Sensing Urban Mobility

Networked Systems

Concept

### URBAN COMPUTING

- **Urban Applications** (e.g. traffic management)
- **Urban Data Analytics** (Data mining, ML, visualization)
- **Urban Sensing** (Data Acquisition)

#### URBAN DATA ANALYTICS

Objective: Sensing and modeling the city pulse (e.g.)
- Traffic Monitoring
- Pedestrian Mobility
- Environmental sensing

### APPLICATION: ECO-ROUTING

Objective: develop eco-friendly routing engine for vehicle, bike & pedestrians
- Dynamic: e.g. diverts users from areas of congestion/poor air quality.
- Adaptive: take account of evolving context (e.g. trip purpose)
- Personalized: considers user preferences (e.g. shade along path)

Optimization Criteria (e.g.)
- travel time,
- distance,
- pollution emissions etc.

Eco-friendly Load Balancing

### FIWARE ARCHITECTURE

- **Applications**
- **Mobile Apps**
  - STH Comet
  - Cygnus
  - Cosmos
  - IDAS IoT Agent
  - Orion
  - Wirecloud
  - DCU