



Lebeau Frederic

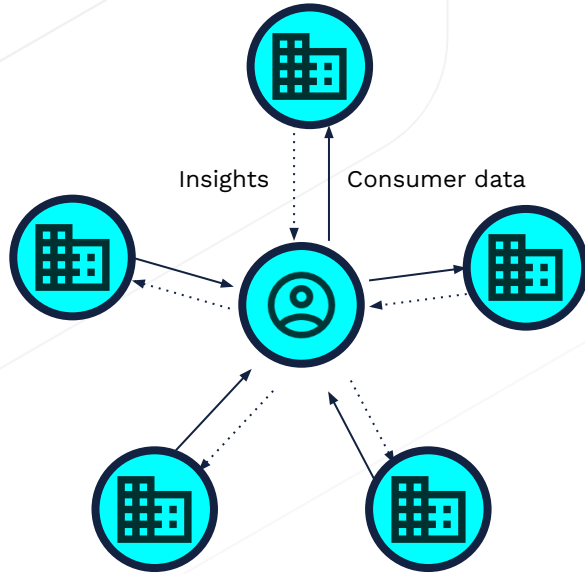
Co-founder  **Datavillage**

Background in IT Innovation, IT management,
architecture, open banking & cyber security

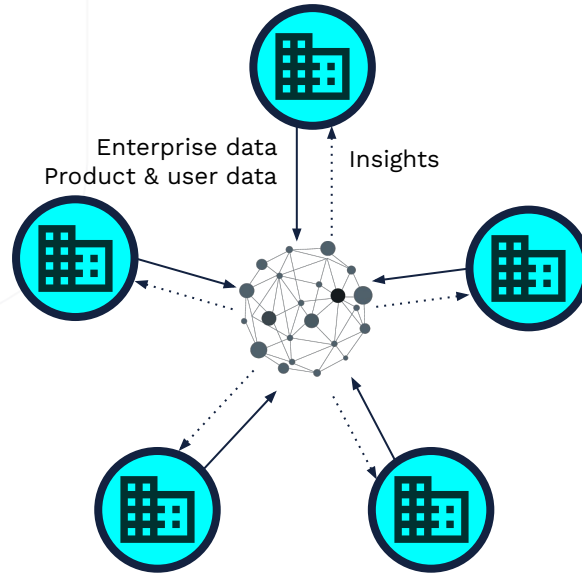
Data spaces

Different models

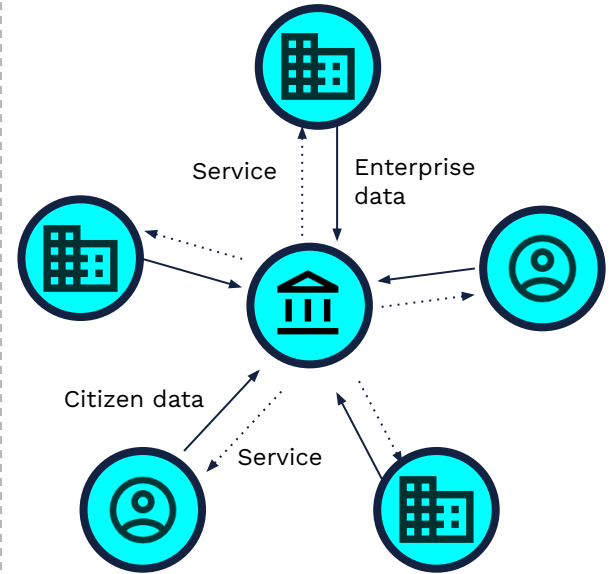
Consumer functionalities



Business functionalities



Public functionalities



Key technical challenges

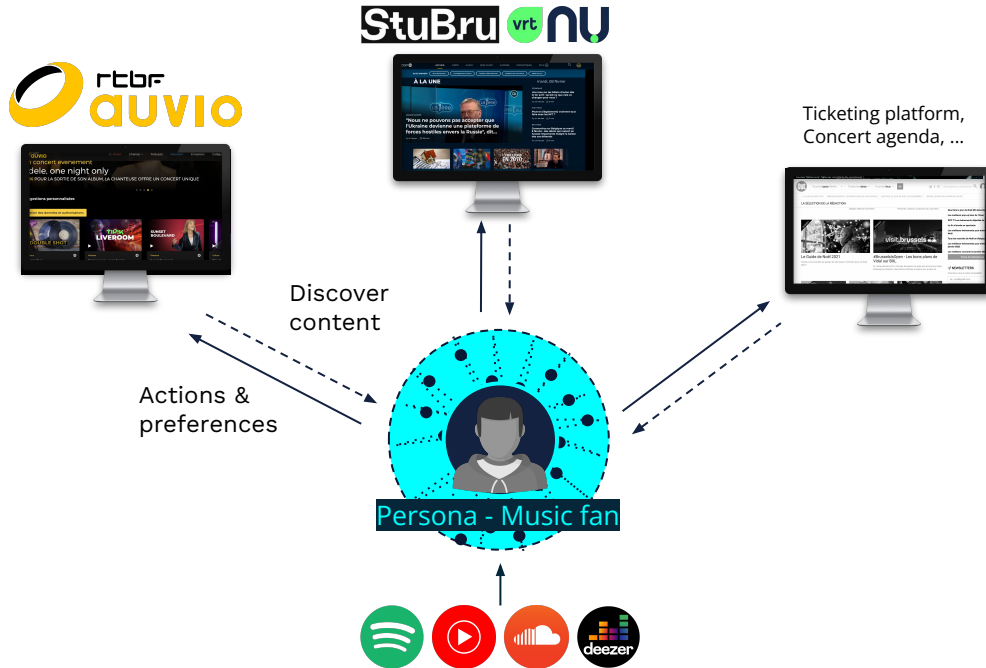
- How to enable data interoperability and align data access policies?
- How to manage the data lifecycle between multiple actors and bring transparency ?
- How to protect product data and algorithm integrity ?
- How to keep user privacy ?
- How to ensure data provenance and traceability ?



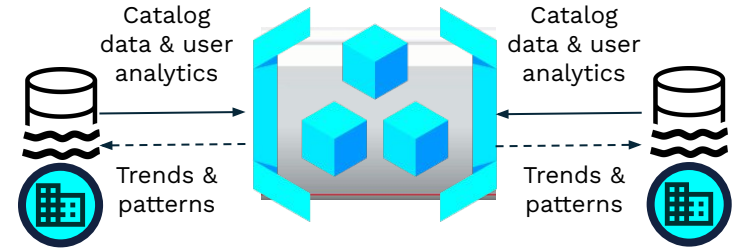
Foster trust and maximize the value of data sharing

Examples

- 1 Consume online content on multiple platforms with your own reputation, identity and history



- 2 Media companies to better understand consumers needs in catalog offerings



Technical building blocks

Highlighting the capabilities required to support examples

DATA SERVICES	Data Analytics Engine	Data Visualisation	<div>1</div> <div>2</div> Workflow mgt Engine
DATA VALUE	<div>1</div> <div>2</div> Metadata & Discovery protocols	Publication & marketplace services	<div>2</div> Data Usage Accounting
INTEROPERABILITY	<div>1</div> <div>2</div> Data models & formats	<div>1</div> <div>2</div> Data exchanges APIs	<div>1</div> <div>2</div> Provenance and traceability
TRUST	<div>1</div> <div>2</div> Identity management	<div>1</div> <div>2</div> Trusted exchanges	<div>1</div> <div>2</div> Access & Usage control /policies
SW INFRA	System Adaptation	<div>1</div> <div>2</div> Data routing & preprocessing	<div>1</div> <div>2</div> Data Processing

Challenges, building blocks and solutions

Interoperability & data access policies

Data Analytics Engine	Data Visualisation	Workflow mgt Engine
Metadata & Discovery protocols	Publication & marketplace services	Data Usage Accounting
Data models & formats	Data exchanges APIs	Provenance and traceability
Identity management	Trusted exchanges	Access & Usage control /policies
System Adaptation	Data routing & preprocessing	Data Processing

Combine market ontologies for data interoperability. Enrich with open data.

Leverage agreed-upon ontologies and linked data to translate data access policies with the right granularity (example for user data)

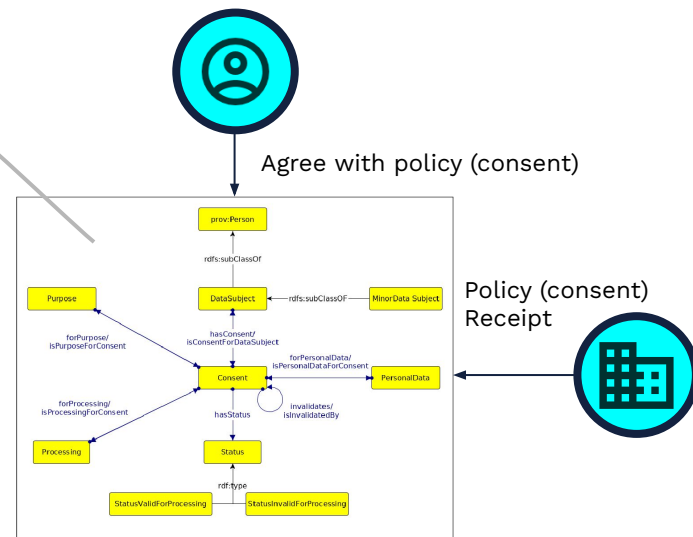
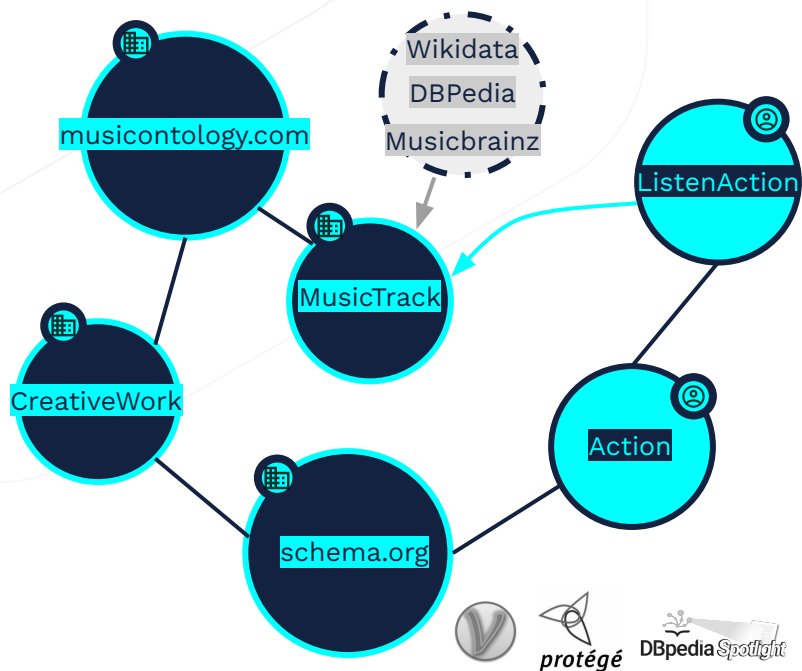
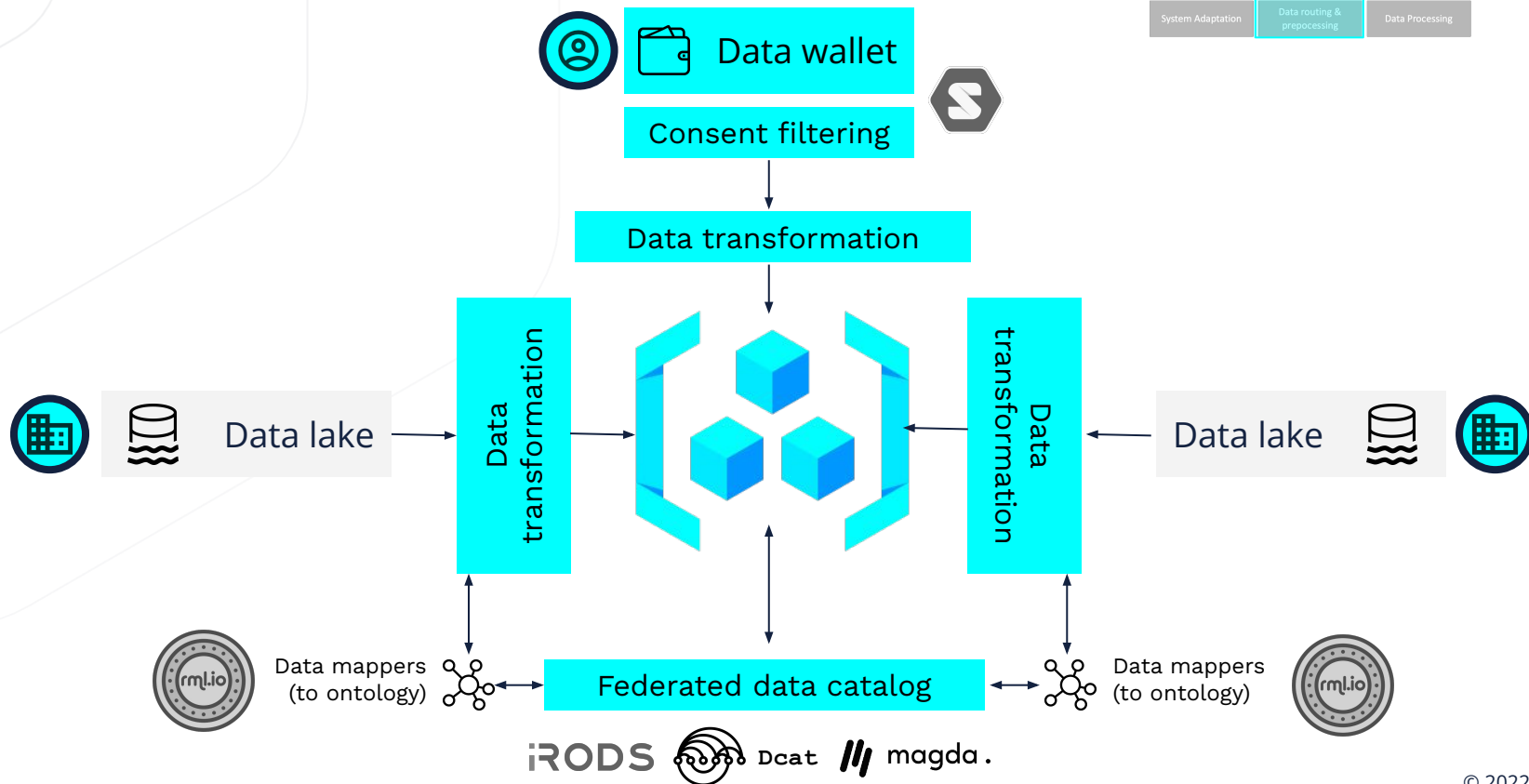


Fig. 1: Overview of the GConsent core ontology

Challenges, building blocks and solutions

Data lifecycle & transparency

Data Analytics Engine	Data Visualisation	Workflow mgt Engine
Metadata & Discovery protocols	Publication & marketplace services	Data Usage Accounting
Data models & formats	Data exchanges APIs	Provenance and traceability
Identity management	Trusted exchanges	Access & Usage control /policies
System Adaptation	Data routing & preprocessing	Data Processing



Challenges, building blocks and solutions

Data processing & trust

Data Analytics Engine	Data Visualisation	Workflow mgt Engine
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Trusted Execution Environment



Sandboxed environment

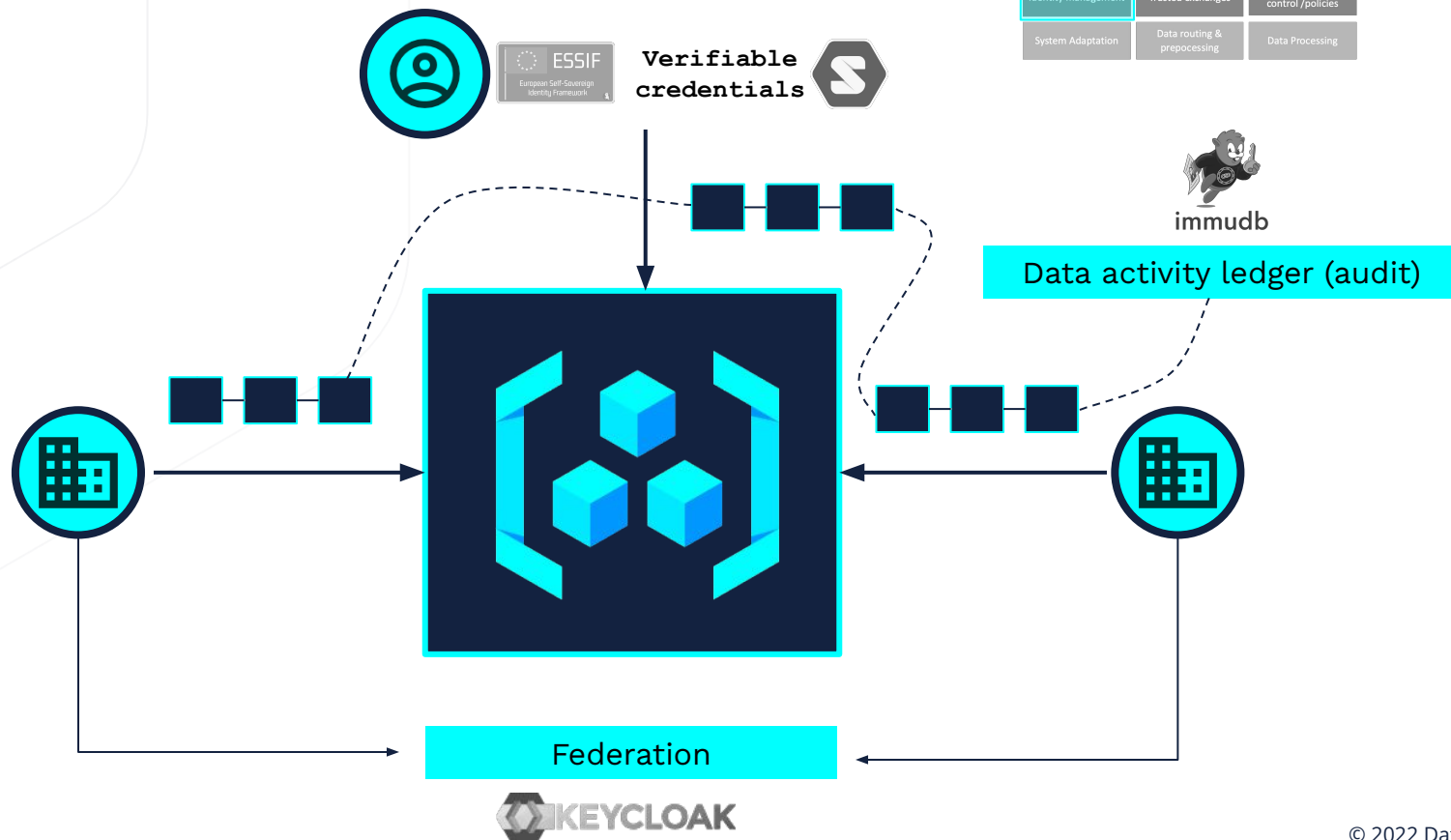


NGINX

Challenges, building blocks and solutions

Data provenance & traceability

Data Analytics Engine	Data Visualisation	Workflow mgt Engine
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Take aways

- ✓ Data sharing can be straightforward and safe
- ✓ Keep in mind the goal not the mean
- ✓ Learning and opportunities come with practice
- ✓ Better together than alone

Thank you

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