

*The Innovation 4 Change project, a collaboration between **Politecnico di Torino, Scuola di Alta Formazione al Management** and **CERN**, involves professionals between MBA fellows and PhD students, with scientific and engineering backgrounds to address epochal challenges.*

**Challenge theme: CO<sub>2</sub> reduction and air quality improvement in urban areas**

**Challenge owner: Ministero dello Sviluppo Economico (Italian Ministry of Economic Development)**

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**The problem:** Air pollution and greenhouse gas emissions in urban areas are a worldwide problem and, as urbanization will increase in next decades, this problem will increase too. Despite the huge advancement of cutting-edge “green technologies”, the problem still endures. The bottleneck here identified lies on the difficulty in spreading them out. Infact, most of the available “green” products and/or services are not enough attractive because air quality issues are perceived far away from people’s personal interest and daily life. Therefore, the reduction of pollution requires a change in people’s everyday behavior towards the adoption of viable solutions, which is only possible if citizens are aware of the problem and of the impact that their habits have on air quality.

**Therefore, how can this challenge be tackled?**

**The idea:** Our goal is to create a platform, in the form of an App for mobiles, to establish a *green community* which involves citizens, local administrations, and companies providing products or services to reduce air pollution. The App features will be built around people needs, in order to foster a participatory proactive commitment. This latter essentially evolves from the combination of information about air quality issues and suggestion of viable solutions. Indeed, the users will be enabled to understand their personal impact on the basis of their daily life and supported to adopt countermeasures to improve it. The App tools will be tough to build up a network which will empower citizens to be proactive as individuals and as a local community, which will open the market to “green” business companies.

Information will be provided on the basis of a very highly accurate pollution mapping of the city built on a dynamic monitoring low cost sensor system. High resolution mapping of the emissions will contribute to change people’s perspective of the problem, in order to more easily raise awareness and trigger environmental-friendly behaviors. Moreover, public administrations will benefit from resulting high-quality data to better sustain decision-making processes. Purposely designed interfaces will be placed at strategic public places (e.g. waiting spots) and are intended as the first user engagement channel. These interfaces will inform citizens about the local air pollution level and will encourage them to download the App.

The readiness level of the technologies involved would allow the short-term implementation of the proposal. This will promote a sustainable long term response towards a long-lasting problem.

Our launch schedule foresees (within 2016) a prototyping testing phase in one of the major cities in Italy (e.g Milan or Turin), with the support of local administrations. In the future, once the pilot project will be at operating speed, we consider to extend it to the largest European cities, starting from the most conscious ones.