Abstract.
The analysis of massive amounts of diverse data provided by large cities, combined with requirements from multiple domain experts and users, is becoming a challenging trend for practitioners and researchers. Although current solutions support data analytics varying in volume, variety, velocity and veracity, as well as data sources coming from devices, people and services (e.g. APIs, spreadsheets, databases, etc.), there is less coverage of approaches dealing with the dynamics of Quality of Result (QoR) to assist data analytics in distributed data-intensive environments. In this paper, we present the fundamental building blocks of a framework for enabling the dynamic process selection and execution (DP-SE) through an user-defined QoR. These building blocks form the basis to support modeling, execution and configuration of flexible processes in order to perform process-based data analytics. They can be integrated with different underlying APIs, promoting abstraction, dynamic data interaction and process configuration at runtime. Finally, we carry out a performance evaluation on the URBEM scenario, concluding that our framework spends little time for QoR-driven DP-SE.

Keywords: Dynamic Processes, Data-aware Processes, Runtime Configuration, Data Analytics, Smart Cities