

## Chapter 92

# Avatar–Based Supply Chain Management as Expert Knowledge for Smart Solutions: Creating Sustainable Urban Systems

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## ABSTRACT

*This chapter discusses issues related to managing the avatar-based supply chains as expert knowledge for smart solutions in creating sustainable urban systems. Avatar-based supply chains as expert knowledge is a new term that describes the planning, search, production, distribution, and delivery of Mkrttchian's digital avatars from the place of origin to consumption. These supply chains are very different from traditional ones because they relate to a specific product-expert knowledge, which is created through electronic data distributed on the internet between business partners and value-added service providers operating in a general digital economy paradigm using blockchain technologies. This chapter focuses on the analysis of business relations and this integration into sustainable urban systems.*

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## **INTRODUCTION**

As you know, issues related to planning, search, production, distribution and delivery, from the place where these products and services were created to the place of their consumption are expressed by the term Supply Chain Management (SCM). Currently, this term is a promised standard that is officially accepted when managing in the supply chain all the physical and informational flows of materials made of finished products and goods. Modern SCM ones consist of popular business processes that are implemented only by the latest technologies and innovative solutions. The main goal SCM is to be highly efficient and rational with the mind of supply management so that the right product or product is available where you need it, in time, and the price must be reasonable.

SCM is implemented as a technology that includes various sensors, including artificial intelligence, performing machine learning with cognitive computing, which makes it possible to have constant analytics and transformation between the cyber-physical real environment and the digital space. In fact, SCM provides the transformation of traditional linear supply chains into intelligent, scalable, customizable, and fast delivery networks based on digital transformations. But in order for the technology to work, two more components are needed: the correct economic business models that, under the conditions of the digital economy, form part of it under the name of a joint economy and mechanisms for providing trusted relations in business that are grouped around the ecosystem of blockage or Internet values. This chapter discusses issues related to managing the supply chains of avatar-based as an expert knowledge for smart solutions in creates sustainable urban systems. The supply chains of avatar-based as the expert knowledge is a new term that describes the planning, search, production, distribution and delivery of Mkrttchian's digital avatars from the place of origin to consumption (Mkrttchian, & Alershina, 2017). These supply chains are very different from traditional ones because they relate to a specific product-expert knowledge, which is created through electronic data distributed on the Internet between business partners and value-added service providers operating in a general digital economy paradigm using blockchain technologies. This chapter focuses on the analysis of business relations and this integration into sustainable urban systems. The supply chains of the 21st century are more complex and dynamic than ever before. How effectively and profitable companies can plan, deliver their products to customers - this is what separates industry leaders from the laggards. For companies that determine the real value of the business and the results in today's competitive global economy, they need to improve the management of several aspects of their business, such as inventory, costs, assets and the introduction of new products. And this, of course, cannot happen without the best in its class digital supply chain, which, working together with the technology of the block, will transform the world of modern logistics. Even the largest organizations lack the capacity, resources and knowledge to deploy end-to-end information integration in their supply networks that actually form a network. A supply chain network consists of many components, or supply chain nodes, that are connected through flow paths. Inventory and products - and information - along these flow paths to various supply chain nodes have the ultimate goal of ensuring that customers' needs are realized in the most beneficial way. Now governments and companies have an urgent need to cooperate to accelerate such integration within the framework of the Digital Supply Chain (DSC) concept, using the principles of joint economy and blockbuster technology. Collaboration in the DSC is a multi-stakeholder environment with different needs and objectives in which large companies are seen as those that are integrating with their main suppliers. Even competing companies are forced to cooperate to integrate the entire supply chain. Value-added service providers play different roles, but those cooperating with common interests should establish a trusted environment and systems through

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