The influences of user generated ‘Big data’ on urban development

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Problem statement

- Cities are the nucleus for creativity and ideas, this magnet in the cities created the problem of population.
- Approximately 50% of world’s population lives in urban areas, a number which is expected to increase to nearly 60% by 2030.

Cities current status

- In cities, data comes from weather channels, street security cameras, Facebook, Twitter, sensor networks, in-car devices, location-based smartphone apps, RFID tags, smart meters, among other sources.
How can we make use of these data?

To

• Utilize intelligent prediction tools to deliver a better way of living.
• Improve cities infrastructure and their vital systems.
• Deliver an analytical framework for urban optimization.
City anatomy

- City anatomy by City Protocol: (1) the physical structure (structure); (2) the people who live in this physical space (society); and (3) the interactions between people and their physical structure.
- The focus will be on the third element investigating how people can communicate with their physical environment.
Technologies and trends

Ubiquitous computing

Internet of things (IOT)

Cloud computing
Technologies and trends

Big data

Volume

Veracity

Velocity

Value

Variety
Case studies

Amsterdam Smart City

iBeacon Living Lab

Smart citySDK

A route of 2 Km with beacons lining it (Amsterdam smart city: Smart Areas, 2015)

CitySDK Linked Data API implementation on Amsterdam (WaagSociety, 2015)
Case studies

New York City24/7

City24/7 Smart Screen Locations (Mitchell, Villa, Stewart-Weeks, & Lange, 2013).
Application

Trend
• Open government data
  • Egypt open governemnt data model
    http://egypt.opendataforafrica.org/
• IOT applications

Application architecture
Application

Demo

[Image of a webpage showing a map with options to view data and charts.]
Thank you
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