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# Technologies for GDPR Compliance

## A Consent & Personal Data Management Framework



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### Motivation

- **Consent** under GDPR is one of the important legal basis.
- **Compliance** needs information about how consent and personal data is collected, used, stored, erased, and shared.
- **Documentation** of obligations required for compliance

### Potential Impact

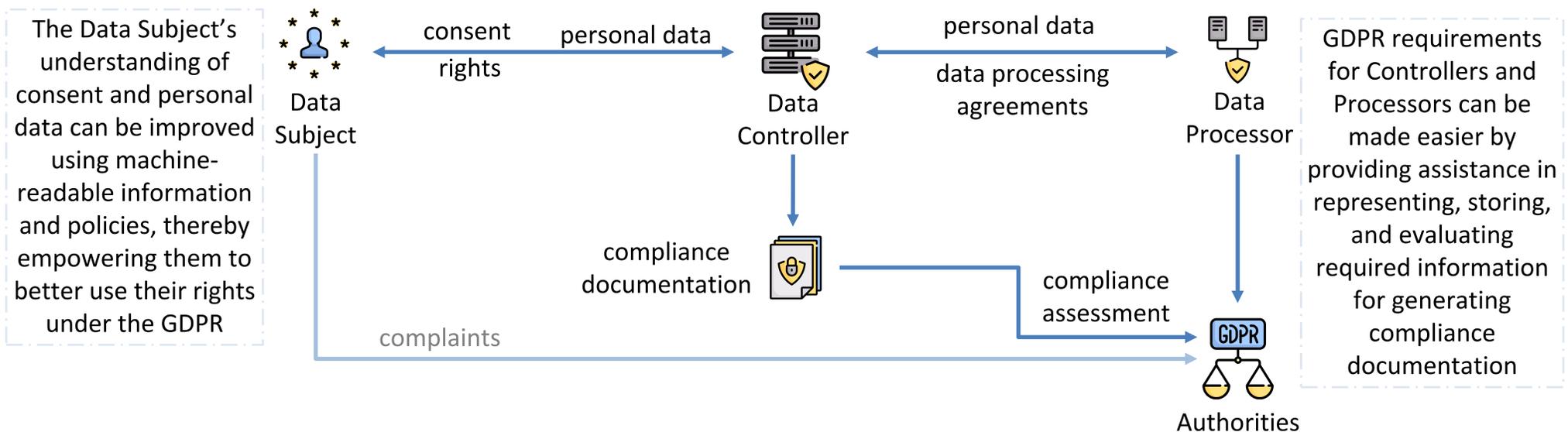
- Information management approach for GDPR Compliance
- Open & Interoperable mechanism fosters transparency
- Beneficial to all entities – data subjects, data controllers, data processors, and supervisory authorities

### Problem Statement

- 1) What information is required for GDPR Compliance regarding consent and personal data life-cycles?
- 2) How to best record, store, and query this information so as to assist in the GDPR Compliance process?

### Novelty of Work

- Provides link between GDPR Compliance & Data Governance
- Assists in maintaining and evaluating compliance information
- Solutions are open & interoperable based on semantic web standards and technologies



### Results and Discussion

- GDPR compliance involves multiple parties and thus benefits from an open and interoperable model
- Semantic Web technologies are best suited for this task being based in open standards and are extensible
- To date, we have developed representations for consent and provenance of data life-cycles
- We have also demonstrated creation of a knowledge-graph for compliance information that can be queried

### Future Work

1. Develop a test-based approach to ensure information required for compliance is present and in correct format
2. Create a tool to automate the generation of GDPR compliance documentation using machine-readable information
3. Participate in standardization of research through community channels such as DPVCG W3C group
4. Build a compliance framework based on developed open standards for collaboration with industry

### References

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 [4] "Modelling provenance for GDPR compliance using linked open data vocabularies" H. J. Pandit, D. Lewis. ISWC, 2017  
 [5] "GConsent: A Consent Ontology based on the GDPR" H. J. Pandit, C. Debruyne, D. O'Sullivan, D. Lewis. 2019.