Sustainable Smart Traffic Light

Explore topics surrounding data analytics and driving sustainable systems

As part of society, we all have an important role to play in fighting climate change – a key factor is in reducing our individual, and societal climate change levels. Many activities, and processes are not climate neutral, and we need to find new sustainable methods of reducing these impacts. To do this, society and large organisations must consciously evaluate areas affecting the CO2 levels and find improvements. Your overall carbon footprint is built from the greenhouse gases you produce through human activities such as driving, flights etc. To reduce vehicle emissions, transportation policy makers are looking to create more efficient transport systems. In addition to this, the overall CO2 emissions, noise pollution and commute times could be reduced through the optimisation of traffic operations and reduction of congestion.

Your challenge is to optimise the overall vehicle operation traffic light system based on traffic flow, CO2 output and reduction of pollution. In the first steps, you will be provided the tools needed by your challenge expert. Your goal is to analyse data, finding trends as well as finding data on the emission values for each key action you decide is most important, e.g., bus emissions, common car type CO2 outputs etc. An optimised traffic light system will improve many current negative factors. Within your challenge, you should strive to do this at the highest level, crashing through city congestion levels, increasing traffic flow, exploring speed management techniques, all building into your final solution. This challenge is based on largely populated cities (500.000 people or more). Create and present an innovative solution to increase cities sustainability, reduce CO2 and make daily life more comfortable, all leading to a positive environmental and social change.