



Borsa di studio attivata ai sensi di quanto disposto dal D.M. n. 1061 del 10/08/2021

Titolo del progetto: Citizen Travel Habits: a new solution to encourage sustainable commuting and facilitate the assessment of mobility management policies

La borsa sarà attivata sul seguente corso di dottorato accreditato per il XXXVII ciclo:

INFRASTRUTTURE E TRASPORTI

Responsabile scientifico: Guido Gentile

Area per la quale si presenta la richiesta: GREEN

Numero di mensilità da svolgere in azienda: 12

Numero di mensilità da svolgere all'estero: 6 presso Università del Lussemburgo

Azienda: Movesion srl

Il Dipartimento è disponibile a cofinanziare per un importo pari a euro: 10000

Dipartimento finanziatore: DIPARTIMENTO DI INGEGNERIA CIVILE, EDILE E AMBIENTALE con delibera del 22.09.2021

Progetto di ricerca:

According to the European Environmental Agency (EEA), in 2016, the transport sector contributed with 27% of the total EU-28 greenhouse gas emissions. However, emissions need to fall by around two thirds by 2050, compared with 1990 levels, to meet the long-term 60% greenhouse gas emission (GHG) reduction target as set out in the 2011 Transport White Paper and other Paris Agreement goals. A specific but crucial point is how people commute in the cities, especially regarding private car use, which produces a massive amount of GHG emissions. Not only cities must invest in solutions for the problem, but also companies need to encourage their employees to have more sustainable commuting. For that, it is essential to understand travel behaviour, preferences and patterns to plan for short- and long-term interventions in the city and the workplace. Nowadays, solutions are sparse and not efficient; that is, they usually tackle specific problems generally not considering the science and dynamics behind commuting patterns, travel behaviour and commuters' preferences.

Citizen Travel Habits is a research project which aims at a new solution to encourage citizens sustainable commuting. CTH innovation is unique because it utilises a gamification approach to promote sustainable commuting while collects data over people's movement and preferences with its built-in automatic mode detection tool using GPS tracking and recording together with the administration of brief surveys connected to the trips. This innovation is meaningful because it acts on both the planning and execution of better mobility for cities and companies. A mobile app will be downloaded by citizens of a town or the employees of a company. A reward system will encourage them travelling with other means of transport than the single-occupancy private vehicle. Using gamification approaches, CTH app rewards the user with points for using sustainable modes and answering brief questionnaires, which can be traded for customised prizes defined by the owner (Enterprise or Municipality). On the other hand, CTH collects mobility data of the users, and explore it into valuable and fruitful information for Municipalities and Enterprises, which are, therefore, used to plan for interventions in the city or the workplace. Since the data collected provides time, space location, route and mode choice, and people's behaviour and preferences, the range of applicability in urban and transportation planning are enormous for Municipalities as well as for Private Companies for their workplaces mobility plans. Nowadays, there is a lack of solutions that integrates the benefits of data collection and habit change for mobility purposes. Current applications are usually focused on providing specific services, such as a reward or a habit change platform, software for analysis of pre-existing mobility data, or a motion tracking tool. CTH approach merges those

services to provide information over what is vital for planning: understanding commuting and mobility behaviour. The proposed solution is also reliable since the continuous and broader application generates information and impact on a progressive scale, which enables the customers to continuously enjoy the benefits and induce the creation of sustainable habits among their staff or citizens. We will focus on two groups of actors, Private Companies with more than 250 employees, and Municipalities with over 50.000 inhabitants. These groups can push for better urban mobility by decreasing GHG emissions and creating healthier and more active citizens and employees. The European market is vast, containing more than 16 thousand enterprises with more than 250 employees and over 800 cities with more than 50.000 inhabitants.

Titolo del progetto (inglese): Citizen Travel Habits: a new solution to encourage sustainable commuting and facilitate the assessment of mobility management policies

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