



**Barry Levenfeld**  
Hi-tech Partner



**Nimrod Vromen**  
Hi-tech Partner



**Roy Keidar**  
Special Adviser

## Creating Legal Regulatory Foundations in an Age of Emerging Technologies

By: Advocates Barry Levenfeld, Nimrod Vromen, and Roy Keidar

**The renowned futurist, Ray Kurzweil, once said that our understanding of the future is linear, while technological developments are exponential. The gap is enormous. Kurzweil compared it to a man climbing stairs. If he takes 30 linear steps, he will reach the 30th step, while a person who takes 30 exponential steps will reach the billionth step.**

When Kurzweil talks about future technology, he refers to emerging technologies, that have been on the rise over the past decade. Topics such as information revolution, artificial intelligence, nanotechnology, the Internet of things ("IoT"), intelligent transportation, virtual reality, laminated reality, wearable computing, 3D printing, the cyber world, and more. Kurzweil and others try to compartmentalize the best minds in the world and Israel, who wish to change the world through unique technological developments. They lead an entire hi-tech industry, resources, and attention. There is hardly one field today that will not change in the coming decades due to technological innovations. Kurzweil and other futurists believe that if we thought that in the past, the pace of change was strong, we cannot describe the change in the rate of change in the decades to come.

Kurzweil's illustrative example describes the challenge that regulators and lawyers face vis-à-vis the unpredictable pace of technological developments. In this example, some will argue that the legislator climbs one step, for the average person's 30. How can one expect a reality that changes so quickly? How can one plan, from the standpoint of a regulatory system, that until completion of the regulatory process it will change dramatically? How to give legal advice to clients in a situation of regulatory-legal uncertainty? The questions are not theoretical. They surface in legal proceedings involving investments, mergers, and acquisitions.

They are examined during any due diligence process and in specialized opinions regarding regulatory and legal risks in relation to tangible technologies. They surface in ongoing legal counsel for technology companies seeking to create legal certainty in their fields of activity, and when necessary they are discussed in litigation.

This challenge requires lawyers involved in the emerging technology world to adopt for themselves added tools, beyond the traditional tools taught in law schools. First off, they must have a good understanding of the technology and its applications. The intention is not to understand the technical-engineering issues, but to understand the need for which the technology was intended and the various uses that could be made of it. For example, when examining developments and applications using VR technology and laminated reality in the world of computer games, such as the popular "Pokémon Go" game, one needs to consider the technological capabilities of GPS positioning, the degree of accuracy, the ability to add another layer of data on an existing map system, and to analyze all said against any reasonable behavior of the players in the game. Thus, legal problems such as encroachment, infringement of privacy, and nuisance, must be considered and they must be discussed in the development stage of the product itself and the rules for its use.

In addition to understanding any technological trends, a better understanding of regulatory dilemmas is needed. These often point to probable future barriers

that will affect business feasibility. For example, "Blockchain" technology serves as a platform on which virtual currencies, and especially "Bitcoin" were developed. To understand the legal implications of technology, it is important to understand the regulatory concerns created by the "Bitcoin" coin. The lack of supervision by central banks, the anonymity of the currency, and the widespread use of the coin in the black market, have created some reluctance among the regulators, which has led to a suspicious attitude vis-à-vis "Blockchain" technology, which over time affects the process of regulation of technology in various industries such as Fintec, intellectual property and smart contracts.

Another necessary tool is the recognition of regulation in the world. Although Israel is a bastion of excellence in technology, in almost all cases the target market is not Israel. Therefore, although the company is developing innovative technology in Israel, it (and its Israeli lawyers) know with great certainty that the first significant market to be exposed to the technology and the difficulties it creates, will be in another jurisdiction, with other laws. Other markets and certainly larger, in the US and Europe, are required and will be required to formulate legal solutions where, in the past, they did not exist. The most prominent example of said, is the robotic car (autonomous) market. Vehicle industry turnover is expected approximate trillions of dollars over the next few decades, changing not only our ability to move from point to point, but also our attitude toward vehicle ownership, our handling of the defaults relating to liability for road accident damages (and consequently the world of vehicle insurance), the manner how we plan the municipal real estate infrastructure, and entire professions that will disappear and others that will appear in their stead. Since the transportation sector is highly dependent on regulation, there is hardly any issue that will not require regulatory attention. Although there are still no formulated standards, a series of regulatory attempts around the world can be seen as the first emerging signs of regulation. Learning from what is happening in the world and understanding said, is essential to identify the future implications of regulation on the technological product being developed today.

One of the ways to deal with the lack of regulation in emerging technological fields is self-regulation: subordination of the entity's conduct to future regulatory practices. There is some logic to this - on the one hand, the desire to save development resources of products and services when future regulation will be enacted, by adapting the company's activities from the start, and on the other hand, creating a competitive business advantage by standardizing accepted standards in the marketplace. This is a solution suitable for large international conglomerates (which sometimes even try to prevent future regulation), but also seeps into early-stage start-ups that are looking for an anchor point for their business model.

Laminated reality, Blockchain technology, robotic vehicles or any other emerging technology will continue to challenge society and law at an increasing rate. The ability to offer a suitable legal response involves the degree of willingness to internalize the applicable changes and at the same time to create legal foundations that will enable further growth of the associated technologies and business models, even under regulatory uncertainty.