Time Series

The connection from Big Data to Artificial Intelligence

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The radical change in IoT data: NoSQL Time Series

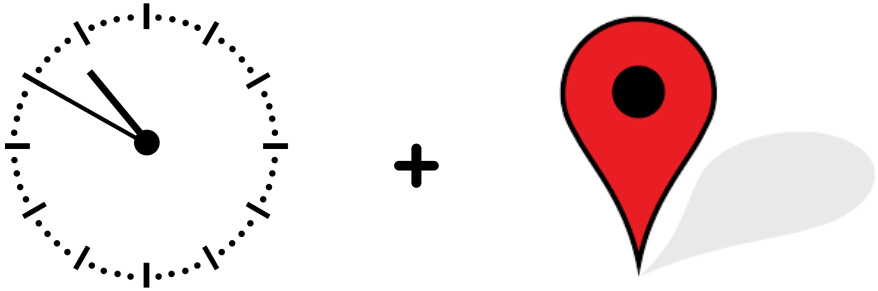
Four families of data (including understanding, technologies, culture, governance)

Sensor/IoT Data and Machine Data go stronly to Time Series technologies

#1	Data from major companies databases	Relational SQL	Big Data = Data Mining No Disruption	IBM, SAP, Microsoft, ORACLE
#2	Data from documents, social networks, videos …	NoSQL	Content data analytics, semantic	Google, facebook, hadoop
#3	Data for Sensors, Meters … measures	NoSQL Time Series	Where future business is	Warp10, Apache Spark, cloudera, HORTONWORKS
#4	3D Modeling	Structured Géospatial	Geospatial databases	Google, esri

examples

Warp10 / Asset #1: Geo Time Series ®



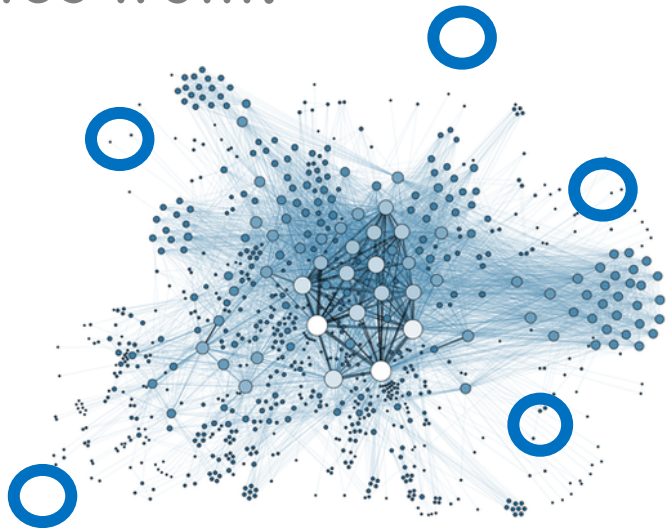
A disruptive architecture for sensor data in which all data are not only defined by time, but by time+location

When data are traditionally stored in by business applications, Warp10 uses a “universal formal” referring to time +location and independent from any business specific format.

Time Series: the link from Big Data to Artificial Intelligence

Disruption comes from:

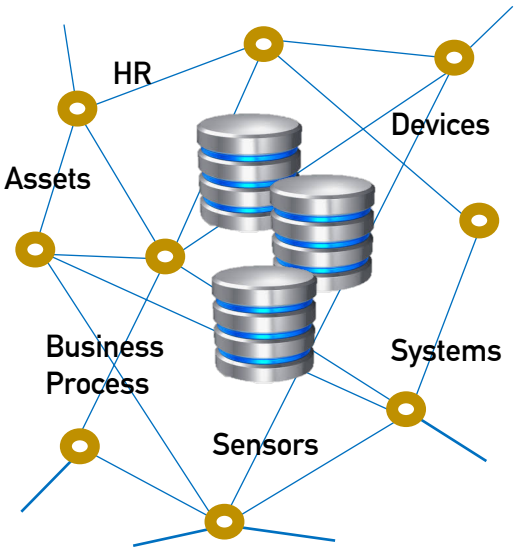
1/ Deep data history



2/ Very large number of data sources

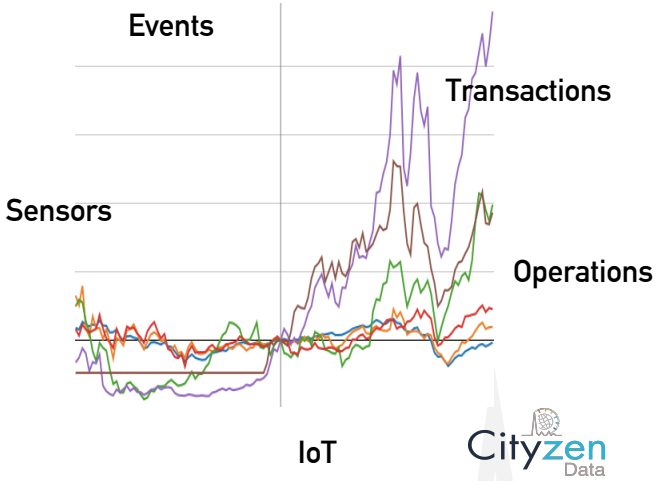
Energy, industry 4.0, connected cars, telecoms, internet ...
Billions x billions measures / day

From transactions to events streams



IT architecture driven by transactions (today)

Rigid business applications & databases



IT architecture driven by stream of events

Flexible and scalable architecture

A new generation of data infrastructure
A new approach in data governance … & risks

Applications Services

Time Series Data infrastructure

Horizontal or integrated Rules & Governance

Cityzen Data

WARP10

ITEMS INTERNATIONAL

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