Connected Bus Monitor

For Sustainable Mobility

DIPARTIMENTO DI INGEGNERIA INFORMATICA
AUTOMATICA E GESTIONALE ANTONIO RUBERTI

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CONCEPT

What is sustainable mobility?

The transport sector has the potential to improve the lives and livelihoods of billions of people. However, as well as meeting people's needs today, the sector must be ready to respond to future generations' expectations:

- Shared mobility
- **Public transport**
- **Smart mobility**
- **Access to mobility**
- Walking & cycling
- **Safety**
- **Reducing emissions**

The problem

Improve the service quality of surface public transport solutions providing trustworthy information about the availability of surface public transport options and the air quality conditions onboard.

- Reducing the waste of time
- Improving the travel conditions
- Providing trustworthy information to help making informed mobility choices
- Guaranteeing safety and salubrity
- Reducing congestion and occupation of parking spaces

Project Goals

Provide a cost-effective solution to improve public transport by meeting the needs of potential users

- Affordability
- Reliability
- Safety and Salubrity
- Sustainability

Proposed Solution

Connected Bus Monitor: a service aimed at providing (near) real time estimates of waiting times/proximity and indoor air quality of the surface public transport units.

Aims to provide incentives to use public transport as a reliable and affordable means of sustainable mobility oriented at reducing emissions, congestion and occupation of parking spaces in urban areas.

Proposed Solution

How?

- Monitor transport unit position/location
  - GPS, acceleration
- Monitor air quality onboard
- Temperature, humidity, CO2 levels

Why IoT?

- Collect and aggregate data from transport units (things)
- Scalability
- Feasability (financial, technical)

Actors and Use Cases

Who?

- Public transport users
  Private sector employee, Student
- Public transport drivers

Use Case Scenarios