

Adamantic

A Sustainable Data Management Approach for Smart Cities

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Problem: Smart Cities and Their Data

Smart Cities are based on a smart usage of the data they produce.

- An **enormous** quantity of data \rightarrow hence the term "Big Data"
 - IoT devices
 - People, Organisations, Processes, Documents
- Unrelated and unclassified
 - Different producers, businesses, purposes, and ethics
- Who trusts...
 - ... the Data Producer?
 - ... the Data Consumer?
 - ... the Intermediary?



Problem: Smart Cities and Their Data

Common (current) approach: establishing trusted Point-to-Point relationships between selected producers and consumers

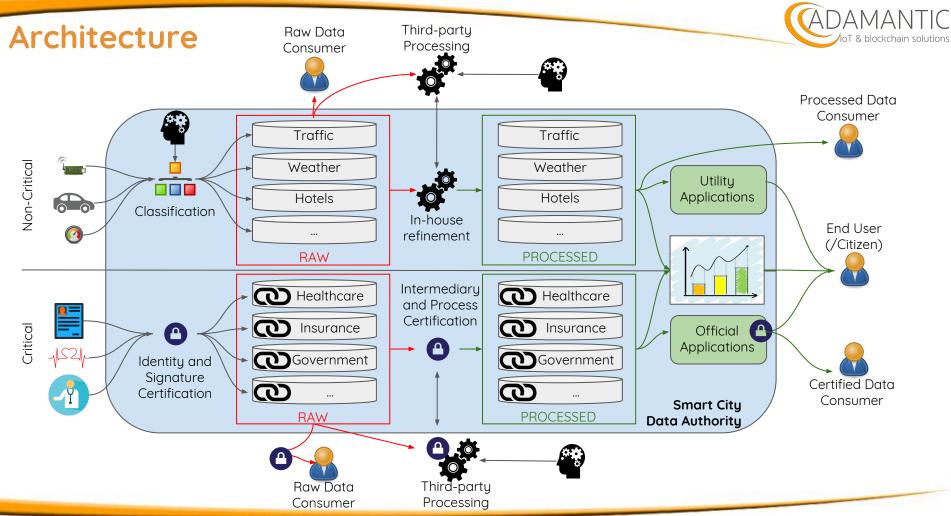
- Too many links
- Total loss of control over data
- \rightarrow **NOT** sustainable for mission-critical businesses
- Healthcare
- Government
- Insurance
- ...

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A Different Approach Is Possible

Divide data in two categories:

- Non-critical
 - Statistics
 - Traffic Management
 - $\circ \longrightarrow$ tagged, loosely-coupled Big Data
 - Approach: topic-based, categorized and Al-reconciled Big Data
- Critical
 - Official documents and procedures
 - Health Information
 - Personal Data
 - Approach: blockchain-backed certification of
 - Data
 - Actors (producers, consumers, intermediaries)
 - Processes (data manipulation)



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