With the Ministerial Decree of the Ministry of Infrastructure and Transport of 29 November 2018, *Design and implementation of a National System of Tourist Cycle Routes*, and with Law No. 2/2018, *Provisions for the development of bicycle mobility and the implementation of the national cycling network*, Italy has formally acknowledged the significant socio-cultural and economic potential of Long-Distance Cycle Routes (LDCRs). On the other hand, Directive 375, which governs the Technical-Economic Feasibility Projects (PFTE) for cycle routes of national interest, presents notable shortcomings. In addition to containing a number of technical inconsistencies, it does not appear to provide effective guidance regarding aspects related to attractiveness and, consequently, to the requirements for the architectural and landscape quality of LDCRs. As a result, the PFTEs developed for the National System of Tourist Cycle Routes (SNCT) are partially deficient in their approaches to territorial planning, overlooking important architectural, urban, environmental, and socio-economic aspects. Looking ahead, in the absence of more effective tools, these shortcomings risk being replicated in the implementation of the Bicitalia Network of cycle routes of national interest, established under the General Plan for Cycling Mobility. For these reasons, it is of fundamental importance to define a methodological framework for a possible design tool for the architectural development of LDCRs, given the role they are expected to play in the near future in shaping the landscape and in their relationships with settlements.

Considering the complexity involved in constructing a design framework for LDCRs—one that also takes into account the architectural quality of the infrastructure—this research proposes first to define a reference model based on a design experiment, and subsequently to outline a set of guidelines aimed at developing a more effective tool than those currently in use.

The reference model identified by the research is the hypothesis of equipping the Piedmontese shore of Lake Maggiore with a cycle route. Due to its morphological, anthropic, and historical-cultural characteristics, this territory exhibits both a high degree of complexity and strong attractiveness at national and international levels, dating back to the era of the Grand Tour. In its specific features, Lake Maggiore presents a diversified system of sustainable mobility that enables travel by rail, by navigation, and through a number of historic mid-slope routes.

The aim of the research is to experimentally isolate the main aspects of a methodology for studying territories affected by cycle route projects, capable of providing guidance regarding architectural and landscape quality. The outcomes of these studies should be able to inform cycle route design both in terms of defining the route as an interpretation of landscape characteristics and in identifying the architectural forms through which such characteristics can be expressed.

The research is structured into four main parts.

The first part — *The architectural quality of cycle routes: problems and perspectives*—aims to define the state of the art of the regulatory framework within which LDCRs are designed and implemented, comparing existing tools in Italy with selected international case studies. This critical analysis seeks both to verify, in the Italian context, the regulatory and theoretical gaps concerning the architectural and landscape characteristics of cycle routes, and to identify, in foreign case studies, potential tools relevant to the research objectives.

The second part — *The Lake Maggiore cycle route: a design hypothesis*—is devoted to the theoretical definition of the two research hypotheses and to the study of the sustainable mobility context within which to develop the reference model. The first hypothesis concerns the potential role of cycle routes as territorial axes capable of economically revitalizing fragile areas which, although adjacent to well-established linear tourist regions, are often overshadowed by them. The second hypothesis addresses the issue of the re-functionalization or co-functionalization of historical infrastructures for cycling purposes, which is one of the main objectives of Law No. 2/2018 establishing the Bicitalia network. Since the study area lacks historical infrastructures suitable for accommodating a cycle route, the research poses the following question: can the design of a cycle route assume the architectural-

territorial model of historical infrastructures even in their absence, by recognizing systems of serial architectures within the landscape? Based on these hypotheses, the research specifically investigates the feasibility conditions for a cycle route along the mid-slope path between Verbania and the Swiss border, within the broader cycling system of Lake Maggiore. The study of this route and its topographical identification also relies on the superimposition of historical cadastral maps onto current topography.

The third part — *Three perspectives for the architectural design of cycle routes: a methodological experiment on Lake Maggiore* — addresses the testing of a methodology aimed at identifying the architectural and settlement characteristics of the territory that can form the basis for developing the architectural design of the Lake Maggiore cycle route, and, by extension, general methodologies emerging from this experimentation. The three "perspectives" through which the research interprets the territory correspond to three different cartographic representations.

The first perspective — *Traversing the Lake* — investigates the intermodal vocation of the Verbano area based on descriptions by Grand Tour travelers between the eighteenth and nineteenth centuries. This analysis reveals how the lake has historically been structured as a space defined by a varied and interconnected system of transport modes, which today may serve as a model for the slow, experiential use of the territory that the research seeks to outline.

The second perspective — *Admiring the Lake* — examines how the lake landscape, particularly its coastal settlements, has been represented in views and especially in historical postcards. The aim is both to identify the viewpoints along the mid-slope line from which these views were taken and to determine the visual rules underlying them, in order to incorporate these locations and principles into the cycle route design.

The third perspective — *Inhabiting the Lake* — explores the hypothesis that the serial characteristics of the construction of the shoreline—namely, the system of walls that renders the boundary between water and land architectural, composed of embankments, terraces, small harbors, landing places, and piers of lakeside villas—can be used to describe the architectural characteristics of the mid-slope road, along which settlements and the system of Romanesque parish churches are arranged. By comparing the construction of these two lines, the research seeks to identify architectural forms that can be employed in shaping spaces related to the cycle route. This objective is achieved through the preparation of a general technical design map, accompanied by selected detailed design studies.

The fourth and final part — *Notes for a reform of design guidelines on the architectural quality of cycle routes* — builds on the results obtained to propose a preliminary, though not exhaustive, design tool for LDCRs, with particular attention to architectural and landscape quality. The research identifies two main areas in this regard. The first concerns the criteria and interpretative methodologies for territorial analysis used in selecting long-distance cycle route alignments. The second concerns the methods for identifying architectural forms that characterize cycle route infrastructures in relation to the settlement and landscape features of the territories they traverse. From an operational perspective, the concluding section proposes a possible methodology structured into six "moves," aimed at supporting and guiding designers in the development of architectural projects for Long-Distance Cycle Routes. These "moves" are intended for professional practitioners and are designed to be applied particularly in the preliminary design phases, such as the DOCFAP and the PFTE.