

# Artificial Intelligence, Intellectual Property and Fundamental Rights Intertwined

## Towards a Conceptual Framework

*CEIPI Diploma on AI and IP Program, Université de Strasbourg, 25-26 January 2023*

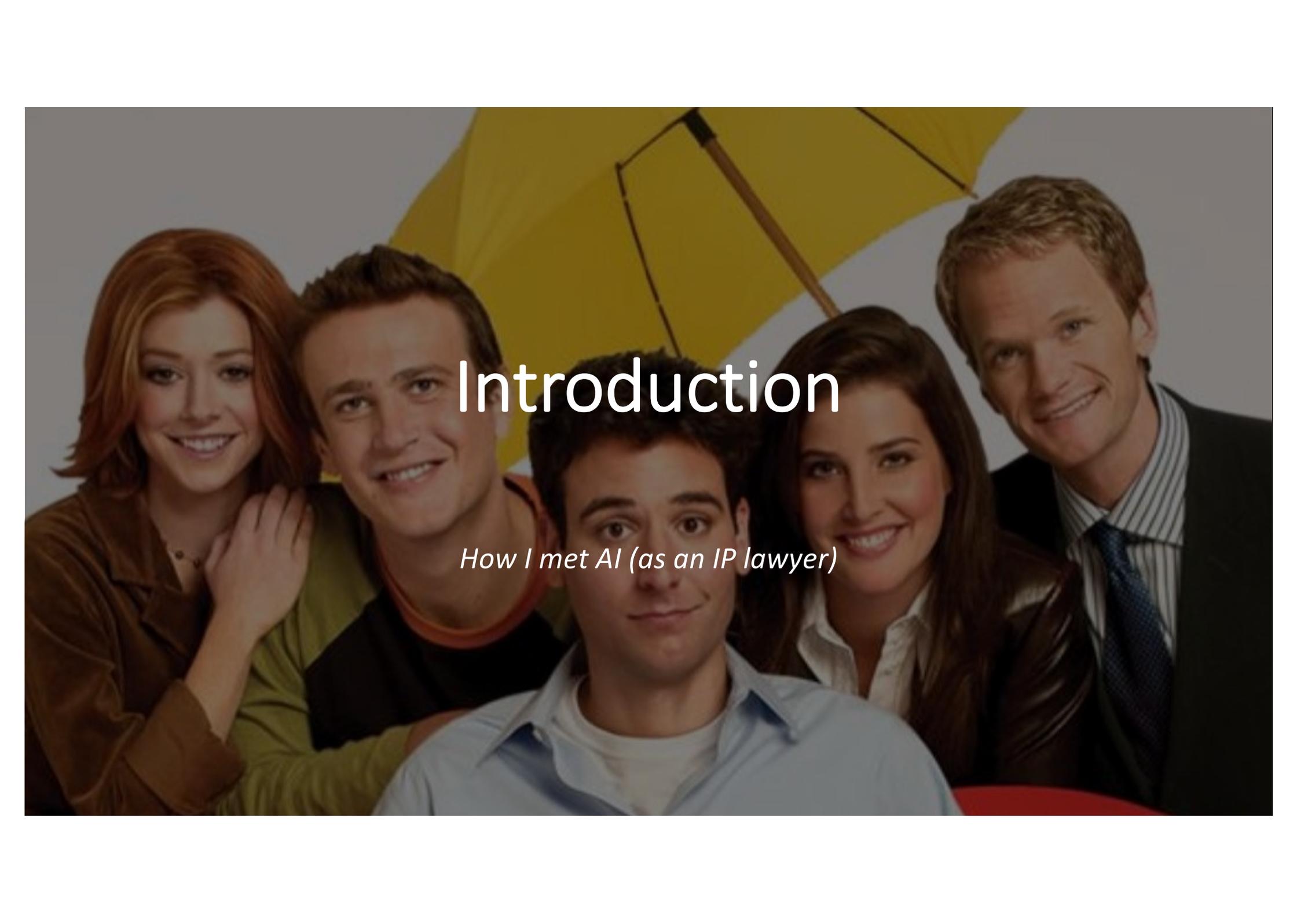
Julien Cabay

Professor Université Libre de Bruxelles (ULB – JurisLab)

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Invited Professor KULeuven

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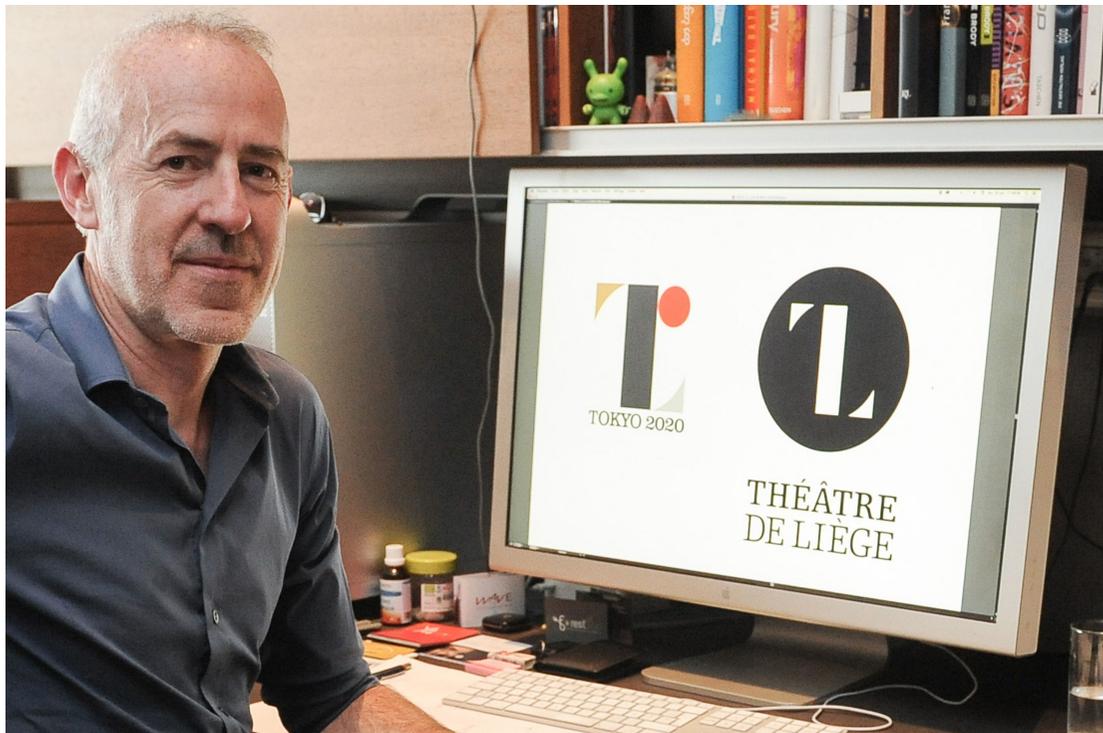
A promotional photograph of the main cast of the television show 'How I Met Your Mother'. The cast members are arranged in a group, smiling and looking towards the camera. A semi-transparent dark grey overlay covers the entire image, with the title 'Introduction' and the subtitle 'How I met AI (as an IP lawyer)' centered over it. The background features a yellow umbrella and a red circular object at the bottom right.

# Introduction

*How I met AI (as an IP lawyer)*



Kenjiro Sano (Japanese Designer), *2020 Tokyo Olympics Logo* (2015)



Olivier Debie @OliDebie · 28 juil. 2015  
Théâtre de Liège vs Tokyo 2020  
#Tokyo2020 #ThéâtredeLiège #plagiat?

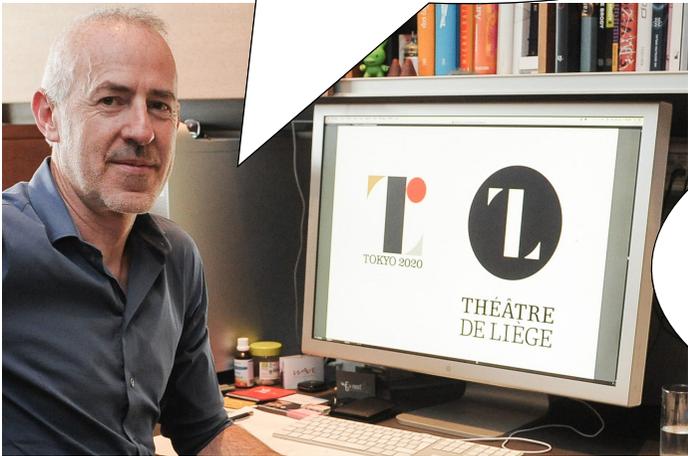
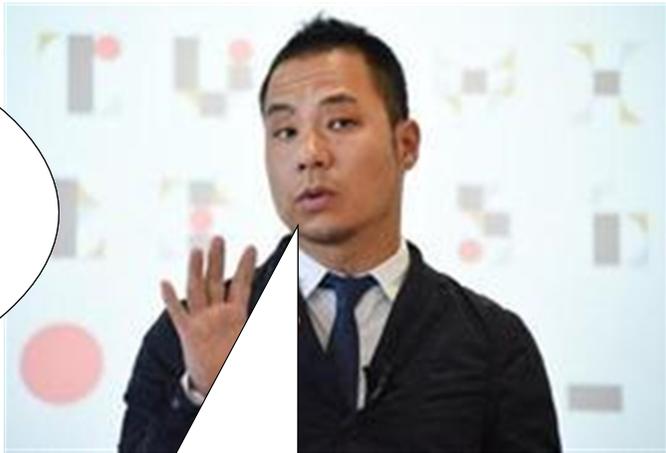


GIF  
242 2,9 k 1,0 k

Olivier Debie (Belgian Designer), *Theater of Liège Logo* (2011)



Access + similarities  
= Presumption of copying



Independent  
Creation  
= No Copying



Asao Tokolo (Japanese Designer), *New 2020 Tokyo Olympics Logo* (2016)



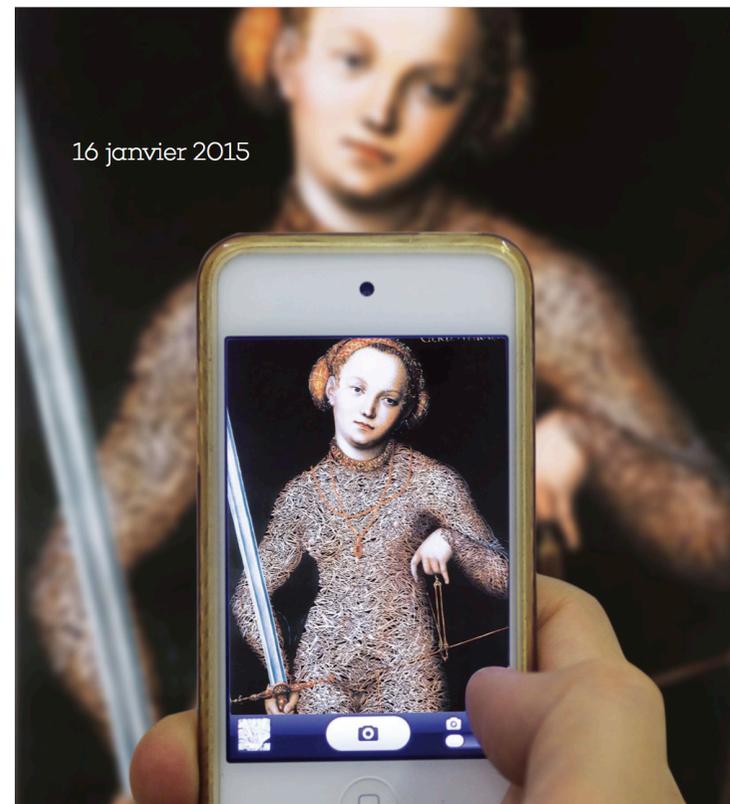
Université libre de Bruxelles  
Faculté de Droit et de Criminologie

## L'objet de la protection du droit d'auteur Contribution à l'étude de la liberté de création

Thèse présentée en vue de l'obtention du titre de docteur en sciences juridiques  
par Julien CABAY

Promotrice : Prof. Andrée PUTTEMANS (ULB)  
Jury : Prof. Alain BERENBOOM (ULB)  
Prof. Jane C. GINSBURG (COLUMBIA LAW SCHOOL)  
Prof. Frank GOTZEN (KATHOLIEKE UNIVERSITEIT LEUVEN)  
Prof. Arnaud NUYTS (ULB)  
Prof. Alain STROWEL (UNIVERSITE CATHOLIQUE DE LOUVAIN ;  
UNIVERSITE SAINT-LOUIS - BRUXELLES)  
Prof. Edouard TREPPOZ (UNIVERSITE JEAN MOULIN - LYON III)

Année académique 2015-2016



16 janvier 2015

# 20 ans de nouveau *droit d'auteur*

Conférence organisée par Julien CABAY (ULB), Vitorique DELFRÈGE (EPF ÉCONOMIQUE), Virginie FERRÉOL (ULB) et Micaela LAMBRECHTS (UCL)

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Avec le soutien de

et la collaboration de



- How do I get from Tokyo to Liège on Internet?

- Method 1 : **text-to-image search**

- Input = textual description of images

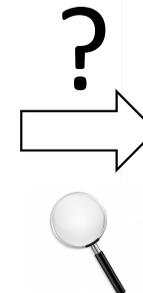
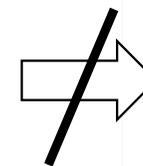
- « Logo based around the « T » letter (for Tokyo, Team, Tomorrow), in Didot font, with a red circle (took over from Yasuka Kamekura's logo for 1964 Tokyo Olympics), symbol of the Hinomaru and representing a beating heart » (Kenjiro Sano)

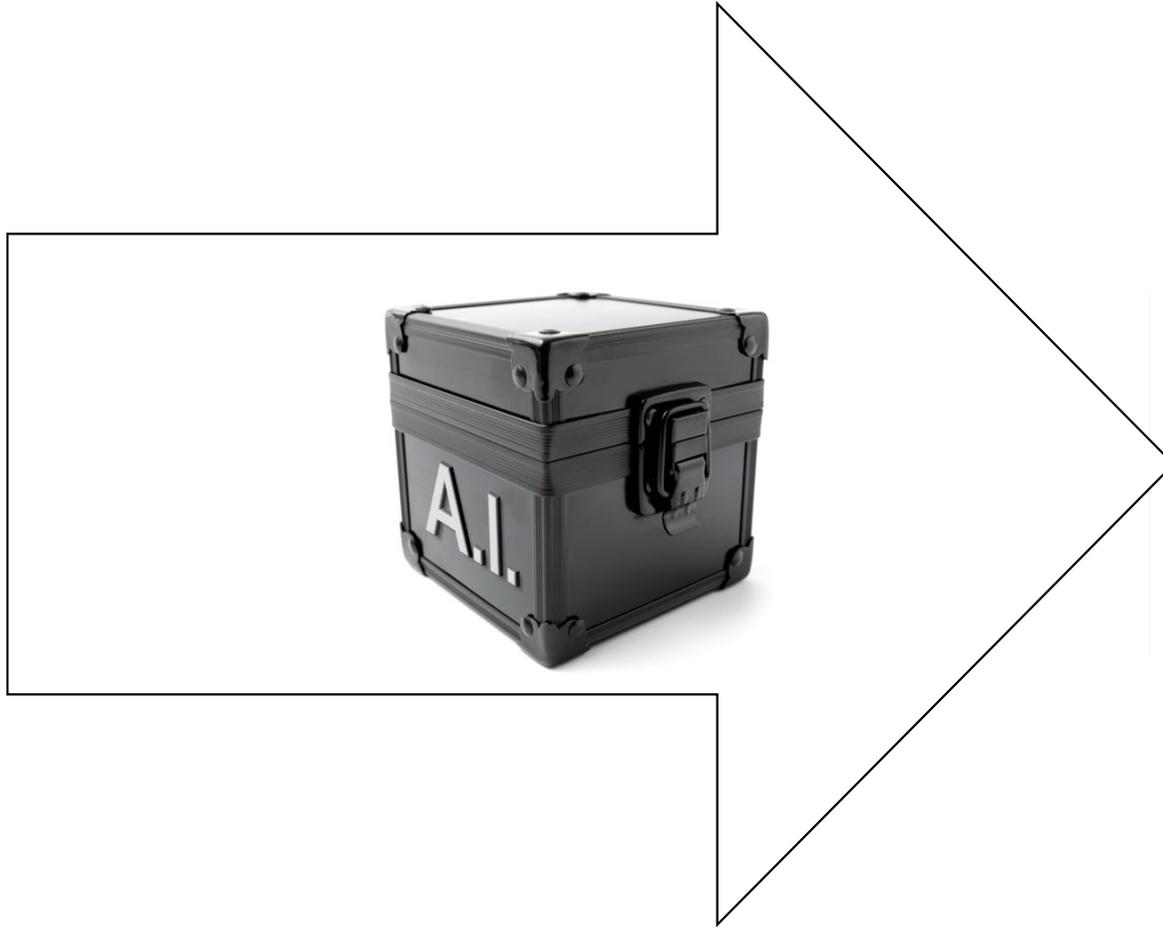
- Output = nothing

- Method 2: **reverse image search**

- Input = image

- Output = visually similar images

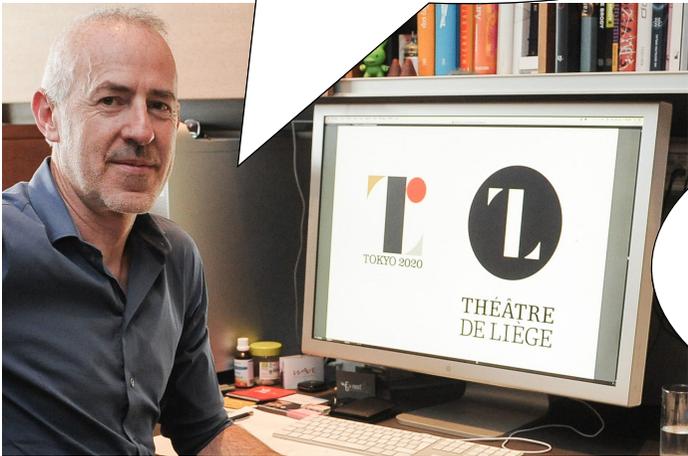




THÉÂTRE  
DE LIÈGE



Internet disclosure +  
algorithmic  
similarities  
= Copying



... I am  
screwed  
...

...



# **Artificial Intelligence, Intellectual Property and Fundamental Rights are Intertwined**





# En direct des labos

PROPRIÉTÉ INTELLECTUELLE ET CONTREFAÇON

## LE DEEP LEARNING À LA RESCOURSSE

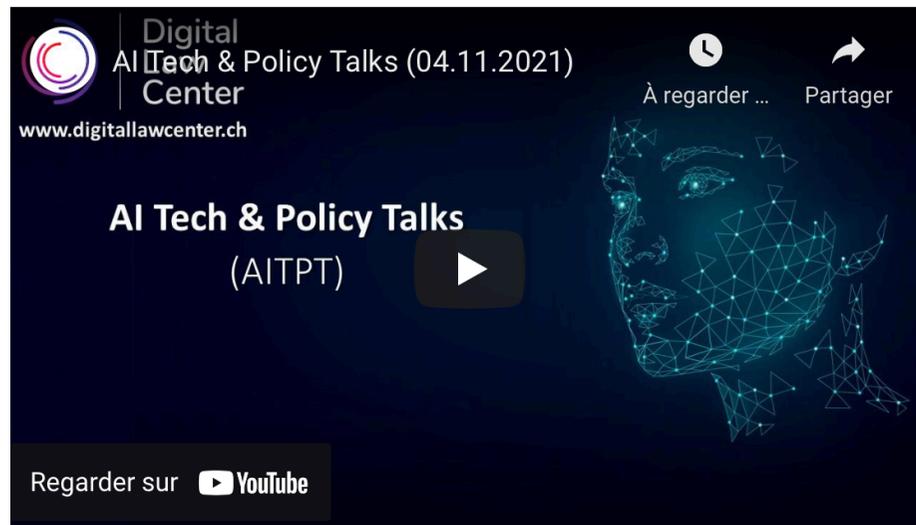
et chercheur au sein du JurisLab du Centre de Droit privé, Julien Cabay pointe le brouillard qui parasite la définition des contours d'un objet de propriété intellectuelle, à divers

labos gonflent leur puissance de calcul pour gagner de petits pourcentages de performance. Cela m'intéresse peu. Ici, nous travaillons sur l'explication des algorithmes: comment les rendre

Victor Levy

# IPSAM Research Project

- <https://droit-prive.ulb.be/ipsam-adressing-intellectual-property-relevant-similarities-in-images-through-algorithmic-decision-systems/>



<https://www.youtube.com/watch?v=dy2BNJGjF6o>

A YouTube video player thumbnail for 'Introducing IPSAM Research Project'. The background is light gray. Text on the left includes the ULB LIÈGE logo. The title 'Introducing IPSAM Research Project' is in the center. Below the title is a bulleted list of project details. At the bottom, it says 'Regarder sur YouTube'.

- ARC (Actions Recherches Concertées) 2020-2023 (ULB)
  - <https://droit-prive.ulb.be/ipsam-adressing-intellectual-property-relevant-similarities-in-images-through-algorithmic-decision-systems/>
- Interdisciplinary
  - Law: JurisLab (Center for Private Law - FabLab ULB)
  - Engineering: LISA (Laboratory of Image Synthesis and Analysis) (Prof. Olivier Debeir)
- Focus:
  - 2D images (IP Common)
  - IP Offices tools (publicly available)
  - TM (quantitative/qualitative data)
- BOIP Support

<https://www.youtube.com/watch?v=RP703UAKDRY&t=6858s>





↑ Posted by u/benmoranartist 7 days ago 🔒

219 A muse in Warzone, me, Photoshop, 2022

↓ Rule 6

⛔ **Sorry, this post has been removed by the moderators of r/Art.**  
Moderators remove posts from feeds for a variety of reasons, including keeping communities safe, civil, and true to their purpose.



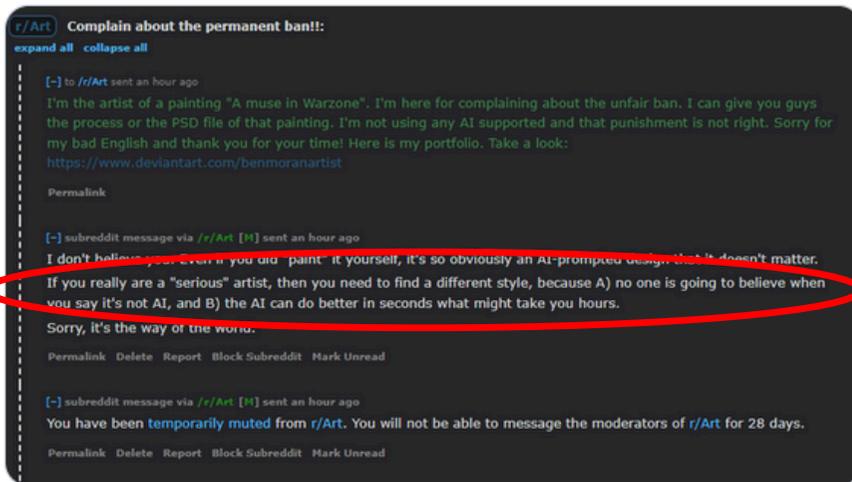
- <https://www.buzzfeednews.com/article/christokelwalker/art-subreddit-illustrator-ai-art-controversy>
- <https://hyperallergic.com/791951/artist-banned-from-subreddit-over-work-resembling-ai-art/>
- <https://www.vice.com/en/article/y3p9yg/artist-banned-from-art-reddit>



ben moran artist  
@benmoran\_artist

...

We are in the world which real artists is being punished because he's the victim of these thief called AI artists?  
#Savehumanartist #noAlart #NoAI #SavefutureArt



*'(...) no one is going to believe when you say it's not AI (...)*

J. Cabay, "Mort ou résurrection de l'auteur ? A propos de l'intelligence artificielle et de la propriété intellectuelle", *Rev. Dr. ULg*, 2019, pp. 179-190

Reste que, même reléguée en dehors du champ du droit d'auteur, le développement de l'intelligence artificielle ne manquera pas d'influencer celui-ci en retour. En se déployant, elle inondera le monde d'un nombre infini de productions avec lequel l'auteur humain devra composer. Par le jeu de l'antériorité et de la présomption de copie qu'elle engage<sup>(57)</sup>, voilà l'auteur humain en bien mauvaise posture pour défendre l'originalité de sa création lorsque celle-ci présentera des similitudes avec le produit antérieur de l'intelligence artificielle. Car si l'esprit fini de l'homme ne lui permet pas en pratique de prendre connaissance de tout ce que créent ses semblables avant lui, comment pourrait-il seulement en aller autrement de la production automatisée ? Et s'il ne parvient pas à prouver cette absence de connaissance et à renverser ainsi la présomption de copie pour justement bénéficier de la protection du droit d'auteur sur sa création indépendante, que restera-t-il alors de ce qui en fin de compte est la fonction initiale du droit d'auteur : protéger ce qui trouve dans l'homme son origine<sup>(58)</sup> ?

Pour redonner à l'originalité son sens originaire et ainsi assurer la coexistence harmonieuse des productions de l'homme et de la machine, il s'impose de réviser son seuil à la hausse et de limiter ainsi la protection du droit d'auteur à ce qui est le propre de l'homme. Je l'ai plaidé par ailleurs<sup>(59)</sup>.

*'Given the existence of prior art triggers a presumption of copying, the human author is in a very bad position to defend the originality of his creation when it present similarities with an anterior production of AI'*



# Fundamental rights in the EU

*An overview of the CJEU case law*

# EU Primary Law

- Article 6 Treaty on European Union (TEU)

*'(1) The Union recognises the rights, freedoms and principles set out in the **Charter of Fundamental Rights of the European Union** of 7 December 2000, as adapted at Strasbourg, on 12 December 2007, which shall have the same legal value as the Treaties. (...)*

*(2) The Union shall accede to the **European Convention for the Protection of Human Rights and Fundamental Freedoms**. Such accession shall not affect the Union's competences as defined in the Treaties.*

*(3) Fundamental rights, as guaranteed by the European Convention for the Protection of Human Rights and Fundamental Freedoms and as they result from the constitutional traditions common to the Member States, shall constitute **general principles of the Union's law.**'*

# EU Primary Law

- Charter of Fundamental Rights of the European Union (CFREU)
  - Relation with ECHR
    - **EU not yet a member** (cf. CJEU, Opinion 2/13)
    - *'In so far as this Charter contains rights which correspond to rights guaranteed by the Convention for the Protection of Human Rights and Fundamental Freedoms, the **meaning and scope of those rights shall be the same** as those laid down by the said Convention. This provision shall not prevent Union law providing **more extensive protection**'* (art. 52(3) CFREU)
    - *'**Nothing** in this Charter shall be interpreted as **restricting or adversely affecting** human rights and fundamental freedoms as recognised, in their respective fields of application, by Union law and international law and by international agreements to which the Union or all the Member States are party, including the European Convention for the Protection of Human Rights and Fundamental Freedoms, and by the Member States' constitutions'* (art. 53 CFREU)

# EU Primary Law

- Charter of Fundamental Rights of the European Union (CFREU)
  - Legal value
    - *'same legal value as the Treaties'* (art. 6 TEU)
  - Addressees
    - *'The provisions of this Charter are addressed to the institutions, bodies, offices and agencies of the **Union** with due regard for the principle of subsidiarity and to the **Member States only when they are implementing Union law'** (art. 51(1) CFREU)
      - = *'legislation falls within the scope of EU law'* (CJEU, *Fransson*, C-617/10, § 19)
      - = *'requires a certain degree of connection above and beyond the matters covered being closely related or one of those matters having an indirect impact on the other'* (CJEU, *Siragusa*, C-206/13, § 24)*

# EU Primary Law

- Charter of Fundamental Rights of the European Union (CFREU)
  - Relation with EU Law
    - *'respect for those rights [recognised by the Charter] being a **condition of the lawfulness of EU acts**, so that measures incompatible with those rights are not acceptable in the EU'* (CJEU, Opinion 2/13, § 169)
    - *'situations cannot exist which are covered in that way by European Union law without those fundamental rights being applicable. The **applicability of European Union law entails applicability of the fundamental rights** guaranteed by the Charter'* (CJEU, Fransson, C-617/10, § 21)

# EU Primary Law

- Charter of Fundamental Rights of the European Union (CFREU)
  - Limitations
    - *'Any limitation on the exercise of the rights and freedoms recognised by this Charter must be **provided for by law** and **respect the essence** of those rights and freedoms. Subject to the principle of **proportionality**, limitations may be made only if they are necessary and genuinely meet objectives of general interest recognised by the Union or the need to protect the rights and freedoms of others'* (art. 52(1) CFREU)
    - *'reconcile the requirements of the protection of different fundamental rights' => 'fair balance'* (CJEU, *Promusicae*, §§ 65-68)
      - Addressees
        - EU institutions when adopting EU law (CJUE, *Deutsches Weintor*, C-544/10, § 47)
        - MS legislator when implementing EU law (CJEU, *Promusicae*, § 68)
        - MS jurisdictions when applying implemented EU law (CJUE, *Deckmyn*, C-201/13, § 32)

# EU Primary Law

- Charter of Fundamental Rights of the European Union (CFREU)
  - IP under the Charter
    - ***'Intellectual property shall be protected'*** (art. 17(2) CFREU)
      - *'No one may be deprived of his or her possessions, except in the public interest and in the cases and under the conditions provided for by law, subject to fair compensation being paid in good time for their loss'* (CJEU, *Luksan*, C-277/10, § 68)
      - *'It is apparent from the wording of that provision that subject matter constituting intellectual property qualifies for protection under EU law. However, it **does not** follow that such subject matter or categories of subject matter must **all qualify for the same protection**'* (CJEU, *Cofemel*, C-683/17, § 38)
      - *'**nothing** whatsoever in the wording of that provision or in the Court's case-law to suggest that that right is **inviolable** and must for that reason be **absolutely protected**'* (CJEU, *Scarlet*, C-70/10, § 43)
        - Enforcement
        - Substantive law (CJEU, *Pelham*, C-476/17, § 33)
      - *'ensure genuine protection of the fundamental right at issue'* (CJEU, *UPC Telekabel Wien*, C-314/12, § 62)
      - *'right to effective judicial protection guaranteed by Article 47 of the Charter'* (CJEU, *Huawei*, C-170/13, § 57)

# EU Secondary Law

- Regulations and Directives on IP (legislation)
  - High level of harmonization
    - IP: Copyright, Trademark, Design, 'Patent' (Biotech, SPC, *Unitary*), ...
    - Not IP (but some analogies) : Trade Secrets
  - References to the Charter in most recent secondary law
    - Ex: Directive (EU) 2019/790 on copyright and related rights in the Digital Single Market
    - Ex: Directive (EU) 2016/943 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure
  - Adoption by EU and implementation by MS in conformity with the Charter
    - *'falls within the scope of EU law' ; 'entails applicability of the fundamental rights guaranteed by the Charter'* (see CJEU, *Fransson*)

# EU Secondary Law

- Regulations and Directives on IP (CJEU)
  - CJEU analysis on the basis of the Charter : the exemple of Copyright
    - CJEU, *GS Media*, C-160/15, § 31

*(...) it follows from recitals 3 and 31 of **Directive 2001/29** that the harmonisation effected by [Directive 2001/29/EC on the harmonisation of certain aspects of copyright and related rights in the information society] is to maintain, in particular in the electronic environment, a **fair balance** between, on one hand, **the interests of copyright holders and related rights in protecting their intellectual property rights, safeguarded by Article 17(2) of the Charter of Fundamental Rights of the European Union ('the Charter')** and, on the other, the protection of **the interests and fundamental rights of users of protected objects, in particular their freedom of expression and of information, safeguarded by Article 11 of the Charter, and of the general interest'***

# EU Secondary Law

- Regulations and Directives on IP (CJEU)

- CJEU analysis on the basis of the Charter : the exemple of Copyright

- CJEU, *Spiegel Online*, C-516/17, § 43 ; *Funke Medien*, C-469/17, § 58 ; *Pelham*, C-476/17, § 60

*'(...) The **mechanisms allowing those different rights and interests to be balanced are contained in Directive 2001/29 itself**, in that it provides inter alia, first, in Articles 2 to 4 thereof, rightholders with exclusive rights and, second, in Article 5 thereof, for exceptions and limitations to those rights which may, or even must, be transposed by the Member States, since those mechanisms must nevertheless find concrete expression in the national measures transposing that directive and in their application by national authorities'*

# EU Secondary Law

- Regulations and Directives on IP (CJEU)

- CJEU analysis on the basis of the Charter : the exemple of Copyright

- CJEU, *Constantin Film v. YouTube*, C-264/19, § 37

- '(...) **Directive 2004/48** is intended to establish a **fair balance** between, on the one hand, the interest of the holders of copyright in the protection of their intellectual property rights enshrined in Article 17(2) of the Charter of Fundamental Rights and, on the other hand, the protection of the interests and fundamental rights of users of protected subject matter, as well as of the public interest'*

# EU Secondary Law

- Regulations and Directives on Data (legislation)
  - Growing level of harmonization
    - Prior 2022 :
      - Personal Data (GDPR) [2016/679]
      - Non-personal data (free flow) [2018/1807]
      - Public sector information [2019/1024]
    - 2022:
      - Data Governance Act [2022/868]
      - Digital Market Act [2022/1925]
      - Digital Services Act [2022/2065]
      - Data Act Proposal (COM(2022) 68 final)
  - References to the Charter in secondary law
  - Adoption by EU and implementation by MS in conformity with the Charter
    - In particular art. 8 CFREU (Protection of personal data)

# EU Secondary Law

- Regulations and Directives on Data (CJEU)
  - CJEU analysis on the basis of the Charter : the exemple of Copyright
    - CJEU, *Scarlet*, C-70/10, §§ 50-51

*'(...) contested **filtering system** may also infringe the fundamental rights of that ISP's customers, namely their right to protection of their personal data and their freedom to receive or impart information, which are rights safeguarded by Articles 8 and 11 of the Charter respectively.*

*It is common ground, first, that the injunction requiring installation of the contested filtering system would involve a systematic analysis of all content and the collection and identification of users' IP addresses from which unlawful content on the network is sent. Those addresses are protected personal data because they allow those users to be precisely identified.'*

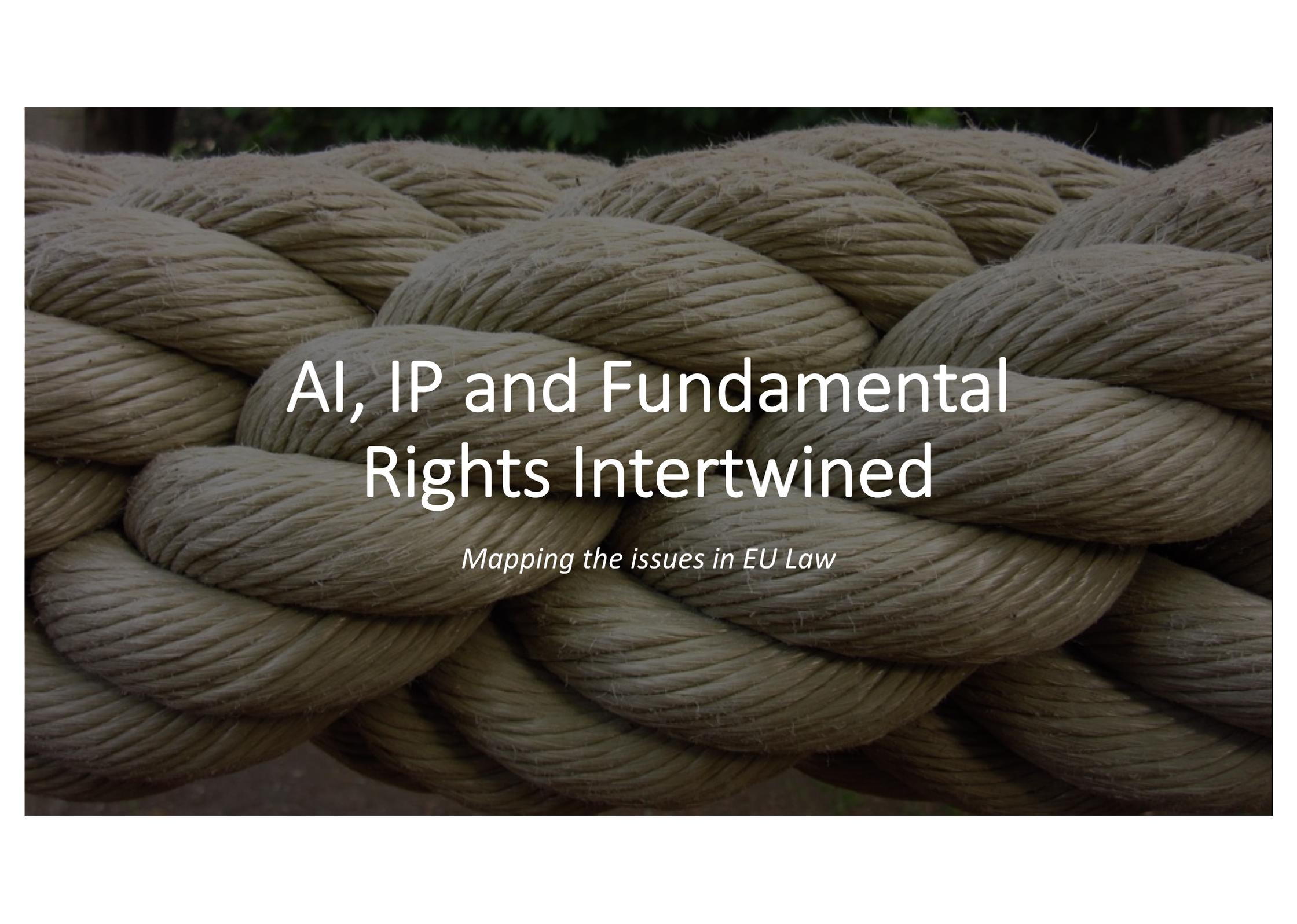
# EU Secondary Law

- Regulations and Directives on AI (legislation)
  - Limited level of harmonization so far
    - IP : Text and Data Mining exception (art. 3 & 4 DSM Directive)
    - Personal data : right not to be subject to a decision based solely on automated processing, including profiling (art. 22 GDPR)
    - Digital platforms: voluntary own-initiatives & content moderation
  - Strong agenda
    - AI Act Proposal (COM(2021) 2016 final)
    - AI Liability Directive (COM(2022) 496 final)
    - Revision of sectoral safety legislation: Machinery products Proposal (COM(2021) 202 final); General product safety Directive proposal (COM(2021) 346 final))
    - See in general on agenda :
      - EU Commission White Paper, *On Artificial Intelligence - A European approach to excellence and trust*, Brussels, 19.2.2020, COM(2020) 65 final
      - EU Commission Communication, *Fostering a European Approach to Artificial Intelligence*, Brussels, 21.4.2021, COM(2021) 205 final
  - Reference to the Charter
    - See in particular prohibited AI practices, high-risk AI systems, FR risks mitigation (AI Act proposal)
    - See in particular 'duty of care' (art. 2(9) AI Liability Directive)
    - See in particular risk assessment by very large online platform (art. 34 DSA)
    - See in general EU Commission Communication, *Building Trust in Human-Centric Artificial Intelligence*, Brussels, 8.4.2019, COM(2019) 168 final
  - Adoption by EU and implementation by MS in conformity with the Charter

**Situations where AI, IP and Fundamental Rights are intertwined shall be analyzed on the basis of the Charter and its interpretation by CJEU**



**BACK  
TO  
THE FUTURE™**



# AI, IP and Fundamental Rights Intertwined

*Mapping the issues in EU Law*

# Commission's view on AI and IP

***'(...) Reflection will be needed on interactions between AI and intellectual property rights, from the perspective of both intellectual property offices and users, with a view to fostering innovation and legal certainty in a balanced way (...).'***

EU Commission Communication, *Artificial Intelligence for Europe*, Brussels, 25.4.2018, COM(2018) 237



# Commission's view on AI and IP

'...'

EU Commission White Paper, *On Artificial Intelligence – A European Approach to Excellence and Trust*, Brussels, 19.2.2020, COM(2020) 65 final ;  
Communication, *A European strategy for data*, Brussels, 19.2.2020, COM(2020) 66 final ;  
Communication, *Shaping Europe's digital future*, Brussels, 19.2.2020, COM(2020) 67 final ;  
Communication, *Fostering a European Approach to Artificial Intelligence*, Brussels, 21.4.2021, COM(2021) 205 final

# Commission's view on AI and IP

*'(...) the Commission will, together with stakeholders and IP offices, **explore the use of new technologies such as AI and blockchain to further improve the effectiveness of our IP systems.** In fact, new technologies can help facilitate the protection of IP, improve transparency, allow for a smoother distribution of license fees, and more effectively tackle counterfeiting and piracy (...)'*

*'(...) In addition, the digital revolution requires **reflection on how and what is to be protected. AI technologies are creating new works and inventions.** In some cases, for instance in the cultural sector, the use of inventive machines may become the norm. These developments raise the question of what protection should be given to products created with the help of AI technologies (...)'*

# Commission's view on AI and IP

## 'Article 70 – Confidentiality

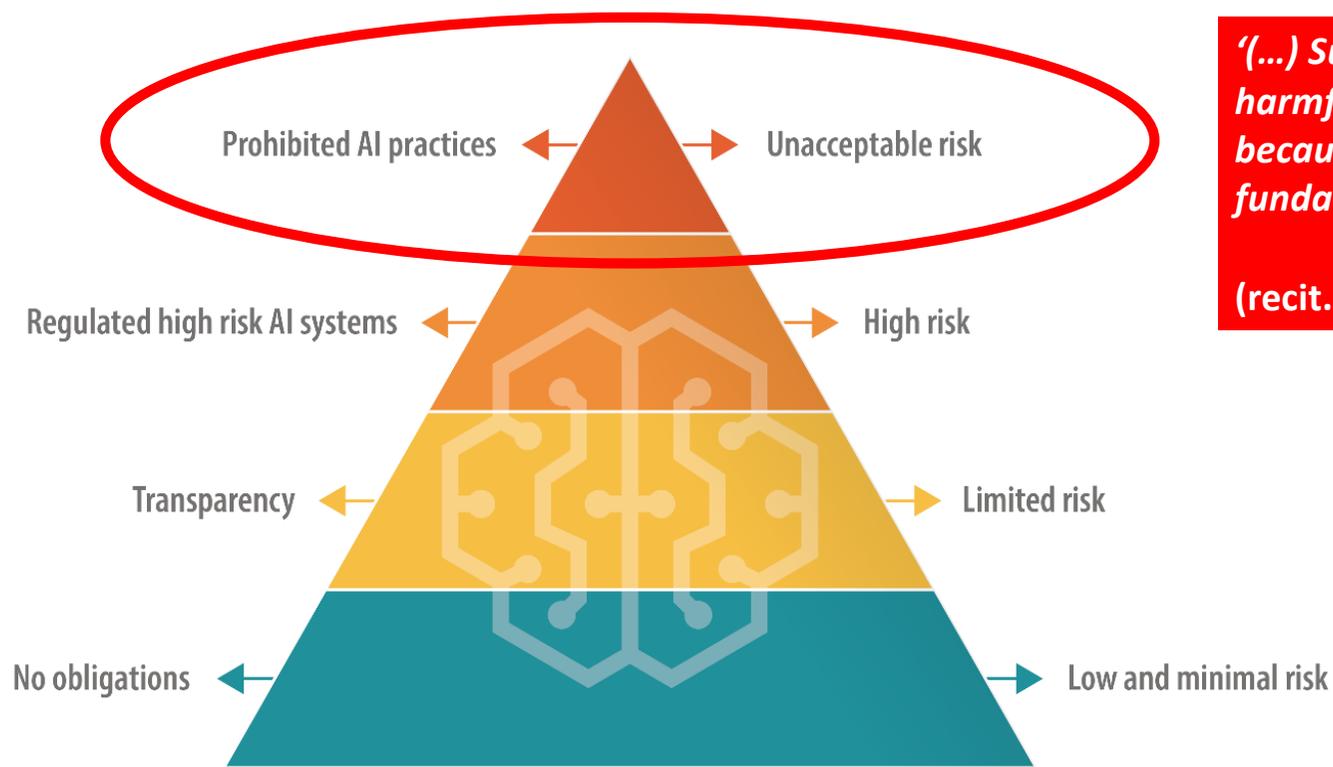
*1. National competent authorities and notified bodies involved in the application of this Regulation shall respect the **confidentiality** of information and data obtained in carrying out their tasks and activities in such a manner as to protect, in particular:*

*(a) **intellectual property rights**, and confidential business information or trade secrets of a natural or legal person, **including source code**, except the cases referred to in Article 5 of Directive 2016/943 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure apply. (...)'*

# Commission's view on AI and Fundamental Rights

*'(...) As with any new technology, **the use of AI brings both opportunities and risks.** Citizens fear being left powerless in defending their rights and safety when facing the information asymmetries of algorithmic decision-making, and companies are concerned by legal uncertainty. **While AI can help protect citizens' security and enable them to enjoy their fundamental rights, citizens also worry that AI can have unintended effects or even be used for malicious purposes. These concerns need to be addressed. (...)**'*

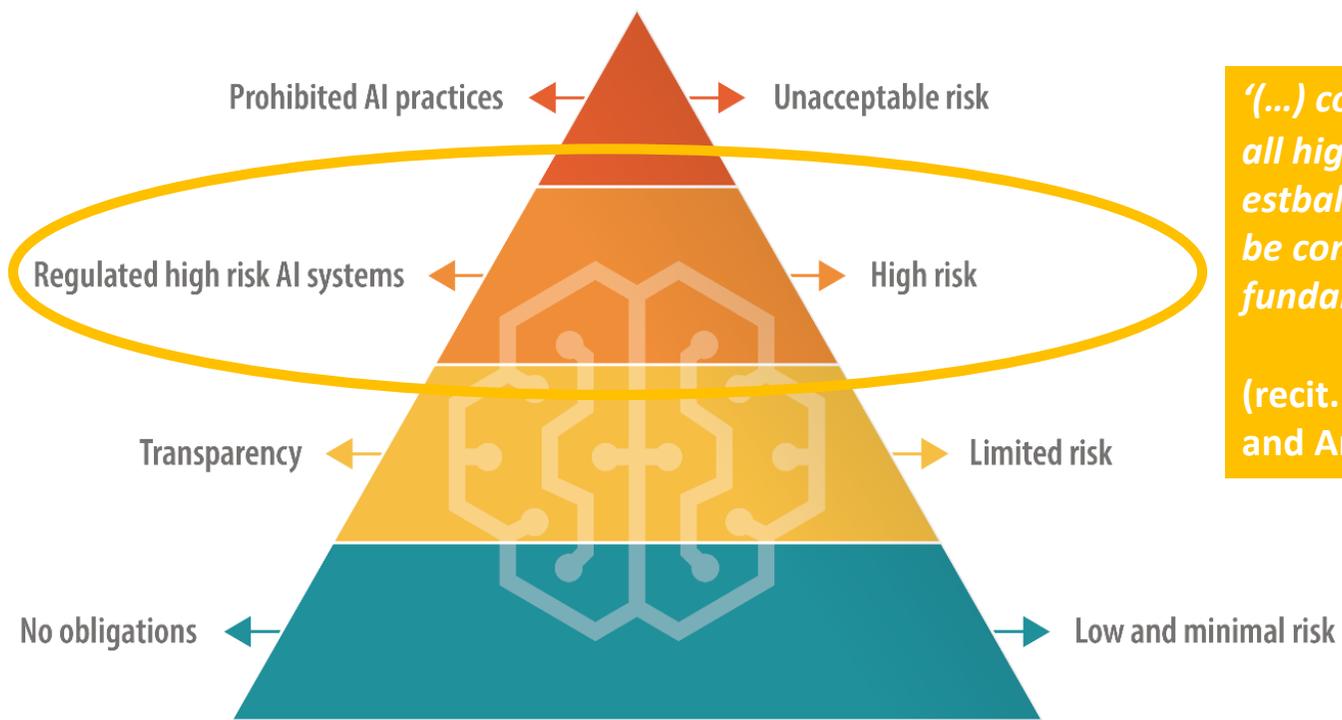
# Commission's view on AI and Fundamental Rights



*'(...) Such practices are particularly harmful and should be prohibited because they contradict (...) Union fundamental rights (...)'*

**(recit. 15 ; see practices listed in art. 5)**

# Commission's view on AI and Fundamental Rights

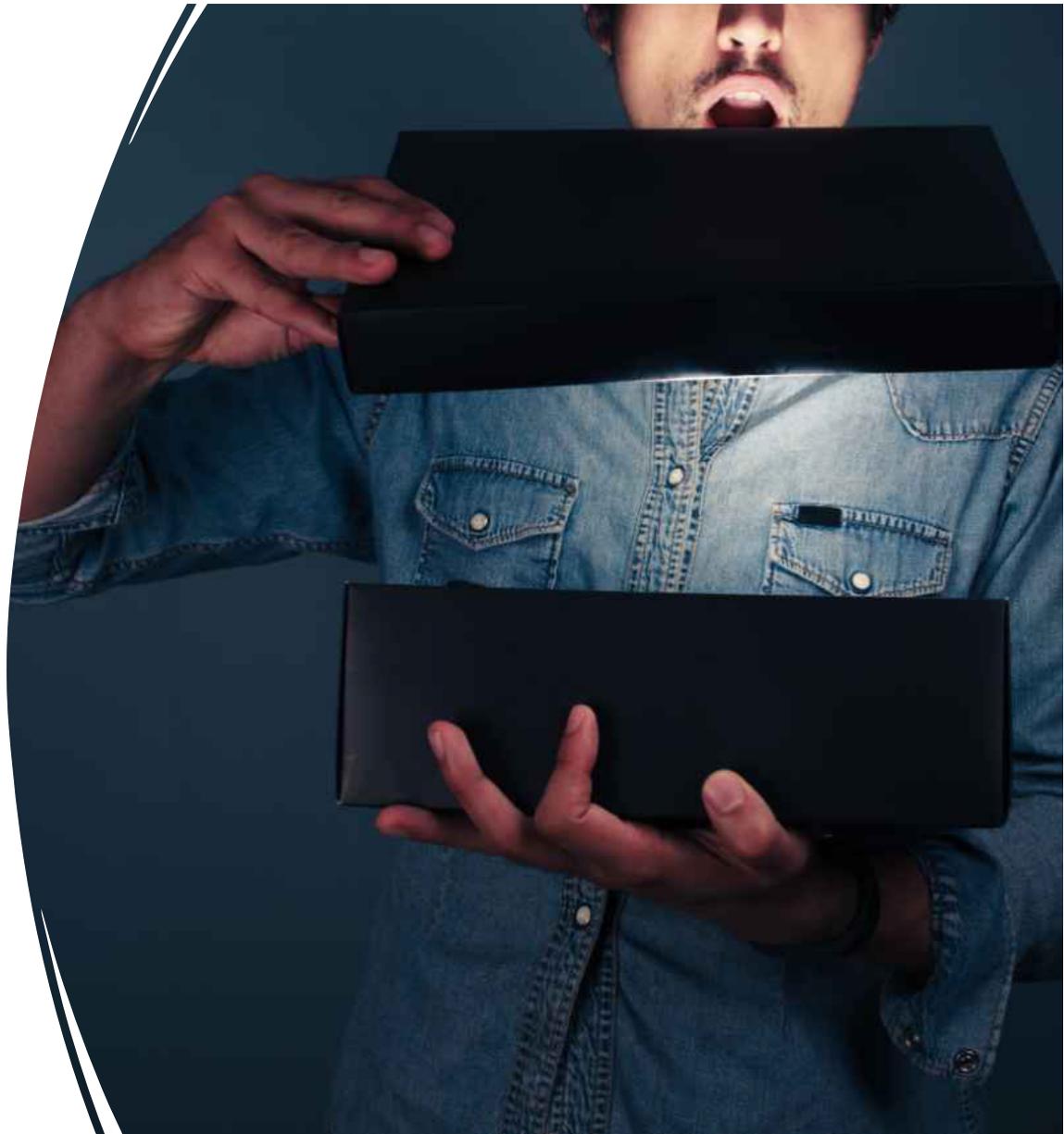


*'(...) common normative standards for all high-risk AI systems should be established. Those standards should be consistent with the Charter of fundamental rights (...)'*

*(recit. 13 ; see AI systems in art. 6(1) and Annex III referred to in art. 6(2))*

# Commission's view on AI, IP and Fundamental Rights?

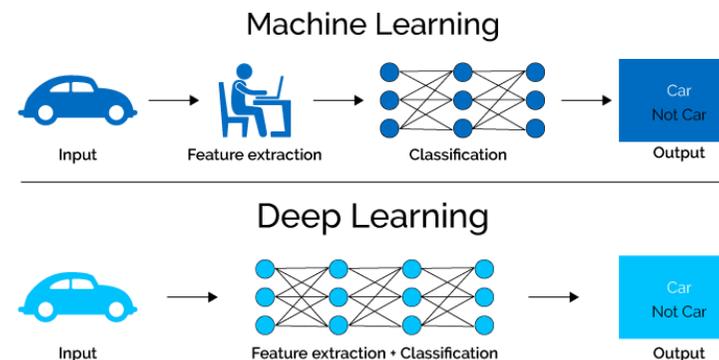
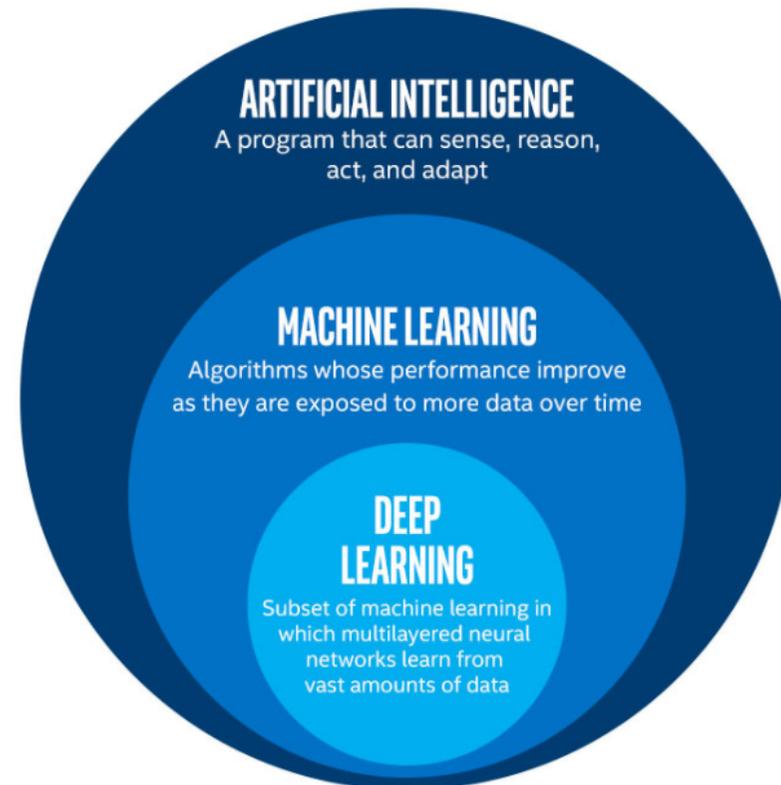
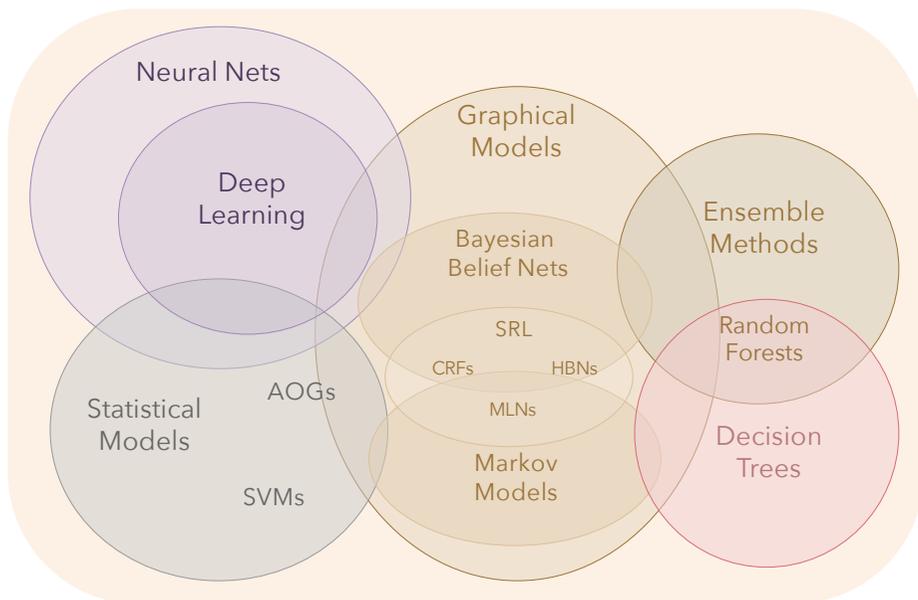
*'(...) The increased transparency obligations will also not disproportionately affect the right to protection of intellectual property (Article 17(2)), since they will be limited only to the minimum necessary information for individuals to exercise their right to an effective remedy and to the necessary transparency towards supervision and enforcement authorities, in line with their mandates. Any disclosure of information will be carried out in compliance with relevant legislation in the field, including Directive 2016/943 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure. When public authorities and notified bodies need to be given access to **confidential information** or **source code** to examine compliance with substantial obligations, they are placed under binding confidentiality obligations.'*





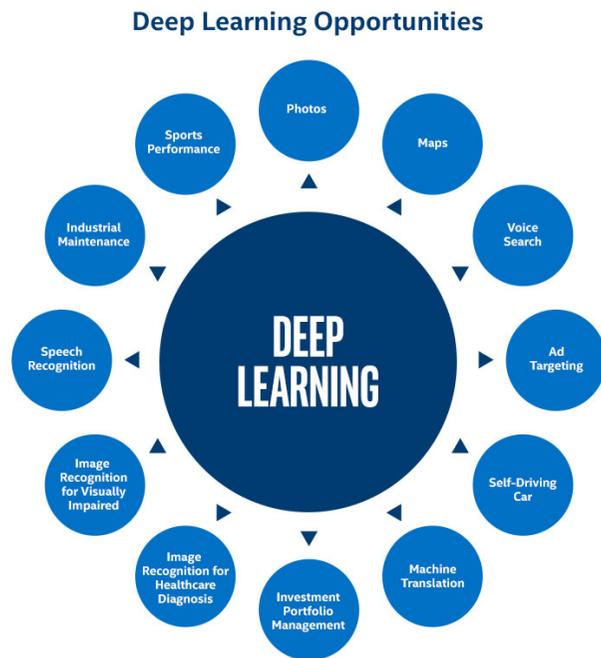
# Mapping the issues

- AI as an **umbrella term** that includes machine learning and deep learning (as a subset of the latter)



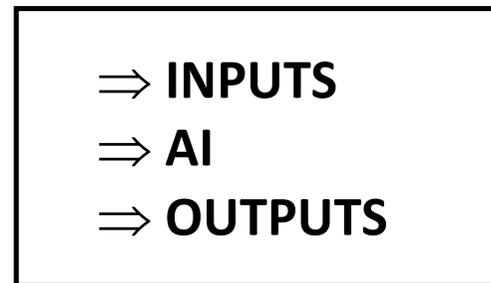
# Mapping the issues

- Myriad of applications



# Mapping the issues

- Issues are infinite
  - Different types of data
  - Different types of technologies
  - Different types of applications
- Issues can only be addressed through a case by case analysis
  - Balancing exercise considering the different types of data, technologies and applications
- Two main categories of issues
  - **IP for AI** and its impact on Fundamental Rights
  - **AI for IP** and its impact on Fundamental Rights



**IP?**

⇒ **FUNDAMENTAL RIGHTS METHODOLOGY?**



# IP for AI and its impact on Fundamental Rights

*'IP' as a hurdle*

# Ethicals Guidelines for Trustworthy AI

- ***‘(...) seven requirements that should be met (...). The below list of requirements is non-exhaustive (...)’***
  - **Human agency and oversight** *(including fundamental rights, human agency and human oversight)*
  - **Technical robustness and safety** *(including resilience to attack and security, fall back plan and general safety, accuracy, reliability and reproducibility)*
  - **Privacy and data governance** *(including respect for privacy, quality and integrity of data, and access to data)*
  - **Transparency** *(including traceability, explainability and communication)*
  - **Diversity, non-discrimination and fairness** *(including the avoidance of unfair bias, accessibility and universal design, and stakeholder participation)*
  - **Societal and environmental wellbeing** *(including sustainability and environmental friendliness, social impact, society and democracy)*
  - **Accountability** *(including auditability, minimisation and reporting of negative impact, trade-offs and redress)*



# AI Act Proposal

Art. 9 (risk management system)  
 Art. 11 (technical documentation)  
 Art. 17 (quality management system)  
 Art. 19 (conformity assessment)  
 Art. 22 (duty of information)  
 Art. 30-51 (notifying authorities and notified bodies)  
 Art. 56-59 (governance)  
 Art. 60 (EU database for stand-alone high-risk AI systems)  
 Art. 61- (post-market monitoring, information sharing, market surveillance)

Art. 21 (corrective actions)  
 Art. 53-54 (AI regulatory sandboxes)  
 Art. 69 (codes of conduct for non high-risk AI systems)

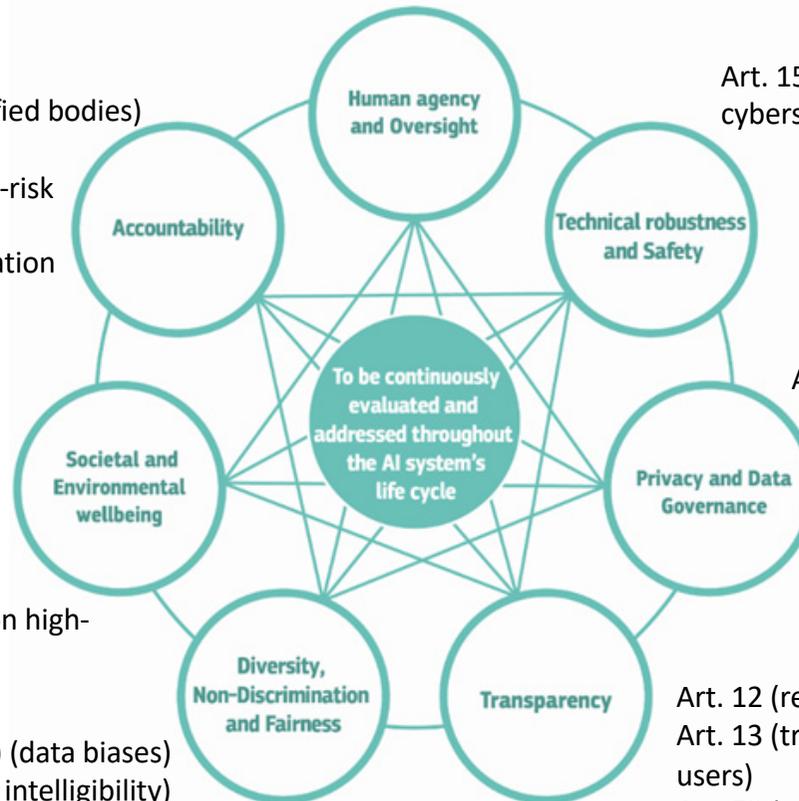
Art. 10(2)(f), 10(5) (data biases)  
 Art. 14(4) (human intelligibility)  
 Art. 15(3) (feedback loops)

Art. 14 (human oversight)

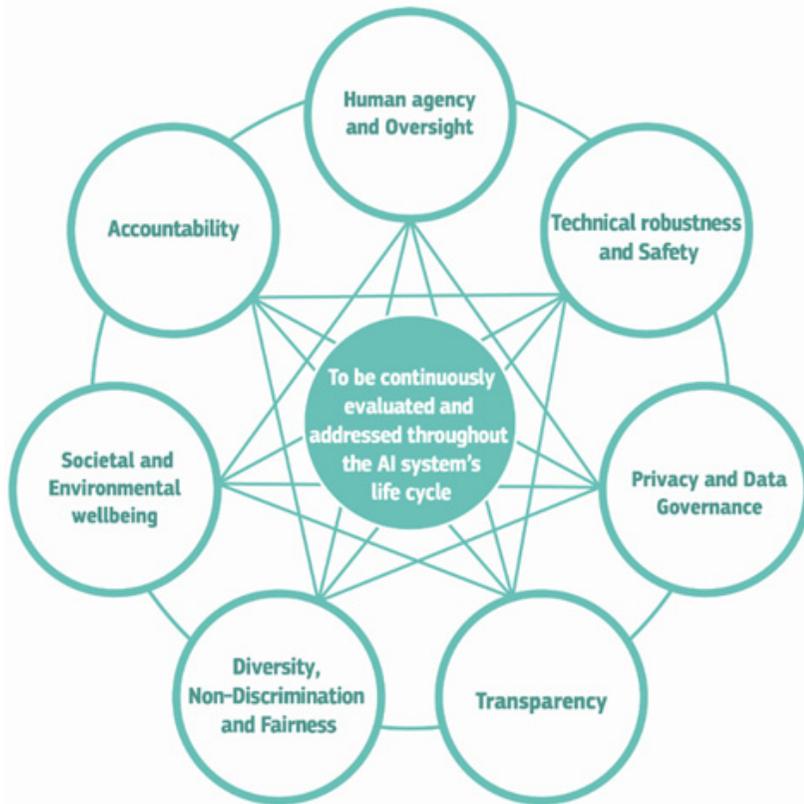
Art. 15 (accuracy, robustness and cybersecurity)

Art. 10 (data and data governance)

Art. 12 (record keeping)  
 Art. 13 (transparency and provision of information to users)  
 Art. 52 (transparency for certain AI systems)



# IP as a hurdle?



VS



# IP on inputs

- IP protection for data?
  - 'Mere' data
    - No IP
  - 'Augmented' data
    - Might qualify for Copyright protection
  - 'Structured' data
    - Might qualify for Database *sui generis* protection
- Impact on fundamental rights?
  - Freedom of expression and information (art. 11 CFREU)
  - Freedom to conduct business (art. 16 CFREU)
- Restoring the balance?
  - Freedom of expression and information
    - TDM exceptions (art. 3 and 4 DSM Directive)
    - Research Data (art. 10 PSI Directive)
  - Freedom to conduct business
    - Abuse of dominant position (CJEU, *Magill*, C-241/91 P & C-241/92 P ; *IMS Health*, C-418/01)

# IP on inputs

- Restoring the balance

- Article 3 Directive (EU) 2019/790 on copyright and related rights in the Digital Single Market

*(1) Member States shall provide for an **exception** to the rights provided for in Article 5(a) and Article 7(1) of Directive 96/9/EC, Article 2 of Directive 2001/29/EC, and Article 15(1) of this Directive for reproductions and extractions made by research organisations and cultural heritage institutions in order to carry out, **for the purposes of scientific research, text and data mining** of works or other subject matter to which they have lawful access.*

# IP on inputs

- Restoring the balance

- Article 4 Directive (EU) 2019/790 on copyright and related rights in the Digital Single Market

*(1) Member States shall provide for an **exception** or limitation to the rights provided for in Article 5(a) and Article 7(1) of Directive 96/9/EC, Article 2 of Directive 2001/29/EC, Article 4(1)(a) and (b) of Directive 2009/24/EC and Article 15(1) of this Directive for reproductions and extractions of lawfully accessible works and other subject matter **for the purposes of text and data mining.***

*(...)*

*(3) The exception or limitation provided for in paragraph 1 shall apply on condition that the use of works and other subject matter referred to in that paragraph has not been expressly reserved by their rightholders in an appropriate manner, such as machine-readable means in the case of content made publicly available online.*

*(...)*

# IP on inputs

- Restoring the balance

- Article 10 Directive (EU) 2019/1024 on open data and the re-use of public sector information

*(1) Member States shall support the availability of research data by adopting national policies and relevant actions aiming at making **publicly funded research data openly available ('open access policies')**, following the principle of 'open by default' and compatible with the FAIR principles. In that context, concerns relating to intellectual property rights, personal data protection and confidentiality, security and legitimate commercial interests, shall be taken into account in accordance with the principle of 'as open as possible, as closed as necessary'. Those open access policies shall be addressed to research performing organisations and research funding organisations.*

*2. Without prejudice to point (c) of Article 1(2), research data shall be re-usable for commercial or non-commercial purposes in accordance with Chapters III and IV, insofar as they are publicly funded and researchers, research performing organisations or research funding organisations have already made them publicly available through an institutional or subject-based repository. In that context, legitimate commercial interests, knowledge transfer activities and pre-existing intellectual property rights shall be taken into account.*

# IP on inputs

- Restoring the balance

- Data Governance Act : nudging towards re-using and sharing data

*Chapter II creates a **mechanism for re-using certain categories of protected public sector data** which is conditional on the respect of the rights of others (notably on grounds of protection of personal data, but also protection of intellectual property rights and commercial confidentiality). (...) Provisions under this Chapter do not create the right to re-use such data, but provide for a set of harmonized basic conditions under which the re-use of such data may be allowed (...)*

*Chapter III aims to **increase trust in sharing personal and non-personal data** and lower transaction costs linked to B2B and C2B data sharing by creating a notification regime for data sharing providers. (...)*

*Chapter IV facilitates **data altruism** (data voluntarily made available by individuals or companies for the common good). (...) (see Commission Proposal)*

# IP on AI

- IP protection for AI technologies?
  - Copyright protection for software
  - Patent
- Impact on fundamental rights?
  - Freedom to conduct business (art. 16 CFREU)
- Restoring the balance?
  - Freedom to conduct business
    - Decompilation (art. 5 Software Directive ; art. 27 UPC Agreement)
    - Interoperability (art. 6 Software Directive ; art. 27 UPC Agreement)
    - Abuse of dominant position (GC, *Microsoft*, T-201/4)

# IP on AI

- Restoring the balance

- Article 5 Directive 2009/24/EC on the legal protection of computer programs

*(1) In the absence of specific contractual provisions, the acts referred to in points (a) and (b) of Article 4(1) shall **not require authorisation** by the rightholder where they are **necessary for the use of the computer program** by the lawful acquirer in accordance with its intended purpose, **including for error correction**.*

*(3) The person having a right to use a copy of a computer program shall be **entitled, without the authorisation of the rightholder, to observe, study or test the functioning of the program** in order to determine the ideas and principles which underlie any element of the program if he does so while performing any of the acts of loading, displaying, running, transmitting or storing the program which he is entitled to do.*

# IP on AI

- Restoring the balance

- Article 6 Directive 2009/24/EC on the legal protection of computer programs

1. The **autorisation of the rightholder shall not be required** where reproduction of the code and translation of its form within the meaning of points (a) and (b) of Article 4(1) are indispensable to **obtain the information necessary to achieve the interoperability** of an independently created computer program with other programs, provided that the following conditions are met:

- (a) those acts are performed by the licensee or by another person having a right to use a copy of a program, or on their behalf by a person authorised to do so;
- (b) the information necessary to achieve interoperability has not previously been readily available to the persons referred to in point (a); and
- (c) those acts are confined to the parts of the original program which are necessary in order to achieve interoperability.

2. The provisions of paragraph 1 shall not permit the information obtained through its application:

- (a) to be used for goals other than to achieve the interoperability of the independently created computer program;
- (b) to be given to others, except when necessary for the interoperability of the independently created computer program; or
- (c) to be used for the development, production or marketing of a computer program substantially similar in its expression, or for any other act which infringes copyright.

(...)

# IP on AI

- Restoring the balance

- Article 27 Agreement on a Unified Patent Court

*The rights conferred by a **patent shall not extend** to any of the following:*

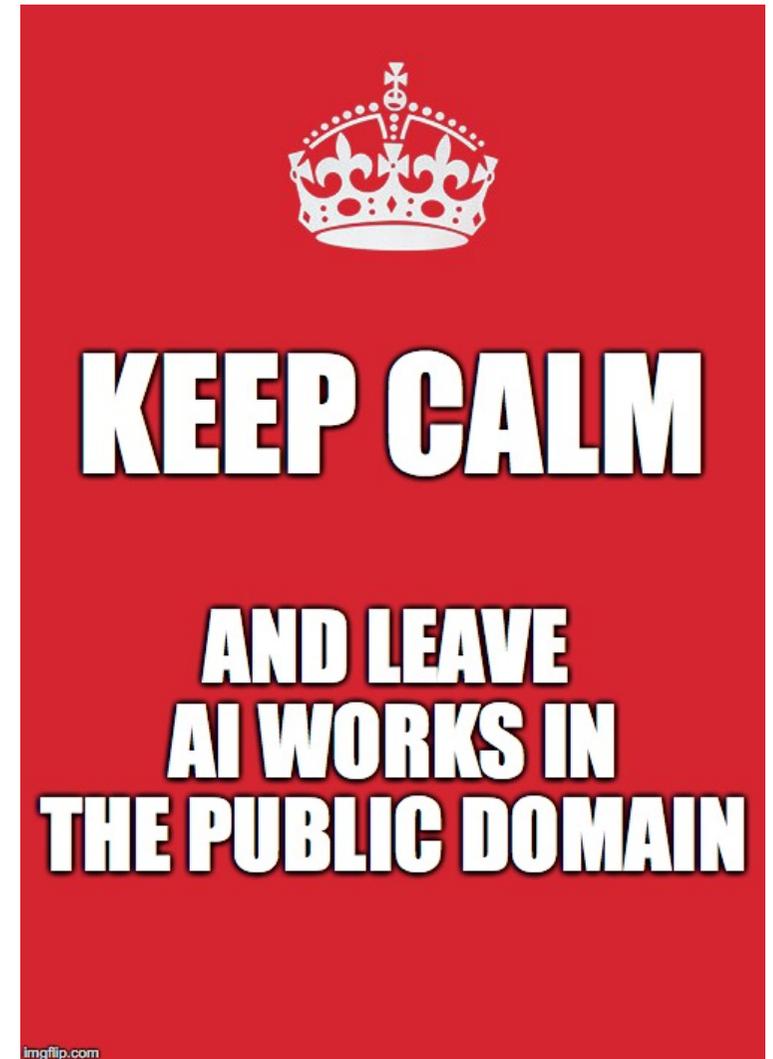
*(...)*

*(k) the acts and the use of the obtained information as allowed under Articles 5 and 6 of Directive 2009/24/EC (3), in particular, by its provisions on **decompilation and interoperability**;*

*(...)*

# IP on outputs

- IP protection for productions assisted by / generated by AI?
  - Copyright? Patent? Design? *Sui Generis* right?
- Impact on fundamental rights?
  - Intellectual Property (art. 17(2) CFREU)
- Restoring the balance?
  - AI production is different from Human production and only if IP protection is evidenced as necessary, then further thinking on appropriate protection in order to avoid undesirable consequences



# Commission's view on IP as a hurdle

*'(...) the Commission will explore the need for legislative action on issues that affect relations between actors in the data-agile economy to provide incentives for horizontal data sharing across sectors (...). One or more of the following issues could be taken forward in a Data Act (2021): (...) **evaluating the IPR framework with a view to further enhance data access and use** (including a possible revision of the **Database Directive** and a possible clarification of the application of the **Trade Secrets Protection Directive as an enabling framework**) (...).'*

# Commission's view on IP as a hurdle

*'In order not to hinder the exercise of the right of users to access and use such data in accordance with Article 4 of this Regulation or of the right to share such data with third parties in accordance with Article 5 of this Regulation, **the sui generis right** provided for in Article 7 of Directive 96/9/EC **does not apply to databases containing data obtained from or generated by the use of a product or a related service.**'*

## Commission's view on 'IP' as a hurdle

*'(...) the Commission will explore the need for legislative action on issues that affect relations between actors in the data-agile economy to provide incentives for horizontal data sharing across sectors (...). One or more of the following issues could be taken forward in a Data Act (2021): (...) **evaluating the IPR framework with a view to further enhance data access and use** (including a possible revision of the Database Directive and a possible clarification of the application of the **Trade Secrets Protection Directive** as an enabling framework) (...)'*

# Commission's view on 'IP' as a hurdle

*'(...) It is true that the legal protection of **trade secrets facilitates the exchange of information.** (...) for more data sharing to happen, companies should feel confident that it takes place in a secure environment, with authorised companies and under the right conditions. Companies should benefit of tools that would help them **fight misappropriation or misuse of their data.** (...)'*

Call for tenders, Study on the legal protection of trade secrets in the context of the data economy (GRO/SME/20/F/206), 23.6.2020, Ares(2020)3269941

*'(...) **Trade secrets shall only be disclosed provided that all specific necessary measures are taken to preserve the confidentiality of trade secrets in particular with respect to third parties (...)**'*

Art. 4(3) Data Act Proposal (COM(2022) 68 final)

See also art. 5(8), 8(6), 17(2)(c), 19(2)

# 'IP' as a hurdle?

- *'(...) seven requirements that should be met (...). The below list of requirements is non-exhaustive (...).'*
  - **Human agency and oversight**
  - Technical robustness and safety
  - Privacy and data governance
  - **Transparency**
  - Diversity, non-discrimination and fairness
  - Societal and environmental wellbeing
  - **Accountability**
- Disclosure as a requisite for compliance assesment



# 'IP' as a hurdle?



**VS**



# Trade secrets on inputs, AI and outputs

- Trade secrets [TS] protection available!
  - See article 2 Directive (EU) 2016/943 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure:

*(1) 'trade secret' means information which meets all of the following requirements:*

*(a) it is secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to persons within the circles that normally deal with the kind of information in question;*

*(b) it has commercial value because it is secret;*

*(c) it has been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret*
- Impact on fundamental rights!
  - See AI Act proposal (COM(2021) 2016 final)

# Trade secrets on inputs, AI and outputs

- Impact on fundamental rights:

- See AI Act proposal (COM(2021) 2016 final)

- “(...) With a set of requirements for trustworthy AI and proportionate obligations on all value chain participants, the proposal will enhance and promote the protection of the rights protected by the Charter:

- the right to human dignity (Article 1),**

- respect for private life and protection of personal data (Articles 7 and 8),**

- non-discrimination (Article 21) and**

- equality between women and men (Article 23).** It aims to prevent a **chilling effect on the rights to freedom of expression (Article 11) and**

- freedom of assembly (Article 12), to ensure protection of**

- the right to an effective remedy and to a fair trial, the rights of defence and the presumption of innocence (Articles 47 and 48),**

- as well as the general principle of good administration. Furthermore, as applicable in certain domains, the proposal will positively affect the rights of a number of special groups, such as **the workers’ rights to fair and just working conditions (Article 31),****

- a high level of consumer protection (Article 28),**

- the rights of the child (Article 24) and the integration of persons with disabilities (Article 26).**

- The right to a high level of environmental protection and the improvement of the quality of the environment (Article 37) is also relevant, including in relation to the health and safety of people. (...)**”

- Restoring the balance?

# Trade secrets on inputs, AI and outputs

- Restoring the balance (ex post)
  - Article 64 AI Act proposal

(1) **Access to data and documentation** in the context of their activities, the **market surveillance authorities** shall be granted full access to the training, validation and testing datasets used by the provider, including through application programming interfaces ('API') or other appropriate technical means and tools enabling remote access.

(2) Where necessary to assess the conformity of the high-risk AI system with the requirements set out in Title III, Chapter 2 and upon a reasoned request, the **market surveillance authorities** shall be granted access to the **source code of the AI system**.

(3) **National public authorities or bodies which supervise or enforce the respect of obligations under Union law protecting fundamental rights** in relation to the use of high-risk AI systems referred to in Annex III shall have the power to request and access any **documentation created or maintained under this Regulation** when access to that documentation is necessary for the fulfilment of the competences under their mandate within the limits of their jurisdiction. The relevant public authority or body shall inform the market surveillance authority of the Member State concerned of any such request.

(...)

(5) Where the documentation referred to in paragraph 3 is **insufficient to ascertain whether a breach of obligations under Union law intended to protect fundamental rights** has occurred, the public authority or body referred to paragraph 3 may make a reasoned **request to the market surveillance authority to organise testing of the high-risk AI system through technical means**. The market surveillance authority shall organise the testing with the close involvement of the requesting public authority or body within reasonable time following the request.

# Trade secrets on inputs, AI and outputs

- Restoring the balance (ex post)
  - Article 64 AI Act proposal : measures under confidentiality obligation (art. 64(6) and 70)
    - Flaw in the Commission analysis when it apparently assumes equivalent status to IP and TS: '(...) **The increased transparency obligations will also not disproportionately affect the right to protection of intellectual property (Article 17(2)), (...)**' (cf. supra)
    - Comp. CJEU, *Ecoservice*, C-927/19, § 132: '*The fundamental rights capable of being protected in this way include the right to respect for private life and communications, enshrined in **Article 7 of the Charter**, and the right to the protection of trade secrets, which the Court has acknowledged as a **general principle of EU law***'
  - Comp. CJEU analysis



**BACK**  
**TO**  
**THE FUTURE**

# Trade secrets on inputs, AI and outputs

- Restoring the balance (ex post)

- Comp. CJEU, *Coty Germany*, C-580/13, §§ 39-41 (right to an effective remedy and right to IP vs. right to protection of personal data)

*'In that regard, that **unlimited and unconditional authorisation to invoke banking secrecy** is such as to prevent the procedures laid down by Directive 2004/48 and the measures taken by the competent national authorities, in particular when they seek to order the disclosure of necessary information under Article 8(1) of that directive, from taking due account of the specific characteristics of each intellectual property right and, where appropriate, the intentional or unintentional character of the infringement.*

*It follows that an authorisation of that kind is capable of **seriously impairing**, in the context of Article 8 of Directive 2004/48, **the effective exercise of the fundamental right to intellectual property** — to the benefit of the right of persons covered by Article 8(1) of Directive 2004/48 to the protection of personal data concerning them — as a result of the obligation, for a banking institution, to respect banking secrecy.*

*It follows from the foregoing that a national provision, such as that at issue in the main proceedings, taken in isolation, is such as to **seriously infringe the fundamental right to an effective remedy and, ultimately, the fundamental right to intellectual property**, enjoyed by the holders of those rights, and that it **does not**, therefore, **comply with the requirement to ensure a fair balance** between the various fundamental rights weighed up in Article 8 of Directive 2004/48.'*

# Trade secrets on inputs, AI and outputs

- Restoring the balance (ex post)

- Comp. CJEU, *Bastei Lübbe*, C-149/17, §§ 51-52 (right to an effective remedy and right to IP vs. right to respect for private and family life)

*'It must be held that if, in situations such as those at issue in the main proceedings, national legislation, as interpreted by the relevant national courts, has the effect of creating an obstacle to a national court before which a tortious action has been brought from being able to compel, on application of the claimant, the providing and obtaining of evidence relating to the opposing party's family members, **proving the alleged infringement of copyright and who was responsible for that infringement are rendered impossible**, and, consequently, the **fundamental rights to an effective remedy and to intellectual property, enjoyed by the holder of the copyright, are seriously infringed**, and thereby the requirement to ensure a fair balance between the various fundamental rights in question is not respected.*

*Therefore, **by guaranteeing an almost absolute protection for the family members of the owner of an internet connection, through which copyright infringements were committed** by means of file-sharing, the national legislation at issue in the main proceedings cannot, contrary to the requirements set by Article 8(1) of Directive 2001/29, be considered to be sufficiently effective and capable of ultimately leading to effective and dissuasive sanctions against the perpetrator of that infringement. Furthermore, the procedure initiated in respect of the remedy at issue in the main proceedings is not capable of ensuring the enforcement of intellectual property rights required by Article 3(1) of Directive 2004/48.'*

# Trade secrets on inputs, AI and outputs

- Restoring the balance (ex post)
  - Comp. CJEU, *Schrems*, C-362/14, § 95 (personal data shall enjoy effective judicial protection)
    - Additional safeguards :
      - *'right to obtain human intervention on the part of the controller, to express his or her point of view and to contest the decision'* (art. 22(3) GDPR)
      - *'right to obtain an explanation of the decision'* (recital 71 GDPR)
  - TS might be limited accordingly
    - Despite recital 63 GDPR (*'A data subject should have the right of access to personal data (...) That right should not adversely affect the rights or freedoms of others, including trade secrets'*)
  - **Trade secrets might be limited to a larger extent than IP**
    - Does not qualify for art. 17(2) CFREU : *'subject matter constituting intellectual property qualifies for protection under EU law. However, it does not follow that such subject matter or categories of subject matter must all qualify for the same protection'* (see CJEU, *Cofemel*)
    - Even so : *'nothing whatsoever in the wording of that provision or in the Court's case-law to suggest that that right is inviolable and must for that reason be absolutely protected'* (see CJEU, *Scarlet*, C-70/10 ; *Pelham*, C-476/17)

# Trade secrets on inputs, AI and outputs

- Restoring the balance (ex ante : regulator risk assessment)

- Article 7 AI Act Proposal

*'The **Commission** is empowered to adopt delegated acts in accordance with Article 73 to update the list in Annex III by adding high-risk AI systems where both of the following conditions are fulfilled:*

*(a) the AI systems are intended to be used in any of the areas listed in points 1 to 8 of Annex III;*

*(b) **the AI systems pose a risk of harm to the health and safety, or a risk of adverse impact on fundamental rights**, that is, in respect of its severity and probability of occurrence, equivalent to or greater than the risk of harm or of adverse impact posed by the high-risk AI systems already referred to in Annex III.'*

- Article 53 AI Act Proposal

*'(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** (...)*

*(3) The AI regulatory sandboxes shall not affect the supervisory and corrective powers of the competent authorities. **Any significant risks to health and safety and fundamental rights identified during the development and testing of such systems shall result in immediate mitigation and, failing that, in the suspension of the development and testing process until such mitigation takes place.***

# Trade secrets on inputs, AI and outputs

- Restoring the balance (ex ante : AI provider/user risk assessment)

- Article 9 AI Act Proposal

*'(1) A **risk management system** shall be established, implemented, documented and maintained in relation to high-risk AI systems.'*

- Obligation of providers of high-risk AI systems (art. 16)

- Article 34(1) DSA

*'Providers of very large online platforms and of very large online search engines shall diligently **identify, analyse and assess any systemic risks** in the Union stemming from the design or functioning of their service and its related systems, including algorithmic systems, or from the use made of their services. (...) This risk assessment shall be specific to their services and shall include the following systemic risks:*

*(...)*

*(b) **any actual or foreseeable negative effects for the exercise of fundamental rights (...);***

*(...).*

- After designation as very large online platform/search engine (art. 33(6))



# AI for IP and its impact on Fundamental Rights

*Challenging the IP basics*

# The topical exemple

- Algorithmic enforcement of IP

- Article 17 Directive (EU) 2019/790 on copyright and related rights in the Digital Single Market (DSM)

*(4) If no authorisation is granted, **online content-sharing service providers** shall be liable for unauthorised acts of communication to the public, including making available to the public, of copyright-protected works and other subject matter, unless the service providers demonstrate that they have:*

*(a) made best efforts to obtain an authorisation, and*

*(b) made, in accordance with high industry standards of professional diligence, **best efforts to ensure the unavailability of specific works** and other subject matter for which the rightholders have provided the service providers with the relevant and necessary information; and in any event*

*(c) acted expeditiously, upon receiving a sufficiently substantiated notice from the rightholders, to **disable access to, or to remove from their websites**, the notified works or other subject matter, and made **best efforts to prevent their future uploads** in accordance with point (b).*

# The topical exemple

- Article 17 = upload filter
  - Common understanding
  - Fundamental rights concerns
    - Action for annulment brought by Poland (C-401/19) ; CJEU dismisses, but

*'In addition, the present examination, in the light of the requirements laid down in Article 52(1) of the Charter, concerns the specific liability regime in respect of online content-sharing service providers, as established by Article 17(4) of Directive 2019/790, which **does not prejudge any examination** which may subsequently be carried out in relation to the **provisions adopted by the Member States** for the purposes of transposing that directive or of the **measures determined by those providers** in order to comply with that regime.'* (§ 71)

# The topical exemple

- **'reconcile the requirements of the protection of different fundamental rights' => 'fair balance'** (CJEU, *Promusicae*, §§ 65-68)
  - See CJEU reasoning in C-401/19 (§§ 59-100)

Charter Fundamental Rights EU	Article 17 DSM Directive
Protection of personal data (8)	<ul style="list-style-type: none"> <li>- No general monitoring obligation (8)</li> <li>- No identification of individual users / processing of personal data, except in accordance with GDPR <i>e.a.</i> (9)</li> </ul>
Freedom of expression and information (11) Freedom of the arts and sciences (13)	<ul style="list-style-type: none"> <li>- Autorisation OCSSP shall also cover acts carried out by users (2)</li> <li>- No prevention of legitimate uses, including copyrihgt exceptions (7)</li> </ul>
Freedom to conduct a business (16)	<ul style="list-style-type: none"> <li>- Taking into account features of service, availability/costs means (5)</li> <li>- Taking into account market position (6)</li> </ul>
Intellectual property (17(2))	<ul style="list-style-type: none"> <li>- Extension communication to the public right (1)</li> </ul>
Right to an effective remedy (47)	<ul style="list-style-type: none"> <li>- Complaint and redress mechanism (9)</li> </ul>

# Further mapping the issues

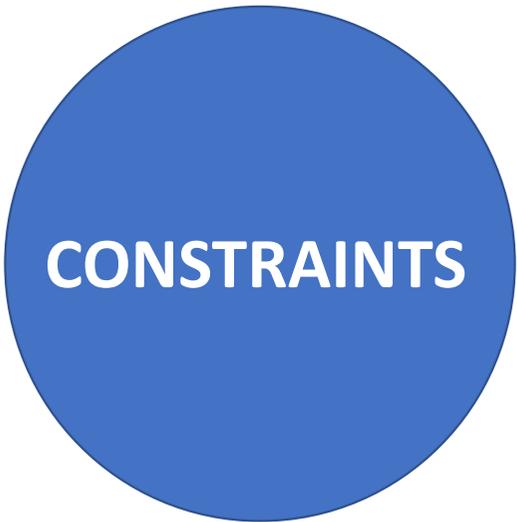
- One exemple amongst many others...
- How to frame the issues with fundamental rights methodology?
  - Balance at the core of IP, but...
    - See the exemple of Copyright (CJEU, *GS Media*, C-160/15, § 31)
  - ... balance different in every IP rights
    - See for another exemple Trademark (CJEU, *Red Bull*, C-65/12, § 41) : *'the purpose of Directive 89/104 is generally to strike a balance between the interest which the proprietor of a trade mark has in safeguarding its essential function, on the one hand, and the interests of other economic operators in having signs capable of denoting their products and services, on the other'*

**CONSIDERING  
THE IP BASICS**

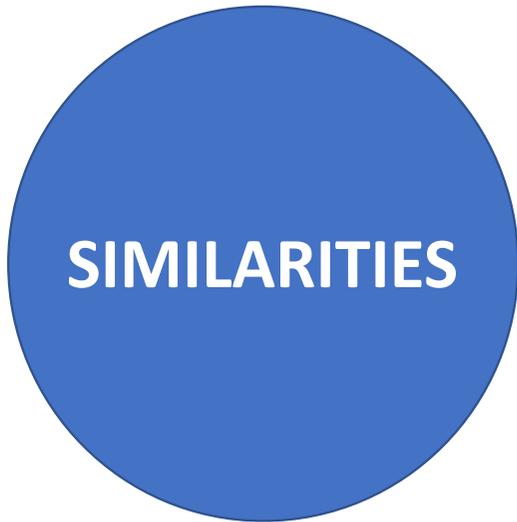
# The IP Basics

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**DISCLOSURE**

A large blue circle containing the word "CONSTRAINTS" in white capital letters.

**CONSTRAINTS**

A large blue circle containing the word "SIMILARITIES" in white capital letters.

**SIMILARITIES**

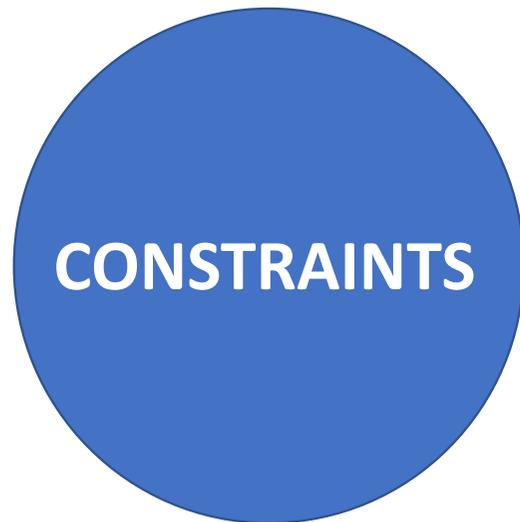


# The IP Basics



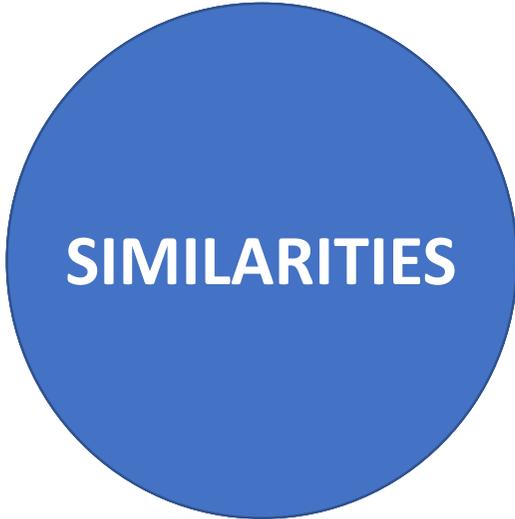
- Copyright
  - No registration, but publicity
  - Novelty relevant in practice through originality
- Patent
  - Registration and Disclosure, *i.e.* 'in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art'
  - Novelty
- Design
  - Registration or Disclosure, *i.e.* 'disclosed in such a way that, in the normal course of business, these events could reasonably have become known to the circles specialised in the sector concerned, operating within the Community'
  - Novelty
- Trademark
  - Registration or Well-known
  - Availability

# The IP Basics



- Copyright
  - Originality through ‘free and creative choices’
- Patent
  - Inventive step, *i.e.* ‘having regard to the state of the art, not obvious to a person skilled in the art’
- Design
  - Individual character, considering ‘the degree of freedom of the creator’
- Trademark
  - Distinctive character, with exclusions (descriptive, exclusively nature/technical/substantial value)

# The IP Basics



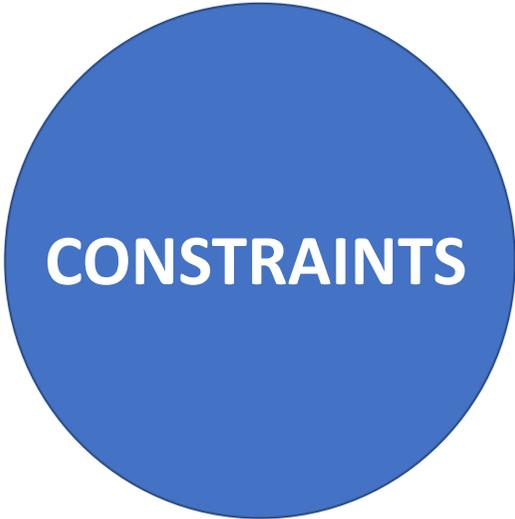
**SIMILARITIES**

- Copyright
  - 'Similarities', 'Audience'
- Patent
  - 'Equivalents', 'Person skilled in the art'
- Design
  - 'Overall impression', 'Informed user'
- Trademark
  - 'Likelihood of confusion', 'Average consumer'

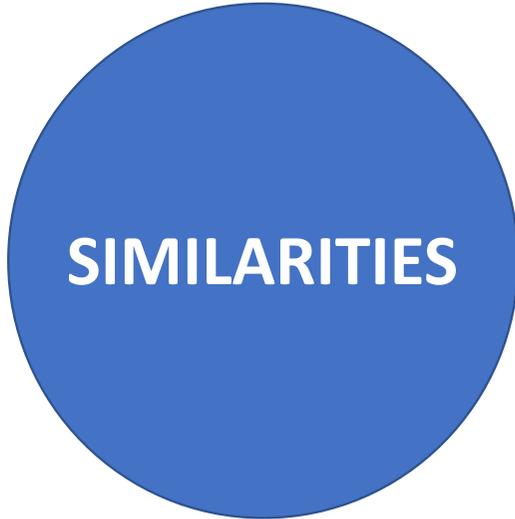
# The IP Basics

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**DISCLOSURE**

A large blue circle containing the word 'CONSTRAINTS' in white capital letters.

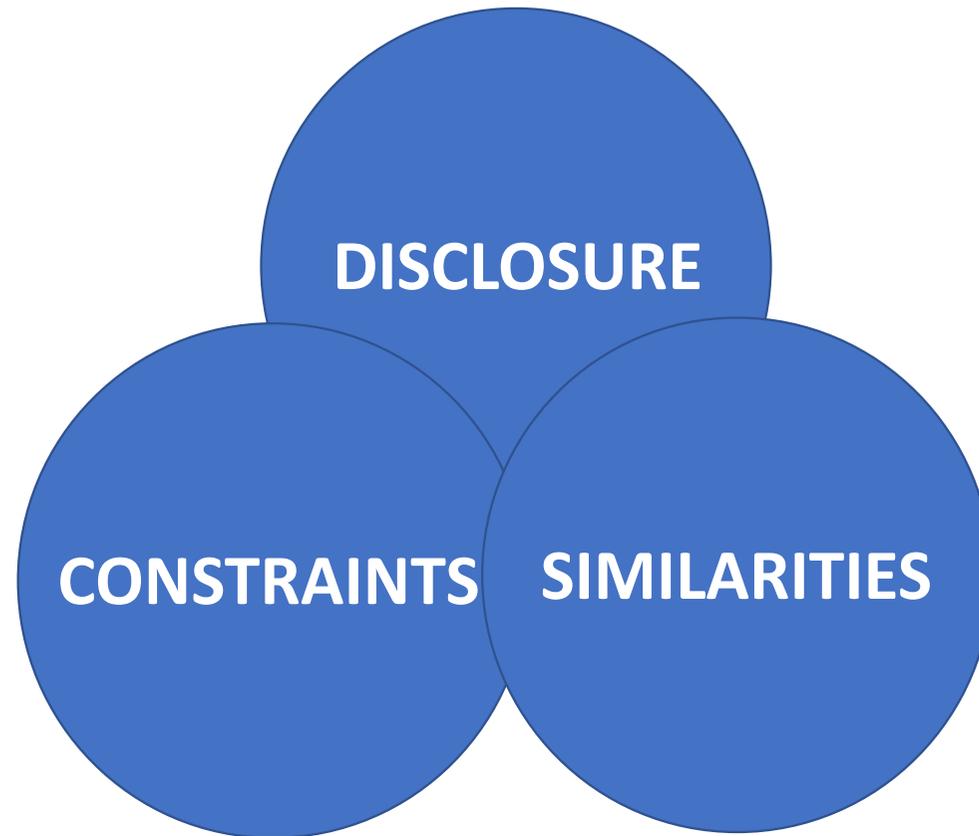
**CONSTRAINTS**

A large blue circle containing the word 'SIMILARITIES' in white capital letters.

**SIMILARITIES**



# The IP Basics



# The IP Basics: the impact of technology



DISCLOSURE

- Patent

- *'AI often performs its processes in a "black box" which humans cannot understand to the fullest extent due to the different approach that machines take towards solving a problem. This makes it very **difficult for an applicant to fulfil the disclosure requirement if he is not able to explain how the invention works so that the technical solution can be re-worked on the basis of the specifications in the patent**' (Report Trends and Developments in Artificial Intelligence – Challenges to the Intellectual Property Rights Framework (2020))*

CONSTRAINTS

- Copyright

- *'AI-generation of new creation based on a training set can be **unleashed** with little marginal costs, and can explore any kind of combinations and variations'* (Sartor, Lagioia, Contissa (2018), "The use of copyrighted works by AI Systems: Art works in the data mill")

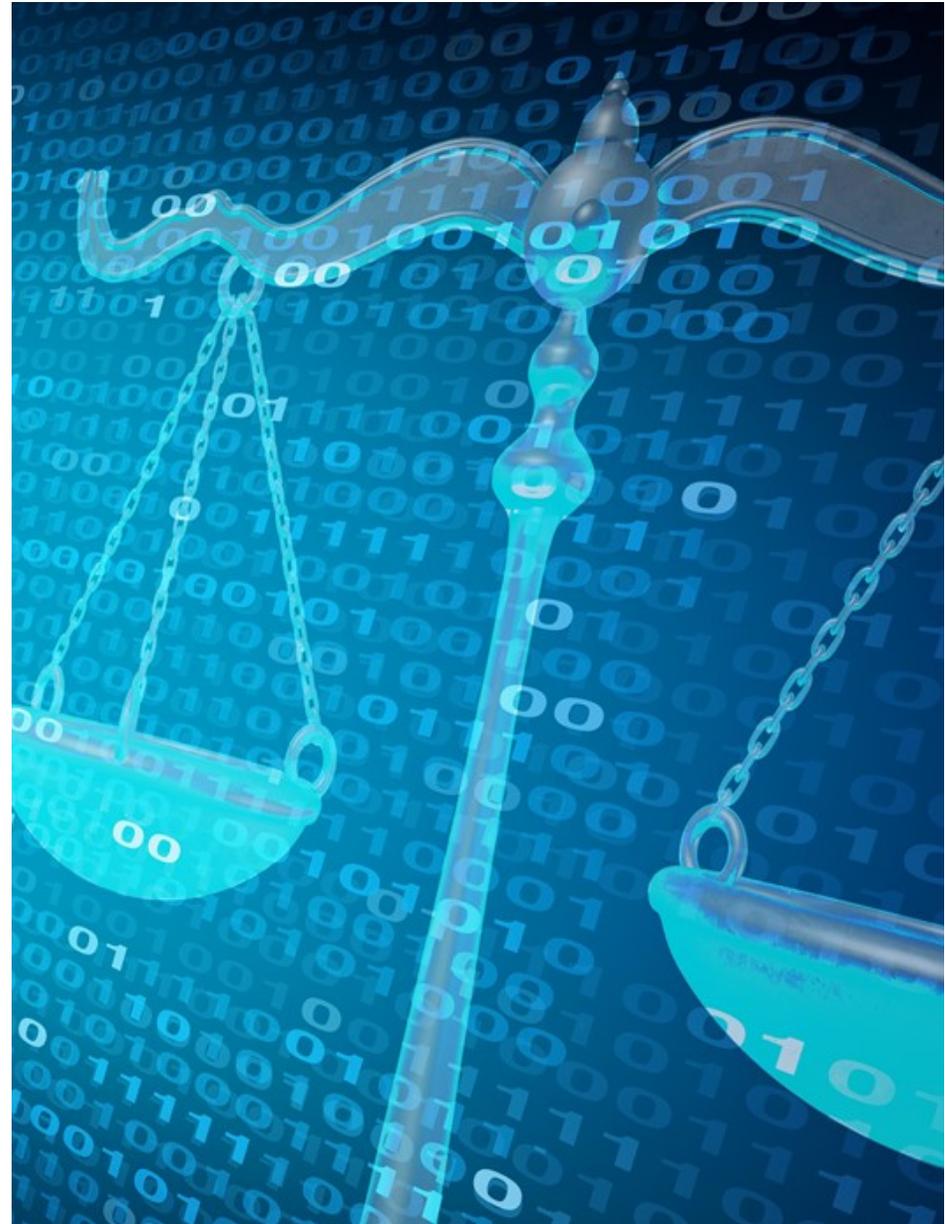
SIMILARITIES

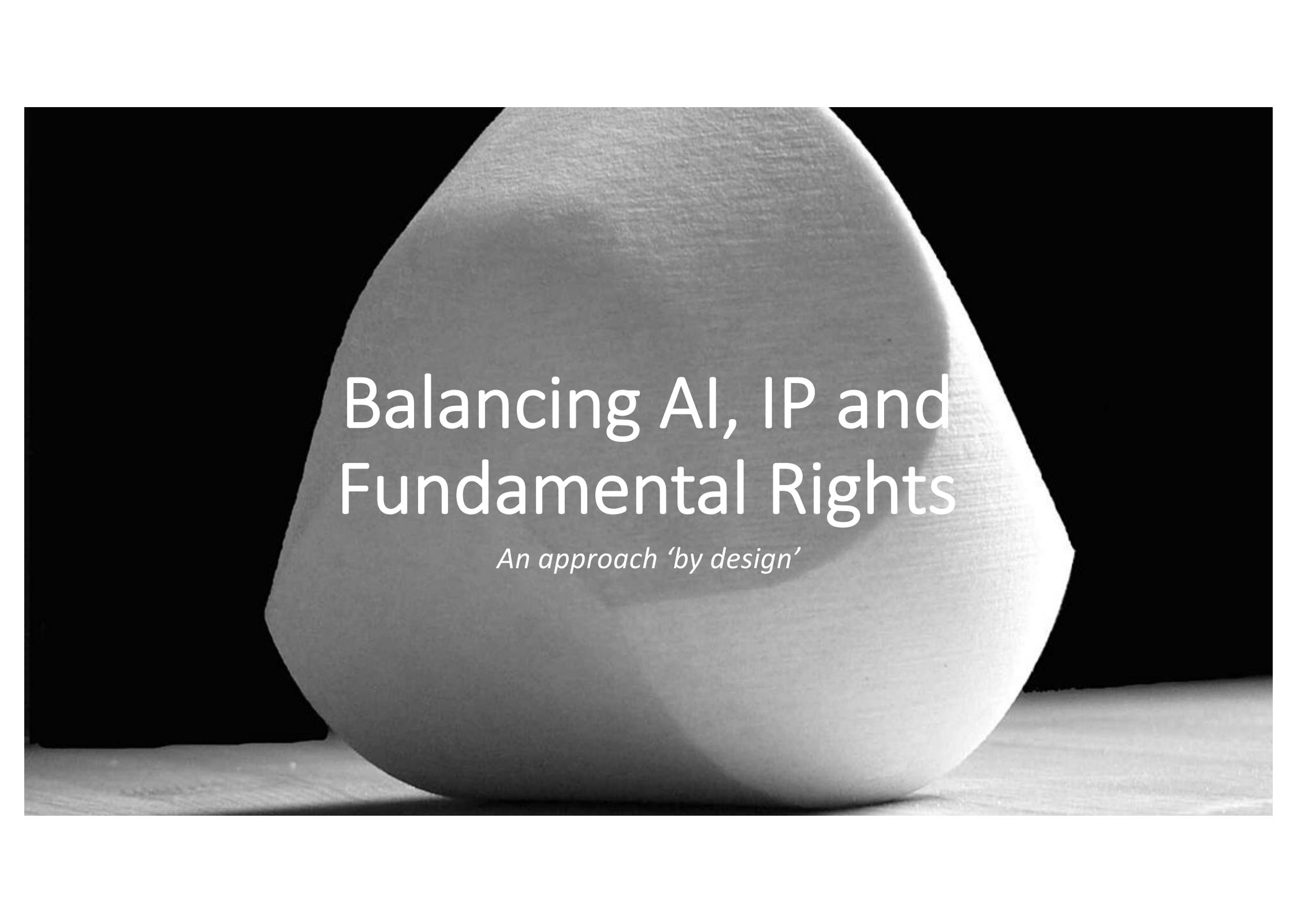
- Trademark

- *'Earlier-generation image search tools primarily determine trademark image similarity by identifying shapes and colors in marks. WIPO's new AI-based technology improves on this technology by **using deep machine learning to identify combinations of concepts** – such as an apple, an eagle, a tree, a crown, a car, a star – **within an image to find similar marks that have previously been registered**' (WIPO Image search Tool (2019))*

# The IP Balance: the impact of technology

- Impact of technology on IP basics has an impact on balance within IP
- Modification of balance within IP has an impact on balance between IP holder interests and other interests
- Most of these interests enjoy protection of the Charter, so the balance has to be assessed in the light thereof





# Balancing AI, IP and Fundamental Rights

*An approach 'by design'*

# Fundamental Rights by design

- From « Privacy by design » (art. 25 GDPR)...

*'1. Taking into account the state of the art, the cost of implementation and the nature, scope, context and purposes of processing as well as the risks of varying likelihood and severity for rights and freedoms of natural persons posed by the processing, the controller shall, both at the time of the determination of the means for processing and at the time of the processing itself, **implement appropriate technical and organisational measures, such as pseudonymisation, which are designed to implement data-protection principles, such as data minimisation, in an effective manner and to integrate the necessary safeguards into the processing in order to meet the requirements of this Regulation and protect the rights of data subjects.***

*2. The controller shall implement appropriate technical and organisational measures for **ensuring that, by default, only personal data which are necessary for each specific purpose of the processing are processed.** That obligation applies to the amount of personal data collected, the extent of their processing, the period of their storage and their accessibility. In particular, such measures shall ensure that by default personal data are not made accessible without the individual's intervention to an indefinite number of natural persons.  
(...)'*

# Fundamental Rights by design

- ... to « Mitigating Adverse Effects on Fundamental Rights by design »

- Art. 9(4) AI Act Proposal

*'(...) In identifying the most appropriate risk management measures, the following shall be ensured:*

*(a) **elimination or reduction of risks as far as possible through adequate design and development;***

*(b) where appropriate, implementation of adequate **mitigation and control measures in relation to risks that cannot be eliminated;** (...)'*

- Art. 15(4) AI Act Proposal

*'High-risk AI systems that continue to learn after being placed on the market or put into service shall be developed in such a way to ensure that possibly biased outputs due to outputs used as an input for future operations (**'feedback loops'**) are duly addressed with appropriate **mitigation measures.***

- See also 53(3) and 54(1)(c) (AI regulatory sandboxes)

# Fundamental Rights by design

- ... to « Mitigating Adverse Effects on Fundamental Rights by design »
  - Art. 35(1) DSA

*‘Providers of very large online platforms and of very large online search engines shall put in place reasonable, proportionate and effective **mitigation measures**, tailored to the specific systemic risks identified pursuant to Article 34, **with particular consideration to the impacts of such measures on fundamental rights**. Such measures may include, where applicable:*

*(a) **adapting the design, features or functioning of their services, including their online interfaces;***

*(...)*

*(c) **adapting content moderation processes (...)** as well as **adapting any relevant decision-making processes and dedicated resources for content moderation;***

*(d) **testing and adapting their algorithmic systems, including their recommender systems (...)***

- See also recitals 81, 86, 87

# By design(s)

- Considering the state of the art

- See EU Legislator

- Art. 25 GDPR : *'Taking into account the **state of the art** (...).'*
    - Art. 17 DSM Dir. (Copyright): *'When assessing whether an online content-sharing service provider has made its best efforts in accordance with the high industry standards of professional diligence, account should be taken of (...) the principle of proportionality. For the purposes of that assessment, a number of elements should be considered, such as the size of the service, the evolving **state of the art** as regards existing means, including potential future developments, to avoid the availability of different types of content and the cost of such means for the services'*
    - Art. 9(3) AI Act Proposal : *'The risk management measures referred to in paragraph 2, point (d) shall give due consideration to the effects and possible interactions resulting from the combined application of the requirements set out in this Chapter 2. They shall take into account the generally acknowledged **state of the art**, including as reflected in relevant harmonised standards or common specifications.'*

- See CJEU

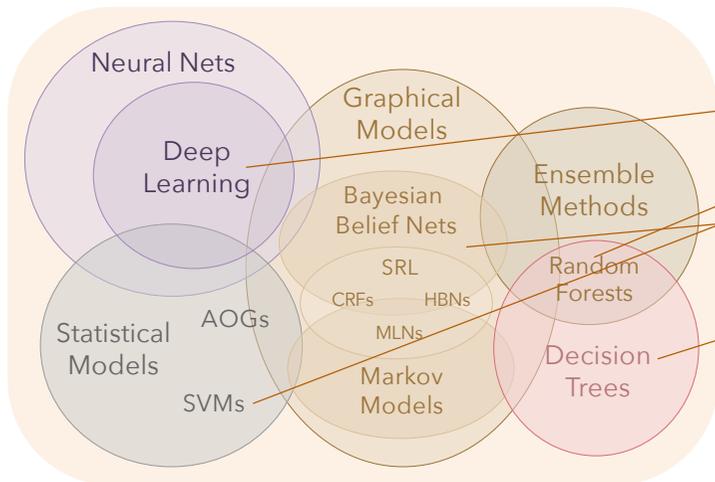
- Adv. Gen. Saugmandsgaard ØE, 15 July 2021, *Poland v EU Parliament and Council*, C-401/19, point 214: *'(...) in situations in which it is not possible, in the **current state of technology**, for example as regards certain types of works and protected subject matter, to use an automatic filtering tool without resulting in a 'false positive' rate that is significant, the use of such a tool should, in my view, be precluded under paragraph 7'*
    - CJEU, *Peterson v. Google/YouTube*, 22 June 2021, joined cases C-682/18 and C-683/18, point 102 : *'(...) does not make a 'communication to the public' of that content, within the meaning of that provision, unless it contributes, beyond merely making that platform available, to giving access to such content to the public in breach of copyright. That is the case, inter alia, where that operator (...) refrains from putting in place the **appropriate technological measures that can be expected from a reasonably diligent operator** in its situation in order to counter credibly and effectively copyright infringements on that platform (...).'*

- Considering the issues

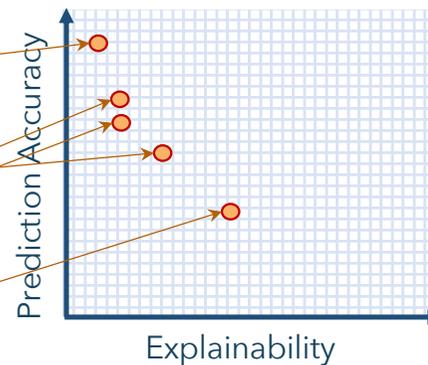
- Ex : IP vs. Right to life ≠ IP vs. Freedom to conduct business

# By design(s)

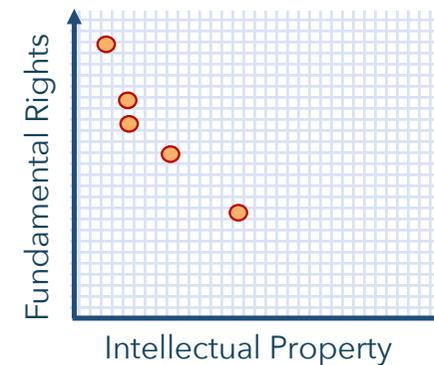
Learning Techniques (today)



Explainability (notional)



Fundamental Rights (balancing)



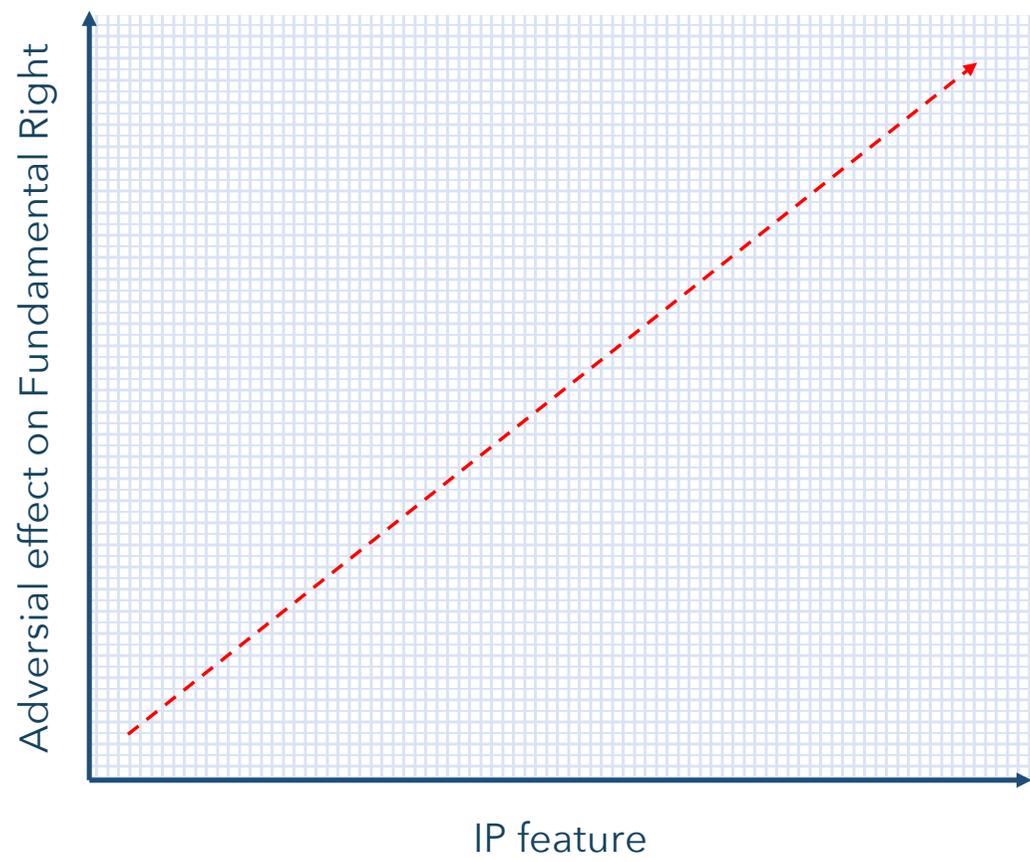
- How to make the trade-off?
  - Explainability/Efficiency
  - Intellectual Property/Other fundamental Rights

**CONSIDERING THE IP BASICS**



# By design(s)

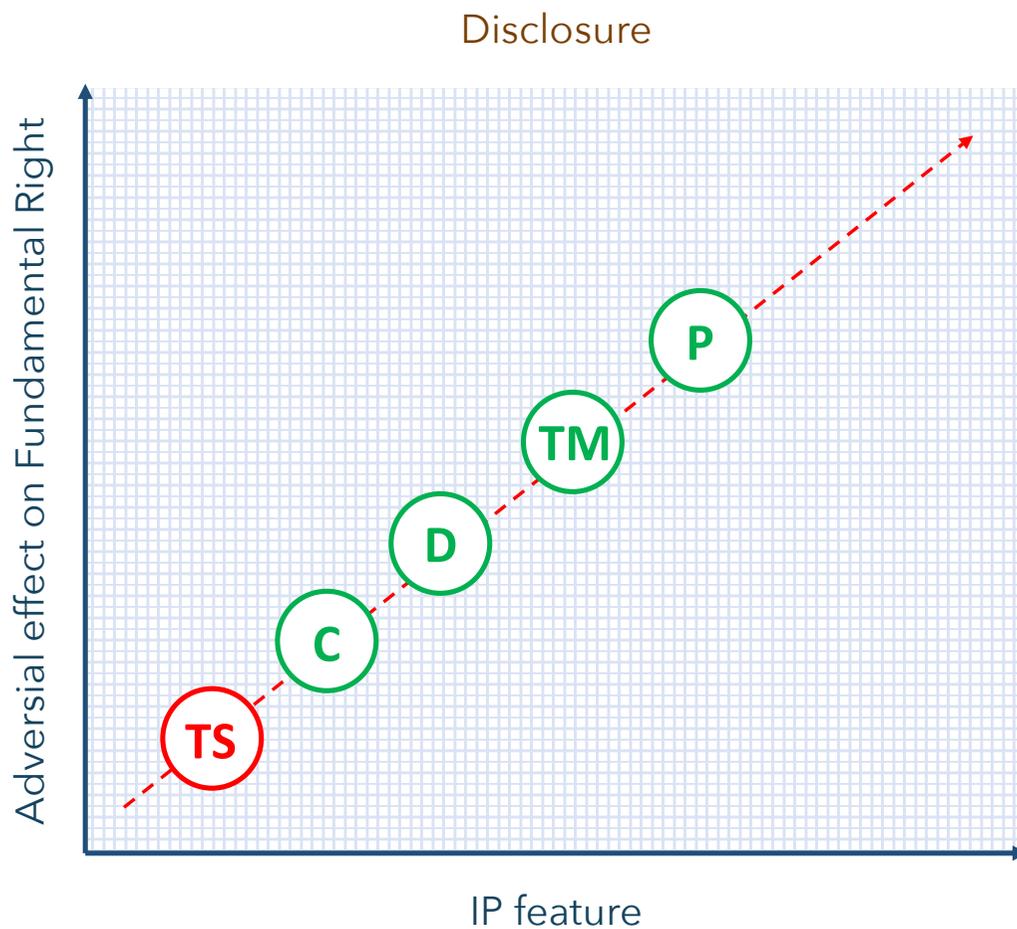
Disclosure



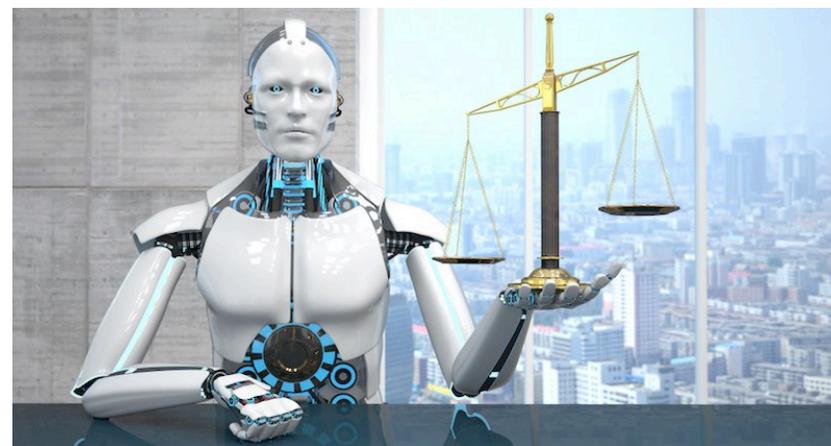
- The more disclosed the IP, the more weight to IP in the balance
  - In theory (-+):



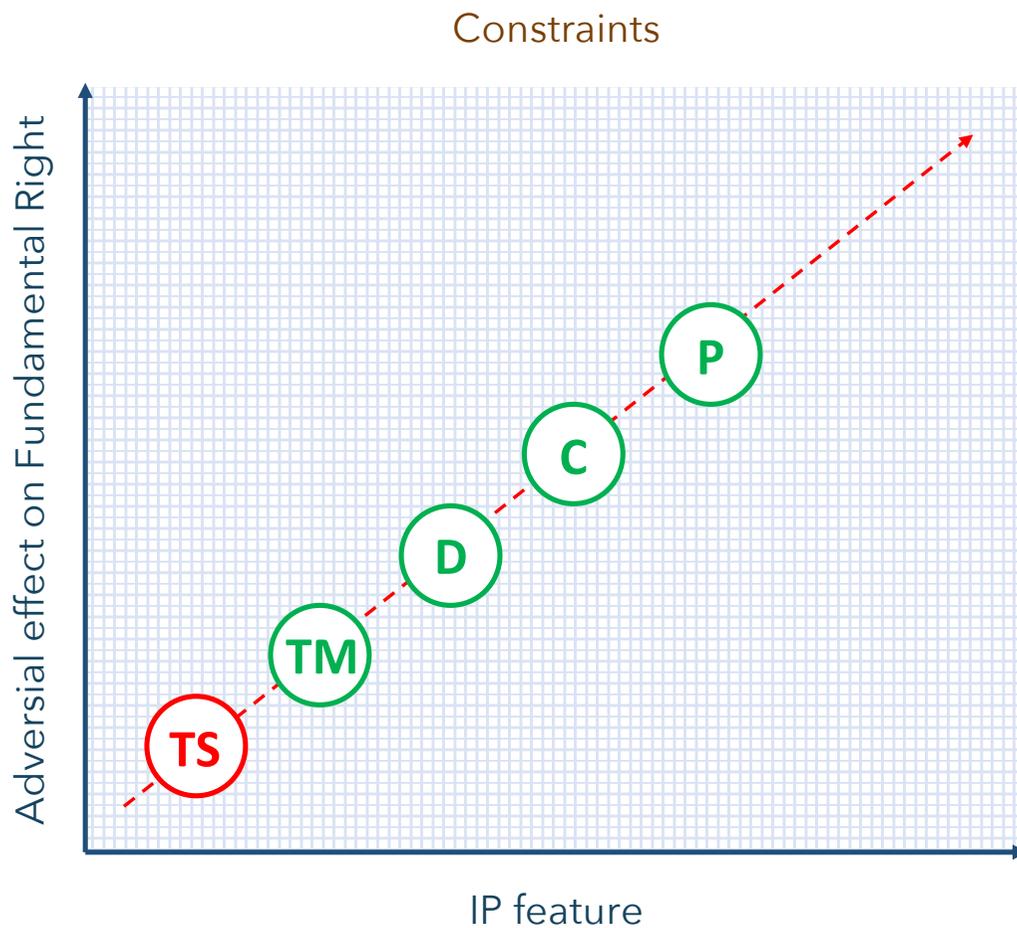
# By design(s)



- The more disclosed the IP, the more weight to IP in the balance
  - In theory (-+):



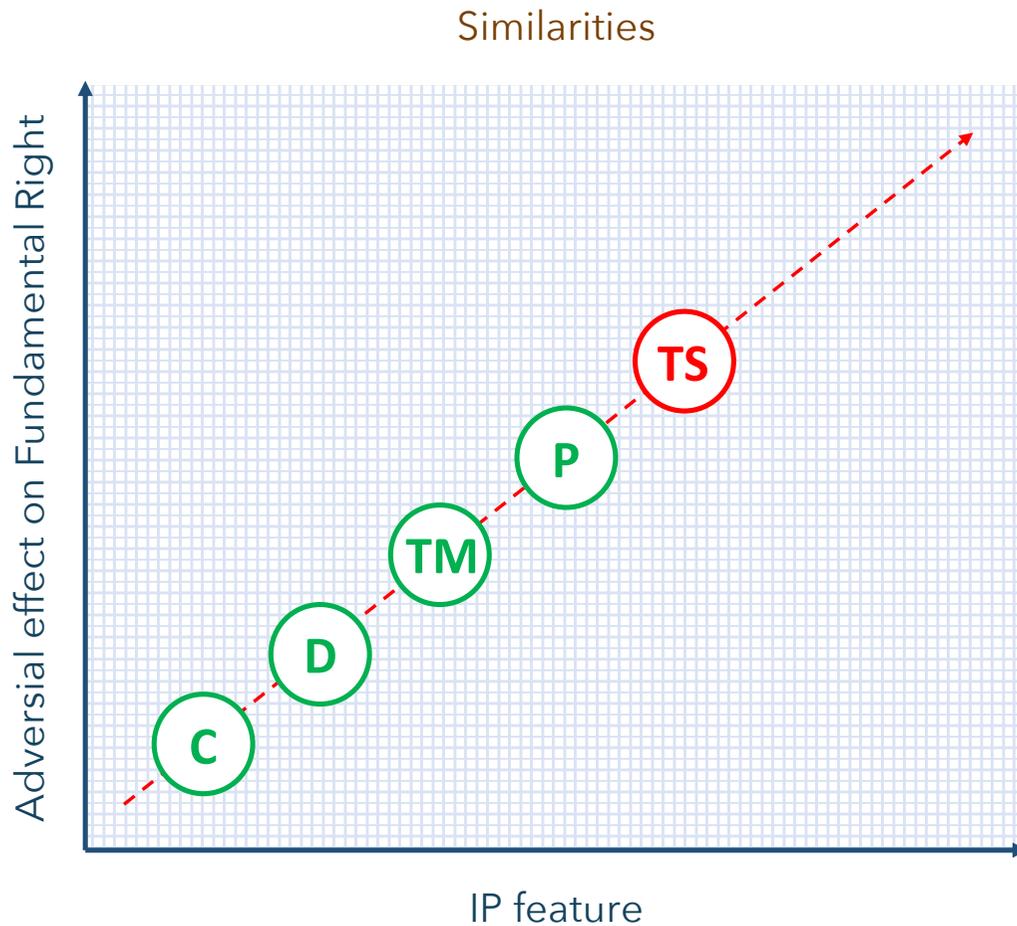
# By design(s)



- The more constraints for IP protection, the more weight to IP in the balance
  - In theory (-+):



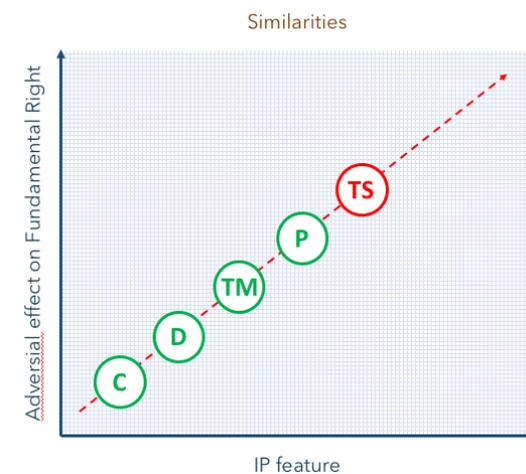
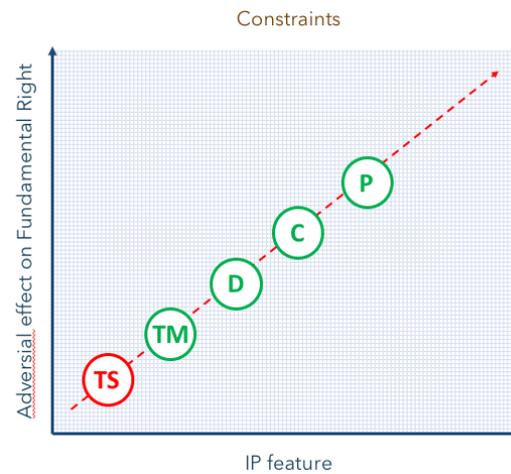
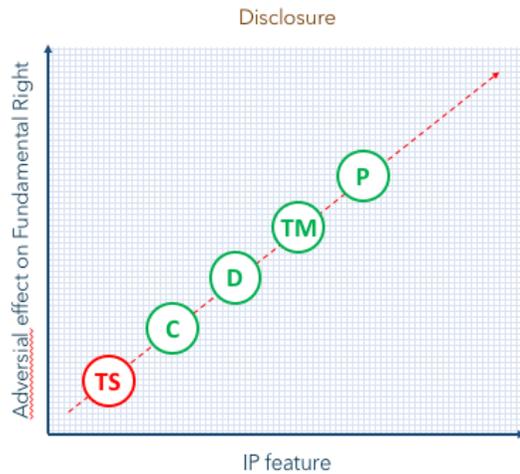
# By design(s)



- The more similarities needed for IP infringement, the more weight to IP in the balance
  - In theory (-+):



# By design(s)



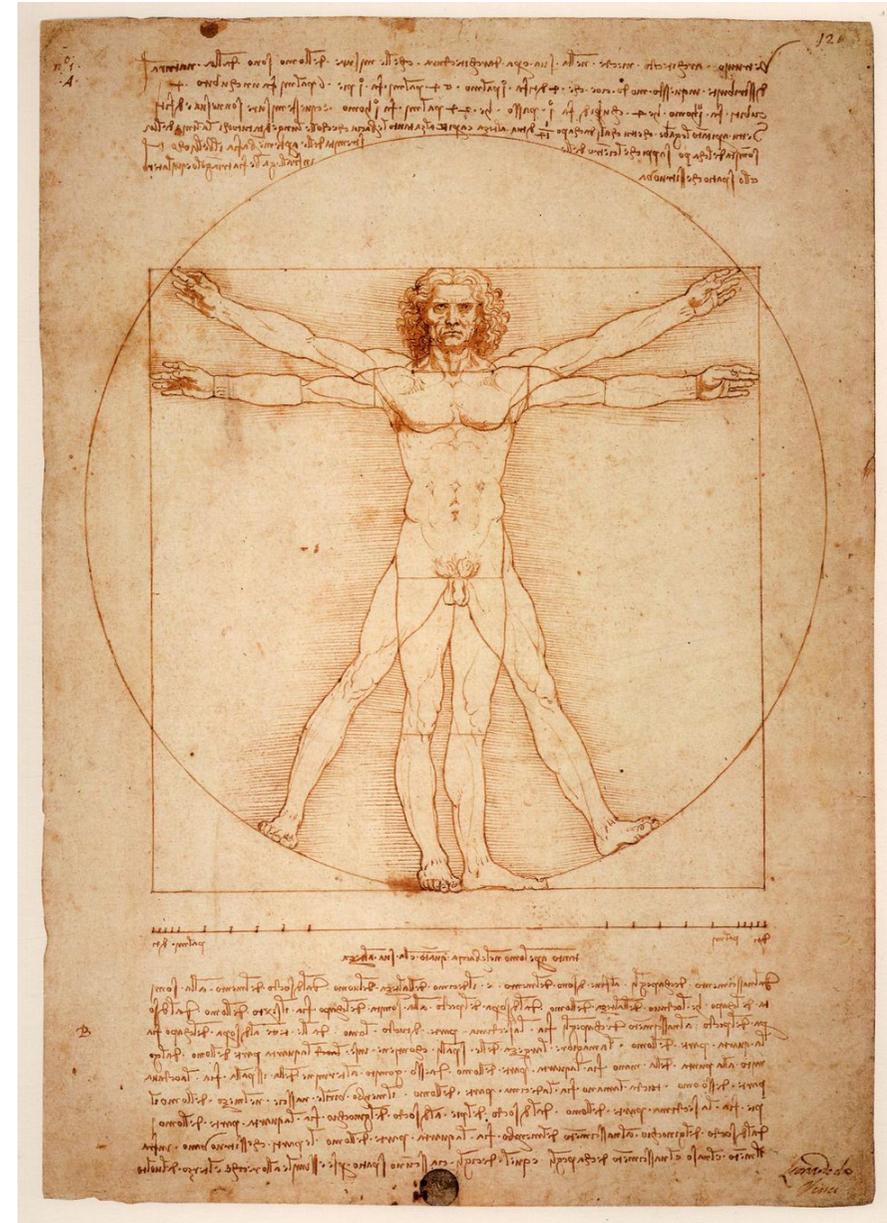
- When combining all dimensions, how to make the final decision?

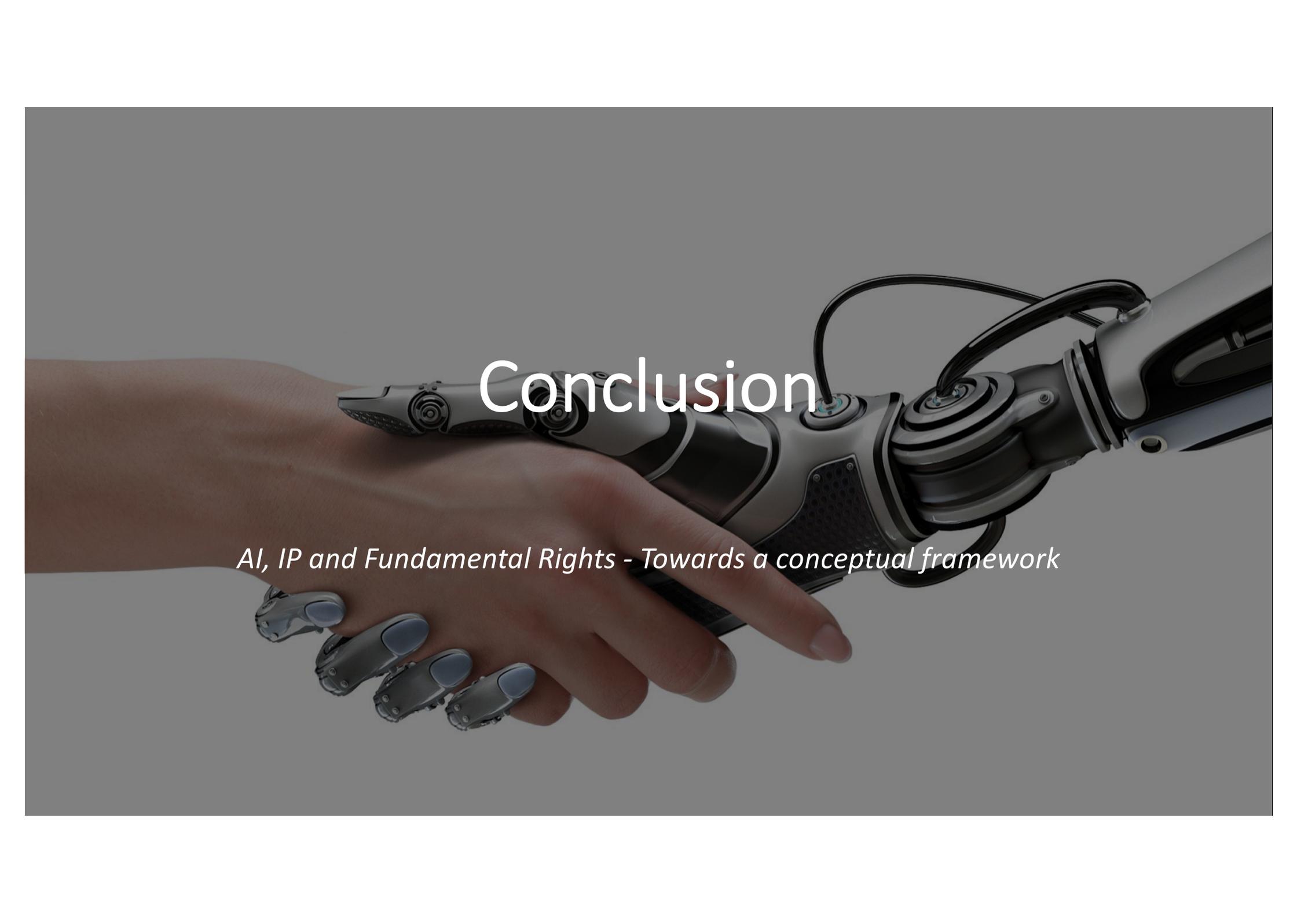
**CONSIDERING THE IP & FUNDAMENTAL RIGHTS BASIC**

# Human-Centric by design

- IP and Fundamental Rights are designed for human beings
- AI is designed to perform tasks that might be attributed to human beings
- IP rules in relation to AI should be adopted (*ex ante*), implemented (*ex post*) and interpreted (both) in order to avoid adversial effects on human beings
  - => strict proportionality test (comp. CJEU, *Sky Österreich*, C-283/11, § 50)

*‘(...) when there is a choice between several appropriate measures recourse must be had to the least onerous, and the disadvantages caused must not be disproportionate to the aims pursued’*





# Conclusion

*AI, IP and Fundamental Rights - Towards a conceptual framework*

# Conclusion

- **AI, IP and Fundamental Rights are Intertwined**
  - Their interconnection shall be analyzed on the basis of the Charter
- **Two main categories of issues**
  - IP for AI
  - AI for IP
- **Towards a conceptual framework based on**
  - AI Basics (inputs, technology, outputs)
  - IP Basics (disclosure, constraints, similarities)
  - Fair balance
  - Human-Centric by design



**Thank You !**

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