness and safety
- Possibilities for oversight by public authorities and by the end-user
- Consequences of forbidding the development and usage of this type of AI in the EU