



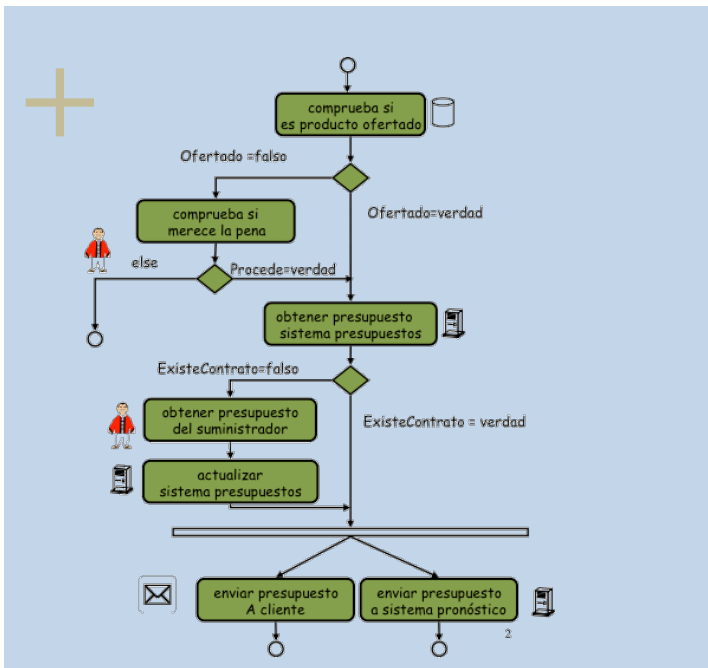
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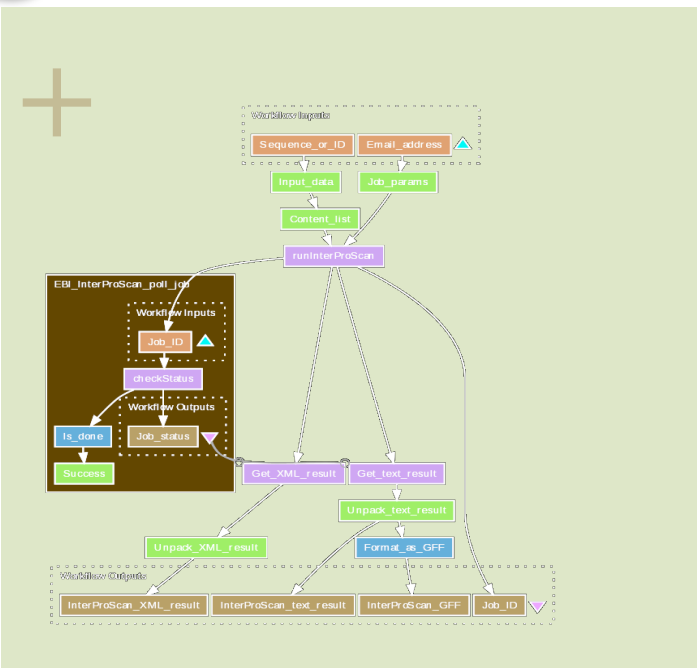
Dealing with Data Deluge



Business Workflows
*The automation of Business process require **informed** decisions*

- Data processing, analysis, visualization
- **Data Mining** is used for fraud detection in financial sectors, to detect trends and patterns in purchasing behaviours, ...
 - **Indexing & Searching**
 - **Visualization**

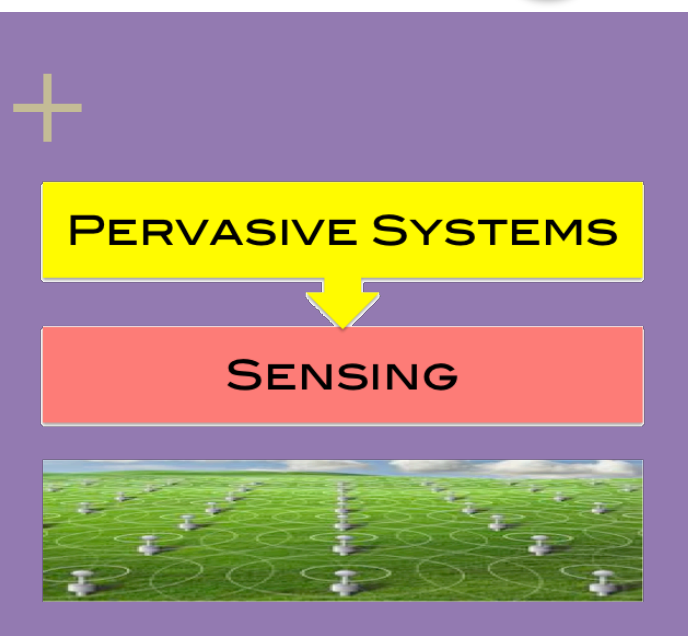
AQUITAINE ARAGÓN OMNIDATA Project



Scientific Workflows
Collections of data through observation and experimentation, and the formulation and testing of hypotheses

- Data Intensive analysis in the experiments
- **Data intensive** analysis in experiments
 - **Large-scale workflows** contain millions of tasks and require thousands of hours of aggregate computation time.

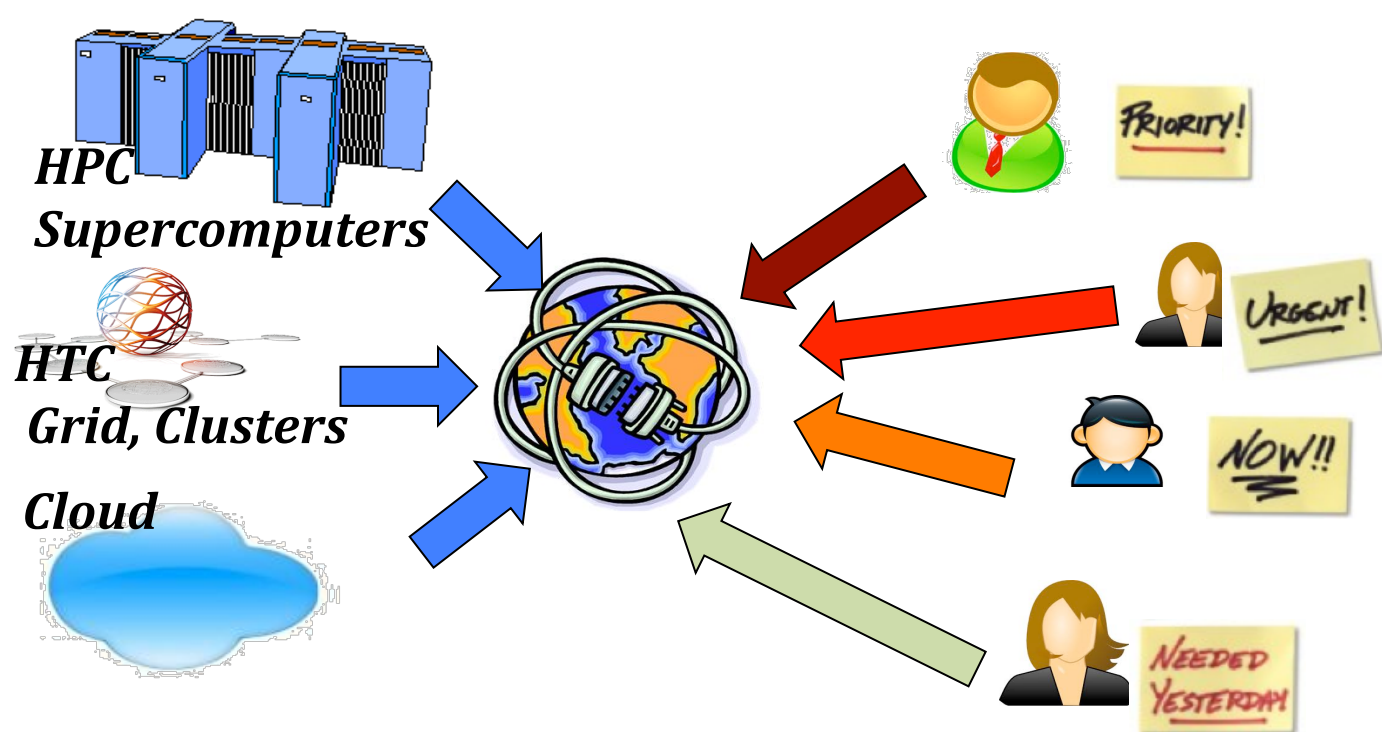
PIREGRID (WWW.PIREGRID.EU)
 INTERREG IVA FEDER POCTEFA 35/08, 2009-2012



Stream Processing Engines
Wireless sensor networks are powerful, distributed, self-organizing systems for event and environmental monitoring

- Urgent Computing, Monitoring, Surveillance
- **Stream data** are processed on-line
 - **Strong time constraints**

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- Different Needs: Same expectations**
- Preserving **QoS** applications on Shared **Distributed** infrastructures
 - Expressing **scalable** solutions on **heterogeneous** infrastructures.
 - Processing huge volume of **data online**
 - **Parallel** processing of data
 - **Scaling** data storage, network and **computing** resources