

## iSCAPE - Improving the Smart Control of Air Pollution in Europe



**Call:** H2020-SC5-04-2015 “Improving the air quality and reducing the carbon footprint of European cities”

**Funding scheme:** Research and Innovation Action (RIA)

**Success rate for this call:** 59 submitted, 3 funded

**Coordinator and PI for UCD:** Dr Francesco Pilla

**Overall budget:** € 5,850,829

**Duration:** 3 years starting in September 2016

**Partners:** University College Dublin , Trinity College Dublin, Università di Bologna, University of Surrey, Ilmatieteen Laitos (Finnish Meteorological Institute), Universiteit Hasselt, Technische Universität Dortmund, JRC - Joint Research Centre - European Commission - Institute for Environment & Sustainability, INSTITUT D'ARQUITECTURA AVANÇADA DE CATALUNYA - FabLab Barcelona, T6 Ecosystems srl, Nanoair Solutions S.r.l., Future Cities Catapult Ltd., Dublin City Council, Agenzia Regionale Prevenzione e Ambiente dell'Emilia-Romagna, European Network of Living Labs.

**Test Cities:** Dublin (IE), Innovation-City Ruhr (Bottrop - DE), Lazzaretto Bologna (IT), Vantaa (FI), Hasselt (BE), Bologna (IT), Guilford (UK)

**Description:** The iSCAPE project aims to integrate and advance the control of air quality and carbon emissions in European cities in the context of climate change through the development of sustainable and passive air pollution remediation strategies, policy interventions and behavioural change initiatives. It will tackle the problem of reducing air pollution at target receptors with an innovative SME-led approach, focusing on the use of “Passive Control Systems” in urban spaces. Improvements in air quality, microclimate and behavioural aspects of urban dwellers will be achieved by applying real-world physical interventions on the urban tissue to alter ventilation rates and dispersion patterns in the selected cities assessed for future climate change scenarios and representative of different cultural & life styles in Europe. Through the approach of Living Labs the team will deploy a network of air quality and meteorological sensors (both stationary and mobile) and evaluate through analysis and a suite of up-to-date numerical modelling the benefits expected from the interventions on a neighbourhood and city-wide scale for several aspects ranging from quantification of pollutant concentration to exposure. iSCAPE encapsulates the concept of “smart cities” by promoting the use of low-cost sensors, engaging citizens in the use of alternative solution processes to environmental problems. iSCAPE will support sustainable urban development by promoting the sharing of results with policy-makers and planners using local test-cases, and providing scientific evidence ready-to-use solutions potentially leading to real-time operational interventions. This integrated approach will include the development and assessment of a framework aimed at changing the mobility behaviour of people by studying processes and dynamics that lead to more resilient, healthy, and sustainable cities, by bringing together theory from urban planning, public policy, urban and environmental sociology and urban geography.