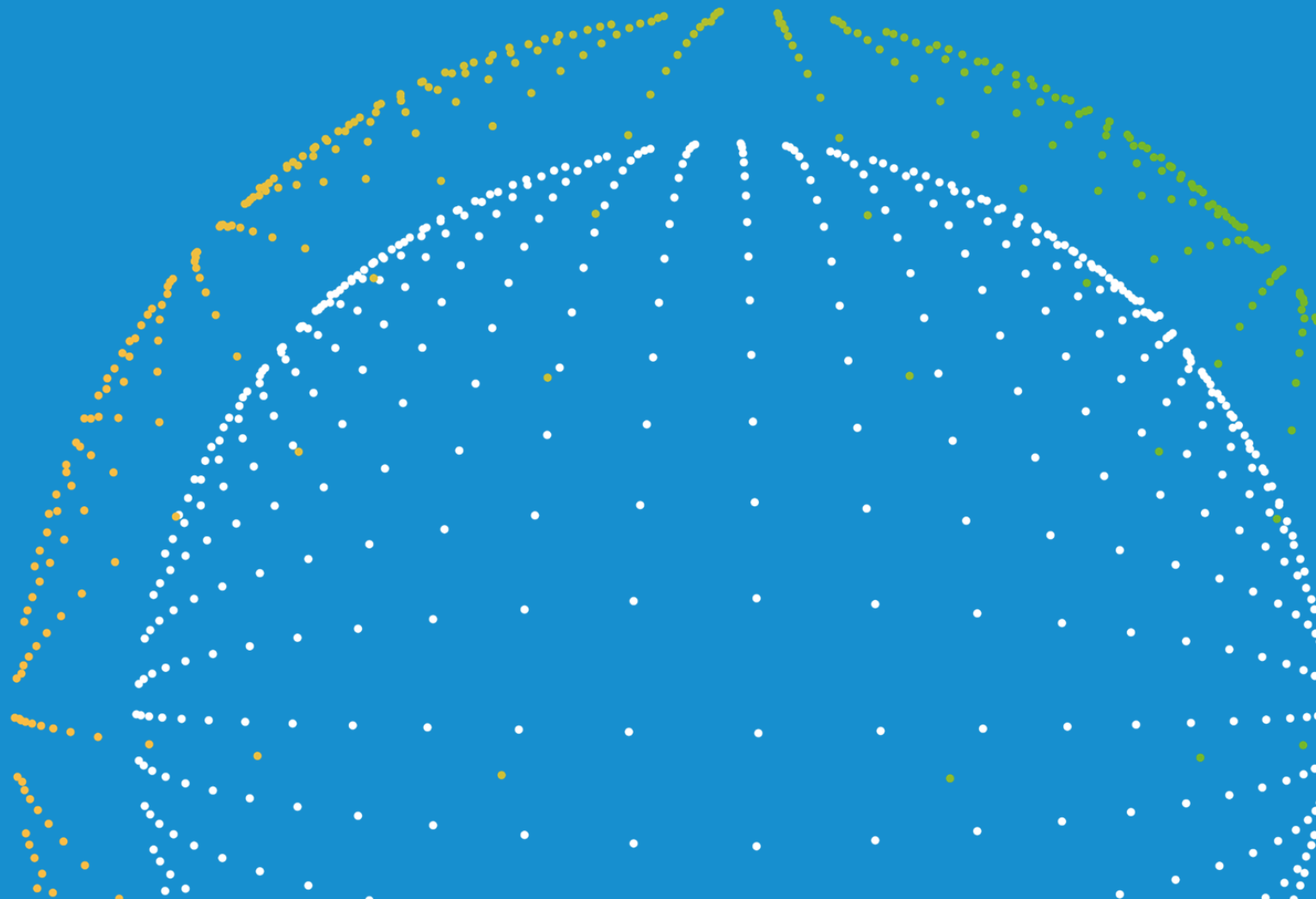
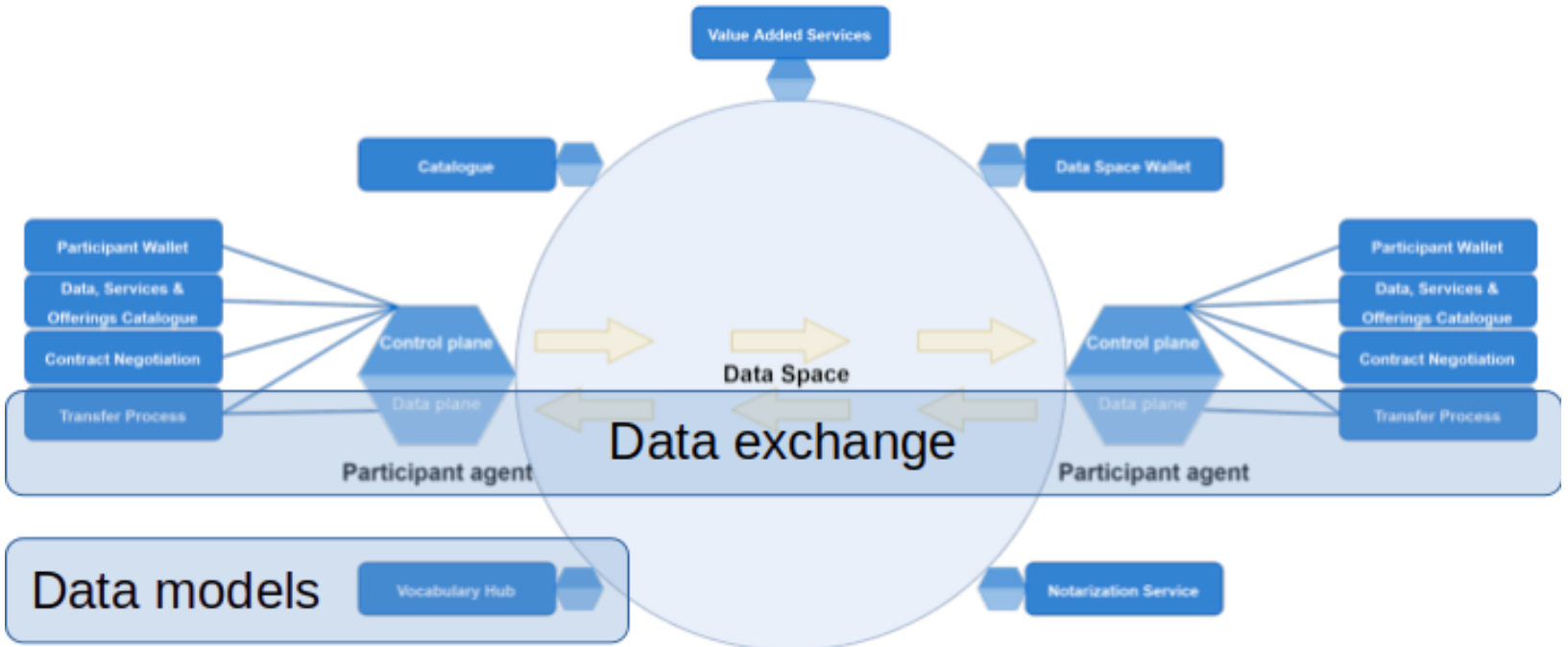
Data Spaces Symposium

FIWARE connector, solutions and data models

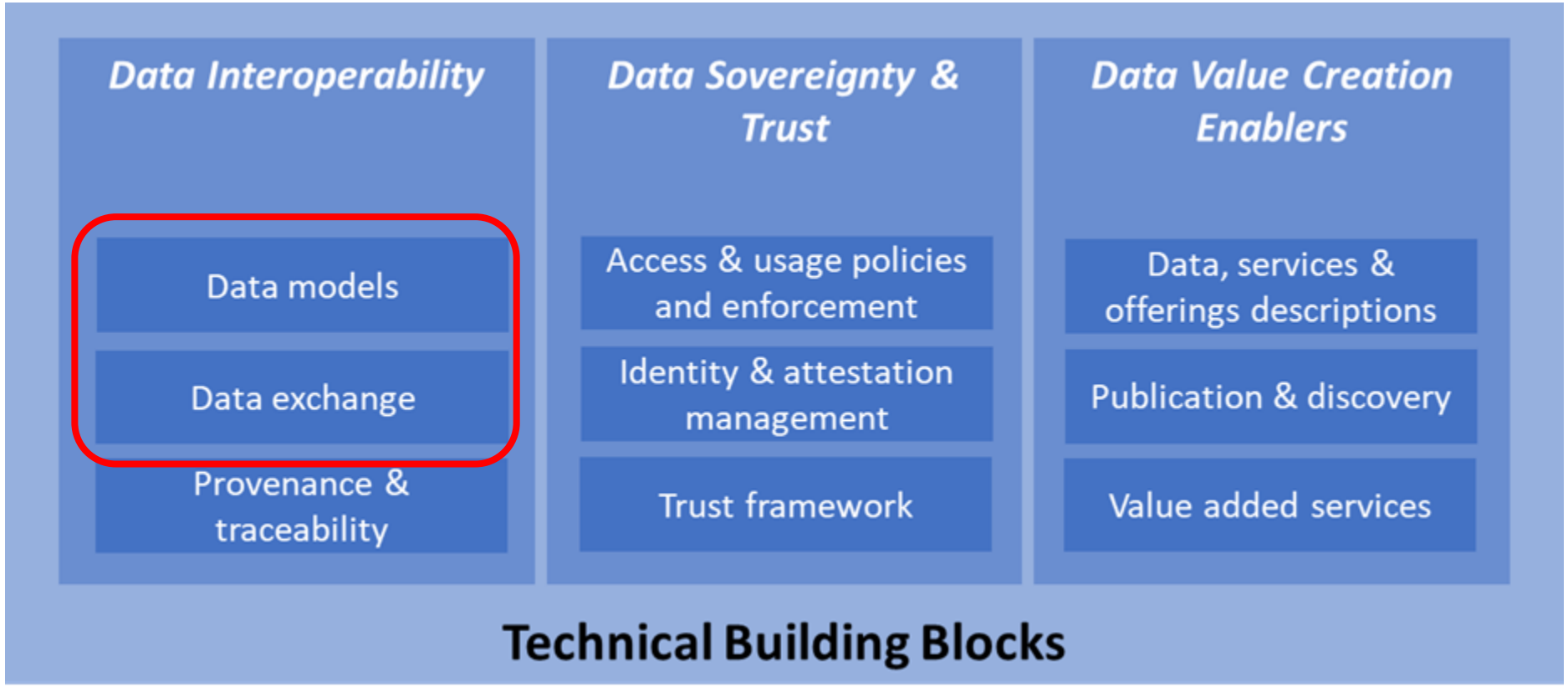


Alberto Abella.
FIWARE Foundation
Data Modelling Expert
@aabella

Data spaces by functions



Data spaces by Building Blocks



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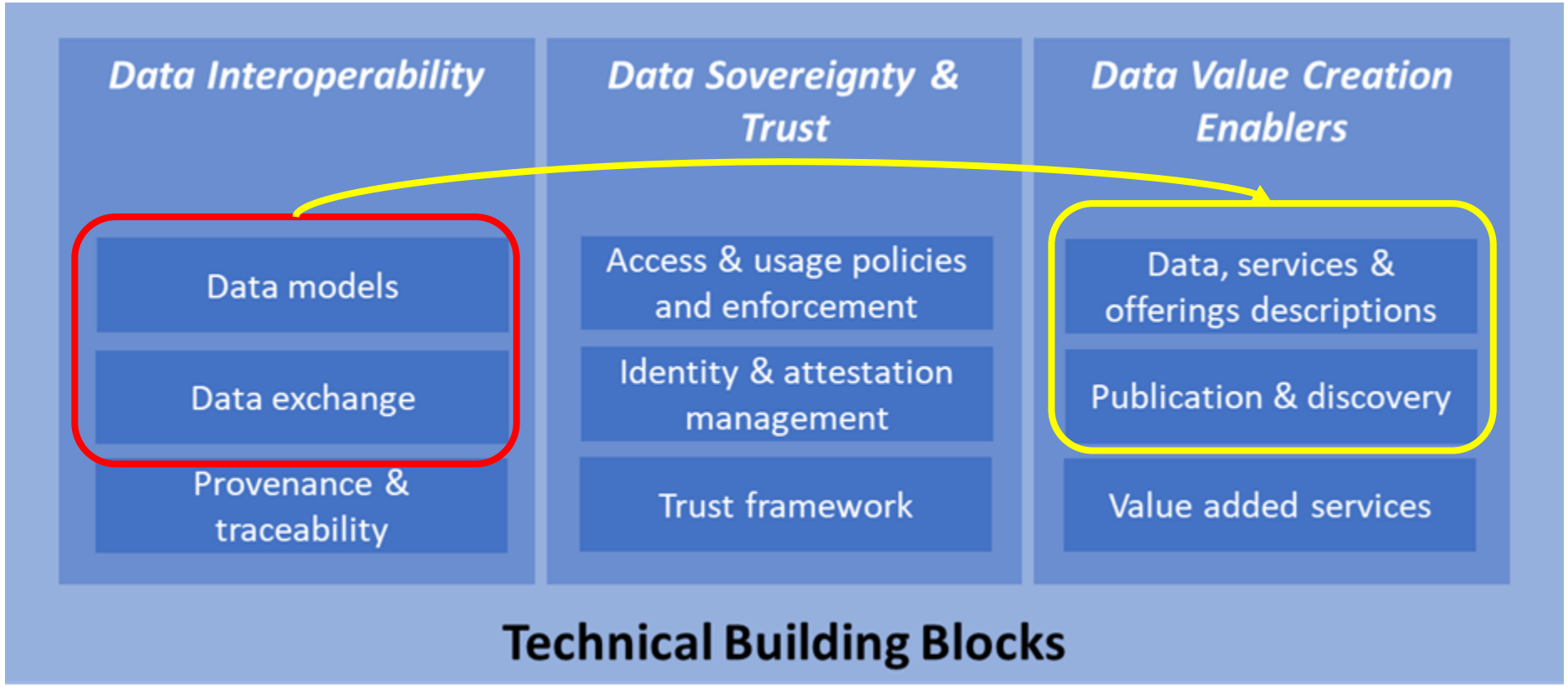

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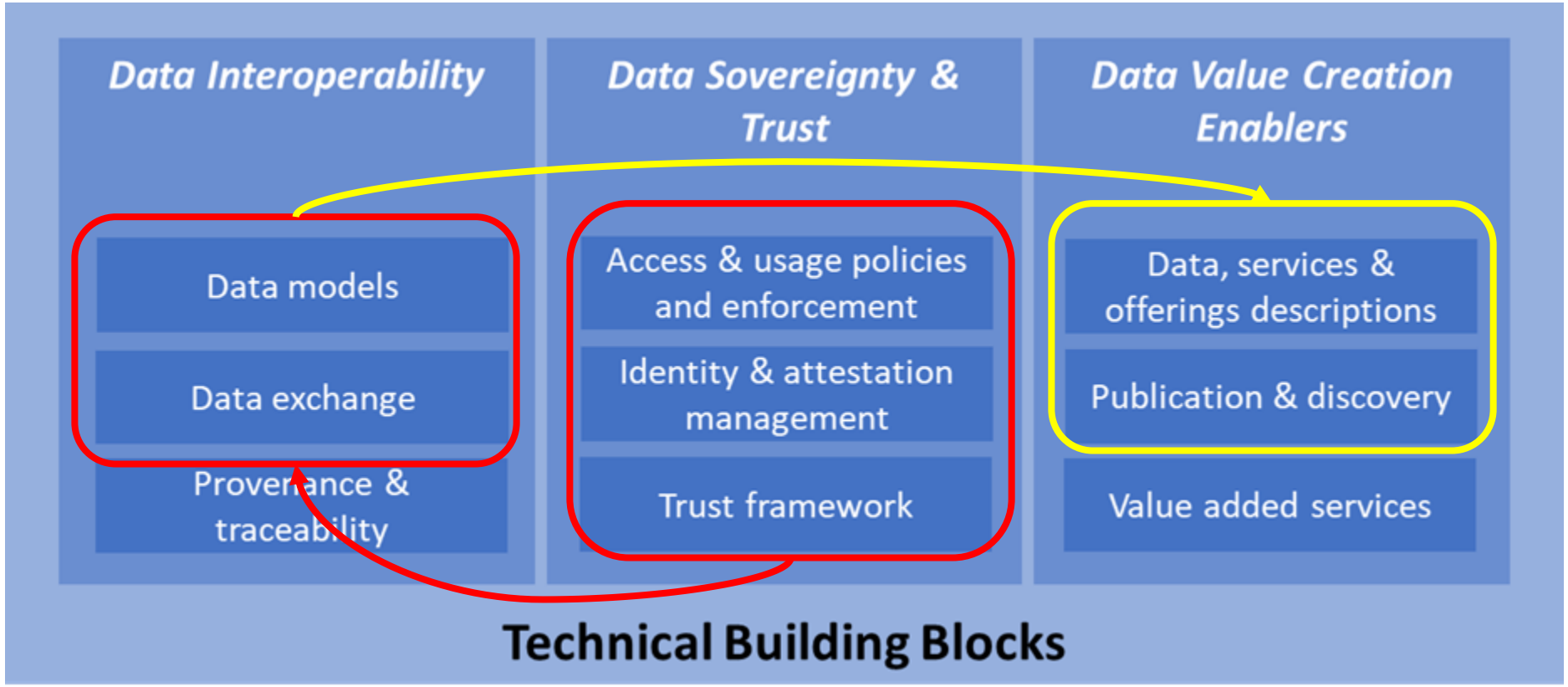

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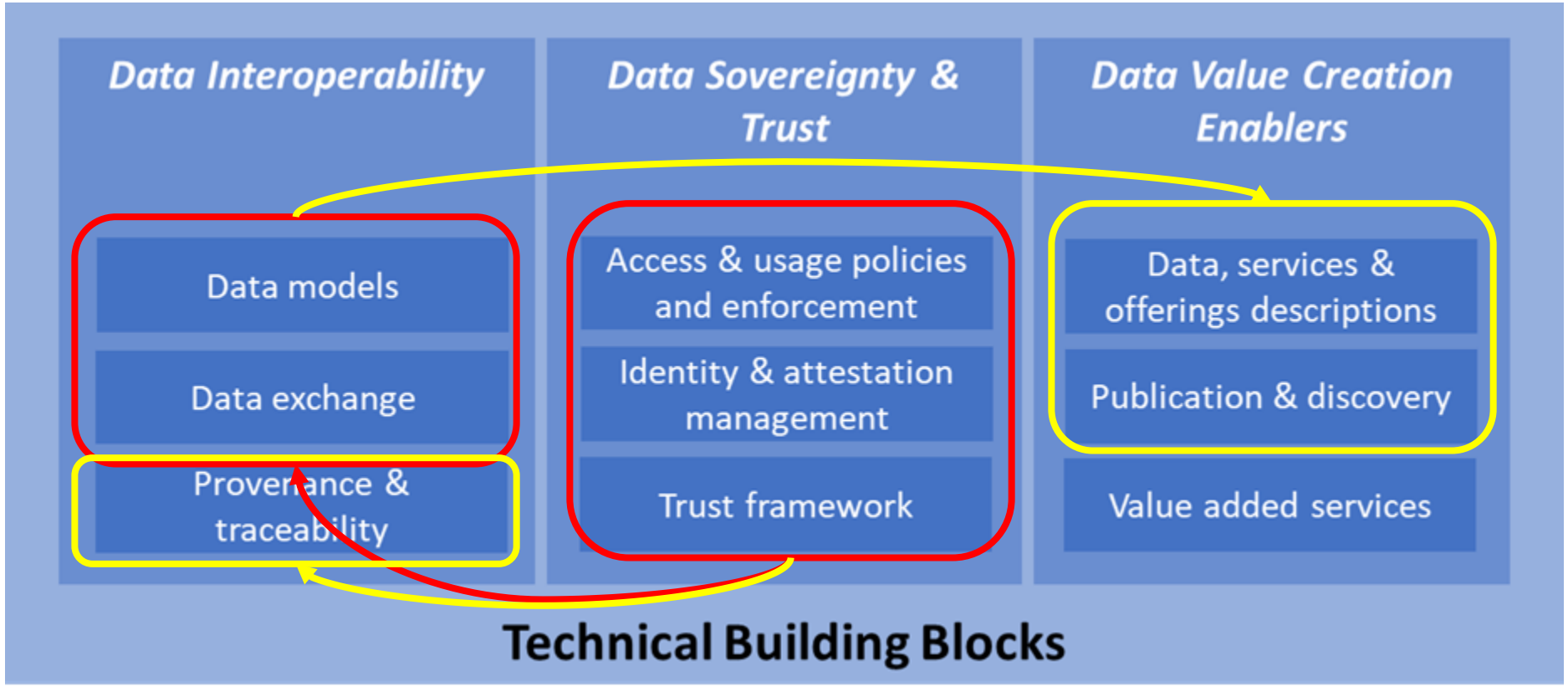


FIWARE Data Space Connector components

FDSC Open source available at:
https://github.com/FIWARE-Ops/data-space-connector
It provides:

- Identity management W3C DID VC/VP
- Compliant with SIOPv2 / OIDC4VP protocols
- Data interchange based on NGSI-LD
- Attribute-based access control (ABAC) following an XACML P*P architecture
- Trust Services aligned EBSI specifications
- Compliant with EU digital identity / Wallet
- Compliant with DSBA recommendations
- Based on existing components

Used in multiple data spaces (i4Trust, DSCaaS, DOME, Citcom.ai, etc)

Smart Data Models initiative

Smart Data Models is a collaborative program to provide data models for digital twins and data spaces

- Free and open-licensed data models for digital market (0€ cost)
- Multisector
- Based on real use cases and adopted open standards. Collaborative.
- At market speed
- Customizable to local needs
- Compatible with linked data

Available at https://smartdatamodels.org
Repository at https://github.com/smart-data-models

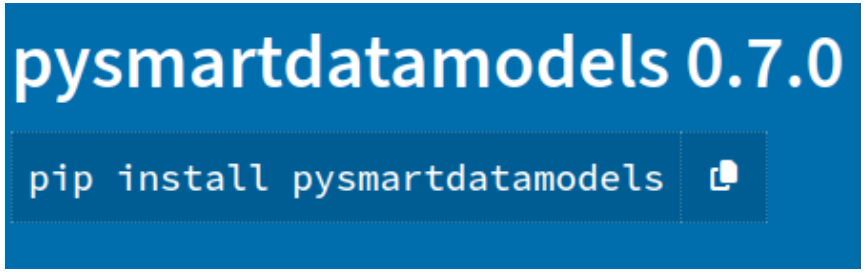
Smart Data Models for Data spaces

pysmartdatamodels python package includes 1.000 DM and 156.000 terms
It manages data models' assets with *23* functions including:

- Inserting compliant data in a context broker
- Listing any asset (names, definitions, types)
- Fuzzy search
- Generation of data model compliant examples
- Update from central repository
- Extends information beyond DCAT catalogue limitations (structure)
- Provides support for creating new DM on the fly

Soon:

- Manage your own data models (private)
- Check compliance with Data Models
- Contribute your data models



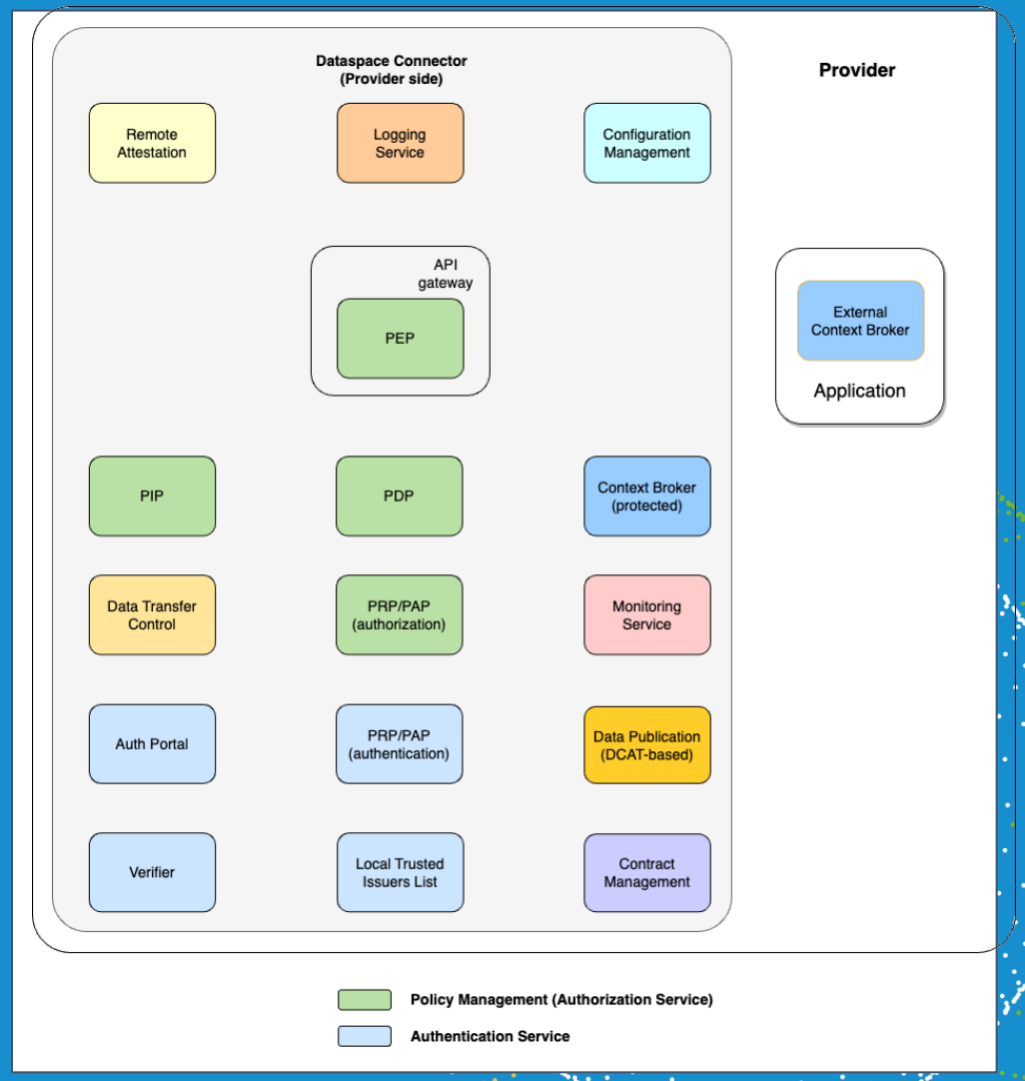
- Open source
- Fully documented
- Possible stand alone

- Available https://pypi.org/project/pysmartdatamodels/
- 104 stars
- 52 forks

Summary

FIWARE components provides the foundations for running data space:

- Based on open source technology
- Based on already proved components
- Compliant with standards
- Beyond some limitations DCAT

pysmartdatamodels 0.7.0

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pip install pysmartdatamodels
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