

# When AI , Big Data and Ethics converge -

## Ethics, Human Rights and AI Governance

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[www.project-sherpa.eu](http://www.project-sherpa.eu)

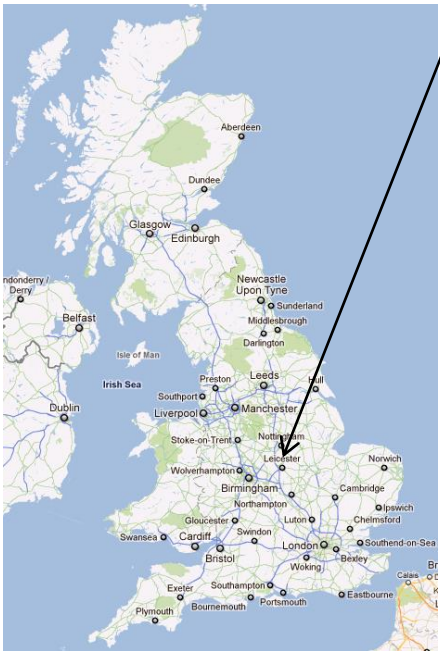


S H E R P A



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# The Centre for Computing and Social Responsibility



De Montfort University, Leicester, UK

## Overview:

- Established 1996
- Members
  - 20 research active members
  - 15+ visiting Profs und Research Associates
- ETHICOMP conference series
- Journal of Information, Ethics and Communication in Society, ORBIT journal
- ~6 live projects, EU, EPSRC, ESRC



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 786641

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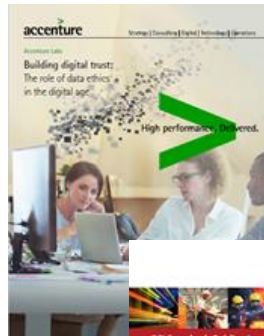
11 & 12 July 2019

2



# What can I say that is novel?

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Recommendation of the Council on  
Artificial Intelligence



OECD Legal  
Instruments



European Commission - Press release

Artificial intelligence: Commission kicks off work on marrying cutting-edge technology and ethical standards

Brussels, 9 March 2018

The Commission is setting up a group on artificial intelligence to gather expert input and rally a broad alliance of diverse stakeholders.

The expert group will also draw up a proposal for guidelines on AI ethics, building on today's statement by the European Group on Ethics in Science and New Technologies.

From better healthcare to safer transport and more sustainable farming, artificial intelligence (AI) can bring major benefits to our society and economy. And yet, questions related to the impact of AI on the future of work and existing legislation are raised. This calls for a wide, open and inclusive discussion on how to use and develop artificial intelligence both successfully and ethically sound.

Commission Vice-President for the Digital Single Market, Andrus Ansip said: "Step by step, we are setting up the right environment for Europe to make the most of what artificial intelligence can offer. Data, supercomputers and bold investment are essential for developing artificial intelligence, along with a broad public discussion combined with the respect of ethical principles for its take-up. As always with the use of technologies, trust is a must."



Report

Sel

AI in the UK:  
ready, willing and  
able?

Ordered to be printed 13 March 2018 and published 16 April 2018

Published by the Authority of the House of Lords

HL Paper 100

Parliament

TEXTS ADOPTED

17/0051

Rules on Robotics

Efficient resolution of 14 February 2017 with recommendations to the

on Civil Law Rules on Robotics (2015/2466/UE)

Parliament

regard to Article 225 of the Treaty on the Functioning of the European Union,

regard to Council Directive 85/374/EEC

regard to the study on Ethical Aspects of Cyber-Physical Systems carried out on

of the Parliament's Science and Technology Options Assessment (STOA) Panel

regard to the Scientific Foresight Unit (STOA), European Parliamentary

Service

regard to Rules 46 and 54 of the Rules of Procedure

regard to the report of the Committee on Legal Affairs and the opinions of the

Committee on Transport and Tourism, the Committee on Civil Liberties, Justice and

Home Affairs, the Committee on Employment and Social Affairs, the Committee on the

Environment, Public Health and Food Safety, the Committee on Industry, Research and

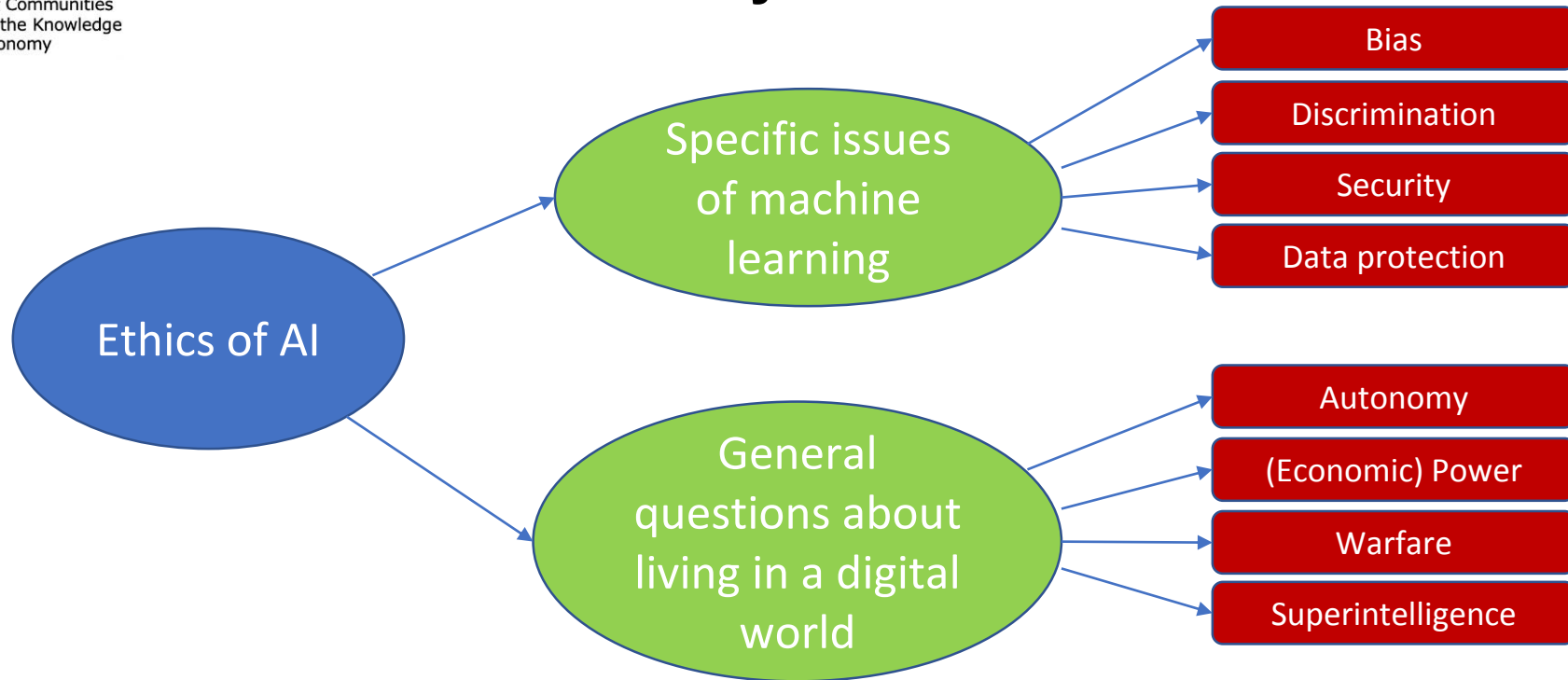
Energy and the Committee on the Internal Market and Consumer Protection (A8-0005/2017).

from the  
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nt agreement no.

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# What do we mean by “Ethics of AI”?

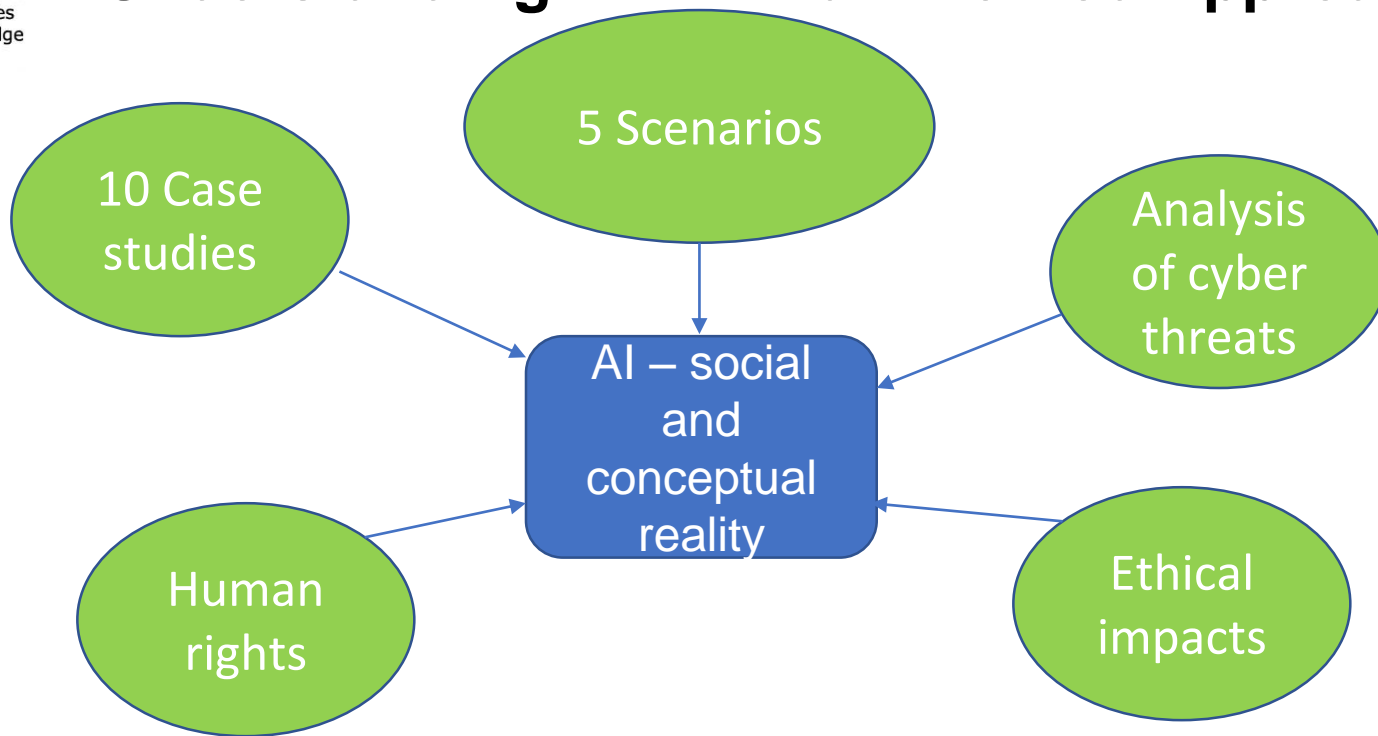


## Desired outcomes

- Economic growth for all
- Addressing global challenges (Sustainable Development Goals) & societal missions
- Better (personalised) services
- Increased human capabilities (compensate disabilities)
- Inclusion & democratic participation
- Empowerment



# Understanding AI – A Multimethod Approach





# Case Studies

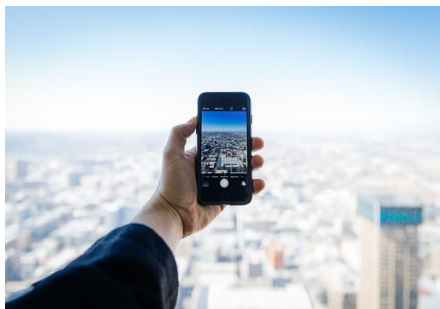
## IoT



## Government



## Agriculture



## Sustainability - Smart Cities



## Science

# Case Studies

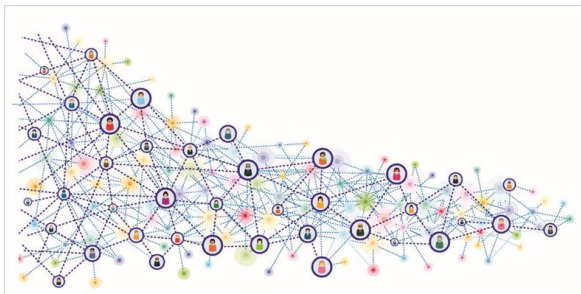
## Insurance



## Energy and Utilities



## Communication, Media



## Retail and Trade



## Manufacturing



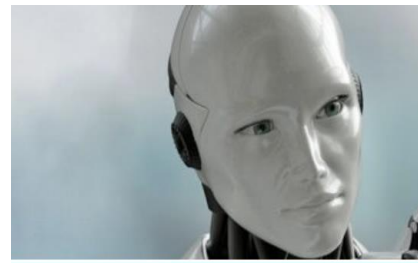
# Scenarios



**Predictive  
Policing**



**Warfare**



**Mimicking  
Technologies**

<https://www.project-sherpa.eu/future-scenarios/>

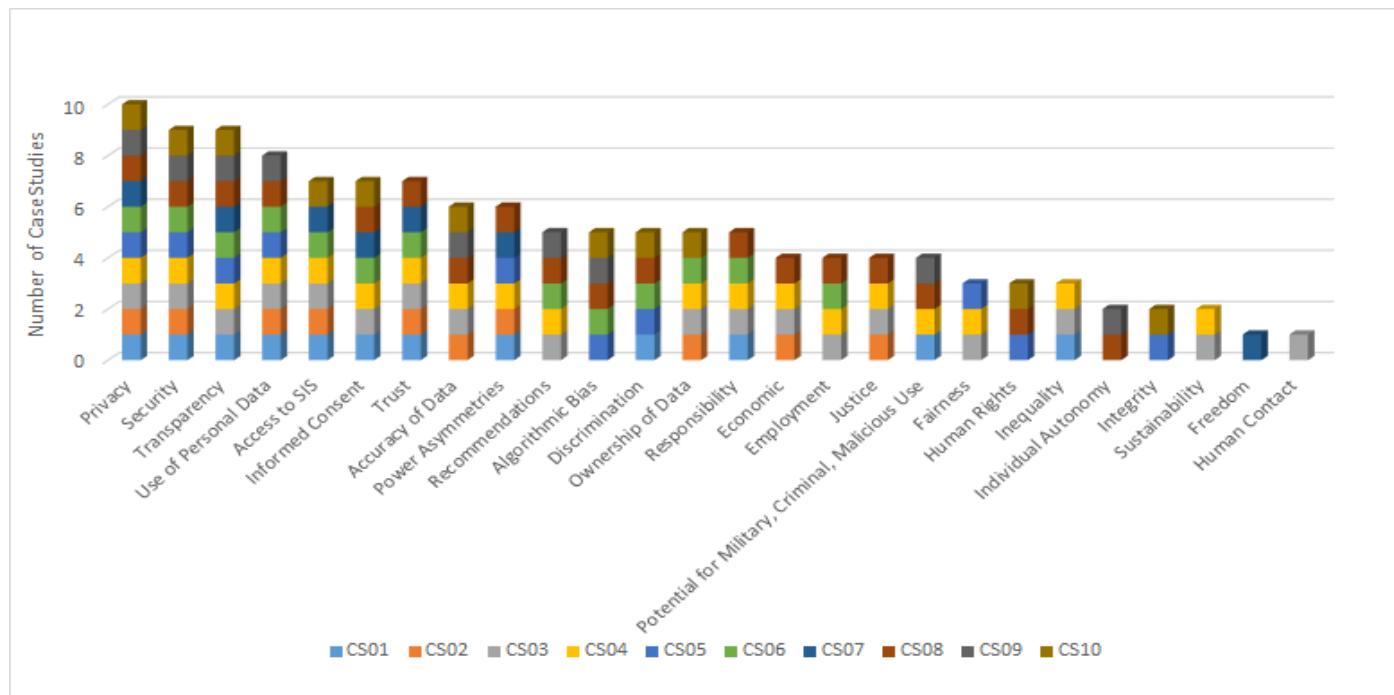


**Education**

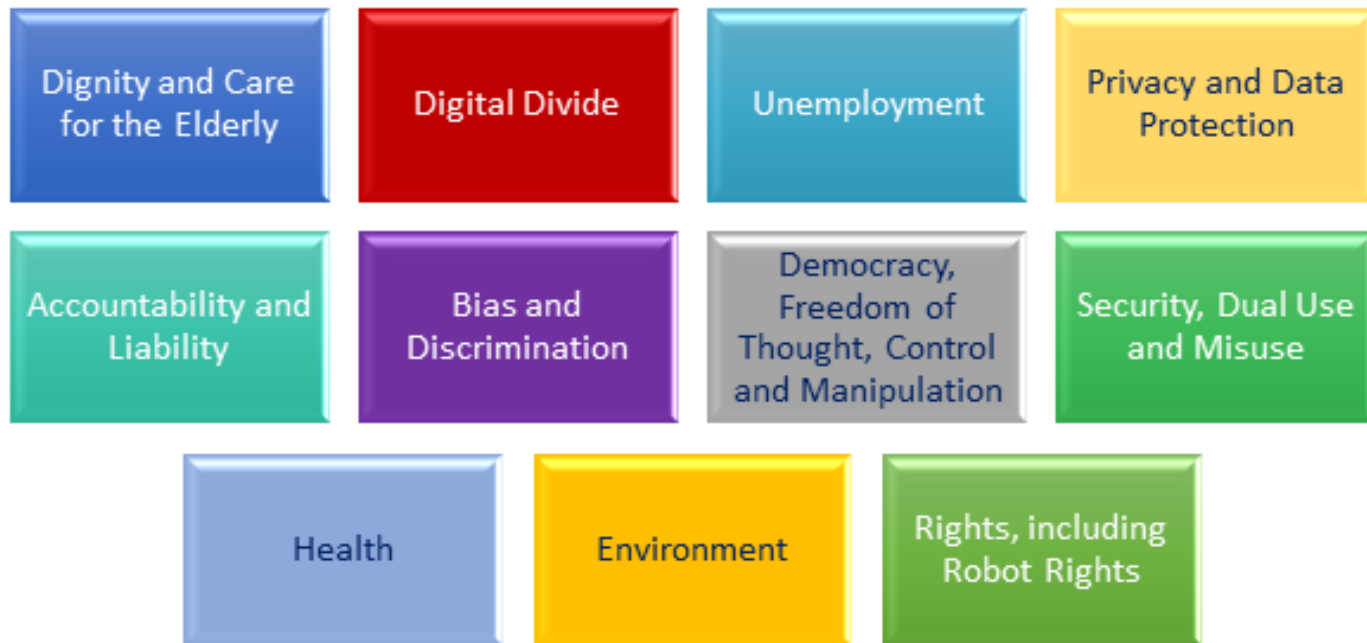


**Self-Driving  
Cars**

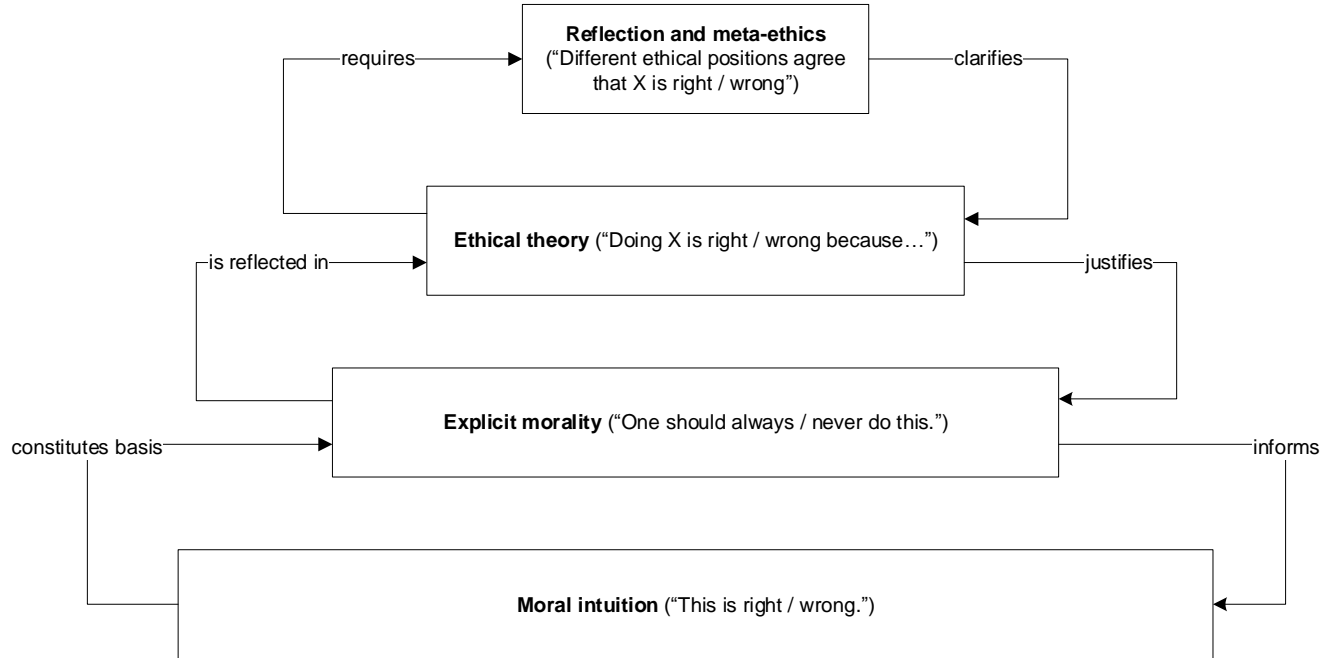
# Prevalence of Ethical Issues in the Case Studies



# Human Rights Analysis



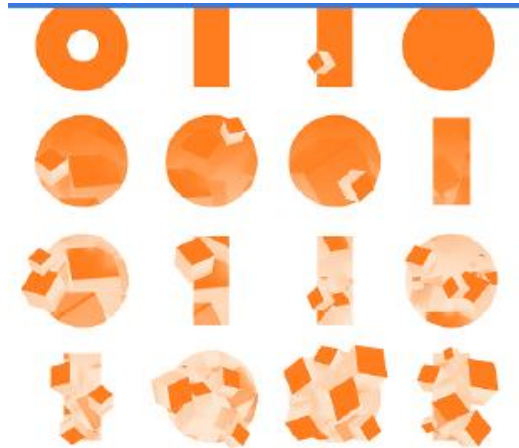
# Concepts of Ethics



Stahl, B. (2012). Morality, Ethics, and Reflection: A Categorization of Normative IS Research. Journal of the Association for Information Systems, 13(8). Retrieved from <http://aisel.aisnet.org/jais/vol13/iss8/1>

# AI definition

- EU AI Communication (April 2018)
  - ‘Artificial intelligence (AI) refers to **systems that display intelligent behaviour** by analysing their environment and taking actions - with some degree of autonomy - to achieve specific goals’ #
- “As soon as it works, no one calls it AI anymore ...” (Meyer, McCarthy, 2011)
- **General** (broad) AI v **narrow** AI



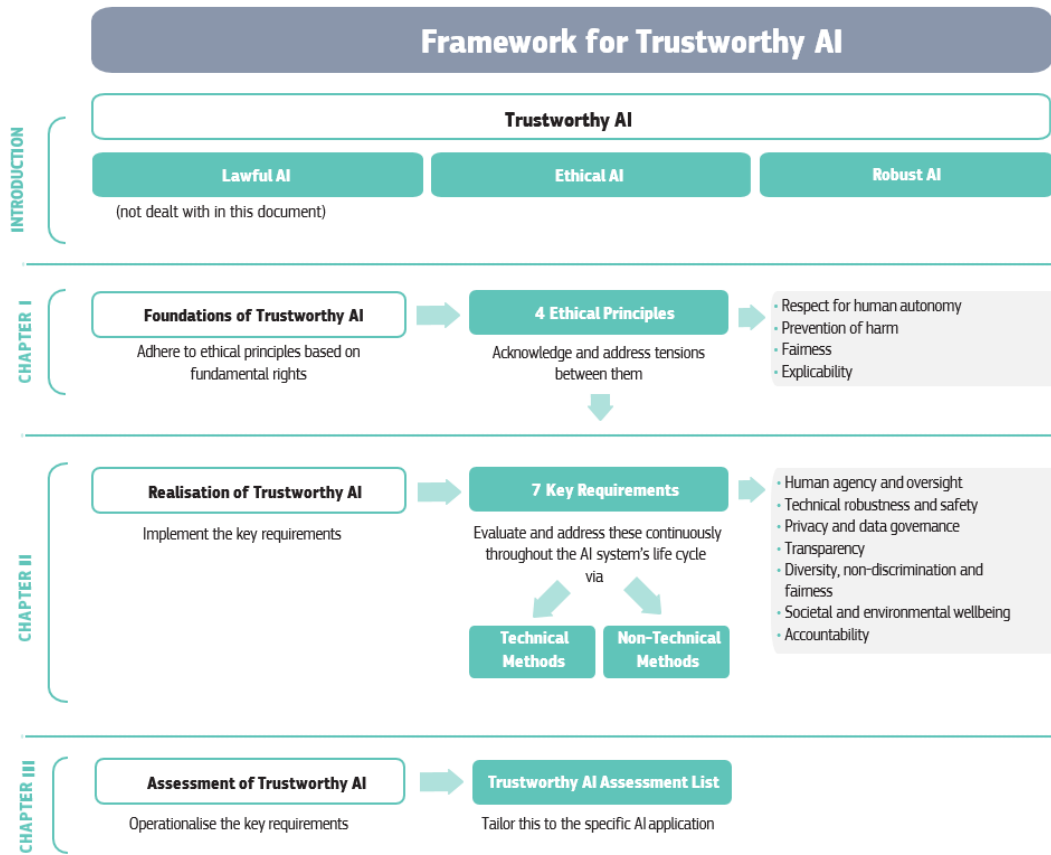
Artificial Intelligence:  
How knowledge is created,  
transferred, and used

Trends in China, Europe,  
and the United States



# Current approaches: HLEG

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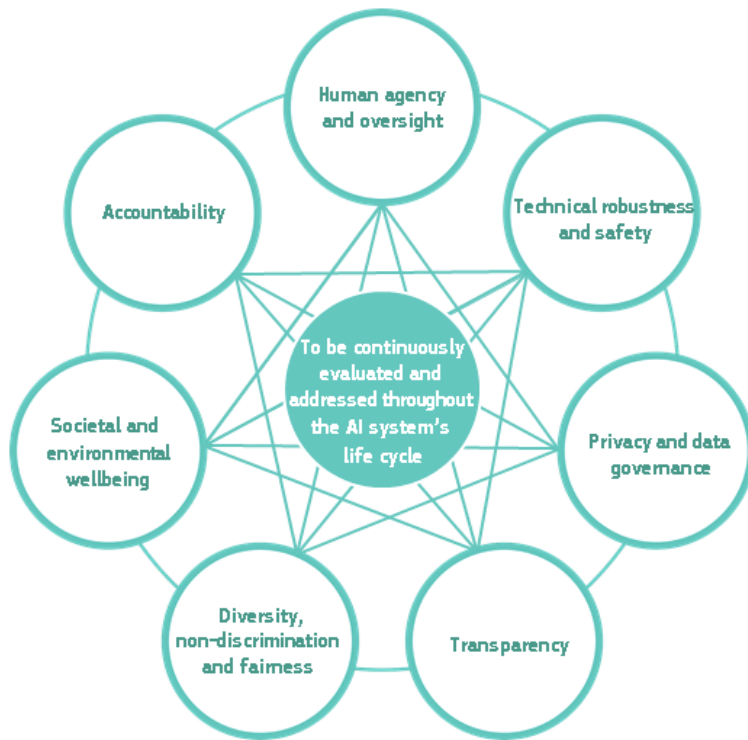


## Fundamental rights

- Respect for human dignity
- Freedom of the individual
- Equality, non-discrimination and solidarity
- Citizens' rights.



# Current approaches: HLEG 7 requirements



## Current approaches: OECD



### Values-based principles

- inclusive growth, sustainable development and well-being;
- human-centred values and fairness;
- transparency and explainability;
- robustness, security and safety;
- and accountability.

## Current approaches: OECD



### Recommendations to policymakers

- investing in AI research and development;
- fostering a digital ecosystem for AI;
- shaping an enabling policy environment for AI;
- building human capacity and preparing for labour market transformation;
- and international co-operation for trustworthy AI.

# Observations

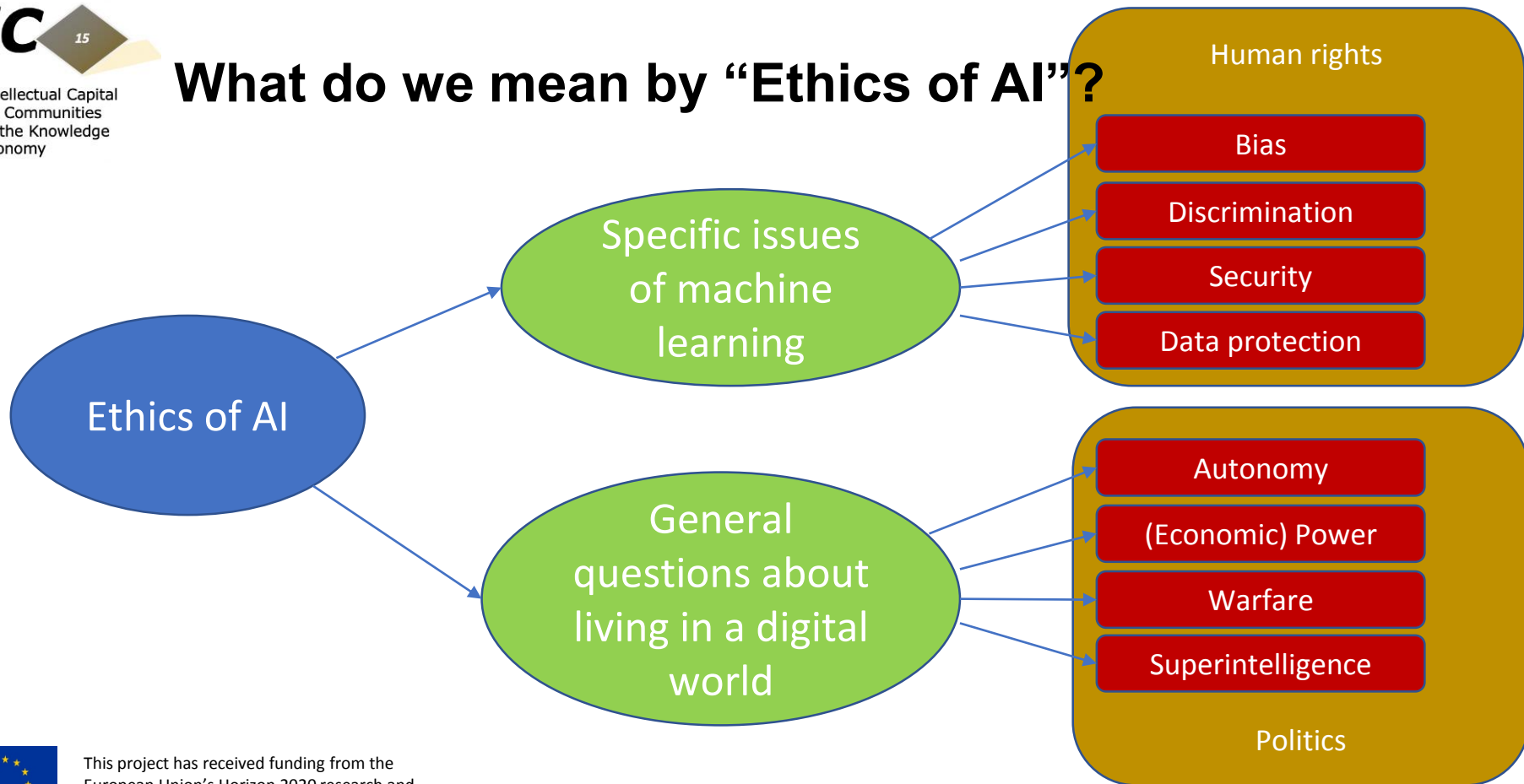
- Pervasive technocentric and techno-optimistic view
- What is new, what is specific to AI?
  - Lack of conceptual clarity
  - AI is part of computer science
  - What happened to computer ethics, info ethics, ethics of technology?
- What is the role of ethics, ethical principles?



# Specific issues of machine learning

Rights	ECHR	EUCFR
Right to human dignity		Article 1
Right to the integrity of the person		Article 3
Right to liberty and security	Article 5	Article 6
Right to respect for private and family life	Article 8	Article 7
Protection of personal data		Article 8
Freedom of thought, conscience and religion	Article 9	Article 10
Freedom of expression and information	Article 10	Article 11
Prohibition of discrimination	Article 14; Article 1, Protocol 12	Article 21
Right of property	Article 1, Protocol 1	Article 17
Right to education	Article 1, Protocol 2	Article 14
Right to free election	Article 3, Protocol 1	Articles 39-40
Freedom of movement	Article 2, Protocol 4	Article 45
Freedom to choose an occupation and right to engage in work		Article 15
Freedom to conduct a business		Article 16
Rights of the child		Article 24
Rights of the elderly		Article 25
Integration of persons with disabilities		
Right to health care		Article 35
Consumer protection		Article 38
Right to good administration		Article 41
Right of access to documents		Article 42
Freedom of movement and residence		Article 45

# What do we mean by “Ethics of AI”?





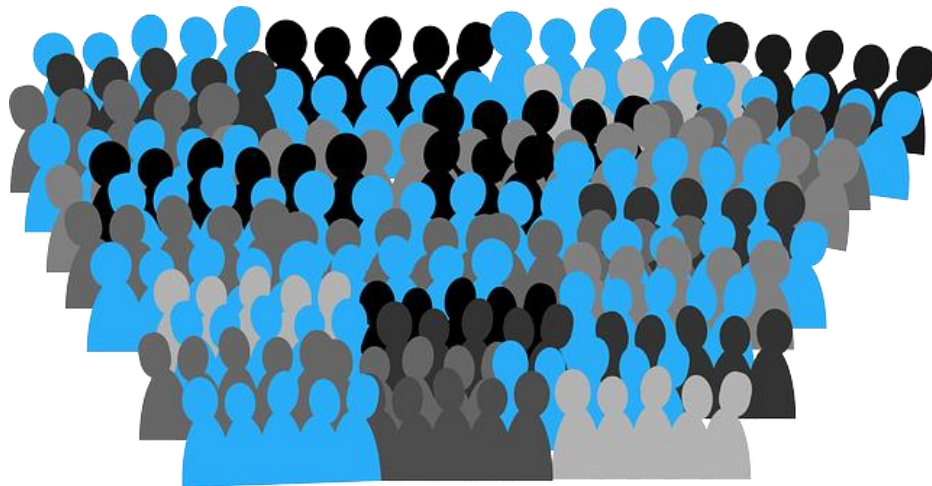
## Existing remedies for specific issues

- Risk management (Clarke)
- Information governance (ISO)
- Development methodologies (e.g. value-sensitive design)
- ICT professionalism, including guidelines
- Product liability (something ICT companies are not used to)
- Data Protection law
- Competition law
- Human rights law



# General questions about a digital society

- Human rights in business:
  - CSR;
  - OECD guidelines
- Public engagement
- Representative democracy
- How to deal with the international nature of technology?



## Next steps

- Look beyond the hype
  - What is really new?
  - Which issues can be addressed with existing measures?
- Clarify the role of ethics
- Don't look at AI or big data in isolation
- Is technical innovation subject to democratic oversight?





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# Are You Interested?

- Check our website: [www.project-sherpa.eu](http://www.project-sherpa.eu)
- Sign up and stay in contact
- Join the stakeholder network
- Spread the word



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OF TWENTE.



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