



COST ACTION CA16222

WISE-ACT

Wider Impacts and Scenario Evaluation of
Autonomous and Connected Transport



cost
EUROPEAN COOPERATION
IN SCIENCE & TECHNOLOGY



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of the European Union

WG1 – 29th March 2022

Final WISE-ACT Conference - on line

Federico Costantini, University of Udine (IT)

1. **WG1 presentation**

Tasks and participants

2. **Summary of the Thematic report**

A short overview

3. **Key points**

Focus on a few issues

4. **Final remarks**

Some conclusions and updates

WG1 TASKS

T1: identify the macro-economic and fiscal implications of ACT and propose appropriate policy measures.

T2: review the required legal framework including its underlying ethics and accommodating liability concerns.

T3: explore safety scenarios of widespread ACT deployment and inform the development of relevant standards.

WORKING GROUP 1 PARTICIPANTS

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) Summary of the Thematic report

1.- Introduction

2.- Ethical and legal framework

3.- Macro-economic implications of AVs

4.- Security and safety concerns

5.- Conclusions

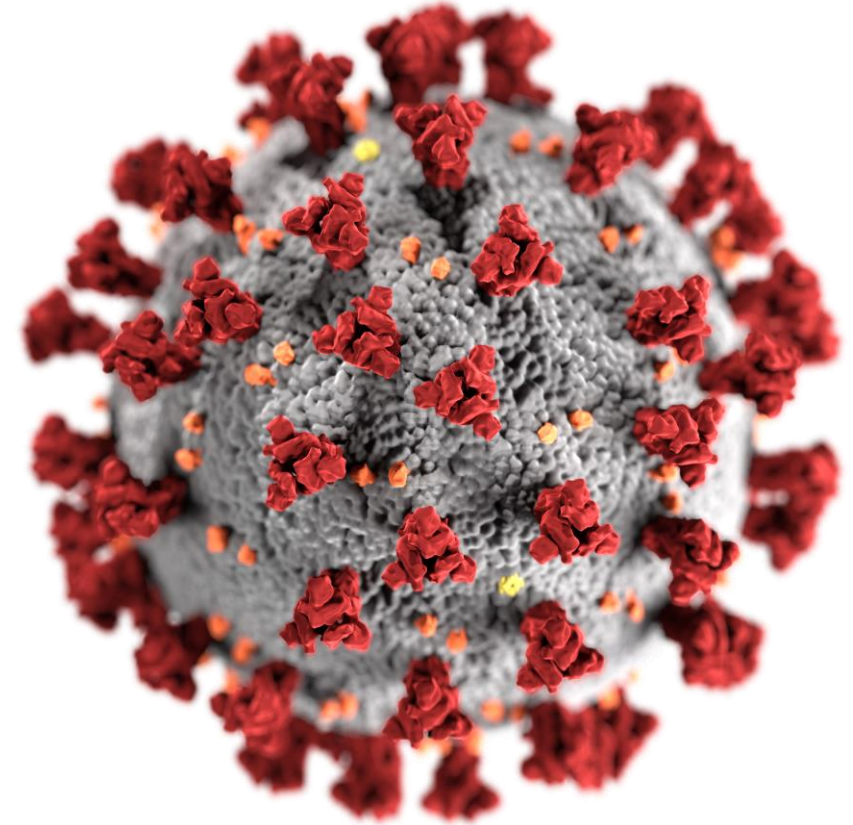
) Summary of the Thematic report

MoU Task	Sections	Focus
2	Ethical and legal framework	Ethical issues and experimentation national frameworks
1	Macro-Economic implications	Transport justice issues, planning challenges, coordinated technological implementation
3	Safety and security concerns	Cyber-resilience and cybersecurity

) Key points

1.- Introduction

«[...] transport is a very complex ecosystem, it is likely exposed to imbalances which, in a globalised scenario, can cause unpredictable consequences of unknown magnitude».



... just one of the lessons we have learnt so far...

<https://it.wikipedia.org/wiki/COVID-19>

2.- Ethical and legal framework

«[...] the legal and ethical framework is expected to change significantly in the next future following an intense political agenda dictated by the newly installed Commission».

Key points

Evolution of the EU Legal framework

Beginning 2000

Dir. (UE) 2002/58/CE privacy in electronic communications

Dir. (UE) 95/46/CE data protection

Dir. (UE) 1999/93/CE electronic signature

Dir. (UE) 2000/31/CE electronic commerce

Dir. (UE) 2001/29/CE digital copyright

Reg. (UE) 2018/1807 «non-personal data»

Proposta di Regolamento «E-Privacy» COM(2017)10

«Privacy Package»

Dir. (UE) (UE) 2016/681 «PRN»

Dir. (UE) (UE) 2016/680 «criminal system»

Reg. (UE) 2016/679 «GDPR»

Reg. (UE) 910/2014 «eIDAS»
Electronic signatures

Dir. (UE) 2016/1148 «N.I.S.»
network information security

Information security

COM(2020) 823 final
Proposal NIS 2.0

COM(2020) 829 final
Proposal Resilience Critical entities

EU Data Strategy

«Data Governance Act»
(COM/2020/767 final)

«Data act»
(COM/2022/68 final)

Reg. (UE) 2019/881 Cybersecurity Act

21 April 2021

P9_TA(2021)0144 online terrorism content spreading

Digital Service Package 15/12/20

COM(2020) 842 final
Proposal Digital Markets Act

COM(2020) 825 final
Proposal Digital Service Act

Artificial Intelligence 20/10/20

P9_TA(2020)0275 Ethics and IA (proposal Artificial intelligence Law COM/2021/206)

P9_TA(2020)0276 Civil liability AI (Proposal Reg.)

P9_TA(2020)0277 Intellectual property AI (Res.)

P9_TA(2020)0274 Digital Services and Fundamental Rights (Res.) 20/10/20

Dir. (UE) 2019/790 copyright in the Digital Market

20 January 2021

P9_TA(2021)0009, «Killer Robots»

) Key points

LIVING LABS WORLDWIDE

- Transpolis in Lyon (France), <http://www.transpolis.fr/>
- Zalazone in Hungary near Budapest, <https://zalazone.hu/>
- K-City in South Korea, <http://www.ts2020.kr/eng/main.do>
- Mcity in the United States in Michigan, <https://mcity.umich.edu/>
- CETRAN (Center of Excellence for Testing and Research of Autonomous Vehicles) in Singapore, <https://cetran.sg/>

FOUR REGULATORY PRINCIPLES

- **adaptive regulation** defined standards can be updated permanently as the technology changes and so the regulation can be adjusted.
- The **outcome-based regulation** focuses on the outcome regulators want to achieve and less on the technology itself.
- A **risk-weighted regulation** helps to priorities the areas of concern when developing a new technology and with this raises the efficiency and fosters the technology development.
- The approach of a **collaborative regulation** supports the cooperation of regulators from different areas across the ecosystem to together define regulations for industry and technology, whereas the national as well as the international level can be addressed.

https://www2.deloitte.com/content/dam/Deloitte/de/Documents/human-capital/DI_DR24_Regulating-the-future-of-mobility.pdf

WHAT IS THE PROPOSAL

Article 53 AI regulatory sandboxes (ARTIFICIAL INTELLIGENCE ACT, COM/2021/206 final)

1. AI regulatory sandboxes established by one or more Member States competent authorities or the European Data Protection Supervisor shall **provide a controlled environment that facilitates the development, testing and validation of innovative AI systems for a limited time before their placement on the market or putting into service pursuant to a specific plan**. This shall take place under the direct supervision and guidance by the competent authorities with a view to ensuring compliance with the requirements of this Regulation and, where relevant, other Union and Member States legislation supervised within the sandbox.

[...]

4. Participants in the AI regulatory sandbox shall **remain liable** under applicable Union and Member States liability legislation for any harm inflicted on third parties as a result from the experimentation taking place in the sandbox.

[...]

3.- Macro-economic implications of AVs

«The adoption of an AI advanced technology as Autonomous Vehicles need to act on two basic needs in transport: time and space, but at the same time on the human contact that is just what Av pretends to reduce»

3.- Macro-economic implications of AVs

The main objective that the European Commission events pointed out are:

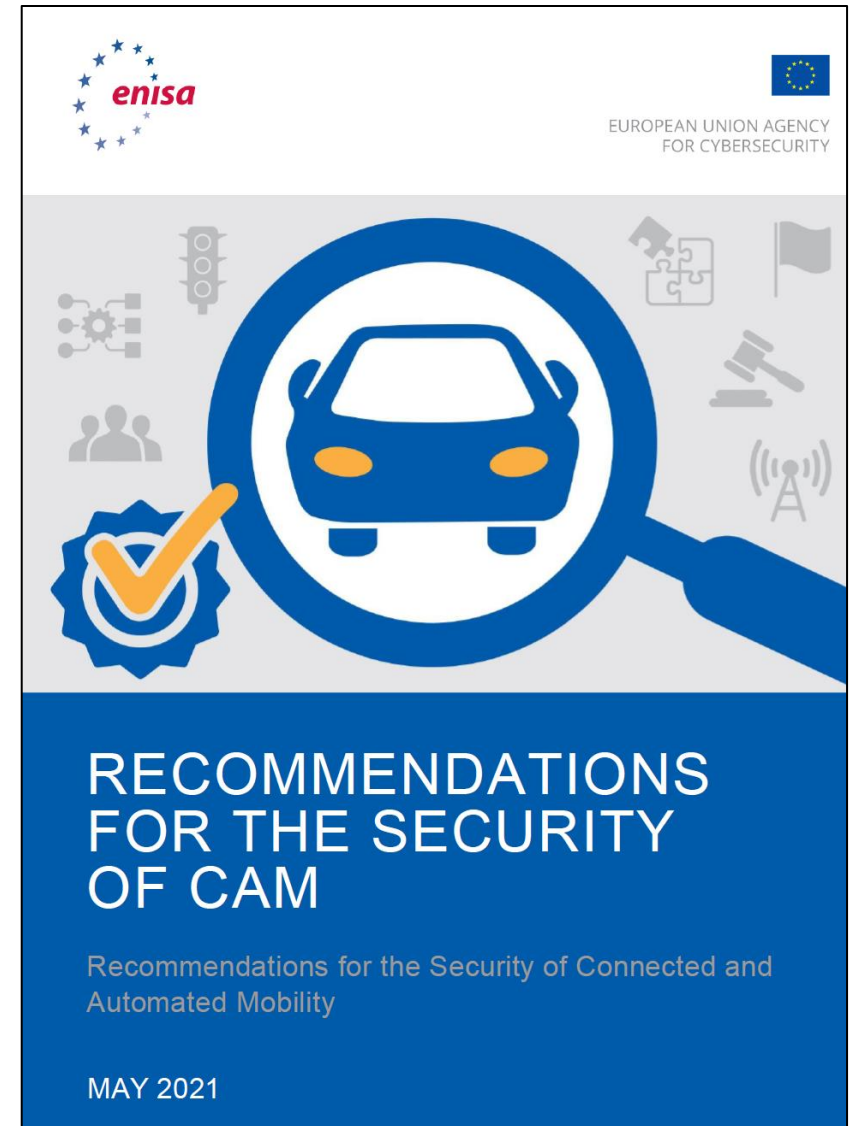
1. How empowering young women for transport digitalized decision job positions?
2. How to incorporate women into the planning process
3. Designing green, resilient digitalization
4. Develop whole communities by ensuring digital transport for New Green Deal
5. Provide inclusive digital services that meet the diverse needs of travel
6. Enabling progress in funding, education and outreach for inclusive sustainable digitized mobility
7. Adding the Green dimension consideration to the Social dimension of the transition towards automation and digitalisation in transport, focusing on the labour force.

4.- Security and safety concerns

«ACTs efficiently interact with infrastructure, people and other vehicles to increase their operating capabilities. The more technical complexity (i.e., electronics and access technologies), the greater vulnerability. Hackers know this, having enough motivation and time to penetrate systems».

) Key points

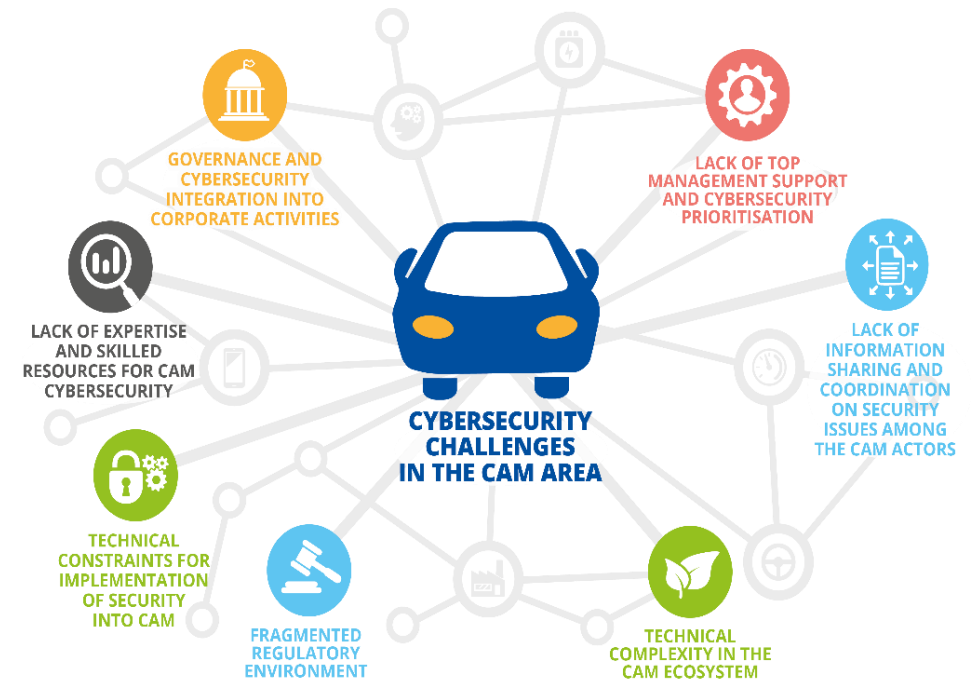
4.- Security and safety concerns



<https://www.enisa.europa.eu/publications/recommendations-for-the-security-of-cam>

) Key points

4.- Security and safety concerns



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5.- Conclusions

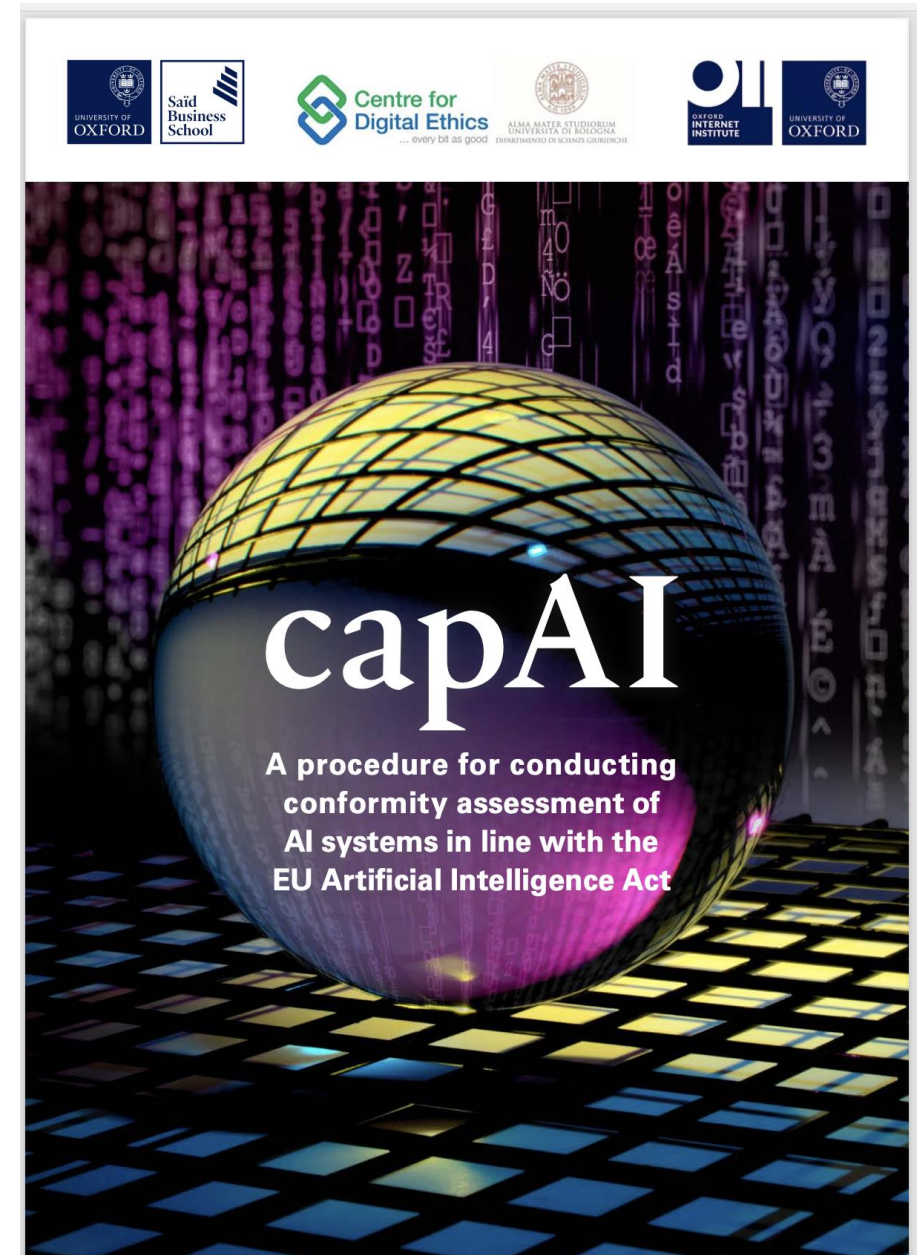
«The fact that the pandemic has so deeply scattered transport in 2020 gives the unique opportunity to re-conceptualize it almost from its grounds, shaping it in a more sustainable, accessible, affordable and ethical way».

) Final remarks



The future is autonomous... and fast
changing ...

Floridi, Luciano, Matthias Holweg, Mariarosaria Taddeo, Javier Amaya Silva, Jakob Mökander, and Yuni Wen. 2022. 'CapAI - A Procedure for Conducting Conformity Assessment of AI Systems in Line with the EU Artificial Intelligence Act'. SSRN Scholarly Paper ID 4064091. Rochester, NY: Social Science Research Network. <https://papers.ssrn.com/abstract=4064091>.



Schwartz, Reva, Apostol Vassilev, Kristen Greene, Lori Perine, Andrew Burt, and Patrick Hall. 2022. "Towards a Standard for Identifying and Managing Bias in Artificial Intelligence."
<https://doi.org/10.6028/nist.Sp.1270>.

NIST Special Publication 1270

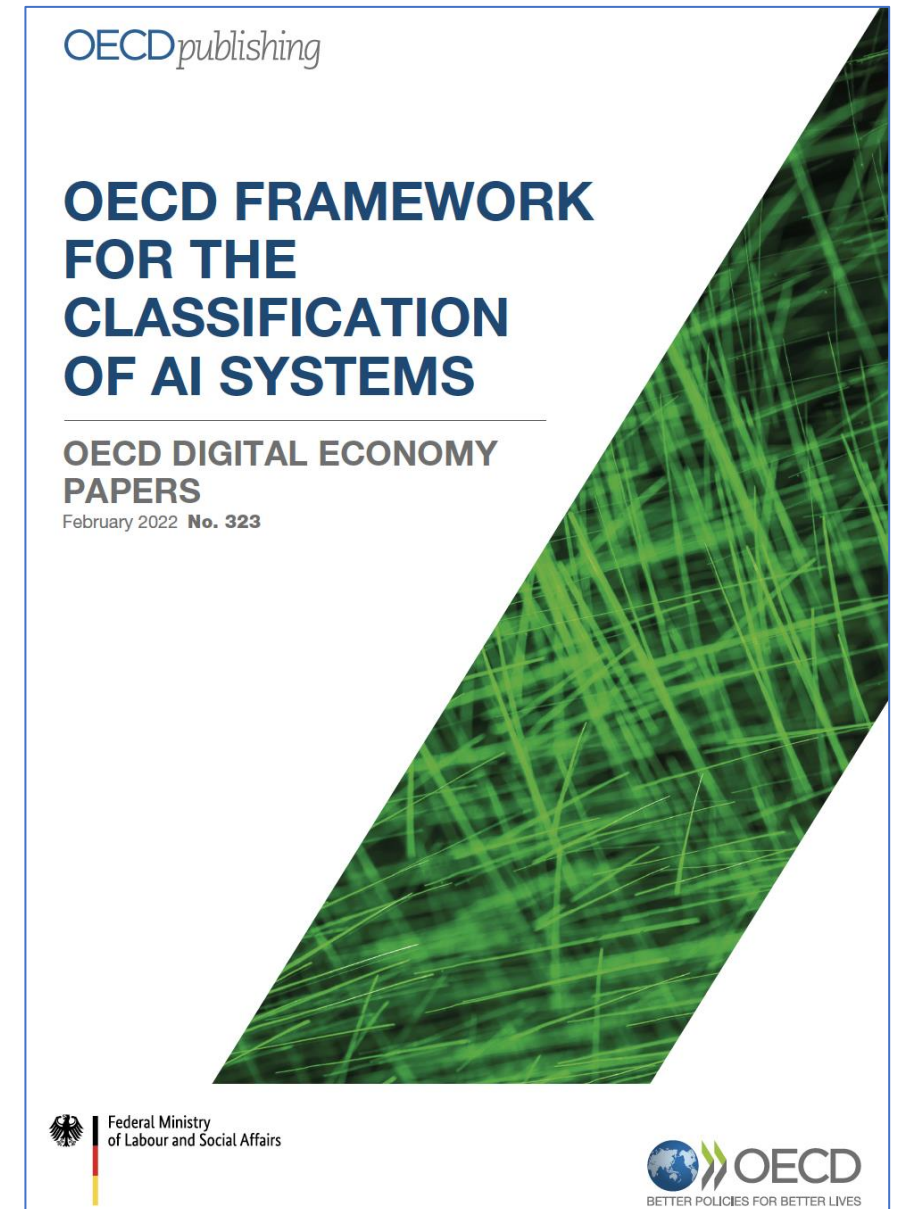
**Towards a Standard for Identifying and
Managing Bias in Artificial Intelligence**

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Apostol Vassilev
Kristen Greene
Lori Perine
Andrew Burt
Patrick Hall

This publication is available free of charge from:
<https://doi.org/10.6028/NIST.SP.1270>

NIST
National Institute of
Standards and Technology
U.S. Department of Commerce

OECD. 2022. 'OECD Framework for the Classification of AI Systems'.
323. OECD Digital Economy Papers. Paris:
OECD. <https://doi.org/10.1787/cb6d9eca-en>.



)) Many thanks!

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