Accelerated technological advancements and increasingly valued innovation processes on a global scale have led to the creation of new products, services and market niches, causing deep changes in regional and global competition structures (Santos et al. 2014). Disruptive innovations arise when new levels or references are defined for the performance of a particular sector, causing the (a) rupture with the old business models (Christensen, 1997). In this context, disruptive innovations in the urban transport sector, such as UBER (Ma et al., 2018), electronic ticketing (Payeras-Capellà et al., 2015) services and autonomous vehicles (Berrada, 2017), among other alternative proposals, have revolutionized the provision of urban transport services, as well as introducing new concepts in this area, such as the intelligent transportation systems - ITS (Festag, 2014) and sharing economy (Puschmann et al., 2016).

Yet cycling, which is considered as one of the essential modalities that composes the sustainable urban mobility, plays a secondary role in the modal distribution of brazilian cities. There is no evidence that the development of innovations regarding this subject, such as electric bicycles (e-bikes), the bike-sharing systems with dockless technology and Internet of Things (IoT) applications in bicycle, have been effective in promoting this modal as a mean of transportation in a national range.

This paper aims to investigate, inside the context of Curitiba city and its metropolitan region, the potential set of innovations aimed at the cyclist or the potentially cyclist public, in order to know its impacts on sustainable mobility development. Thus a review of the bibliography on the subject has been carried out initially, as well as an initiative survey of the many sectors of society (first, second and third sector) facing innovation in cycling modal. Right after that, with the aim of knowing the limitations and impacts of the innovation proposals focused on cycling mobility, an exploratory research regarding the subject has been carried out, in which professionals and specialists who work in these areas were interviewed, has been carried out (delphi method). Finally, incentive and limitation elements collected by this exploratory research were used to formulate a questionnaire with the purpose of identifying the impact of the studied innovations, when it comes to mobility from the perspective of those who live in the cities.

The literature review has made it possible to acquire a better understanding of the currently studied innovations, such as electric bicycles (e-bikes) (Ruan et al., 2014; Gruber & Kihm, 2016), the bike-sharing systems (Otero et al., 2018; Zhang et al., 2018; Zhang et al., 2015; Bullock et al., 2017) and Internet of Things (IoT) applications in bicycle use (Behrendt, 2016), among other proposals and concepts which were further used in the exploratory and descriptive research. An innovation survey facing auxiliary maintenance services of bicycle and cycle lanes was also fulfilled, as well as business models based on provision of cycling mobility services. These initiatives were organised according to the agents responsible for their implementation, which are divided into public, private and third
sector. The identified agents in this phase were later included as interviewed subjects for the application of the delphi method.

Based on the presented methodology, results indicating a greater attractiveness of the cycling mobility system by means of the implementation of the studied innovative proposals are expected.