IOTWeek

Dublin — June 20-23, 2022

Data Processing Challenges: Interoperability and Data Abstraction and Virtualization

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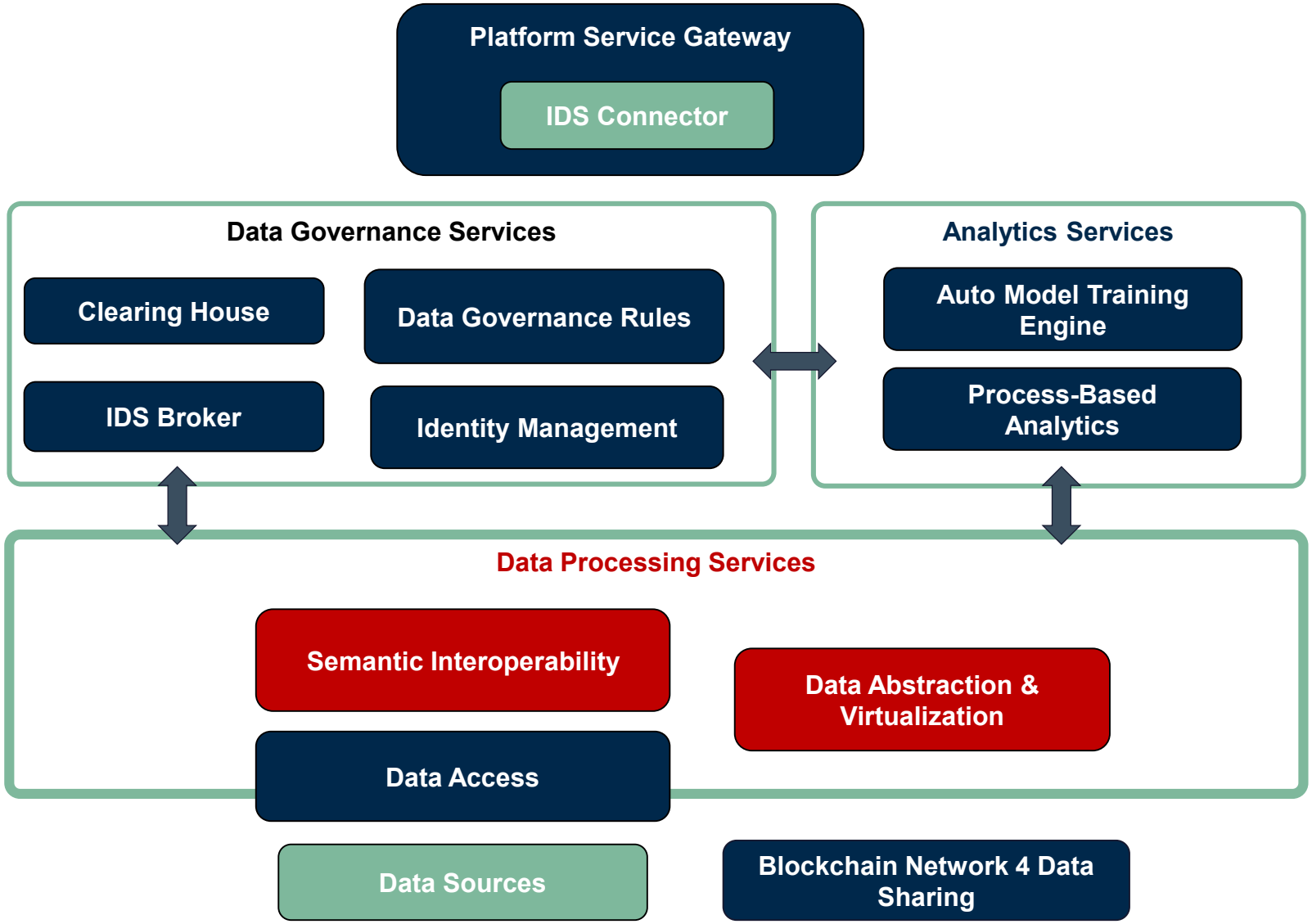
GLOBAL VISION:
IoT TODAY AND BEYOND

IOTForum

Position in the platform



Overview

- The Semantic Interoperability component provides a common API and data model to access the available data and metadata.

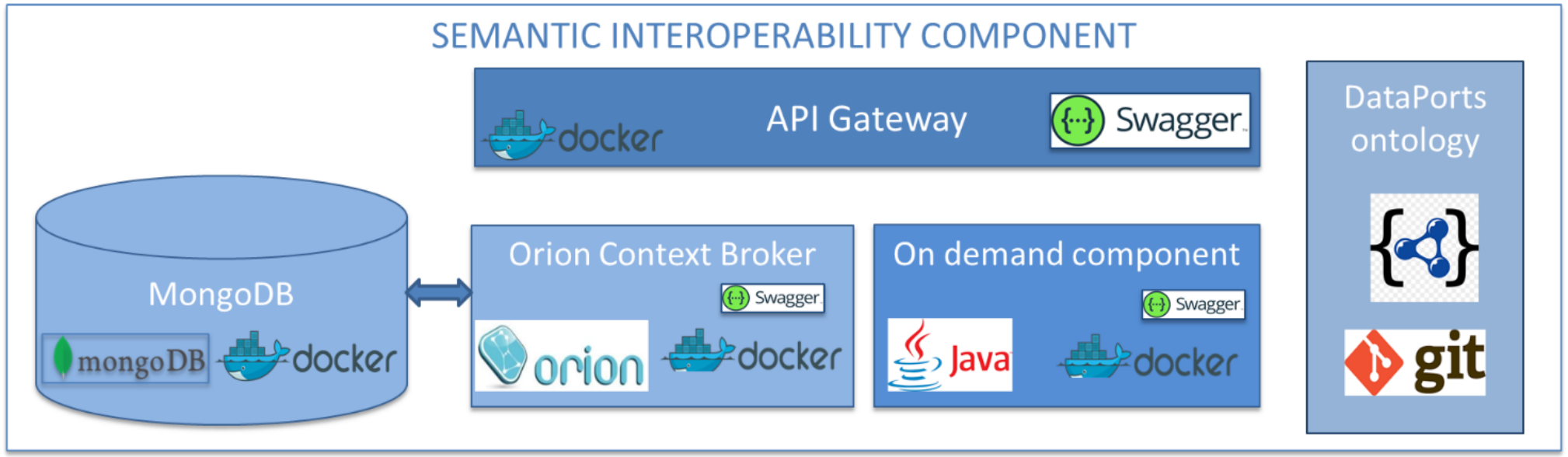
- The Data Abstraction and Virtualization component is responsible for correctly preparing data input from different sources, maintaining metadata from all feeds and making available the cleaned and processed datasets to any eventual client

Goal of the components

- Data Access Mechanisms
- Data Model and Interoperability API
- Data Processing Mechanisms
- Data Management
- Metadata Extraction
- Data Transformation
- Data Analytics integration
- Data Governance Integration

Components at a glance

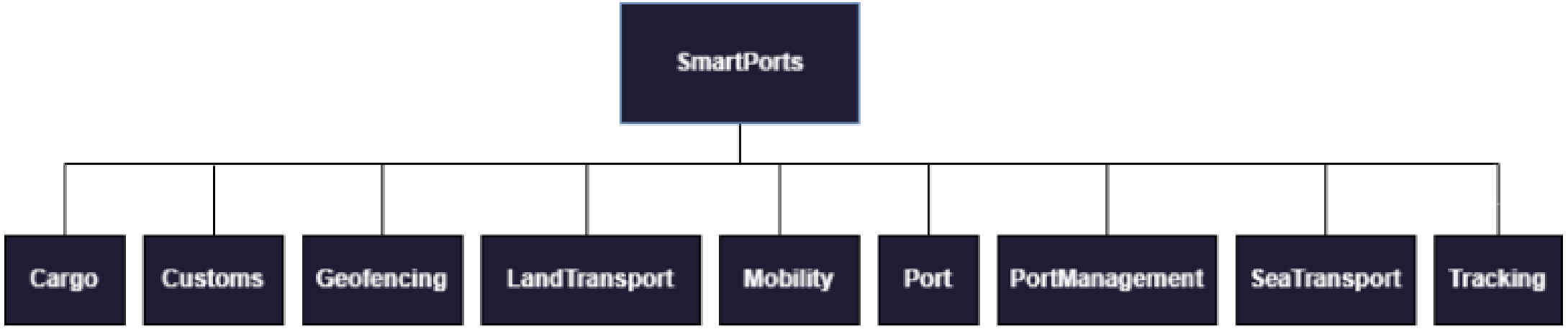
- **Semantic Interoperability component:**
  - Collects and distributes the data and metadata obtained by the agents to the different components of the platform
  - Provides a common API and data model to access the available data and metadata



Components at a glance

- ## Data Model Overview

  - Domain and subjects of the common Data Model

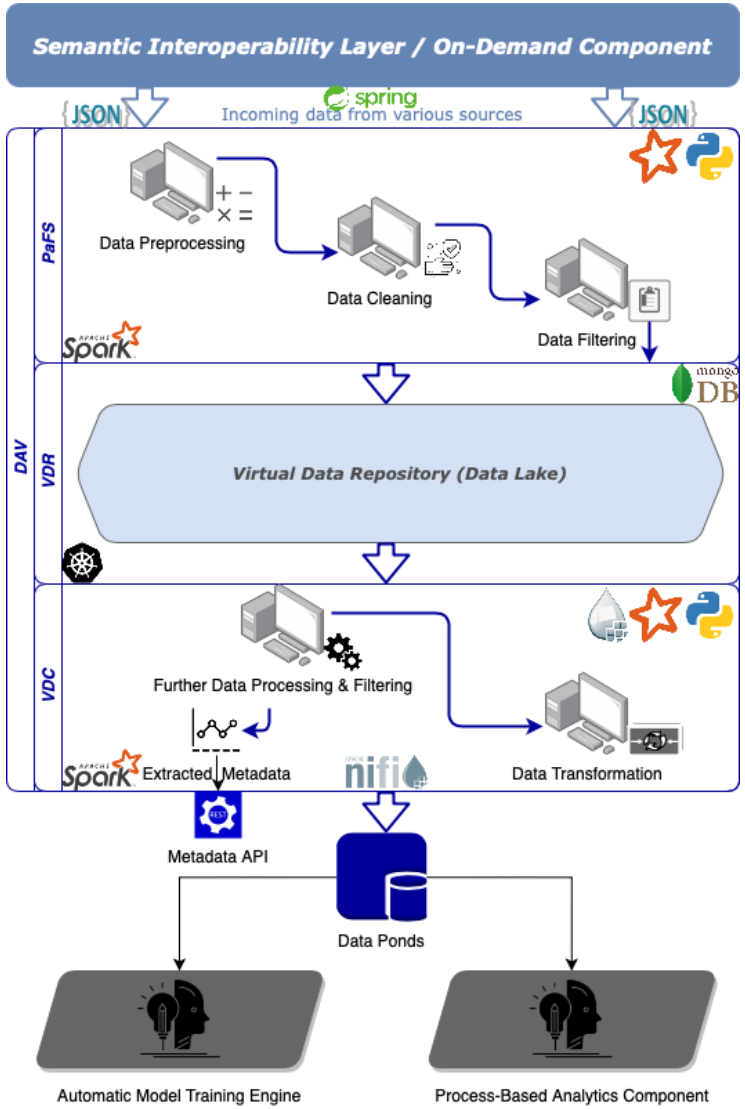


Components at a glance

- **Subjects and entity types of the common Data Model**

Components at a glance

- **Data Abstraction and Virtualization:**
  - Cleanses and pre-processes the input data from different sources
  - Exposes metadata from all feeds
  - Three sub-components
    - (Pre)Processing and Filtering Software (PaFS)
    - Virtual Data Repository (VDR)
    - Virtual Data Container (VDC)



Target users

- Data sharing
  - Data providers and Data Owners
  - Data Consumers
- System administration
  - Admin Users
- System Integrators
  - Agent developers
- Organization
  - Internal Platform Components
  - Data Users

Benefits

- **Interoperability**
  Allowing the connection of heterogeneous Data Sources.
  Offering a System of systems and Common Data Models.
- **Ease of use and deploy**
  Making the access to the available data and metadata simpler.
  The components can be deployed faster in a PC, Server, Cloud Infrastructure or in a Raspberry.
- **Modular and Scalable**
  Adapted to the User needs.
  It could be extended with added value tools and it is possible to scale the components on demand.
- **Less development effort**
  Reduce the effort in creating new applications.
- **Fully compatible with Fiware Ecosystem and common OpenSource Software**
  Joint adoption and contribution to standards. Use of common components and shared Open Source code

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Thank you!

Find more:

https://dataports-project.eu/

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