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| **Milestone II - Application**  Computing Project 2016/17  14D003/14D004 | Carlos Isaac Rodriguez Prado  Hans-Peter Höllwirth  Veronika Kyuchukova |

The main goal of this project is to suggest an emission (reduction) policy for governments that could reduce the air pollution most efficiently. For this purpose, we want to learn which emission sectors impact the measured air pollutants most in a country (and to what extend) and also try to relate the measured pollutions to the size of city populations.

The data view will provide a series of graphs that focus on factors that impact the air pollution most. dashboard will provide pairs of pie charts that highlight the sectors with largest emission output and the sectors impacting city air pollution most for a specific country.

A second element on the data view section will show a "heat-map" of Europe for a selected pollution type and year. The view should help to observe regional patterns and so learn how local air pollution is. In order for this dashboard element to work, we will need to add geographical coordinates for each city in our database.

The analytics view will focus on the prediction of future pollution levels for particular cities and countries, using Bayesian regression. Depending on our findings of what factors impact pollutants most, the predictions will be either based on observed/predicted national emission trends and/or observed and expected population growth. In the second case, the dataset needs to be extended by city population growth data. The predictions will be presented graphically, with the user being able to select a city/country and a particular pollutant type. The graphs will include standard errors. Based on the city-level predictions, a separate graph will show the predicted number of cities to exceed the annual European limits for future years.