

Introduction

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The growth of digital technology has upended the whole economy.¹ Trends in technology have had a radical impact in some branches of the economy and on our society's overall operation. Transportation and mobility have borne the brunt of digitization. The stakes are high given the energy transition and the many issues that operators in transportation and users as well as local and regional authorities will have to address. Thoroughgoing changes are being made in how people and merchandise are moved, thus affecting transporters, users and, too, local authorities. The whole ecosystem is moving fast, expanding and becoming more complex at the pace of successive innovations. Consumers and citizens seem to be gradually changing their behaviors as public and private operators speed up their efforts to bring trips — whether of persons, vehicles or goods — in phase with contemporary issues.

In this context, digital technology definitely turns out to be a tool at the service of the energy transition in the sector of transportation and mobility and, too, an instrument for modernizing regions and local areas. At the national level, the transportation sector is the biggest emitter of greenhouse gases, and digitization can bring opportunities for making the management of flows of persons and freight more efficient and improving security. Meanwhile, easier access to data arouses fear about attacks on individual freedoms, worsens inequality for some parties or leads to new forms of inequality between individuals or between a country's administrative subdivisions.

For traditional transporters, digitization entails heavy investments, at a time when business processes are being overhauled, new players are entering the market, and new forms of competition are springing up that cast doubt on current business models. For instance, the proliferation of connected devices, smart sensors and digital means of communication is producing a huge quantity of data with information about trips — information of better quality, with individualized data relevant to supply chain parameters in transportation and mobility (timetables, availability, waiting times, etc.). Access to this data will boost new transportation and mobility services in the now traditional high tech firms (in particular on service platforms) and in a slue of startups. For shipping and logistics, the time when digitization meant “dematerialization” lies in the distant past. Given the upsurge of online commerce, firms must take up several strategic and operational challenges. One of the most important is to overhaul the whole logistics chain and, given urban concentration and environmental policies, provide “last-mile” delivery services. This problem of last-mile logistics also concerns local authorities, who have to come up with new forms of organization for a more fluid flow of merchandise in dense urban areas or between congested urban areas and outlying zones. Last-mile delivery is a logistics problem not just for merchandise but also for the mobility of people in urban environments.

¹ This article has been translated from French by Noal Mellott (Omaha Beach, France).

The advent of big data with information about practices in mobility changes the way to locally manage trips, especially in urban areas. New offers of mobility are being made in cities, where Uber has considerably altered practices related to rides, trips and haulage. Given geolocation (of bicycles, scooters, etc.), practices for sharing vehicles or rides are rapidly spreading; and offers via smartphone are proliferating that rival each other in originality. These offers of mobility raise new questions, in particular about the occupation of public space. In this often complex environment, the role of local authorities is to help coordinate modes of transportation and persuade users to see their trips as being “multimodal”. This new policy orientation responds to the problem of transporting persons in ever more congested downtown areas and, too, between urban and outlying areas. Local and regional authorities must adopt ambitious policies to support these new forms of mobility, policies that require financing from both public sources and private investors, investments to foster the emergence of innovative services.

This issue of our journal provides food for thought about the current problems related to the digitization of transportation and its impact on the organization of mobility in and outside urban areas. The first part of this issue presents a panorama of the questions raised by the digitization of transportation and logistics. These articles explore questions related to the security and safety of transportation infrastructures, the interoperability of means of transit, and the impact of digital technology on the reorganization of supply chains, including the development of logistics platforms. The second part groups articles that focus on how digital technology reorganizes mobility in and outside urban areas. Even as this technology is forcing us to redefine the occupation and management of public spaces, it offers us a powerful tool for planning multimodal trips in and around urban zones and in rural areas. The models of the city and territory that have been built using digital technology are of central importance. Several topics are broached that have to do with the mobility of persons and merchandise in areas under ever more strain and in a context where the environment must be better managed.

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