Escuela Técnica Superior de Ingenieros de Telecomunicación
UNIVERSIDAD POLITÉCNICA DE MADRID

Ethics in Artificial Intelligence and Data Systems

Building a regulatory framework for Artificial Intelligence

Zoraida Frías Barroso
zoraida.frias@upm.es

To regulate or not to regulate…. ? That's the question

"AI is too important an area to regulate. It's also too important an area not to regulate. So I'm glad these conversations are underway,"

Sundar Pichai

To regulate… or not to regulate…

TECH TRANSFORMERS

A.I. is in its 'infancy' and it's too ear to regulate it, Intel CEO Brian Krzar says

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Arjun Kharpal
@ARJUNKHARPAL

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KEY POINTS

- Intel CEO Brian Krzanich said that artificial intelligence is in its "infancy"
- Krzanich said that it's too early to regulate AI
- Major figures such as Elon Musk and Stephen Hawking have warned about the dangers of AI

Artificial intelligence (AI) is in its "infancy" and it's too early to regulate the technology, Intel CEO Brian Krzanich told CNBC on Tuesday.

Pause Giant AI Experiments: An Open Letter

We call on all AI labs to immediately pause for at least 6 months the training of AI systems more powerful than GPT-4.

View this open letter online.

Published	PDF created	Signatures
March 22, 2023	May 5, 2023	27565

Image: Prominent signatories of the 'Pause Giant AI Experiments' open letter.

Signatories

Yoshua Bengio, Founder and Scientific Director at Mila, Turing Prize winner and professor at University of Montreal

Stuart Russell, Berkeley, Professor of Computer Science, director of the Center for Intelligent Systems, and co-author of the standard textbook "Artificial Intelligence: a Modern Approach"

Elon Musk, CEO of SpaceX, Tesla & Twitter

Steve Wozniak, Co-founder, Apple

Yuval Noah Harari, Author and Professor, Hebrew University of Jerusalem.

Emad Mostaque, CEO, Stability AI

Andrew Yang, Forward Party, Co-Chair, Presidential Candidate 2020, NYT Bestselling Author, Presidential Ambassador of Global Entrepreneurship

John J Hopfield, Princeton University, Professor Emeritus, inventor of associative neural networks

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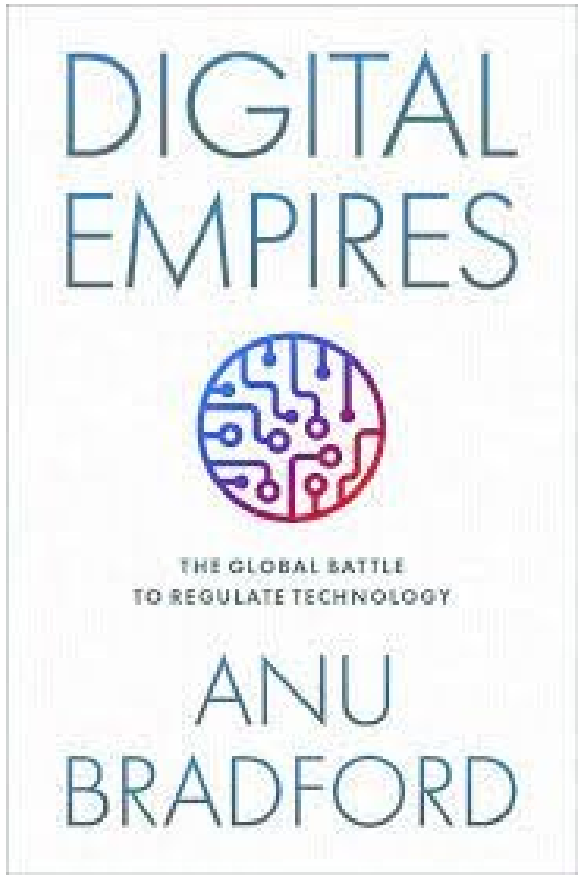
Models of Digital Governance

Three digital empires confronting their digital models and aiming to expand their influence



Two confrontation levels:

- **Governments confront one another** to expand their influence (horizontal confrontation).
- **Governments confront tech companies** to implement their Internet model (vertical confrontation)

The battle for the 'soul' of the Internet

ETSIT UPM

Models of Digital Governance

The US Market-Driven Model

Foundations of the Internet

- Advocates for freedom of expression
- Less concern about other rights (privacy, …)
- An open Internet that boost freedom and democracy

- Maximizes Innovation
- **No government regulatory intervention**
- Self-regulation of Internet companies

- Only one exception: national security (cybersecurity)

Google

Meta

amazon

Section 230 of the 1996 Communications Decency Act, which states that “no provider or user of an interactive computer service **shall be treated as the publisher or speaker of any information provided by another information content provider**.”

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Models of Digital Governance

The Chinese State-Driven Model

"A credible alternative model"

- Reinforces government control.
- Guarantees stability and social harmony
- Supports Chinese technology industry (techno-protectionism)

- Regulated Internet
- State control: censorship and surveillance

- **Export the model based on the success of their Technology industry.**
- Expand influence by deploying infrastructure

ByteDance
TikTok
Alibaba
Tencent
HUAWEI
HIKVISION
xiaomi

ETSIT UPM

Models of Digital Governance

The European Right-Driven Model

"The Brussel's effect"

- Model focused on **citizens** and **their rights**

- **Regulatory intervention** to protect citizent's rights
- **The GDPR** (privacy protection) set the model

- **Expansion to other areas**: content moderation, competition, AI, data…

Legal initiatives in the EU

Legal initiatives in the EU

Legal initiatives in the EU

Regulatory framework proposal on AI

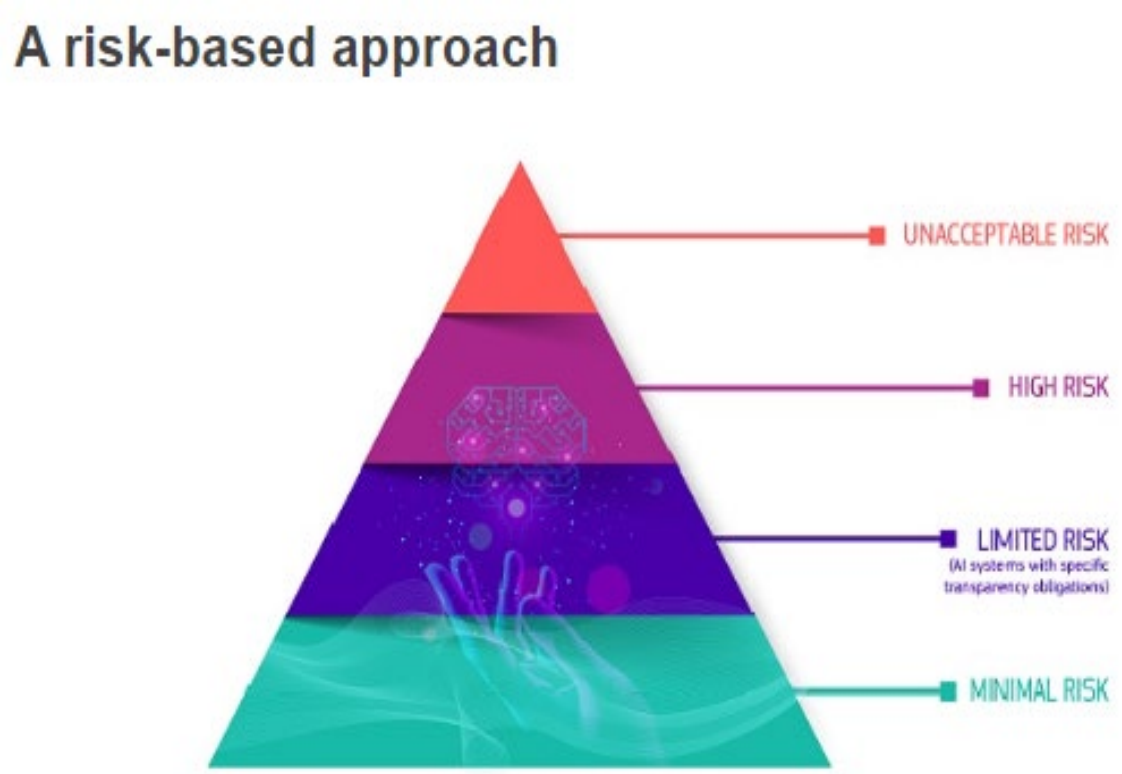
- First-ever legal framework on AI addressing the risks of AI
- Places Europe in a leading role globally.
- Clear requirements and obligations to
  - AI developers
  - AI deployers
  - Users

Proposed rules

- address risks specifically created by AI applications;
- propose a list of high-risk applications;
- set clear requirements for AI systems for high-risk applications;
- define specific obligations for AI users and providers of high-risk applications;
- propose a conformity assessment before the AI system is put into service or placed on the market;
- propose enforcement after such an AI system is placed in the market;
- propose a governance structure at European and national level.

The EU AI Act

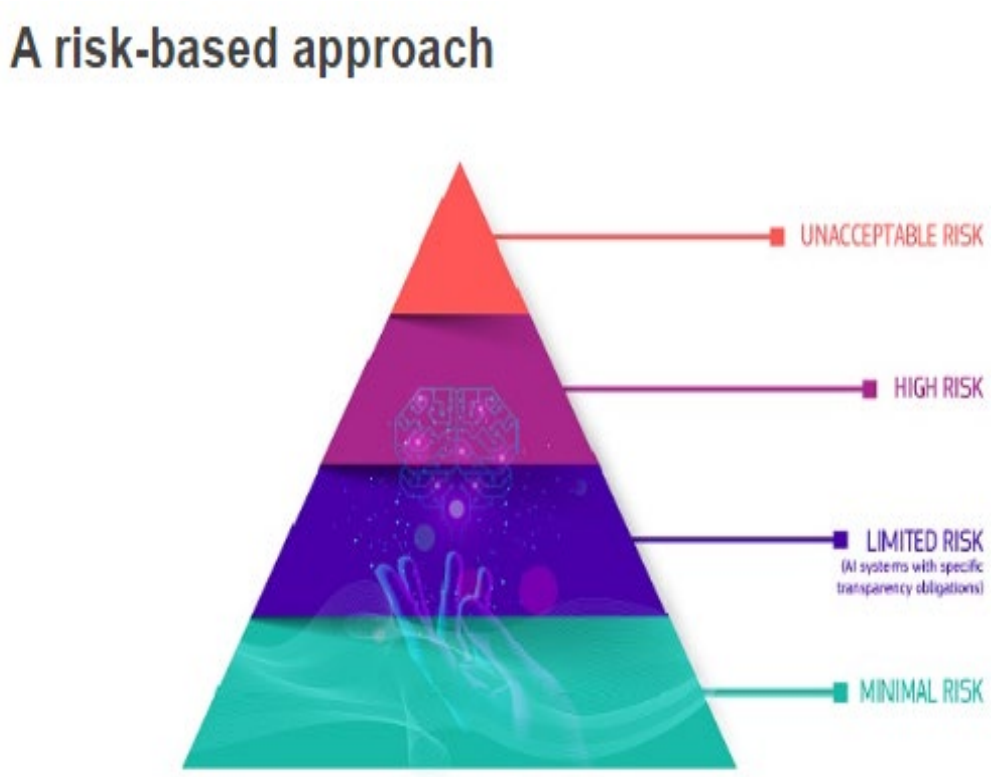
Unacceptable risk



All AI systems considered a clear threat to the safety, livelihoods and rights of people will be banned, from social scoring by governments to toys using voice assistance that encourages dangerous behaviour.

The EU AI Act

High risk cases



- critical infrastructures (e.g. **transport**), that could put the life and health of citizens at risk
- educational or vocational training, that may determine the access to education and professional course of someone's life (e.g. **scoring of exams**)
- safety components of products (e.g**. AI application in robot-assisted surgery**)
- employment, management of workers and access to self-employment (e.g. **CV-sorting software** for recruiting);
- essential private and public services (e.g. **credit scoring** denying citizens opportunity to obtain a loan);
- law enforcement that may interfere with people's fundamental rights (e.g. **evaluation of the reliability of evidence**);
- migration, asylum and border control management (e.g. **verification of authenticity of travel documents**);
- administration of **justice** and democratic processes (e.g. applying the law to a concrete set of facts)

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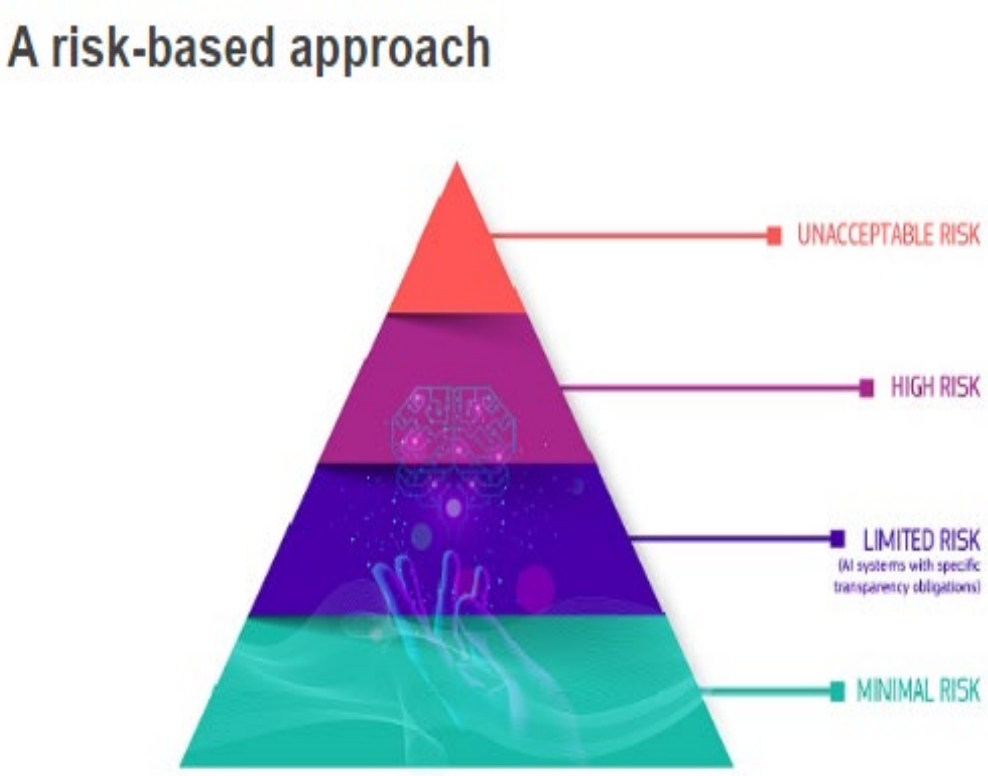
The EU AI Act

High-risk AI systems' obligations



- adequate **risk assessment and mitigation** systems;
- high **quality of the datasets** feeding the system to minimise risks and discriminatory outcomes;
- logging of activity to ensure **traceability** of results;
- detailed documentation providing all information necessary on the system and its purpose for authorities to assess its compliance;
- clear and adequate information to the user;
- appropriate human oversight measures to minimise risk;
- high level of robustness, security and accuracy.

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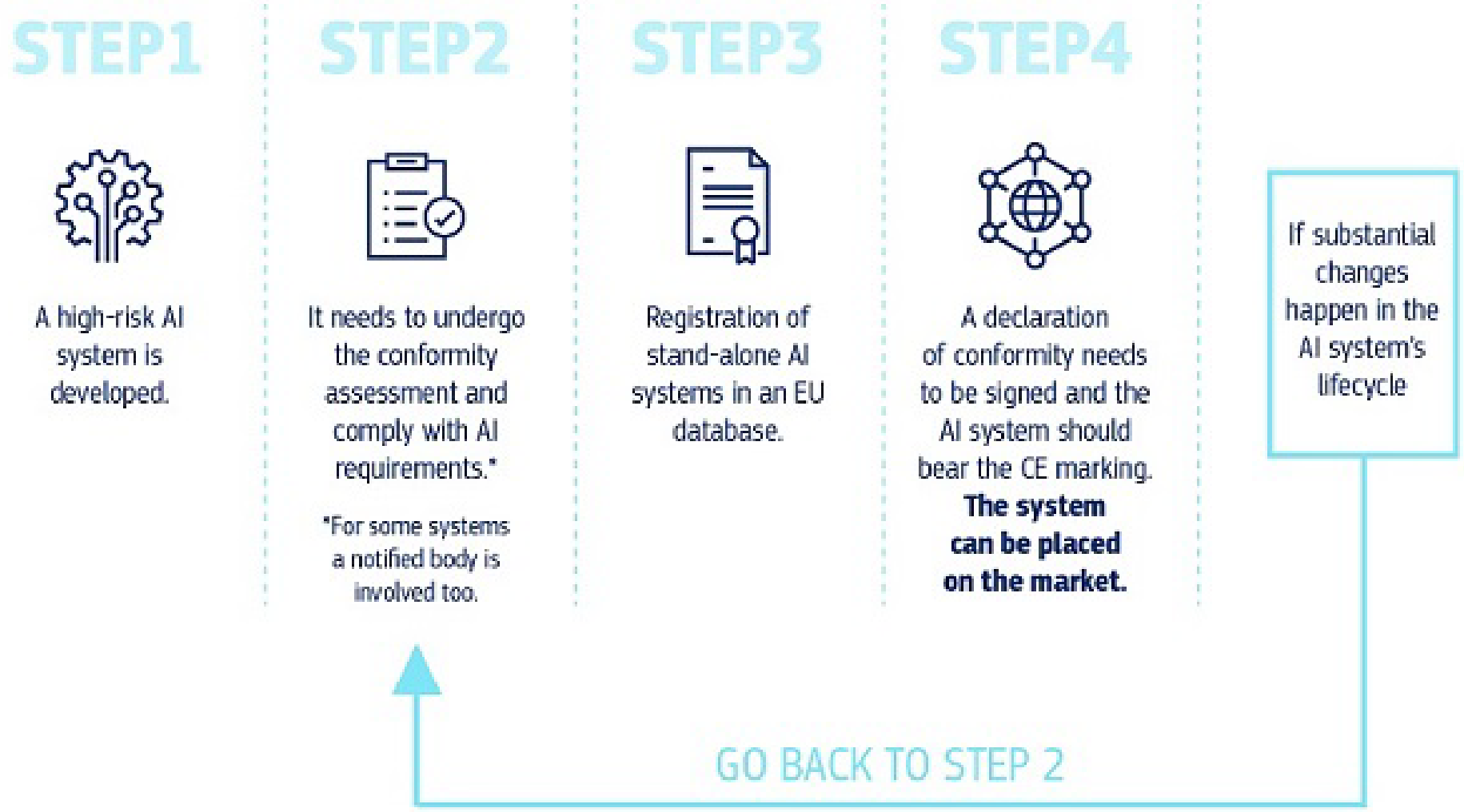
Market functioning



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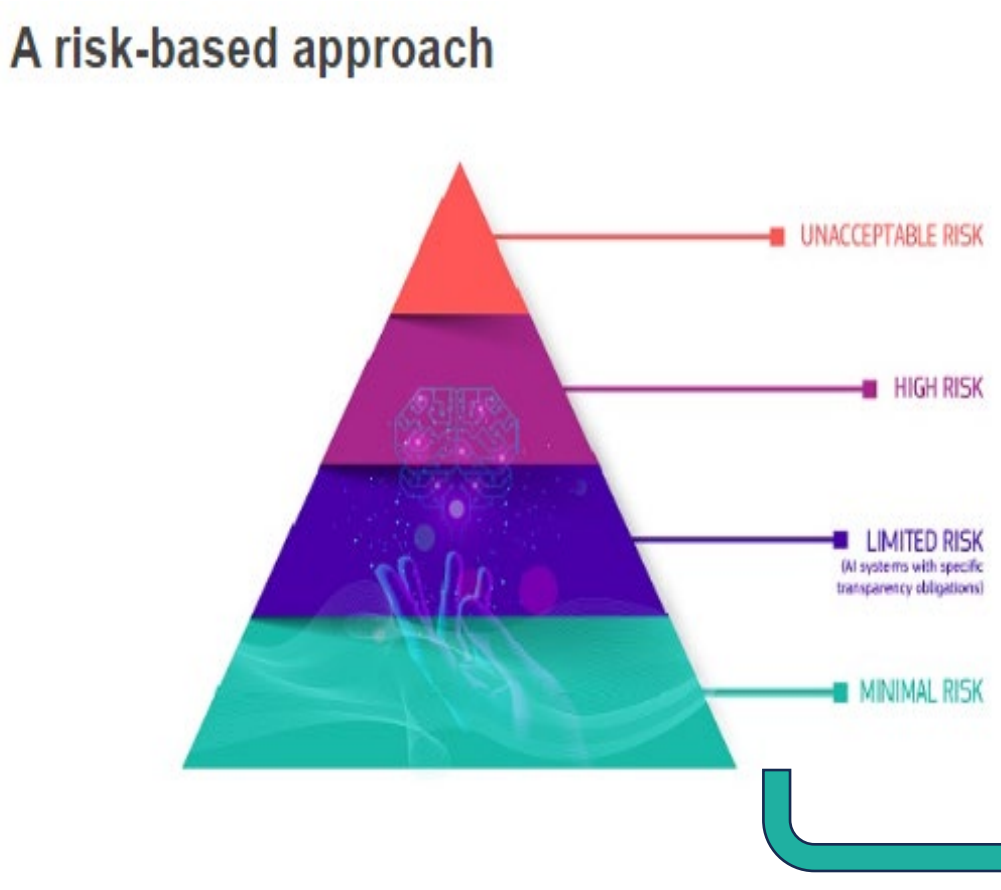
Limited-risk and minimal-risk AI systems' obligations



Transparency obligations (e.g. chatbots, user's should be aware that they are interacting with a machine).

Generative AI

Generative AI, like ChatGPT, would have to comply with transparency requirements:

- Disclosing that the content was generated by AI
- Designing the model to prevent it from generating illegal content
- Publishing summaries of copyrighted data used for training

Free use (e.g., video games, spam filters)

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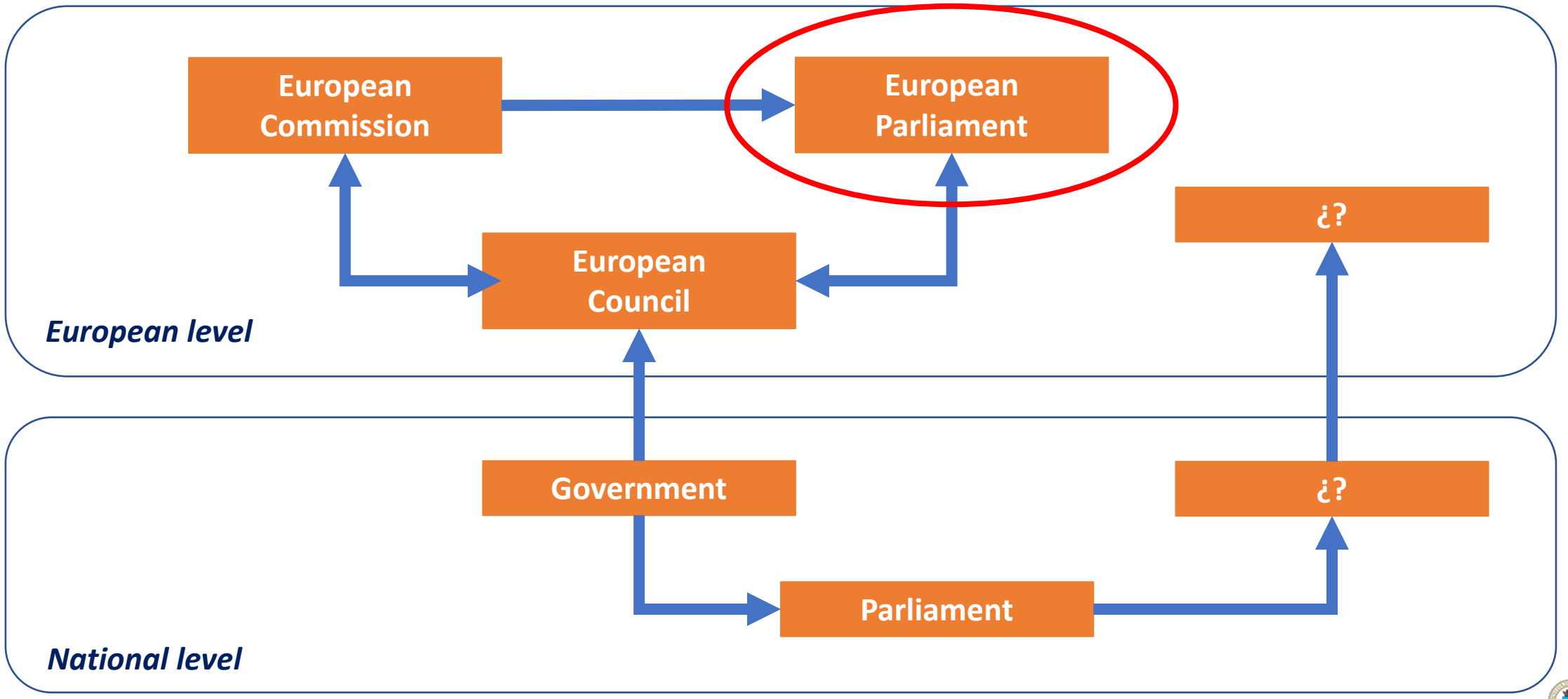
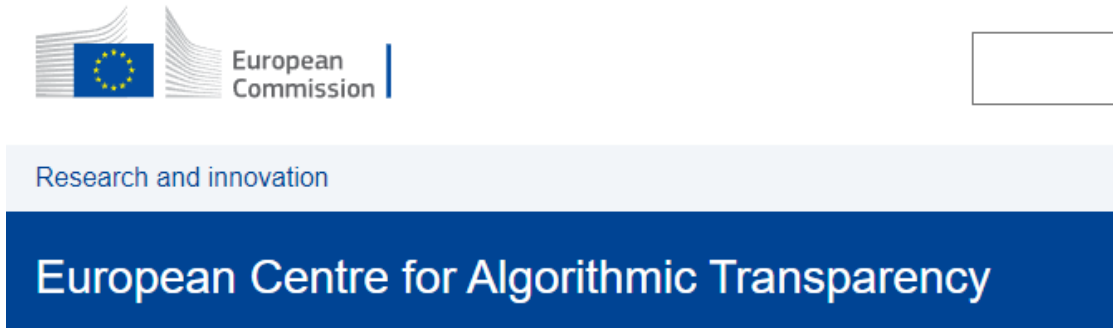
The institutional framework



Other initiatives

European Center for Algorithmic Transparency



The European Centre for Algorithmic Transparency (ECAT) was launched in April 2023 to provide scientific and technical expertise to support the enforcement of the Digital Services Act (DSA) and further research into the impact of algorithmic systems deployed by online platforms and search engines.

What we do

The ever-increasing societal impact of online platforms such as social networks, online marketplaces, and search engines has created an urgent need for public oversight of the processes at the core of their businesses. The automated processes deployed to moderate content and curate information for users warrant particular scrutiny, as they affect everything from our social interactions to our news and entertainment consumption to our shopping habit.

At ECAT, our mission is to contribute to such oversight in two core ways. Firstly, we provide technical assistance and practical guidance for the enforcement of the DSA. Secondly, we research the long-running impact of algorithmic systems to inform policy-making and contribute to the public discussion.

Throughout our work, we take an interdisciplinary approach by integrating technical, ethical, economic, legal and environmental perspectives. We also engage with an international community of researchers and practitioners within academia, civil society, national public administrations and industry.