Title: Building and shaping cities for a healthy and prosperous future

Acronym: BUILDINGCITIES

Project leader: Miquel-Àngel Garcia-López

Host organisation: Universitat Autònoma de Barcelona (UAB)

Main purpose of the project: Empirical evidence shows that air pollution in cities kills millions of people every year. These emissions are driven by how cities are planned and built and by where and how people live, work and travel in them. BUILDINGCITIES aims to study and understand how urban form characteristics affect air pollution.

Design/methodology/approach: The project will use information from air quality monitoring stations (AirBase) and from 12 million buildings and their 36 million units (Cadaster), in conjunction with state-of-the-art econometric techniques, to study the causal link between urban form and air pollution in Spanish cities between 1970 and 2020.

Potential results: We expect to provide evidence on the project's main questions: How have air pollution and urban form in Spanish cities evolved during the last 50 years? Does urban form affect air pollution? Which of its dimensions are more relevant? As a whole, what type of city is less polluting?

Social relevance of the research: With more than half of World's population living in cities, it is important to understand how cities operate and boost their benefits and mitigate their costs. This research aims to help design urban policies that seek to reduce air pollution in order to save lives, money and increase social welfare.

Originality/value of the project: While the impact of city density on air pollution have been documented, little is known about the effects of the experienced density, the height distribution of buildings or the street network design. Our project will provide evidence on the impacts of these other relevant dimensions of the urban form.