



Cycle Highways: a new concept of infrastructure

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ABSTRACT

Only 8% of the European Union residents use a bicycle to commute, being the Netherlands being the country with the biggest representativeness in bicycle use for everyday activities. The advent of e-bikes brought more people to use bicycles, especially elderly or people with reduced mobility. This technology also allowed people to travel longer distances, which is a key factor for the implementation of Cycle Highways (CH). These facilities were thought to be the bicycle connections between cities where people need to travel to work or study. CH are longer than 5 km and allow cyclists to perform higher speeds than those practiced in cities. They can be placed alongside highways or in totally different sites, but the basic requirement is that bicycles have their own space away from cars and pedestrians to make inter-city journeys. This article presents the concept of this type of infrastructure, some successful examples in the Netherlands, Denmark, Germany, and the United Kingdom, and the technical information from two Danish manuals, which can be consulted when planning and implementing Cycle Highways to connect people and places.

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Introduction

The car has been the main mode of transportation around the world since the twentieth century, and the problems with its usage can be felt currently. Major and medium-sized cities suffer from long queues of traffic congestion every day not only on peak hours, and the problem with air pollution has been affecting people's health and demanding more funding from governments for health units (Intergovernmental Panel on Climate Change - IPCC, 2014). Stress has also been a huge problem in modern society due to the problems caused by driving long hours and also for being stuck in traffic for long periods of time (Armstrong, 2008).

Data from IPCC (2014) shows that the transport sector accounted for 27% of final energy use and 6.7 GtCO₂ (each gigaton corresponds to 1 billion tons of carbon dioxide) direct emissions in 2010, and baseline CO₂ emissions have approximately doubled by 2015. That is the reason why integrated urban planning, with more compact urban forms, transit-oriented development, which supports active modes of