



The members of SoBigData have a consolidated experience in users' behaviours analysis, social media analytics, human mobility analytics, graph mining, urban data analytics, digital health for personalized precision medicine.

## Stakeholders



### Human Mobility Analytics

Social mobility behaviours analysis  
Social and demographic indicators  
Public Traffic management  
Public transportation planning



### Text and Social Media Mining

Topic annotator and text analytics tools  
Customer- and domain-specific text mining  
Bespoke interactive visualisations  
Graph mining  
Semantic analysis



### Social Network Analysis

Real-time social media monitoring and analytics  
Social data aggregation and visualisation  
Community discovery methods  
Social networks from time series  
News and financial behavior



### Social Data

Social Mining for Smart Cities  
Users' behaviours analysis  
Social and demographic indicators  
Health and well-being data analysis  
Analytical Platforms for Social Mining  
Ethical Data Mining  
Visual Analytics for Social Mining

## What SoBigData can offer to you:

The RI will take care of the legal, ethical, methodological, and infrastructural issues arising from working with social data, in order to enable data scientists to focus on research itself. It will provide access to the following key types of social data:

- Mobile and sensor data
- Social networks data
- Social media data, including Twitter, Facebook, and FourSquare content, organised into topic- and problem-specific social media virtual collections
- Mobility data, e.g. London Transport Oyster Card records and vehicular GPS trajectories
- Open social data and relevant Linked Open Data resources
- Other social data (such as one of the largest databases of Pinterest records)

# Stories

## Urban Mobility Atlas

The system visually synthetizes the complex analytical processes in a toolset of measures for various mobility dimensions of a geographical area. We focus on the challenge of constructing novel mobility indicators from Big Data, capable of capturing the mobility characteristics of a territory: what is the relationship between systematic and non systematic behavior? Is a territory amenable for adopting a new mobility behavior such as car-pooling or for massive diffusion of electric vehicles?...

## News and financial behavior

News and financial behavior. Using techniques of semantic analysis (sentiment) of published news to model the dynamics of price around news announcement. Twitter activity and stock dynamics. ...

## Social Sensing for earthquakes

During emergencies social media users tend to share different pieces of information on social media channels. The idea is to exploit contents published in real time by Twitter's users to infer useful information in the aftermath of an earthquake. The following analytical tools will be used: Twitter Monitor for the collection of Twitter data and tools for the detection of the consequences and engagement of the eyewitness. ...

## TagME and Smaph semantic analysis for flu spread monitoring

TagME is one of the best known annotators that overcomes the problem of representing text through its terms by extracting and disambiguating the set of entities directly mentioned in a text. In a very preliminary way, TagME understands what the text is about, building an unambiguous representation of a text's semantics, and this understanding can be used in virtually any pipeline that involves text processing. A tweet like "I have a cold and a slight fever" can give a stronger signal about the probability that the twitter user is infected by a virus than a message like "Today's weather is cold, but it's Saturday night fever!". ...

## The Sociometer: measuring city dynamics

Public Administrations and decision makers needs even more updated and reliable information for analyzing and understanding the territory and the community's demand in order to put in place successful decisions and efficient strategic plans. Understanding the actual composition of a population along the time or measuring the impact of events is not a simple and chip task, when using traditional data sources. The Sociometer, an analytical framework based on data mining methods, offers an innovative way to exploit mobile phone data for measuring people presence on a territory and study the city dynamics. This framework accomplishes to identify people presence on a territory, and classify them into behavioral categories, e.g. residents, commuters and visitors; to enable the monitoring of tourism fluxes on a territory; to measure the impact of events at city level. ...

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