

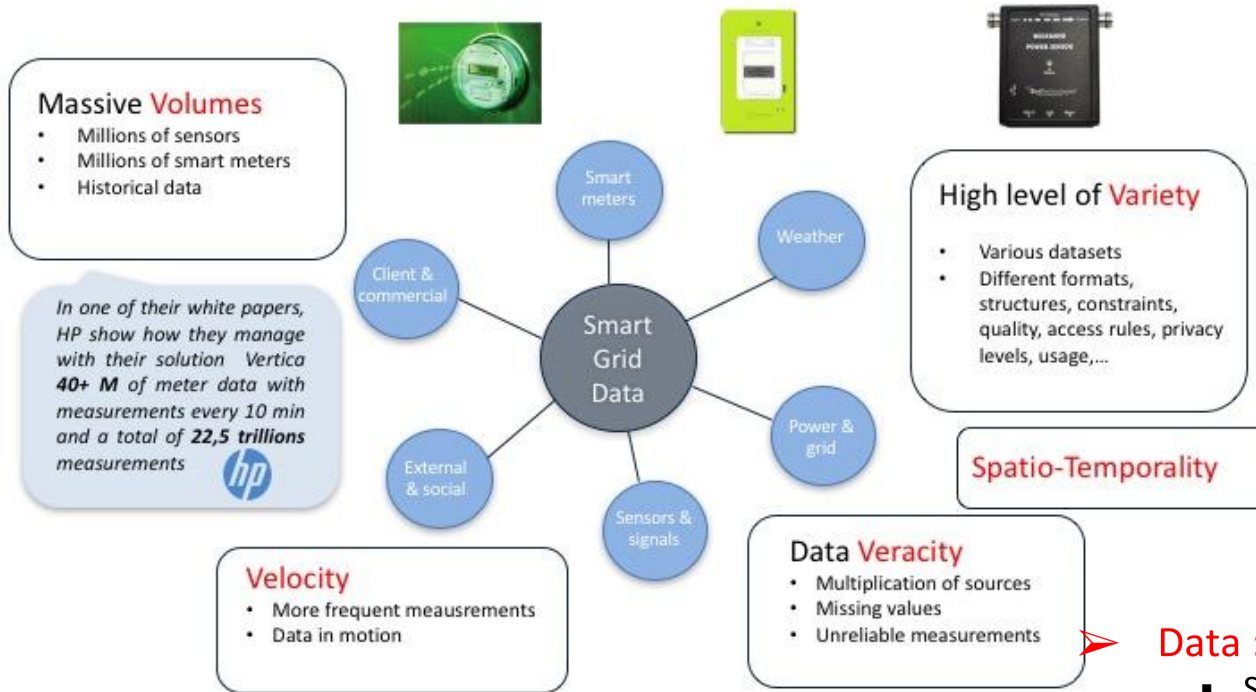


Metadata based datasets placement in Smart grids

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Smart Grids

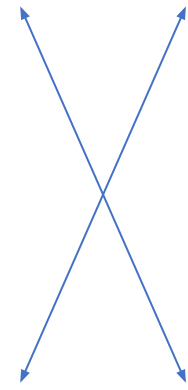


Data :

- Smart meters and grid
- Client consumption profile
- Network and Sensors
- Weather and geospatial

➤ Applications :

- demands forecast
- predictive maintenance
- fraud detection
- efficient energy resources management

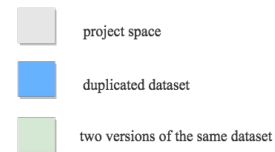
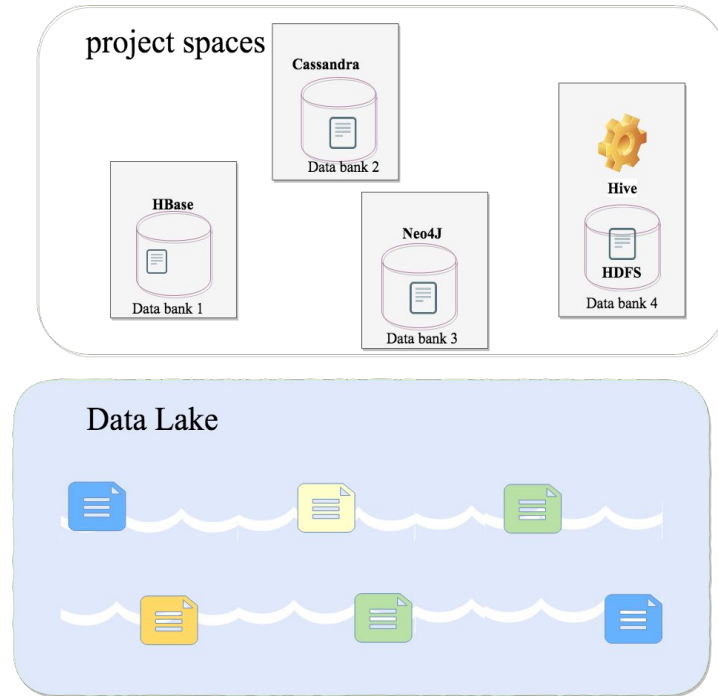


Smart Grid Big data Ecosystem

data storage systems

data processing systems

types of workloads & business rules



Note: figure inspired from the functional and technical architecture of B4ALL

Complexity of Smart grid Big data Ecosystem

datasets

- volume, variety, spatio temporality, veracity ...

workloads

- usage, performance, access & privacy ...

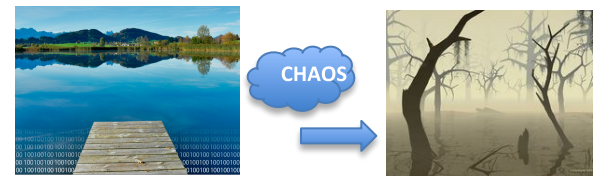
data storage Systems

- performance, latency, scale, availability ...

data processing Systems

- scale, performance ...

Complex data ecosystem !



➤ Global **Metadata management**; for a **Smart** Big Data ecosystem

Objective : placement of datasets

Objective



data scientist

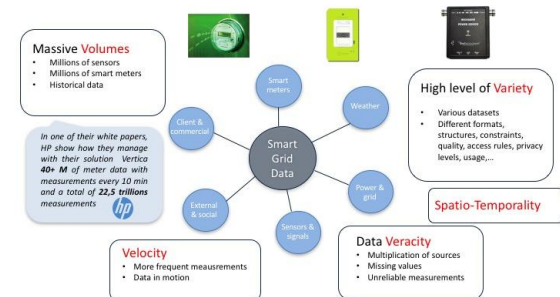


IT professional



Business expert

- **effective storage and processing of datasets :**
 - We need to assist users in identifying a suitable system for their datasets
- **Constraints**
 - The selected data system needs to provide :
 - Efficient workload processing
 - Compliance with business environment & the data ecosystem



Metadata based dataset placement

