Modelling, Management, and Processing of Mobility Data in Urban Polluted Environment

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- We live in **indoor** and **outdoor** environments where numerous human activities are taking place.
- A contextual and environmental semantic knowledge is needed to understand raw human trajectories and **detect complex events**.
- Spatio-temporal trajectories will be studied under the dimension of pollution environment that arise in indoor and outdoor.

Our objective is to:
- Design a hybrid indoor-outdoor data model to represent contextualised human based trajectories.
- Enrich trajectories with semantics to represent multi-level granularities.
- Proceed spatio-temporal and semantic querying capabilities for analysis purposes.

USI	Complex event
1	Walking
2	High pollution
3	Kitchen (indoor)
4	Street (street name)
...	...

Data flow
Computational element
Conceptual element

MDG: Mobility data generator
USIs: Urban situational indicators
ST AQM: Spatio-temporal air quality monitoring