Towards an Architecture for Policy-Aware Decentral Dataset Exchange

Sebastian Neumaier[1] , Giray Havur[1,2], Tassilo Pellegrini[1]

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Resume of the Presenter

Giray Havur

HIGHER EDUCATION

2014 – present	PhD in Computer Science, Vienna University of Economics and Business, Vienna, Austria, Supervisors: Prof. Axel Polleres and Prof. Jan Mendling.
2011 – 2014	M.Sc. in Computer Science, Sabancı University, Istanbul, Turkey, Supervisor: Dr. Yücel Saygın.
2007 – 2011	B.Sc. in Computer Engineering, Middle East Technical University, Ankara, Turkey.

APPOINTMENTS/ POSITIONS

|	
2014 – present	Researcher, Institute of Information Business, Vienna University of Economics and Business, Vienna, Austria. - IKT der Zukunft, SHAPE (10.2014 – 03.2017) - IKT der Zukunft, DALICC (03.2017 – 03.2019) - Horizon 2020, SPECIAL (07.2019 – 12.2019)
2017 – present	Researcher, Siemens Austria, Vienna, Austria. - Leitprojekt, DMA (01.2018 – 09.2019)
2011 – 2014	Researcher, Cognitive Robotics Laboratory, Sabancı University, Istanbul, Turkey.

A Data Sharing Environment
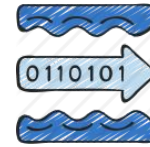
Software libraries

Datasets

Data streams
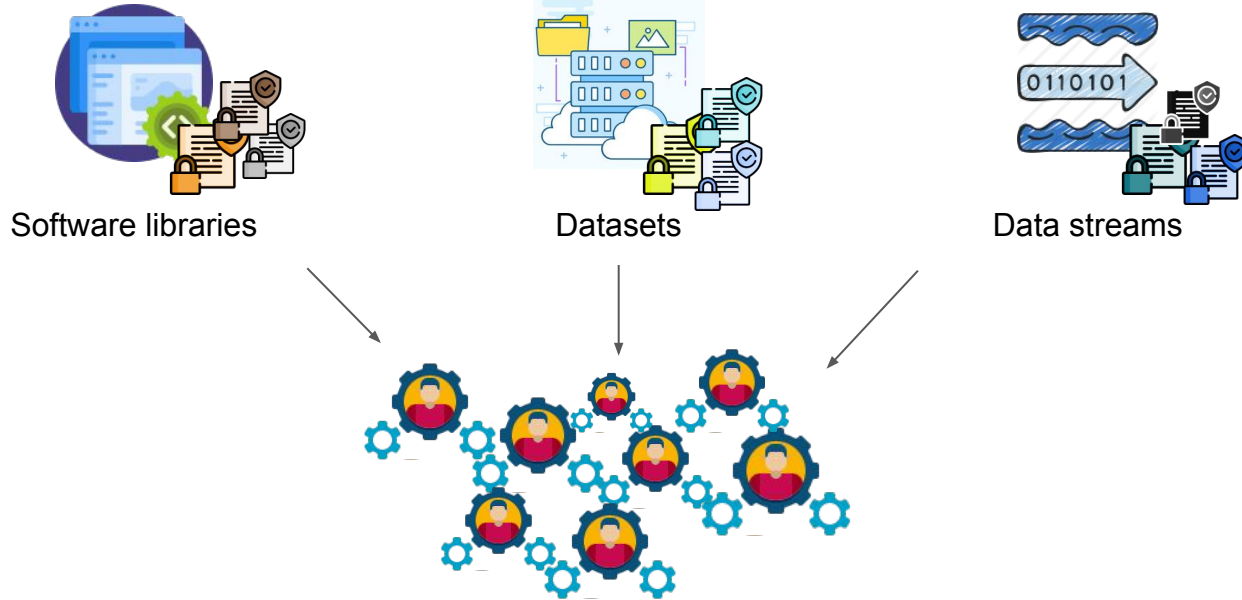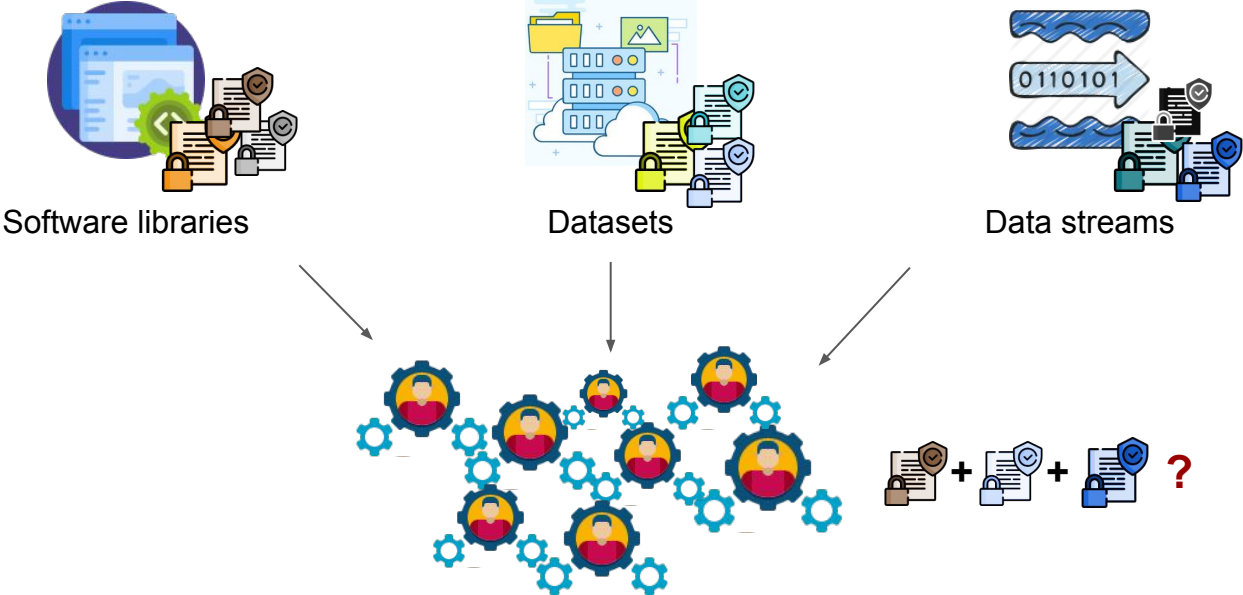
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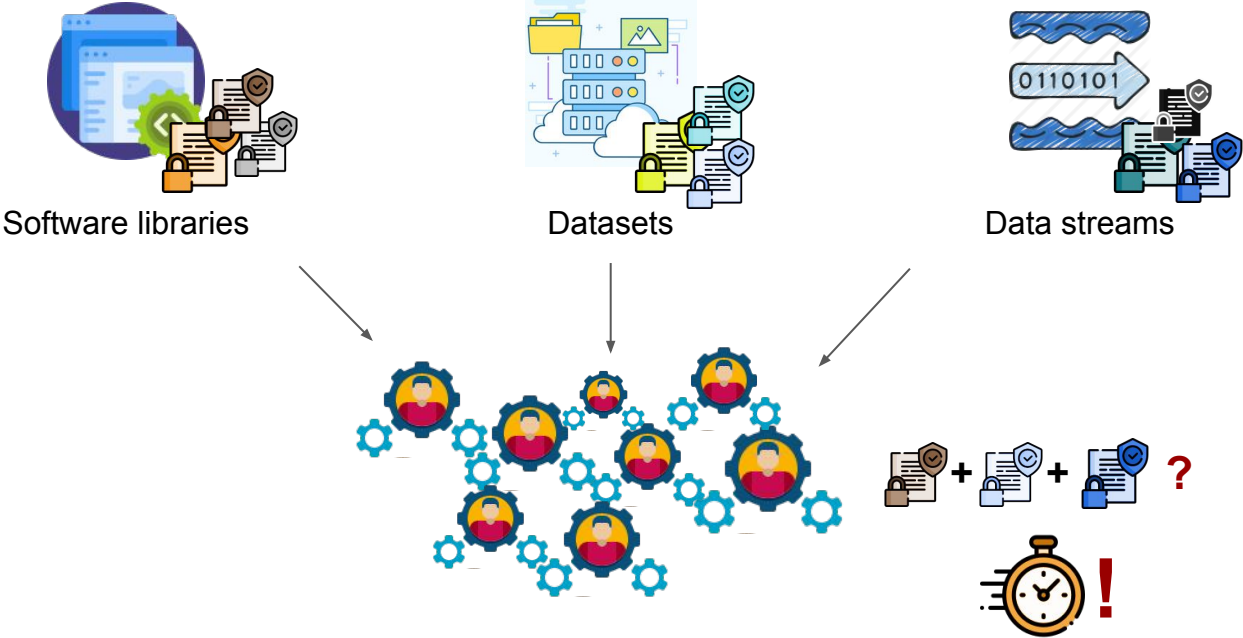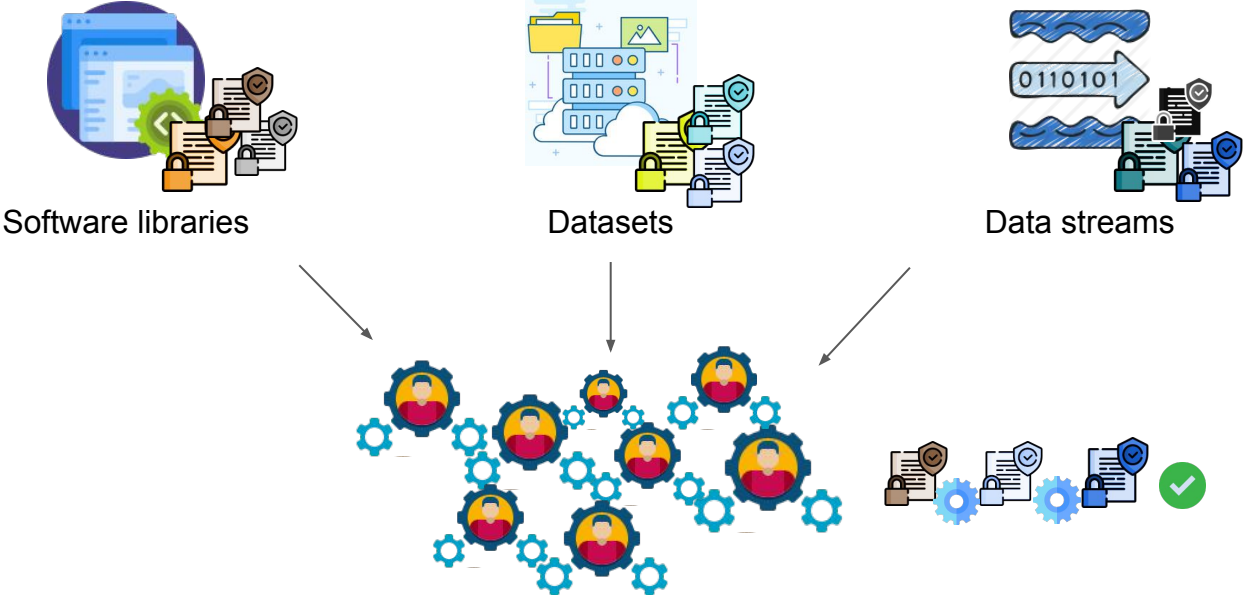
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Problems Identified in Data Sharing Environments

Data user's perspective
- a massive information overload and high efforts,

- a lack of interoperability between policies due to dependent frameworks,

- a loss of transparency and control over data,

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Data provider's perspective
- ensuring legal compliance and accountability to conform with regulations,

- including preferences of users into service and business model innovation,

- making use of data of users for service improvements and customer relationship.

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Key Challenges in Data Sharing Environments

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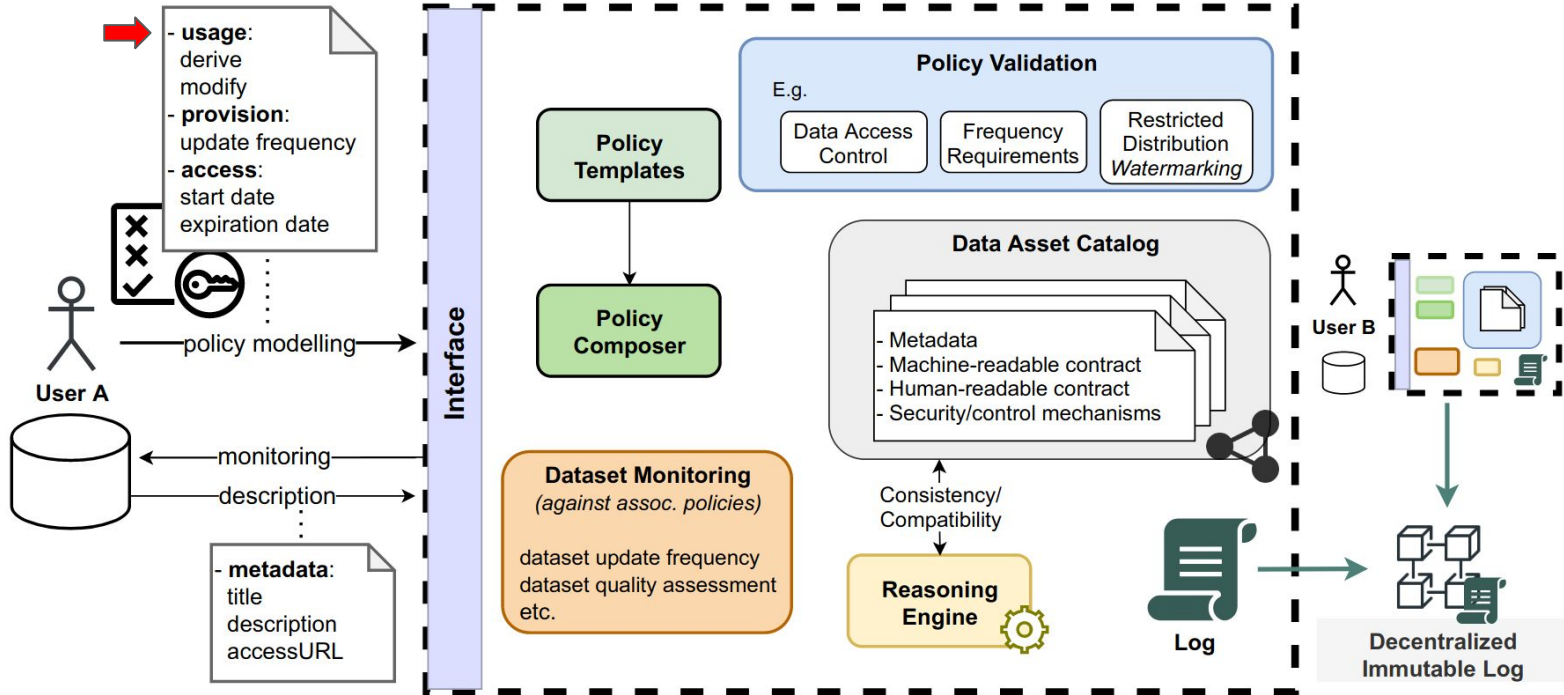
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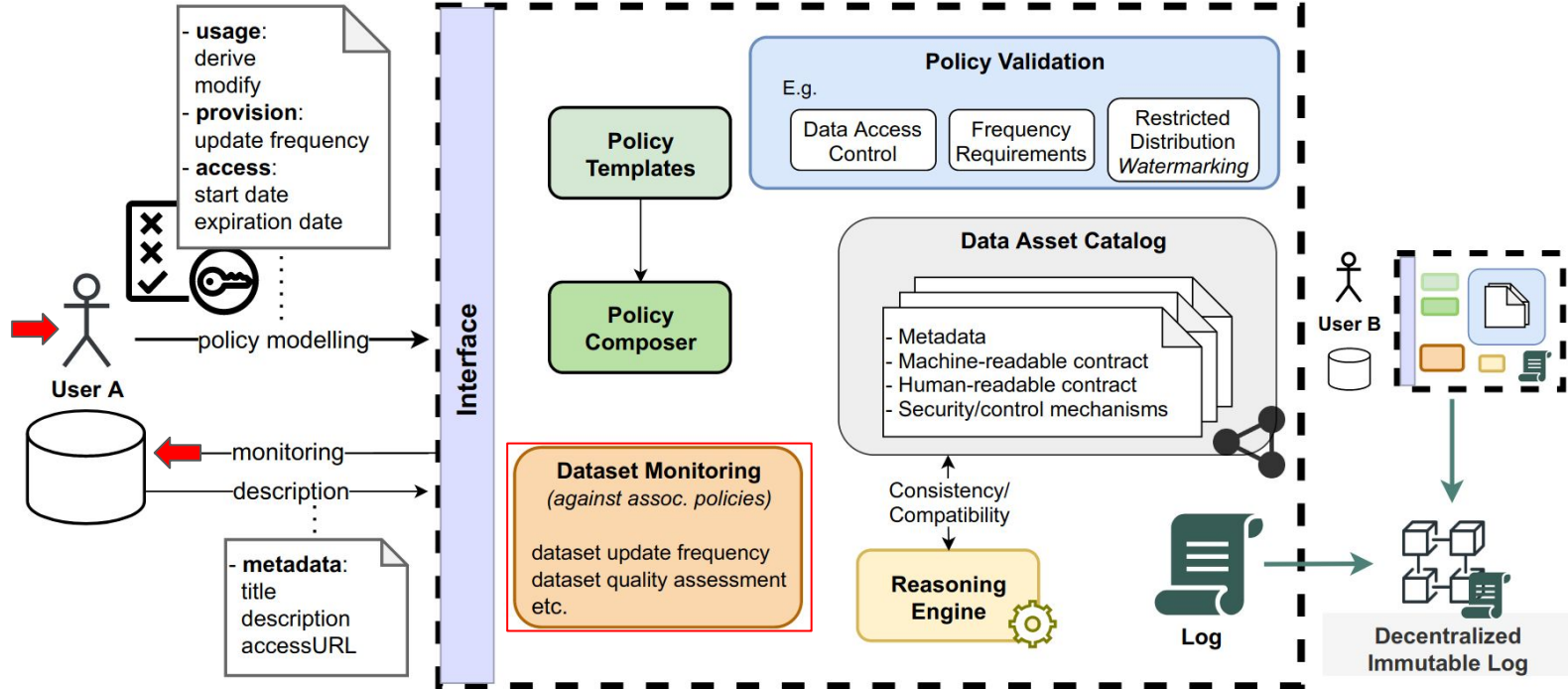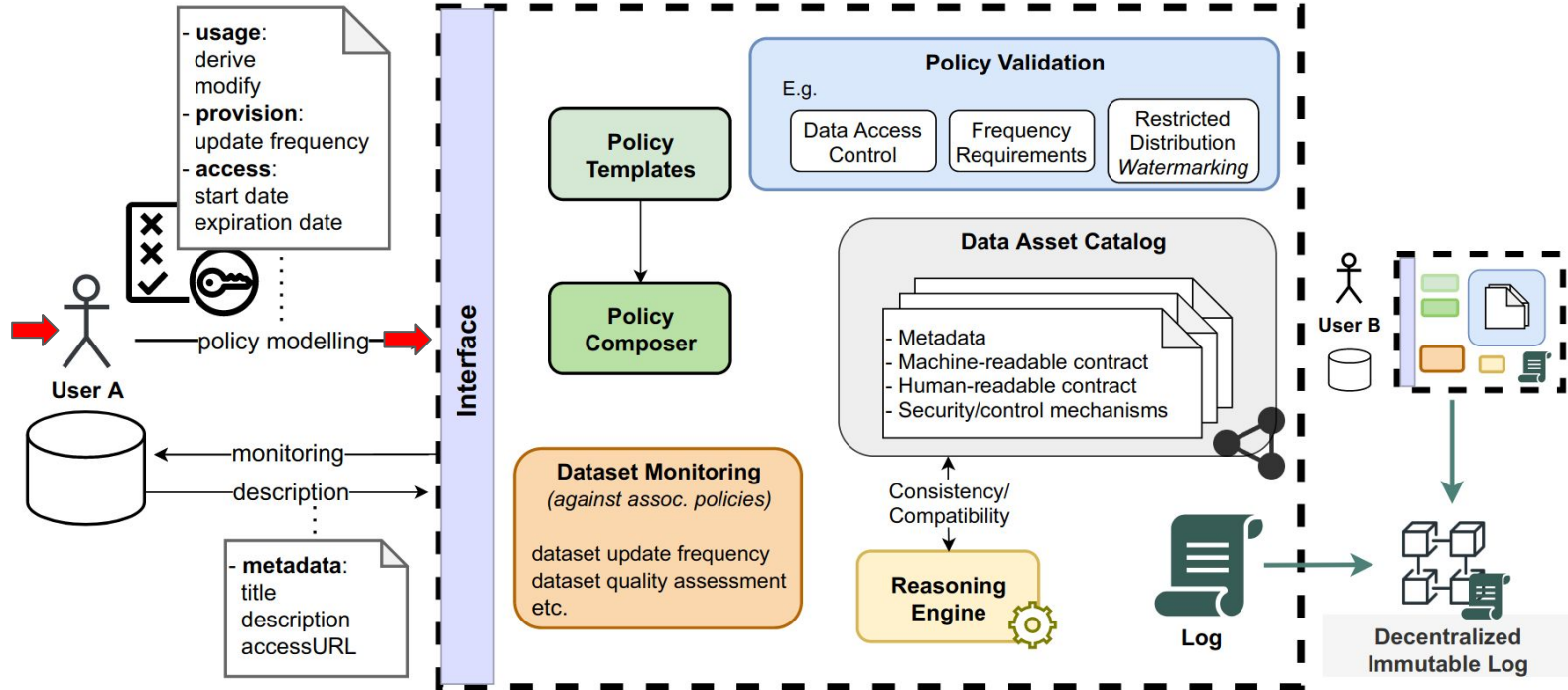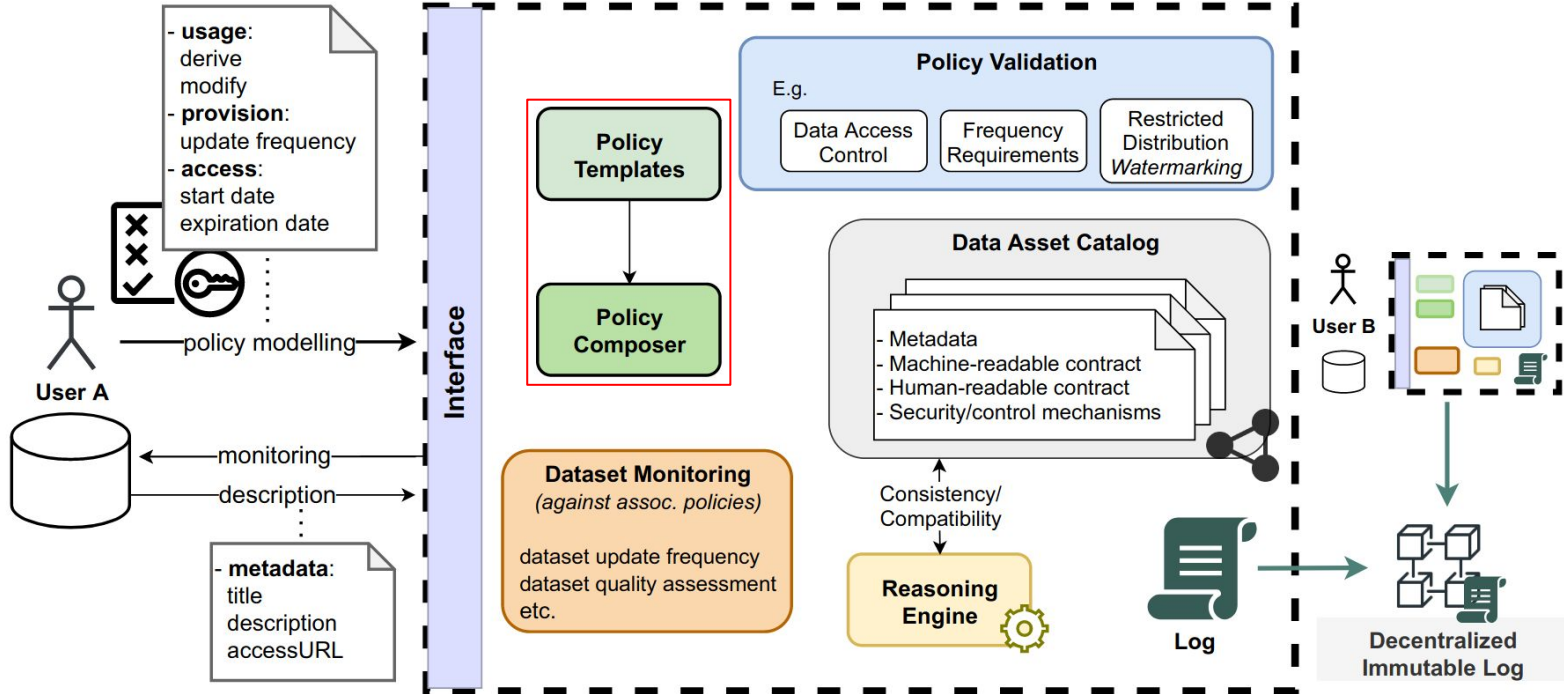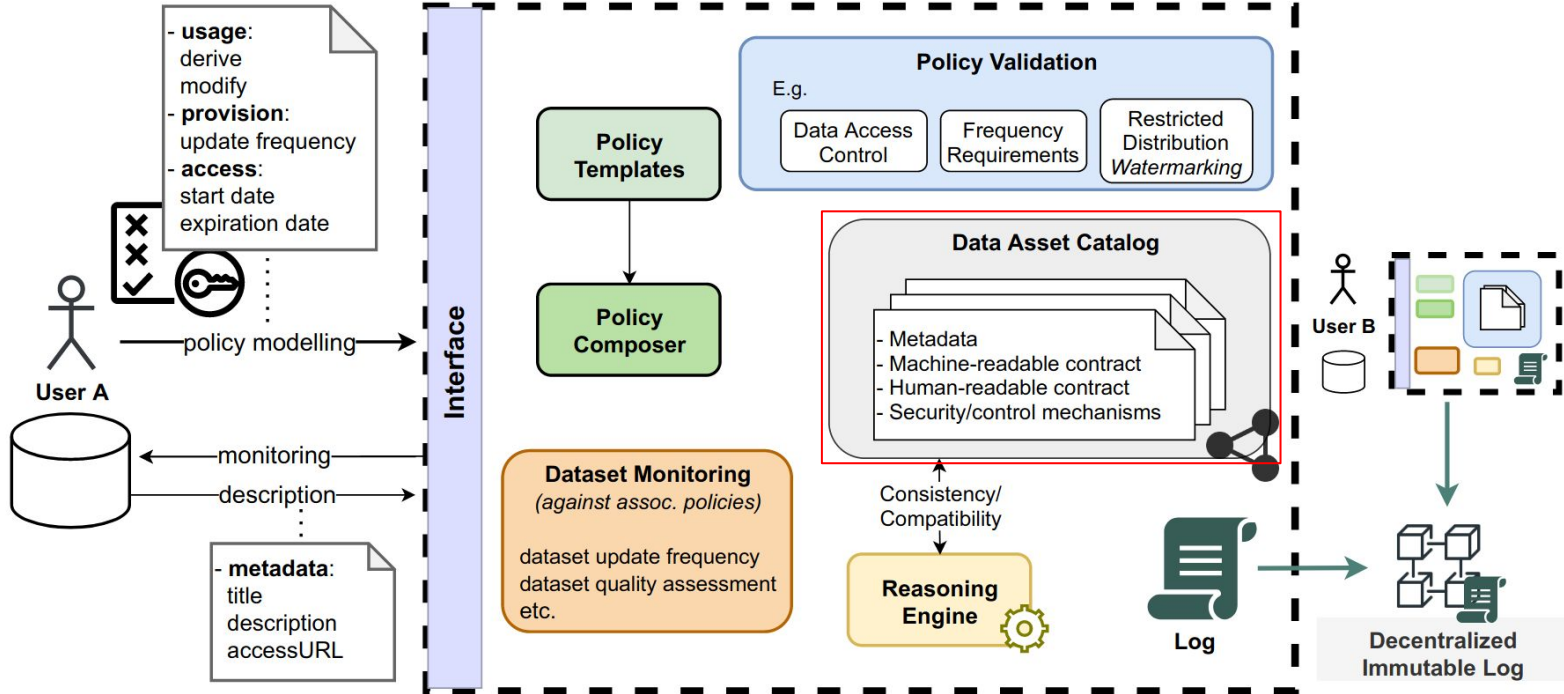*Challenge 5* – Towards a framework for decentral data exchange

Policy-aware Dataset Exchange Architecture
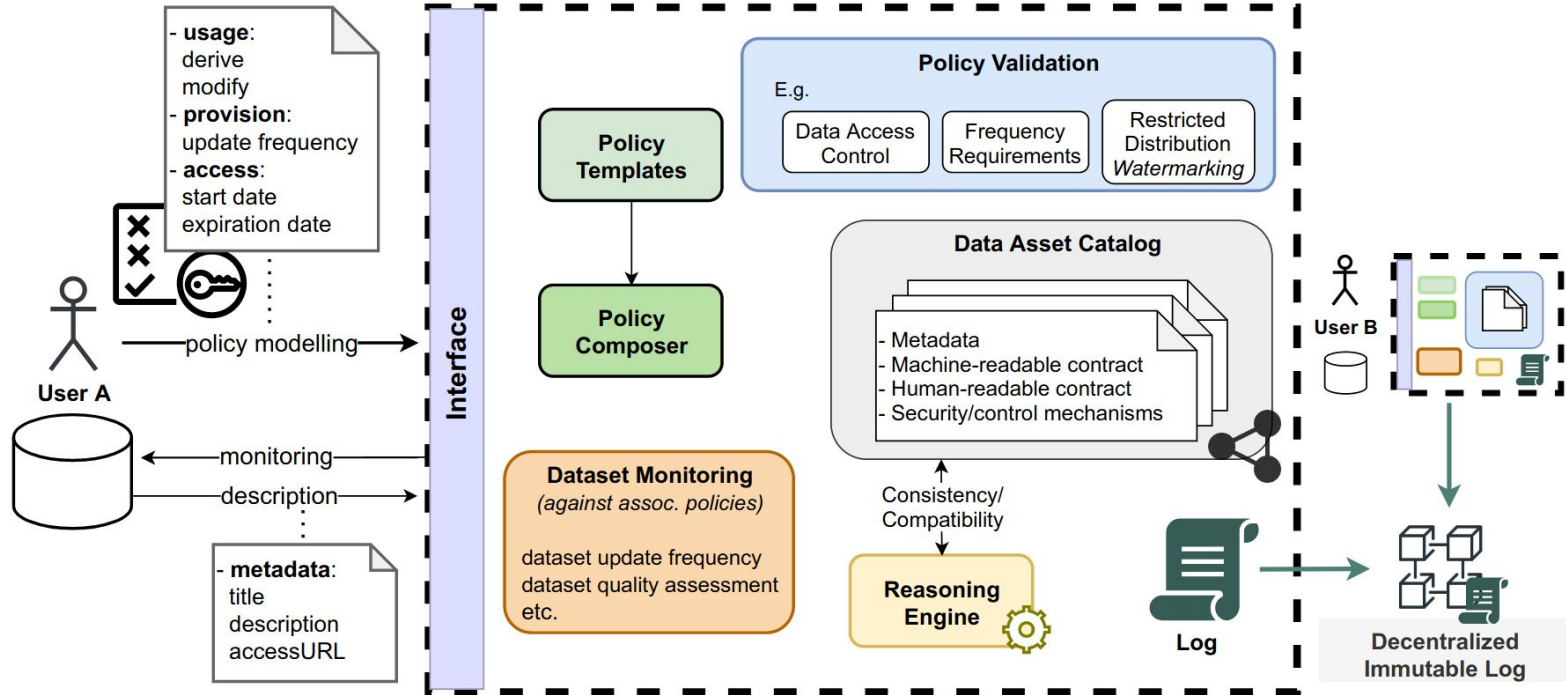
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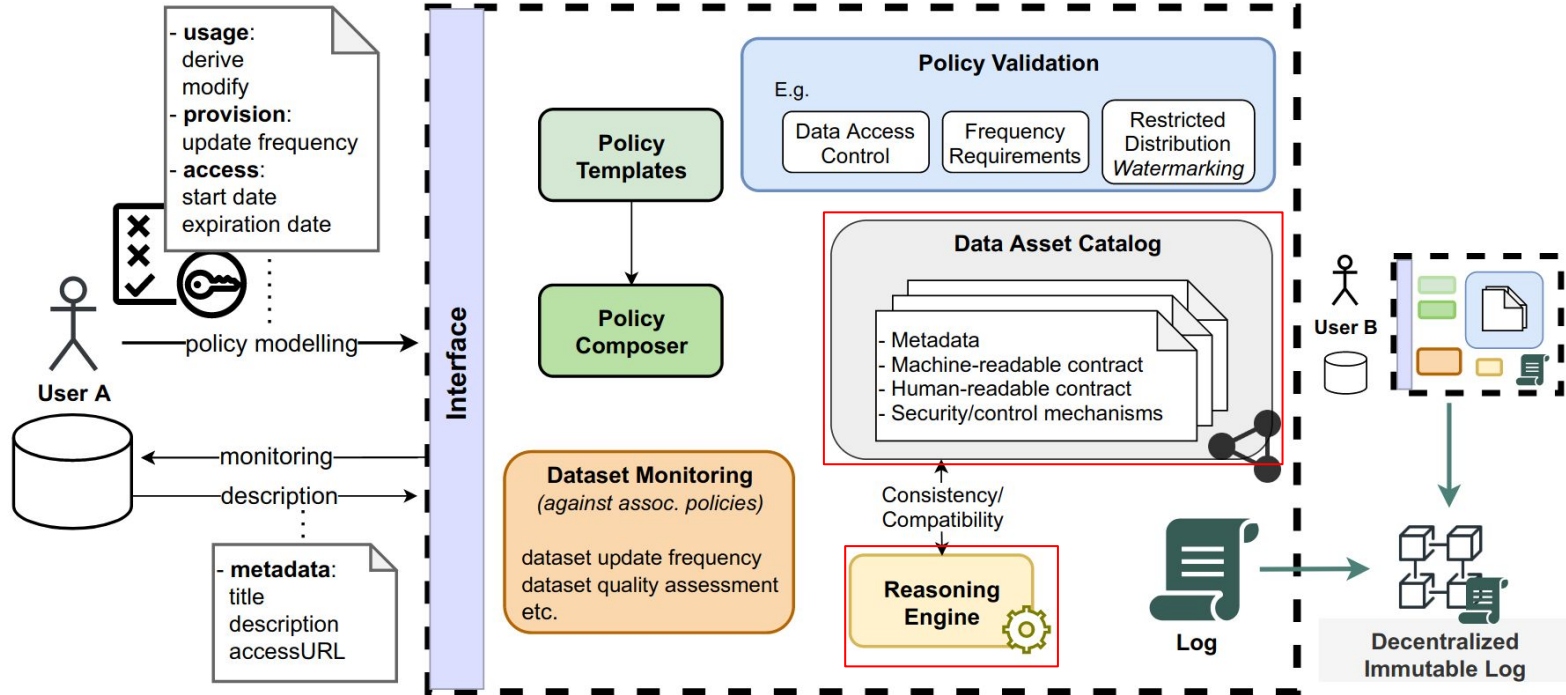# Policy-aware Dataset Exchange Architecture
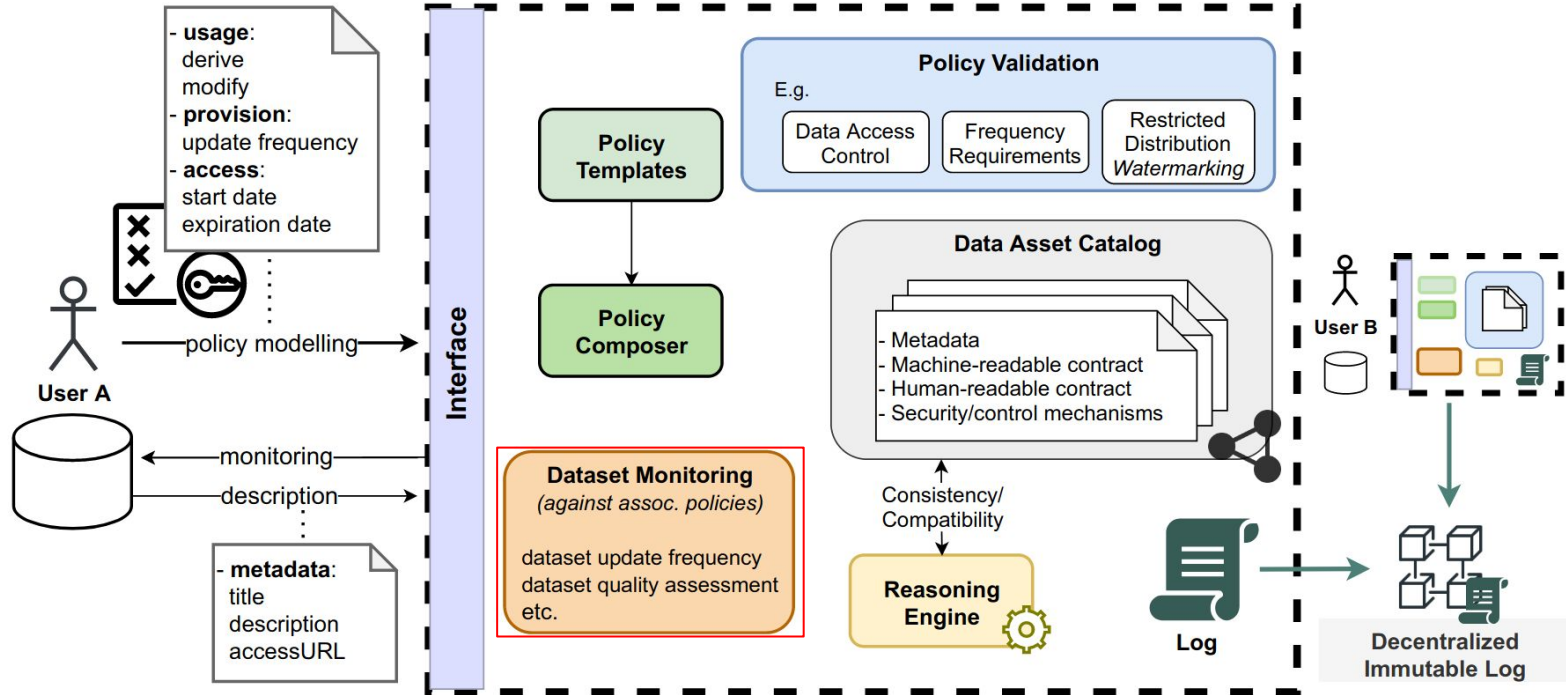
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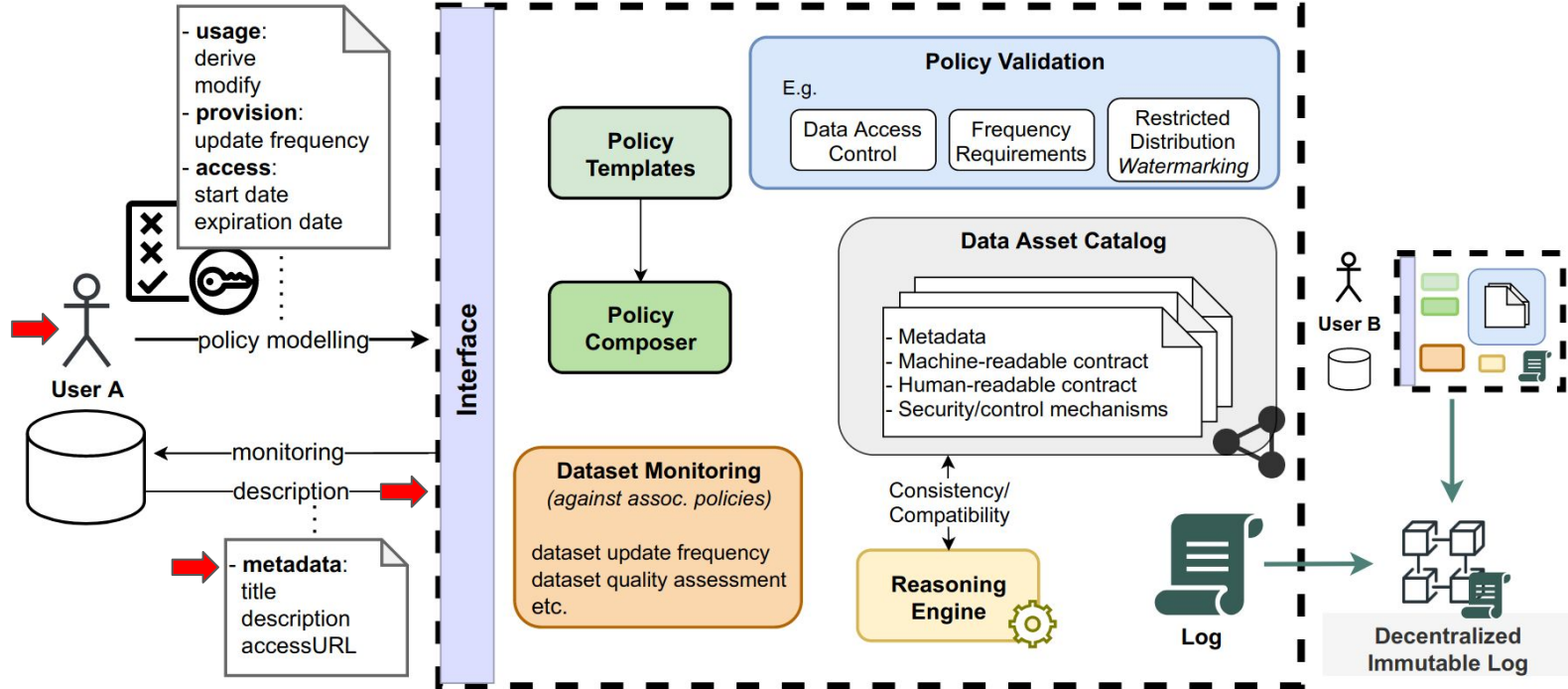
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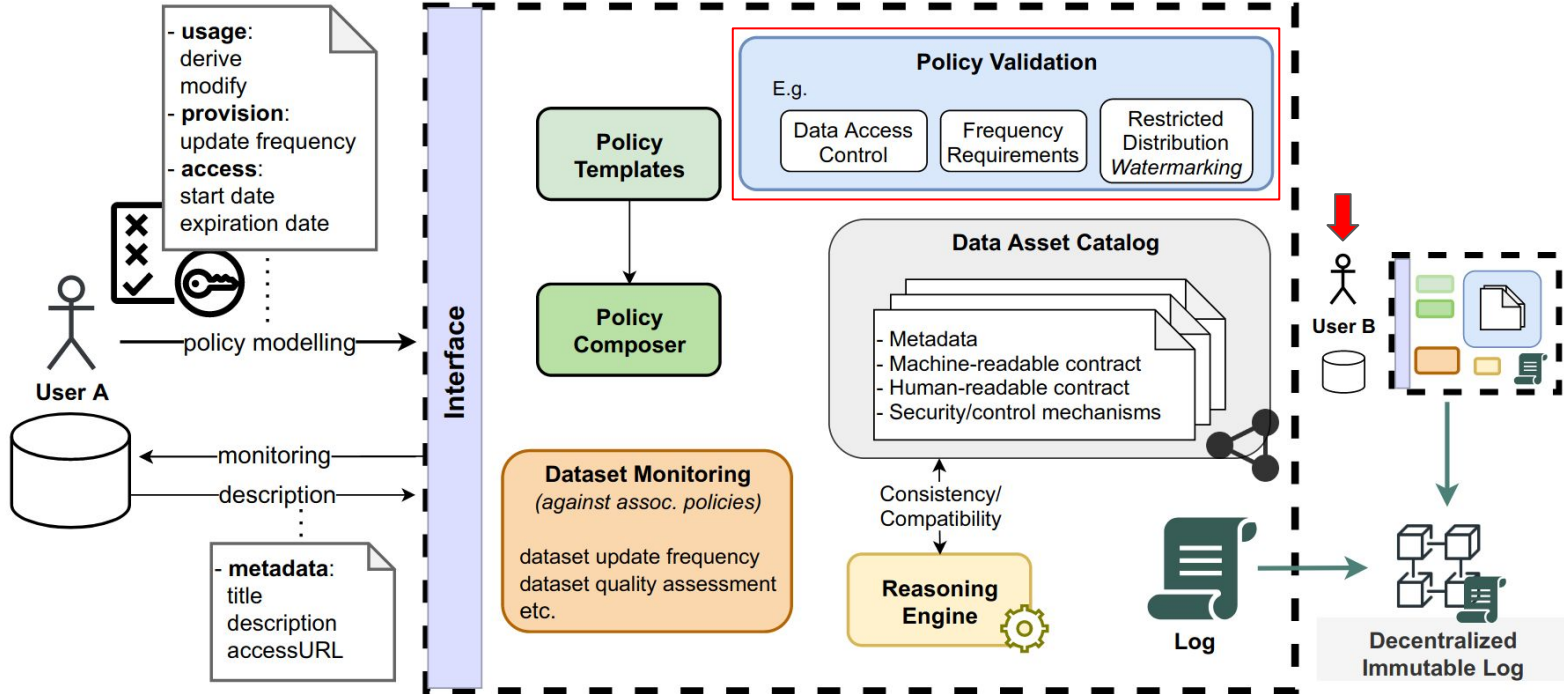# Policy-aware Dataset Exchange Architecture

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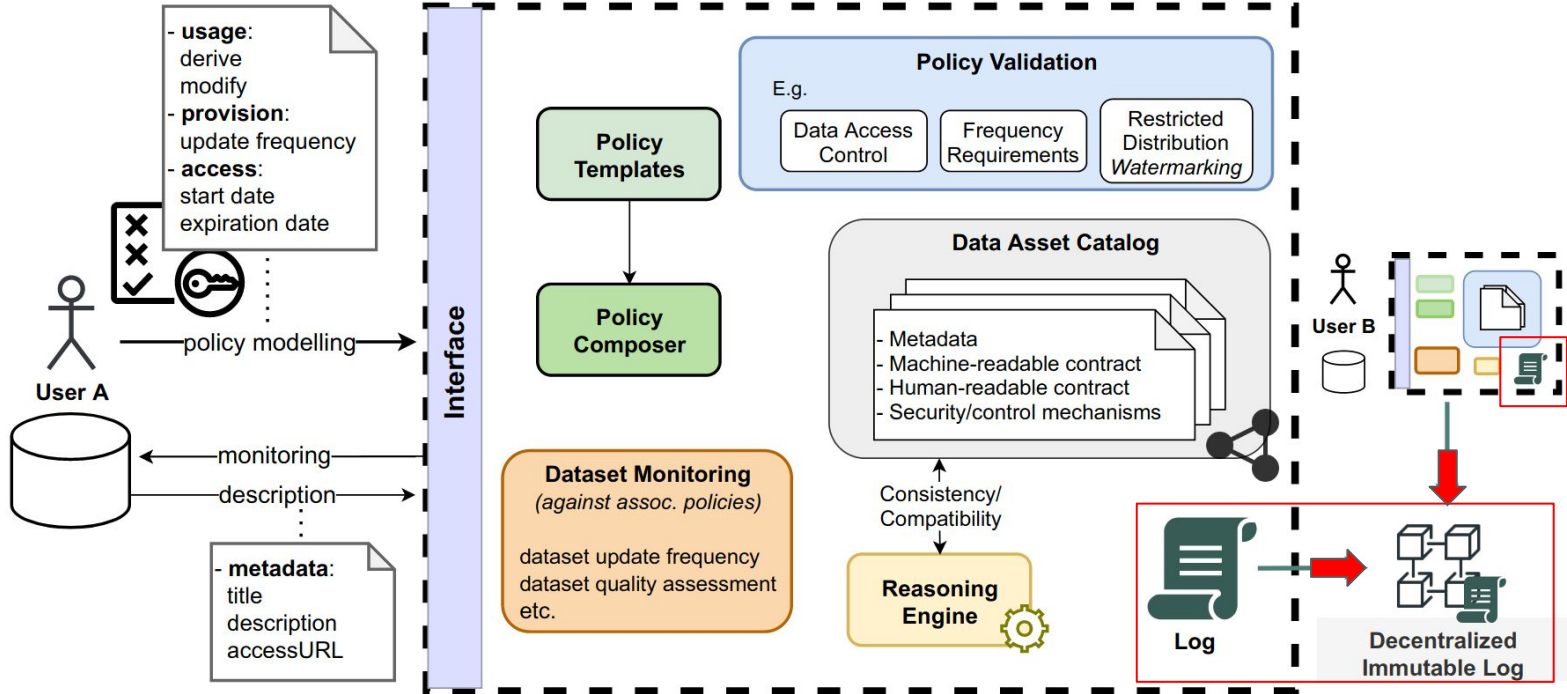# Policy-aware Dataset Exchange Architecture

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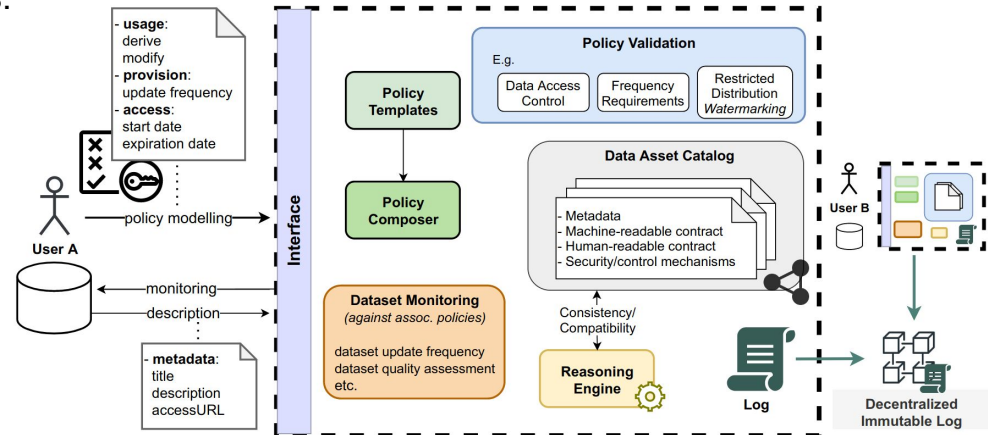# Policy-aware Dataset Exchange Architecture

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Conclusion

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  - data users, data service providers and third parties to define customised, machine-processable policies for data exchange,
  - automated clearance of policies,
  - validation of data provision and data quality agreements,
 - control of data restriction requirements.

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Future work

- developing a platform that uses the proposed architecture as blueprint.
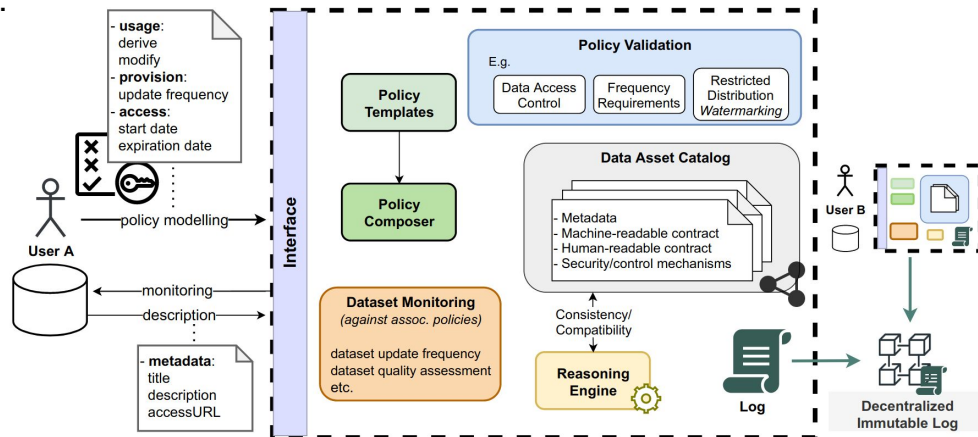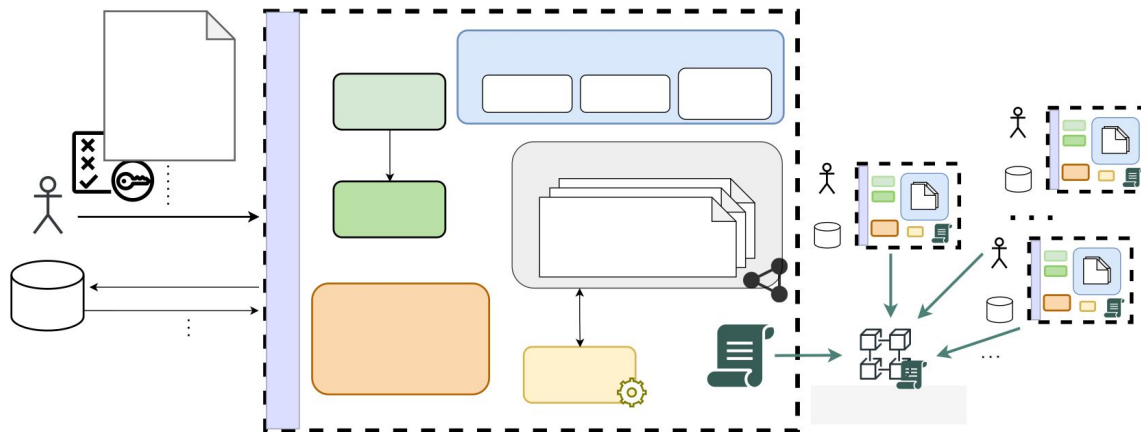
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Please send your questions, comments and feedback to:

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