

# ikaas

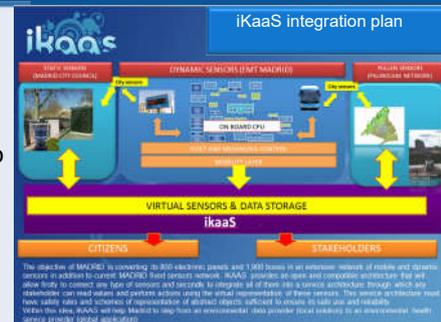
## Madrid scenario

### Storyboard/Overview

- Pollution and pollen airborne particles are one of the main factors that affect the health of citizens.
- By deploying a new network of environmental sensors on the buses of the Municipal Transport Company (EMT), which go across the city, it will be possible to increase the number of geographical points where measures are taken with a limited number of sensors.
- These new sensors, combined with the already deployed environmental network of sensors of Madrid Region and Madrid City Council, will feed the iKaaS system with data; this will make it possible to provide real-time information to citizens and through the Big Data analysis capabilities of iKaaS build a new source of knowledge.
- It will be possible also to monitor how people move across the city by using, for instance, smart phones, and know if people take into account the new information provided.
- The way information is currently being provided to citizens will improve considerably.

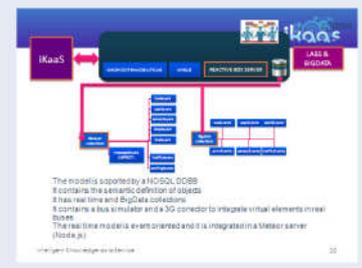
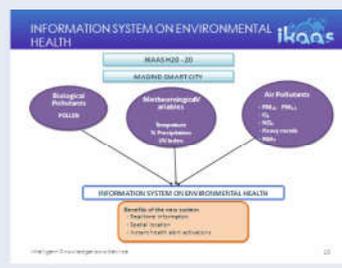
### iKaaS Integration Plan

iKaaS allow to us to connect any type of sensors and secondly to integrate all of them into a service architecture through which organizations, with safety rules and schemes of representation of abstract objects sufficient to ensure its safe use and reliability. Within this idea, Madrid aims to install a network of environmental & pollen sensors to offer health information services within different areas of Madrid, as well as other systems that could have access to virtual sensors.

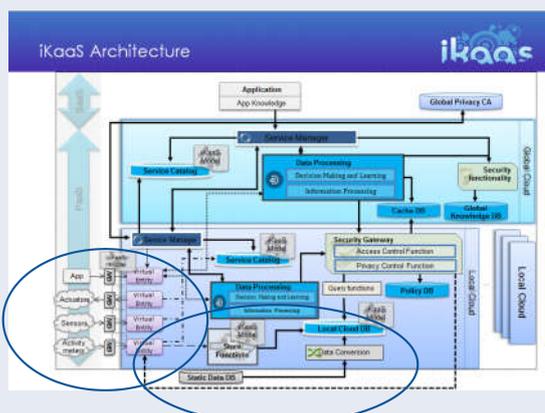


### Information System in Environmental Health

- iKaaS will offer services like instantaneous pollution and airborne pollen information, complementary aerobiological data, pollution and airborne pollen levels in movement, airborne pollen maps, and health advices for the citizens.



### iKaaS Architectural Instantiation



### Benefits/Conclusions

#### Static vs Dynamic information

- The pollen and air quality control system in Madrid City currently includes static sensors. Adding new sensors to the EMT buses will result in obtaining dynamic information using the iKaaS Platform.

#### Localized (geo-located) and timely information

- This new information system through the iKaaS Platform will provide localized (geo-located) and timely information.

#### Hot spot localization

- This new system will enable to locate environmental hot spots with high levels of pollutants or extreme temperatures.

#### Healthier routes

- Alternative healthier routes can be supplied to avoid hot spots, polluted and high pollen levels areas.

#### Environmental and health information

- iKaaS will also provide environmental and health information for all iKaaS Platform users, Madrid Citizens and tourists.

#### Instant health warnings

- The system will be activated when exceeding environmental thresholds, settled previously, to advice on exposure reduction or bans, and other health recommendation.