



Privacy Receipts in Solid Pods

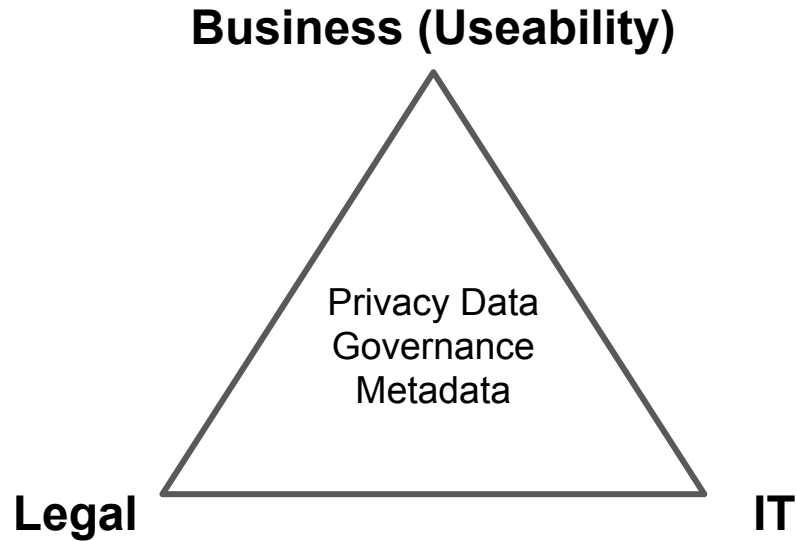
Beatriz Esteves
Jan Lindquist



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POLITÉCNICA
DE MADRID



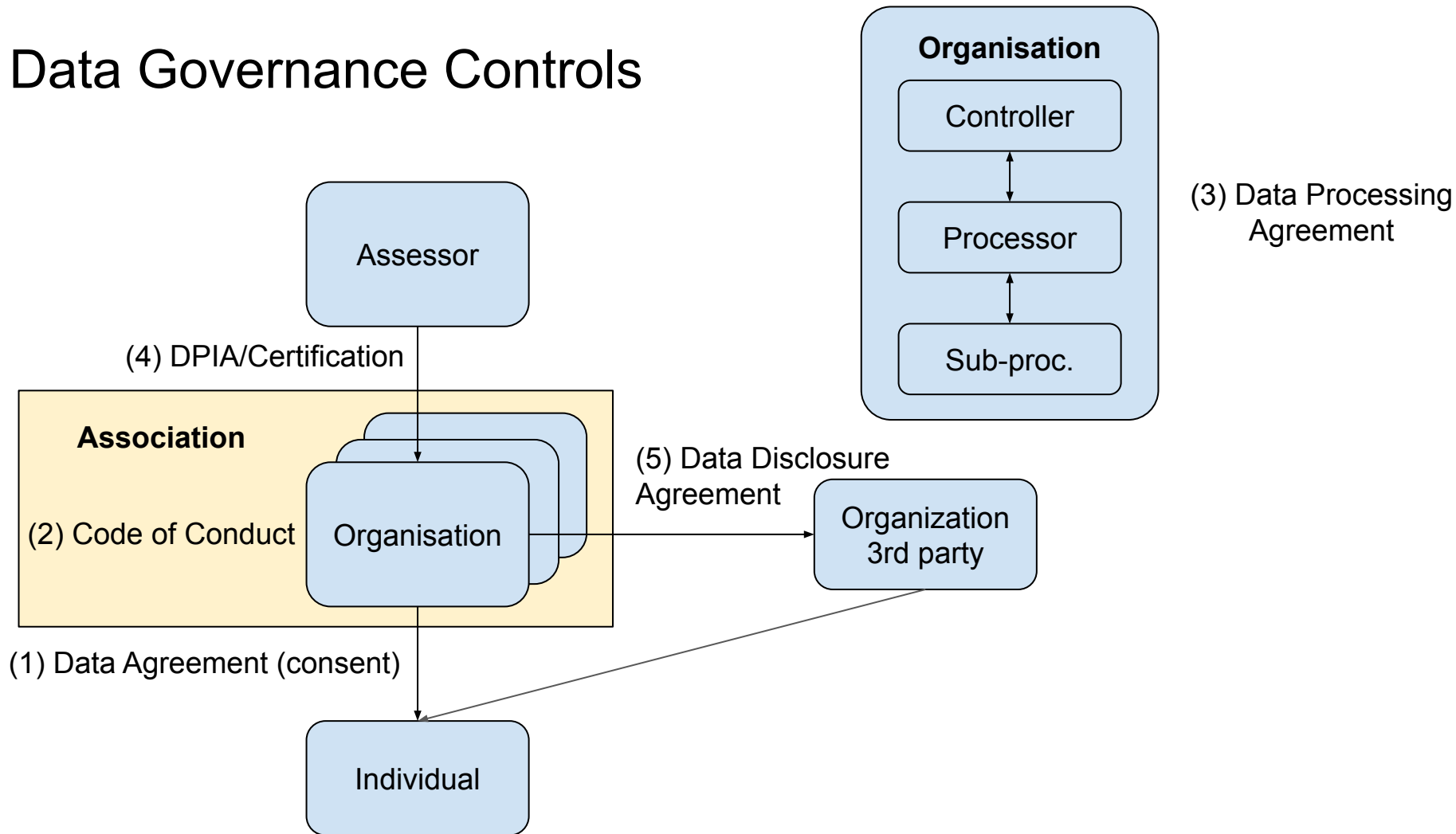
Challenges of alignment



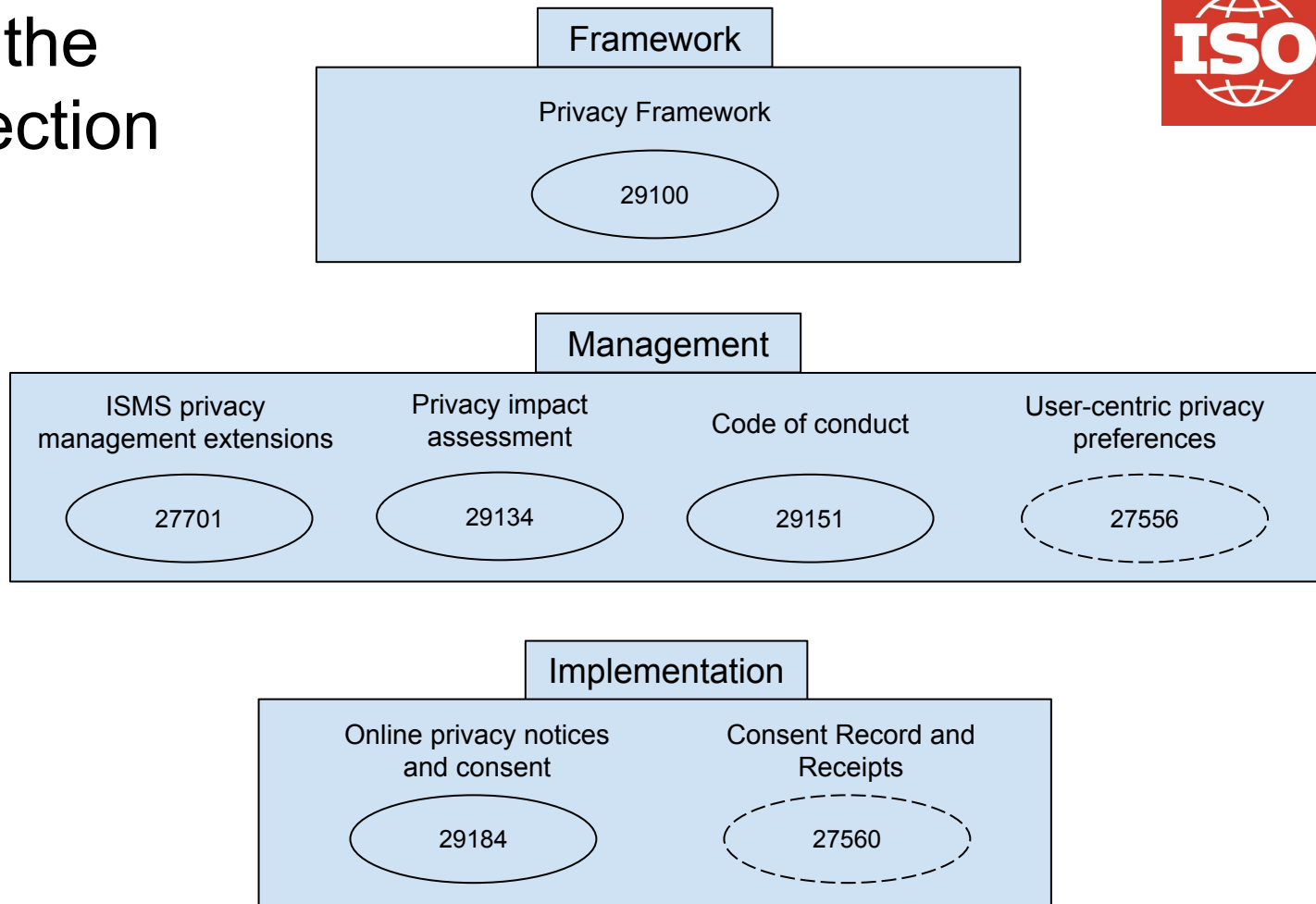
Privacy Data Governance Metadata

1. Metadata exchange between C2B and B2B and forms of agreements
2. How metadata in the form of a data agreement could look like (ex. ISO/IEC 27560 and consent records)
3. Presenting the agreement to the consumer
4. How to map this metadata to Solid Pods and establish the policies for sharing data.

Data Governance Controls

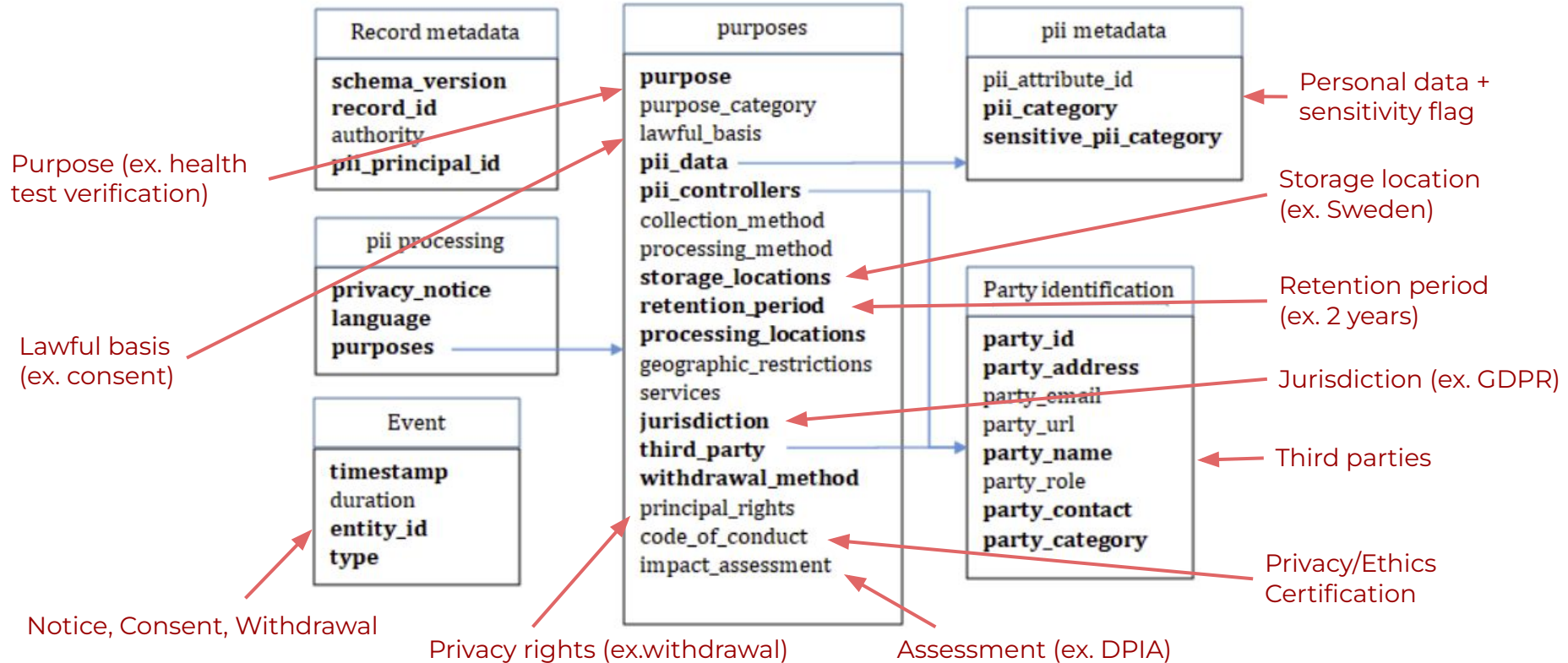


Overview of the privacy protection standards



















ISO/IEC 27560 Consent Record and Receipt Structure

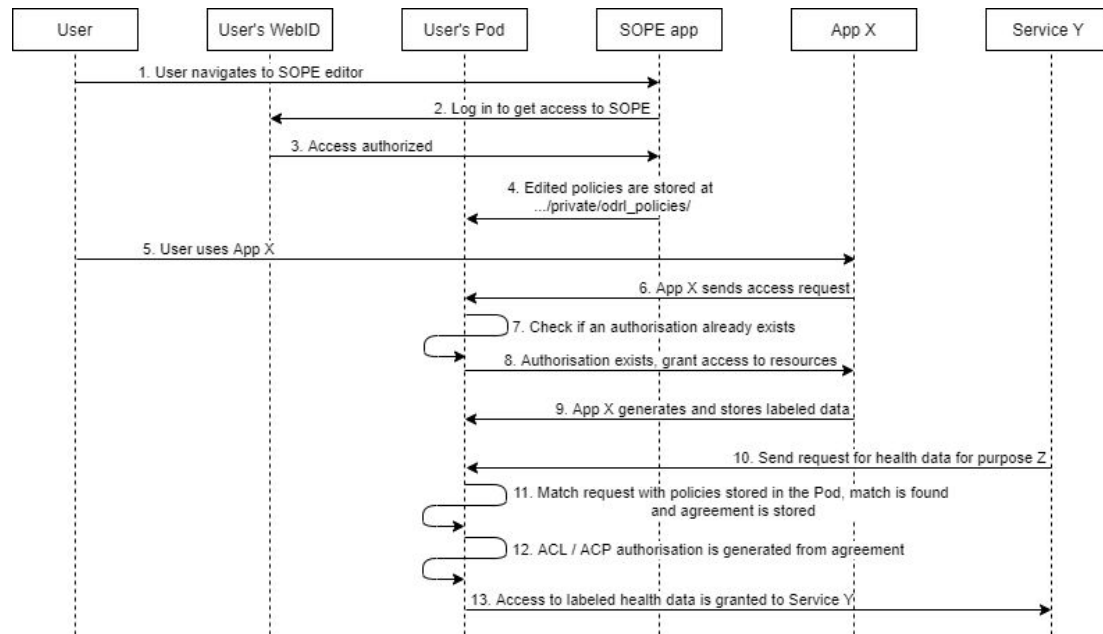
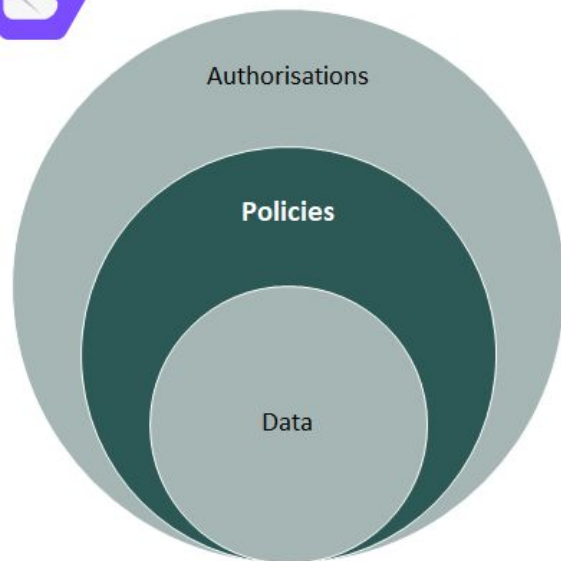


Privacy labels

	Contact Info
	Health & Fitness
	Financial Info
	Location
	Sensitive Info
	Contacts
	User Content
	Browsing History
	Search History
	Identifiers
	Purchases
	Usage Data
	Diagnostics
	Other Data



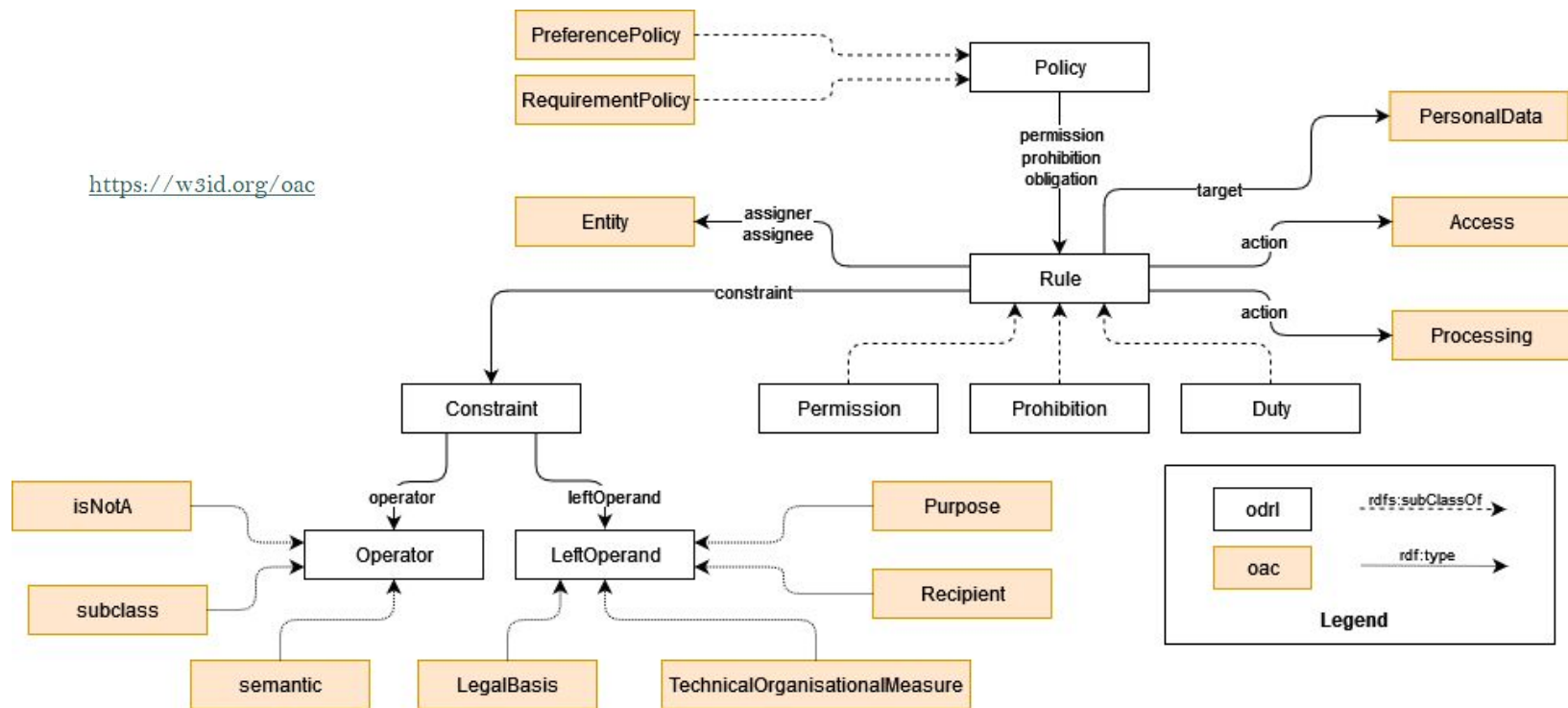
Introducing policies in the Solid ecosystem



Esteves, B., Pandit, H. J., & Rodríguez-Doncel, V. (2021, September). ODRL Profile for Expressing Consent through Granular Access Control Policies in Solid. In 2021 IEEE European Symposium on Security and Privacy Workshops (pp. 298-306). <https://ieeexplore.ieee.org/abstract/document/9585717>

Introducing policies in the Solid ecosystem

<https://w3id.org/oac>



Introducing policies in the Solid ecosystem

Logged in as: <https://pod.inrupt.com/besteves/profile/card#me> [LOGOUT](#)

SOPE allows you to define ODRL policies, based on the [ODC specification](#), to govern the access to Pod resources and to store them on your Pod. Select the type of policy you want to model, choose the types of personal data and purposes to which the policy applies, generate the ODRL policy's RDF and save it in your Pod by clicking on the "Generate" button.

EDITOR

Choose type of policy:
Policy Type:

Choose type of personal data:
Contact ☒

Choose purpose:
Communication Management ☒

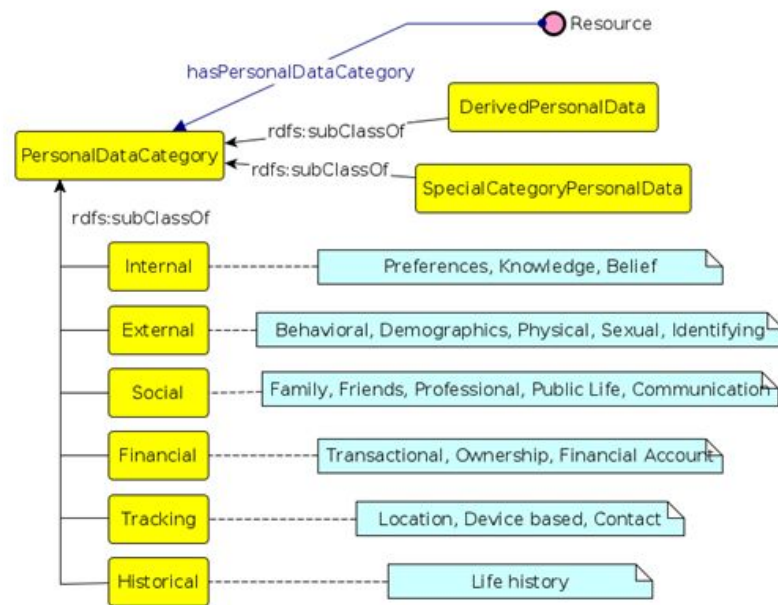
Choose applicable access modes:
Read ☒

Policy name:

GENERATE

```
PREFIX odrl: <http://www.w3.org/ns/odrl/2/>
PREFIX oac: <https://w3id.org/oac/>
PREFIX dpv: <http://www.w3.org/ns/dpv#>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

<https://pod.inrupt.com/besteves/private/odrl_policies/example-policy.ttl>
rdf:type odrl:Policy ;
odrl:profile oac: ;
odrl:permission [
  odrl:assigner <https://pod.inrupt.com/besteves/profile/card#me> ;
  odrl:action oac:Read ;
  odrl:target oac:Contact ;
  odrl:constraint [
    odrl:leftOperand oac:Purpose ;
    odrl:operator odrl:isA ;
    odrl:rightOperand dpv:CommunicationManagement
  ]
]
```



Esteves, B., Rodríguez-Doncel, V., Pandit, H. J., Mondada, N., & McBennett, P. (2022). Using the ODRL Profile for Access Control for Solid Pod Resource Governance. In European Semantic Web Conference (pp. 16-20). Springer, Cham. https://link.springer.com/chapter/10.1007/978-3-031-11609-4_3

<https://w3id.org/dpv/dpv-pd>

Introducing policies in the Solid ecosystem

```
1 <https://example.com/offer1> a odrl:Offer ;
2   dct:description "Offer to read identifier data for identity
   ↳ verification and demographic data for research and development" ;
3   dct:source ex:preference1, ex:requirement1 ;
4   dct:creator ex:userA ;
5   dct:issued "2022-11-08T17:26:35"^^xsd:dateTime ;
6   odrl:uid ex:offer1 ;
7   odrl:profile oac: ;
8   odrl:assigner ex:userA ;
9   odrl:permission [
10     dpv:hasContext dpv:Optional ;
11     odrl:target oac:Demographic ;
12     odrl:action oac:Read ;
13     odrl:constraint [
14       dct:title "Purpose for access is to conduct research and
   ↳ development." ;
15       odrl:leftOperand oac:Purpose ;
16       odrl:operator odrl:isA ;
17       odrl:rightOperand dpv:ResearchAndDevelopment ] ] ;
18   odrl:permission [
19     dpv:hasContext dpv:Required ;
20     odrl:target oac:Identifier ;
21     odrl:action oac:Read ;
22     odrl:constraint [
23       dct:title "Purpose for access is to verify the identity of the
   ↳ assigner." ;
24       odrl:leftOperand oac:Purpose ;
25       odrl:operator odrl:isA ;
26       odrl:rightOperand dpv:IdentityVerification ] ] .
```

```
1 <https://example.com/agreement1> a odrl:Agreement ;
2   odrl:profile oac: ;
3   dct:description "Agreement to read demographic data for research and
   ↳ development purposes in the context of project X." ;
4   dct:creator ex:userA ;
5   dct:issued "2022-11-08T18:13:37"^^xsd:dateTime ;
6   odrl:uid ex:agreement1 ;
7   dct:references ex:offer1, ex:request1 ;
8   dpv:hasDataSubject ex:userA ;
9   dpv:hasDataController ex:userB ;
10  dpv:hasLegalBasis dpv:Consent ;
11  odrl:permission [
12    odrl:assigner ex:userA ;
13    odrl:assignee ex:userB ;
14    odrl:action oac:Read ;
15    odrl:target oac:Demographic ;
16    odrl:constraint [
17      dct:title "Purpose is to conduct research in project X." ;
18      odrl:leftOperand oac:Purpose ;
19      odrl:operator odrl:eq ;
20      odrl:rightOperand ex:RDProjectX ] ] .
```

Discussion points

1. Legal alignment with the ISO standards (ex. 27560)
2. Useability aspect of a consent notice presentation
3. How Solid can support Privacy Data Governance Metadata in Open ID Connect (OIDC)?
4. How eIDAS and wallets can support Privacy Data Governance Metadata?