

Overcoming the challenges in regulating disruptive technologies

by  **Ivan Kisely,**
Counsel
Bird & Bird Slovakia

 **Katarína Ondrovičová,**
Senior Associate
Bird & Bird Slovakia

Bird & Bird

First comes technological possibility, then economic feasibility and then legal regulation, often snubbed as the bogey-man, or obstacle to progress. This article outlines five key challenges that regulators face in dealing with disruptive technologies and offers possible cues on how to make regulation less a crystal-ball gazing exercise and more an efficient learning curve.

According to Investopedia, disruptive technology is an innovation that significantly alters the way that consumers, industries, or businesses operate. This simple definition captures tangible technologies (such as drones), intangible content (e.g. online streaming platforms), innovative services (e.g. Mobility-as-a-Service) and new ways of using existing technology (social media content and targeted advertising). Naturally, this concept changes in time: automobiles, and internet were all considered disruptive technologies in the past, as will one day be fully autonomous vehicles, molecular nanotechnology and quantum computers.

However, as a part of social contract, technologies that a business intends to offer to other businesses or consumers must pass the minimum standards or acceptable level of risks in terms of safety, security, privacy protection and other public-interest objectives. Especially in the sphere of disruptive technologies regulators often struggle to find the suitable extent of regulation and respond timely and flexibly to the changing technology. Below is a shortlist of five such regulatory challenges.

1. Legal classification of new technology

Disruptive technologies can't be easily "labeled" and it is often difficult to determine under which regulation they fall. The rise of health apps has brought about the question: where lies the boundary between a fitness utility and a medical device? Common apps such as pedometers, calorie counters and fasting trackers would fall in the

non-regulated zone. In contrast, apps providing direct diagnosis, monitoring or treatment of any disease would be regulated as medical devices. Difficulty arises in the grey zone of apps that process data entered by the user and make tailored recommendations or systemic evaluation of input data, such as some skincare apps, conception-aiding apps and "indicative diagnosis" apps.

Further examples include Airbnb, which in different jurisdictions was classified as lease, hospitality service or non-regulated activity; and ride-hailing services which have long escaped regulation or were inconsistently labeled as taxi, non-taxi transport services and sometimes confused with ride-sharing vehicles.

While there is no universal solution, some tools that regulators could deploy are (i) leapfrogging, i.e. learning from the mistakes of early adopters and (ii) increased use of non-governmental actors who often adopt voluntary codes of conduct that act as forerunners of governmental regulation.

2. Identifying the main legal risks

Moving from the physical world into the digital environment, it becomes even more difficult to capture all risks that are sufficiently serious to warrant public-law intervention, but at the same time do not stifle innovation. Civilian drones and semi-autonomous vehicles are two cases in point, as are any applications of Artificial Intelligence, mostly due to the "black-box" problem, i.e. the inability to specify how exactly a decision is taken and by whom, which trumps most efforts to make applications using AI

subject to traditional categories of legal liability.

As many disruptive technologies operate in a highly competitive environment, part of the regulation will in fact be done by the businesses themselves or by industry associations. This has been showcased in the segment of electromobility, from car manufacturers, through mobility service providers to charge-point operators. A similarly efficient approach would be balancing the presumed risk with impact on user acceptance. One example is strong customer authentication (SCA) as a requirement of the EU Revised Directive on Payment Services that spurred endeavors of regulated subjects to find creative ways of falling under one of the exemptions.

3. Using old legal concepts for new issues

The concept of leasing is as old as mankind. However, after the time-honored concepts of leasing office space, business car fleet and even employees, numerous enterprises realized the value of using Hardware-as-a-Service, Software-as-a-Service and Platform-as-a-Service business models. The "as-a-service" revolution continued and recently an example of "Staking-as-a-Service" agreement in the blockchain space was reviewed by lawyers, in which a supplier runs a validator node that forms part of a blockchain network, for which it receives crypto/tokens relating to such blockchain network from a delegator as its customer.

Old Civil Codes could not have conceived of such "aaS" contracts and their possible future modifications. The possible solu-

tion lies in creativity and interpretative courage of lawyers to approach any new technology "substance over form" and find the closest existing legal concept that would fit to cover the innovative element.

4. Ensuring fast response to innovations

Lawmakers have been notoriously slow to regulate technologies such as drone delivery, electronic cigarettes and distributed-ledger based technologies, specifically cryptocurrencies and smart contracts. This has led to hesitancy to move from early adopters to mass market, inhibition of further research and belated intrusion of regulators into nascent technological ecosystems. It is often difficult to speed up the necessary tests, safety review and legislative processes, hence one tested way is an extended use of guidelines, codes of best practices and other soft-law tools by regulators.

5. Ability to shoot at a moving target

According to the Law of Accelerating Returns by Ray Kurzweil, the rate of change tends to increase exponentially. Even the fastest regulator in the world will have a hard time to adjust to the pace of technological change. In a way, the courage to shoot at a moving target is a must. The regulators and tech lawyers need to use their expertise to interpret and apply existing laws to the constantly evolving technologies.

Conclusion

Each article by a lawyer must contain at least two disclaimers. Firstly, it is not the message of this article that excessive regulation is beneficial. If anything, many problems connected with regulating disruptive technologies could be avoided by aiming for lean regulation. Secondly, this article could appear to be a checklist for regulators. However, some of the best laws in history were born from involvement of industry, associations and legal experts and consultants from private practice.