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GREEN SMART NET: ENVIRONMENTAL DATA ACQUISITION, HANDLING AND TRANSMISSION FOR RISK ASSESSMENT IN AGRICULTURE AND BEYOND

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1 - Introduction

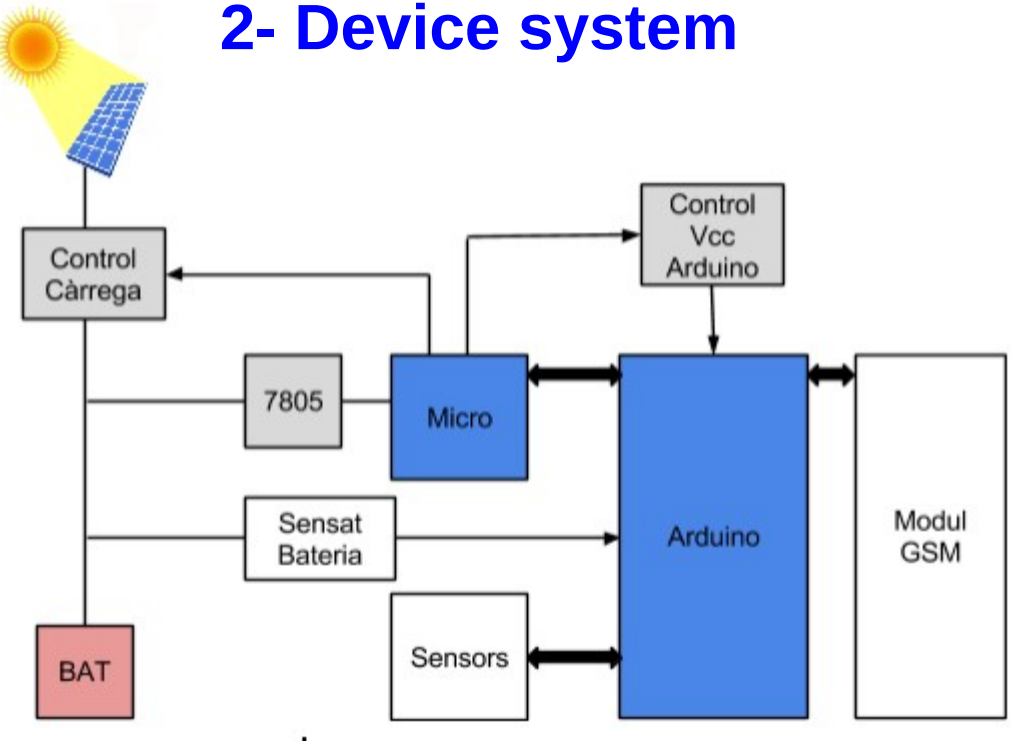
Institutions acive in agricultural research.

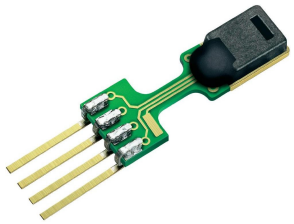
It is widely studied that climate parameters affect the development of different plant pathogens such as bacteria, fungus and insects. See many papers in American Phytopathological Society

Xanthomonas arboricola

Leaf moisture

2- Device system





Temp and relative humidity

Leaf moisture

Soil moisture

3- Green Smart Net, as a result of university and companies collaboration

Measurements from sensors

Data collected from sensors at different places

Other Sources of information

- Big Data
- Data from Users

Algorithms

- Risk index
- Electronic Noise
- Neural Networks

Scheduled tasks

- Analyze
- Summarize
- Create alarms

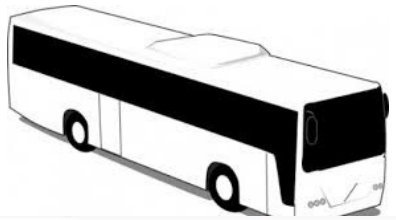
Historical Data
Statistics
Correlations

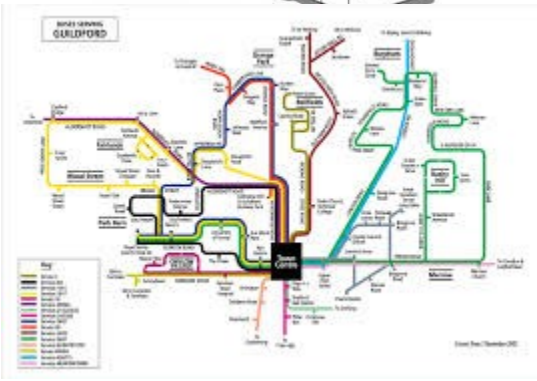
Alarms
Informs
Summarized Data

4 - Future applications in gas sensing

Green Smart Net system **could be adapted** to other applications.

Collect gas contamination data at each floor in underground car park in order to control fan extractors.





Analyze air quality in cities, using sensors situated on the roof of urban buses

5 - Conclusion

1- We have developed a modular and autonomous **platform for climate sensors.** Our system works under real conditions and **solves problems in the agricultural field.**

2 -Our system **has been tested** for one year in real conditions

3 -Green Smart Net system **could be adapted** to other applications. But we need low power sensors.

4- We have split the data acquisition process (hardware) and final analysis (server)