Implementation of Traceability in the Fashion Networks: Literature Review and Conceptual Framework of Traceability System Requirements

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These recent years, the fashion industry has been exposed to several crises highlighting social and environmental impacts occurring in the supply chains. Located downstream, fashion brands are facing more and more pressure to bring transparency and to provide information on their supply chains, in order to justify their sustainable claims. These several crises that affected the industry, showed the incompleteness of traceability in these complex, global and fragmented networks characterized by disperse actors, numbers of raw materials, and several processes and sub processes. Due to the globalization combining with other factors, fashion brands have progressively focused on design and marketing, relocating the production in low cost countries with less stringent laws, creating a physical and cultural distance with suppliers. These aspects have recently encouraged the implementation of traceability systems, as they represent a requirement to develop and implement suitable and accurate sustainable strategies, by providing information sharing and the possibility of impact calculation methods. Besides, compared to other sectors, the fashion industry is also characterized by short life-cycle products and trends, high volatility and low predictability, leading fashion brands to show flexibility. Beyond an essential tool for attaining sustainability goals, traceability systems are also gaining momentum due to other drivers, such as product optimization, competitive advantage, quality management, innovation, or even counterfeiting. The current COVID19 crisis has further reinforced the relevance of traceability. Such traceability systems are becoming a viable solution to ensure appropriate production quality with timely supplies to respond to the competition. However, if traceability is gaining attention in the fashion industry, the question of the implementation of such system remains an open challenge. There is still a lack of research in the sector. Number academic works address the topic to the food sector, where traceability is considered as one of the most effective implementations, due to the EU legal framework requesting one step forwards on step backwards traceability, after the several safety crises. As government regulations are playing a major factor for traceability implementation, the lack of requirements and standards identifying the proper method to design a traceability system represent a major issue in the sector. If technical tools are available, the challenge is also organizational, one of the most critical aspects in the development of traceability systems residing in interoperability and the exchange of information in a standardized way. Besides, the literature shows that traceability represents an interdisciplinary and confused notion. This paper aims to analyze the literature with respect to the fashion industry but also to other sectors, to identify the essential requirements of a traceability system in the fashion

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industry and their respective levers. By this framework, this study aims to provide a measurement model, guiding and facilitating the practical implementation of nascent traceability in the fashion networks. This paper also intends to promote a common understanding of the notion in the sector.