PREFACE

AI and Blockchain overview in a global context

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The implementation of blockchain and next-generation artificial intelligence (AI) technologies is both promising and challenging, giving rise to a host of complex, and often interconnected, legal issues. These are the potential overreach of smart contracts and private ordering, copyright registries and data protection, the articulation with the legal regime of digital rights management (DRM), fair remuneration, counterfeiting of fake and pirated goods, among others.

The globalization of trade and communication has offered unparalleled opportunities for organized crime organizations to engage in illicit trade and counterfeiting to increase their economic influence internationally. The exponential rise of e-commerce capabilities has only intensified the mushrooming growth of the counterfeit goods industry. While offenders use highly sophisticated methods and digital tools, legal frameworks around the world are still left with many queries to answer.

Various reports, among which the 2016 report by the OECD and the EU's Intellectual Property Office on **"Trade in Counterfeit and Pirated Goods: Mapping the Economic Impact",** put the value of imported fake goods worldwide at USD 461 billion in 2013, compared with the total imports in world trade of USD 17.9 trillion. The current state of play shows that up to 5% of goods imported into the European Union are counterfeited, while 5.4 million jobs in the world will be lost by 2022 due to this factor. These estimates cover all physical counterfeit goods, which infringe trademarks, design rights or patents, and tangible pirated products, which breach copyright. It does not cover online piracy, financial and cyber frauds, which is a further drain on the formal economy.

Given that artificial intelligence solutions and innovation in 3D technologies are scaling like never before, the economic impact of applied science is growing with more than one million 3D printers being already on the market. In this context, it is crucial to discuss whether converging advanced technologies and legal frameworks could present feasible progressive solutions for current national frameworks, thus achieving the Sustainable Development Goal 16, maintaining the rule of law and accelerating the fight against counterfeiting, financial crimes and cyber threats. How can an autonomous platform based on AI be correctly incentivized to boost the effectiveness of legal systems? Can blockchain be a solution for platform vulnerabilities where entities are incentivized, and objectives are reframed to actively fight against counterfeiting?

Such topics were discussed both at the international round table on "Economy and Law: Practical Challenges in the Digital Era", held in Villa Lubin, Rome (Italy) in June 2018, as well as on the international panel on "Artificial Intelligence and the Blockchain Technology in the Fight Against Counterfeiting: a Legal-Economic Analysis in the Global Context", organized at the St. Petersburg International Legal Forum, St. Petersburg (Russian Federation) in May 2019.

The two international high-level events focused, also, on the following areas:

- Development and use of artificial intelligence and the blockchain technology: opportunities and practical examples of today;
- European Union's Supreme Court decisions, positions and evaluations: the case of Italy;
- Building the culture of law: industrial criminal and civil liabilities in the technology sector;
- Fight against counterfeiting: current état de l'art and next steps;
- Achieving SDG16: digital opportunities and technology risks in the context of the Agenda 2030.

The aim of these panels was to map out the legal-economic intersection in these domains and flesh out some of its normative implications, focusing on the examples of Italy, Russia and the respective trade unions: the European and the Eurasian Economic Union.

In a framework of a rapidly developing knowledge society, it has emerged that new tools to find the right balance between knowledge, technological culture and action in establishing a clear legal framework are needed. By achieving collaborative partnerships and engaging in transdisciplinary work, research and scientific communication, a new global plaform – shared among key stakeholders – might come as a solution to foster evidence-based approaches, along with intergenerational and intercultural dialogues.

Although it might require additional efforts by everyone involved, when it comes to the role of academic institutions, public and private sectors and non-governmental actors in the 21st century, it has become clear that integrating the concepts of sustainability and internationalization in each institution's agenda, thus focusing on the implementation of the Agenda 2030 and its related Sustainable Development Goals (SDGs), is of utmost importance to assure people's future prosperity and quality of life worldwide. It is with my greatest pleasure to acknowledge that SIRIUS GLOBAL, leading INGO in the sector of education,

innovation and science based in Rome (Italy), will launch a high-level working group to work on the abovementioned matters discussed in several international forums with the aim of presenting its new report in the near future.