

# McSense ParticipAct

McSense is a research project that aim at exploring how and to what extent the power of collective, though imprecise, intelligence can be employed in smart cities. The main and visionary goal is to automate the organization of spontaneous and impromptu collaborations of large groups of people participating in collective actions, i.e., participAct, such as in the notable case of urban crowdsensing. In a crowdsensing environment, people or their mobile devices act as both sensors that collect urban data and actuators that take actions in the city, possibly under solicitation/request.

Managing the crowdsensing process is a hard task spanning several socio-technical issues: from the characterization of the regions under control to the quantification of the sensing density needed to sensing obtain a accuracy certain accuracy; and resource from usage the evaluation (number of of people a good involved, balance network between bandwidth, battery usage, ...) to the selection of good incentives for people to participAct (monetary, social, ...).

McSense is a crowdsensing platform that tackles these problems with three main original technical aspects:

1. an innovative geo-social model to profile users and regions along different variables, such as time, location, social interaction, service usage, and human activities;
2. a matching algorithm to autonomously choose people to involve in participActions and to quantify the performance of their sensing;
3. a new Android-based platform to collect sensing data from smartphones, automatically or with user's help, and to deliver them sensing/actuation tasks.

McSense Participact is a joint project developed at the [Laboratory of Advanced Research on Computer Science, University of Bologna](#) and [New Jersey Institute of Technology](#).

Note:

This project is part of the McSense "Sense the world" project. Please visit [its web page for further information](#).

More informations about the architecture of McSense can be found in the [architecture](#) and [documentation](#) sections.