

BODS (RDF) in Risk & Compliance

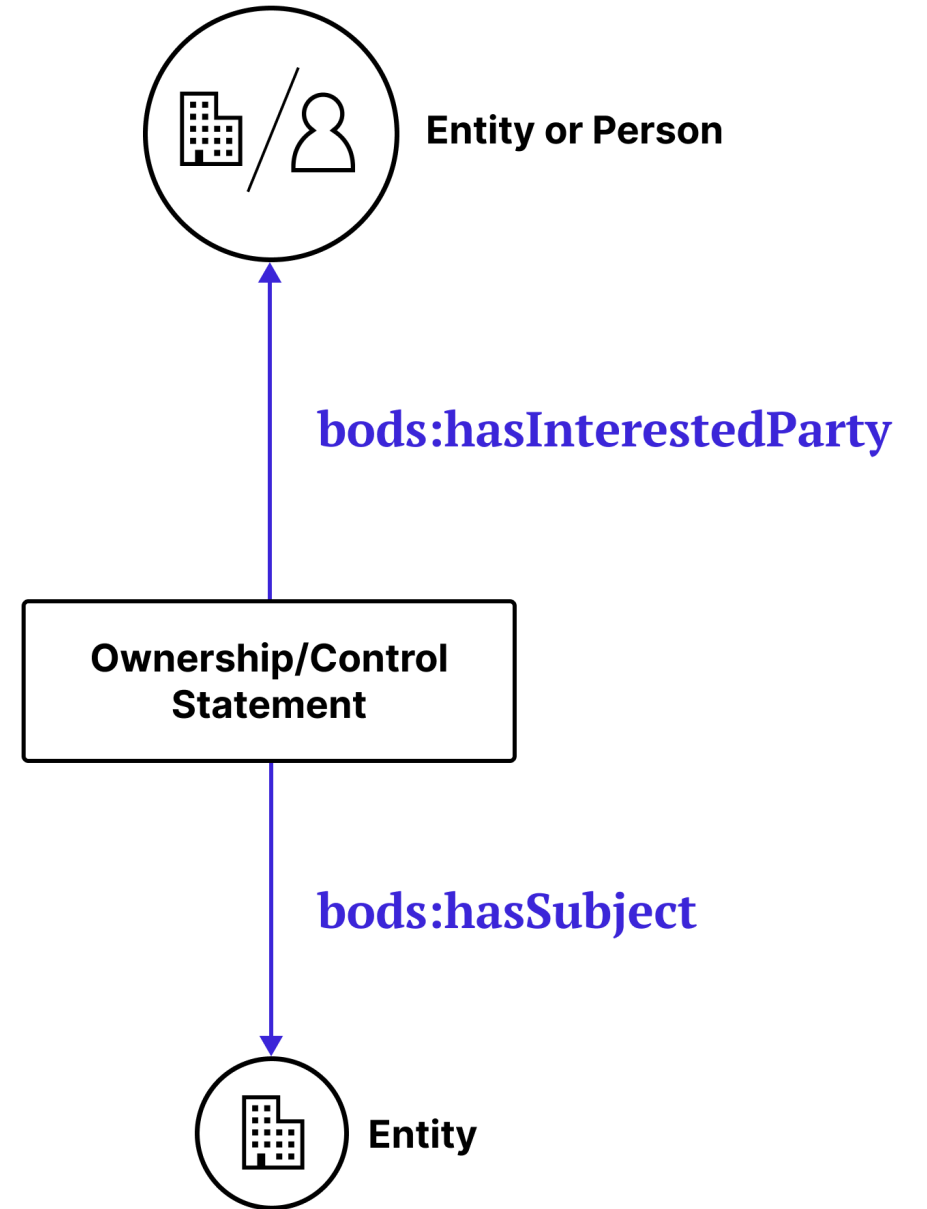
Cosmin Marginean

BODS RDF

- An RDF vocabulary for BODS
- Tools for converting BODS JSON data to RDF

[Detailed proposal](#)

[GitHub](#)

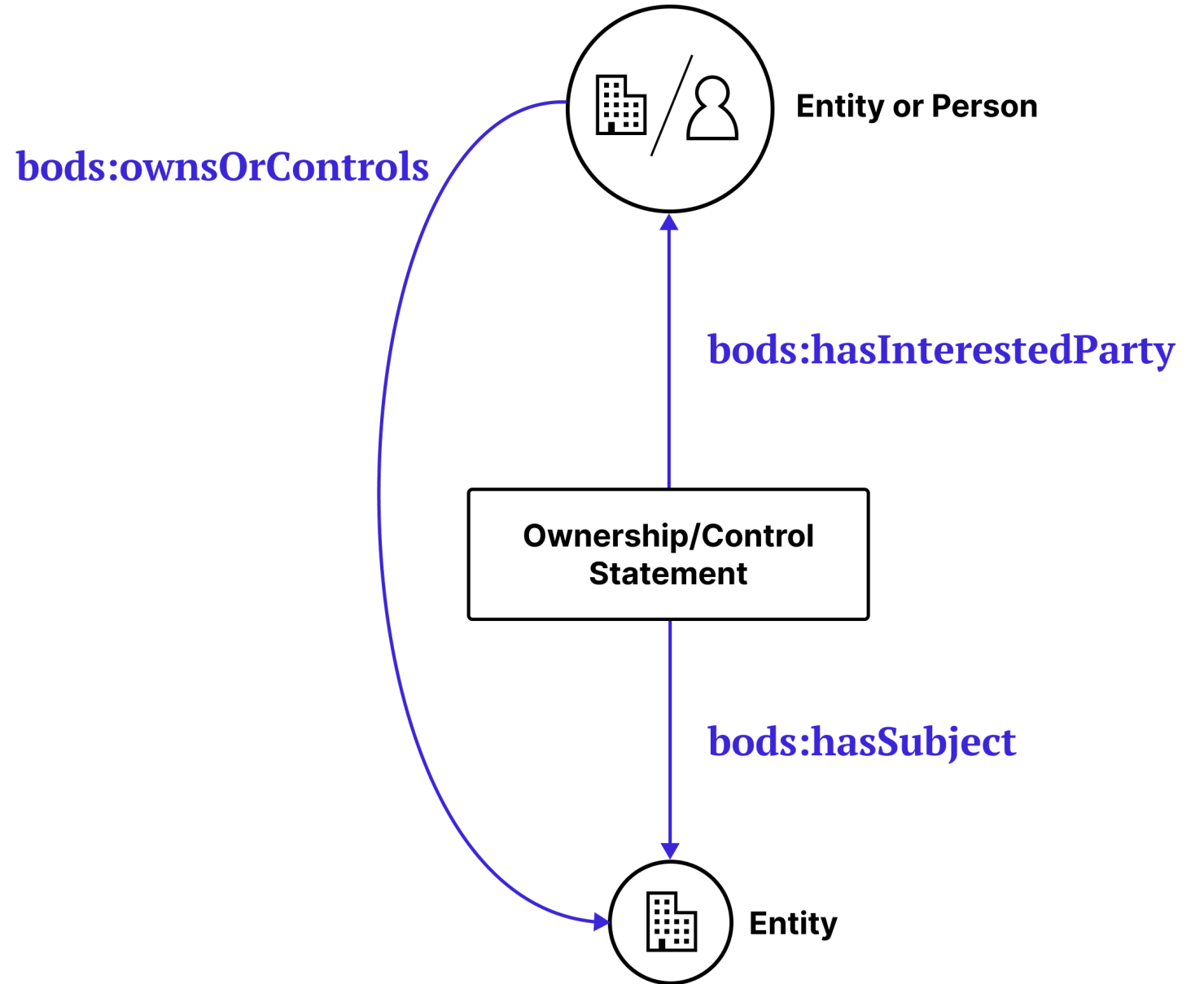


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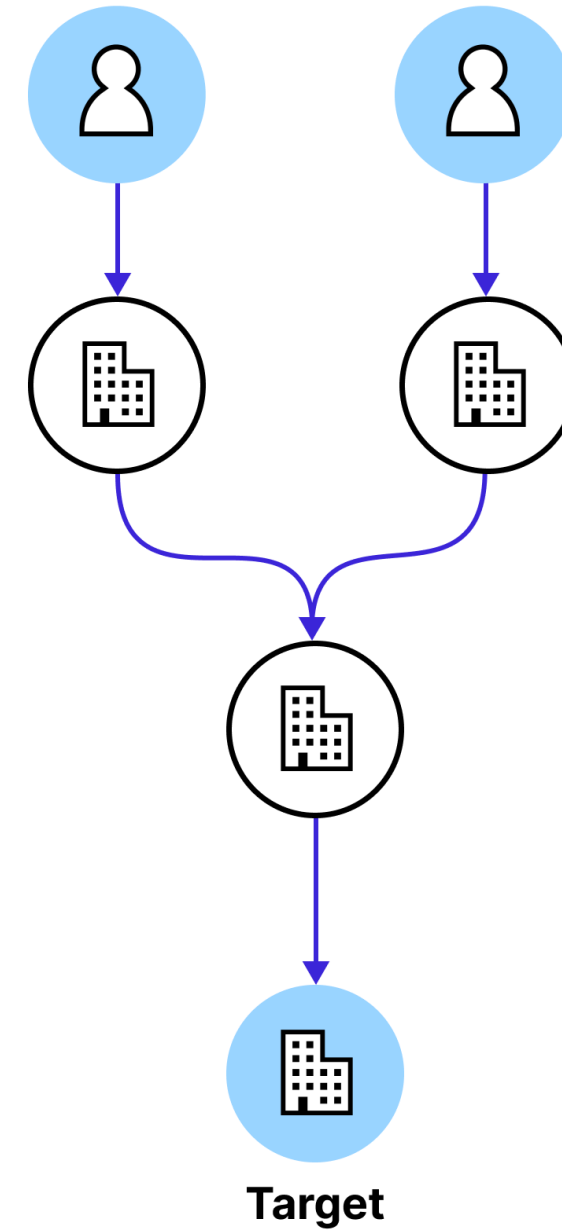
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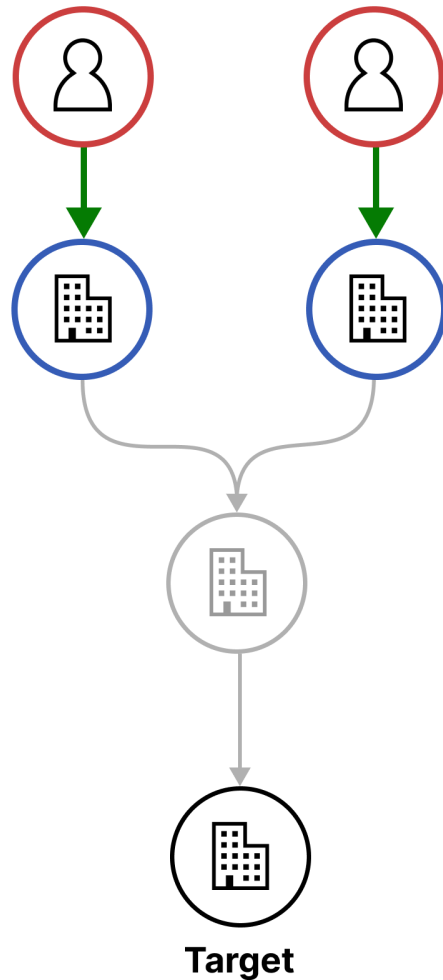
UBOs

An Ultimate Beneficial Owner (UBO) is an individual exercising control over a target through another entity.



Querying UBOs

[Gist for this query](#)



```
SELECT ?ubo ?ctrlStatement ?controlledCompany

WHERE {

    ?ubo rdf:type bods:Person .

    ?ctrlStatement bods:hasInterestedParty ?ubo .
    ?ctrlStatement bods:hasSubject ?controlledCompany .

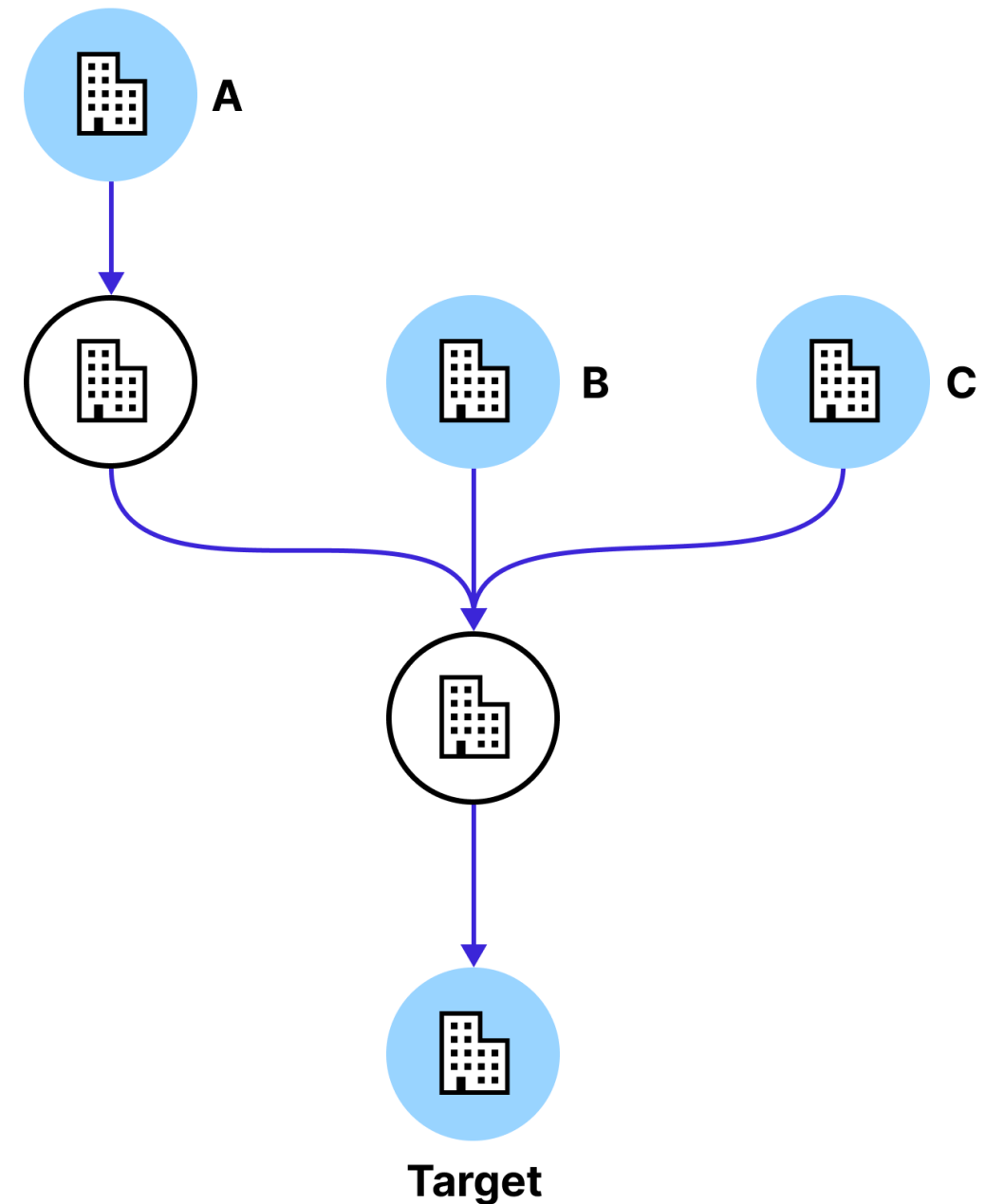
    ?controlledCompany bods:ownsOrControls* ?targetEntity .

}
```

Ultimate parents

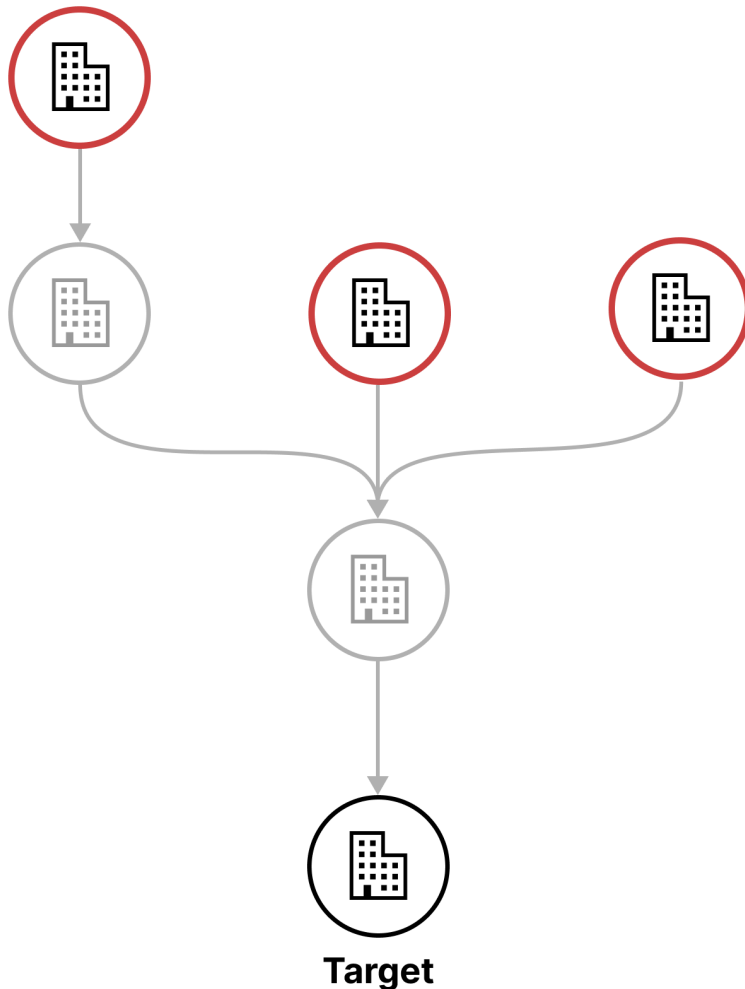
Entities at the "top" of ownership & control chains

...and it's ultimate parents, plural :)



Querying ultimate parents (1)

[Gist for this query](#)



```
SELECT ?ultimateParent
```

```
WHERE {
```

```
    ?ultimateParent bods:ownsOrControls+ ?targetEntity .
```

```
    ?ultimateParent rdf:type bods:Entity .
```

```
    FILTER NOT EXISTS {
```

```
        ?s bods:ownsOrControls ?ultimateParent .
```

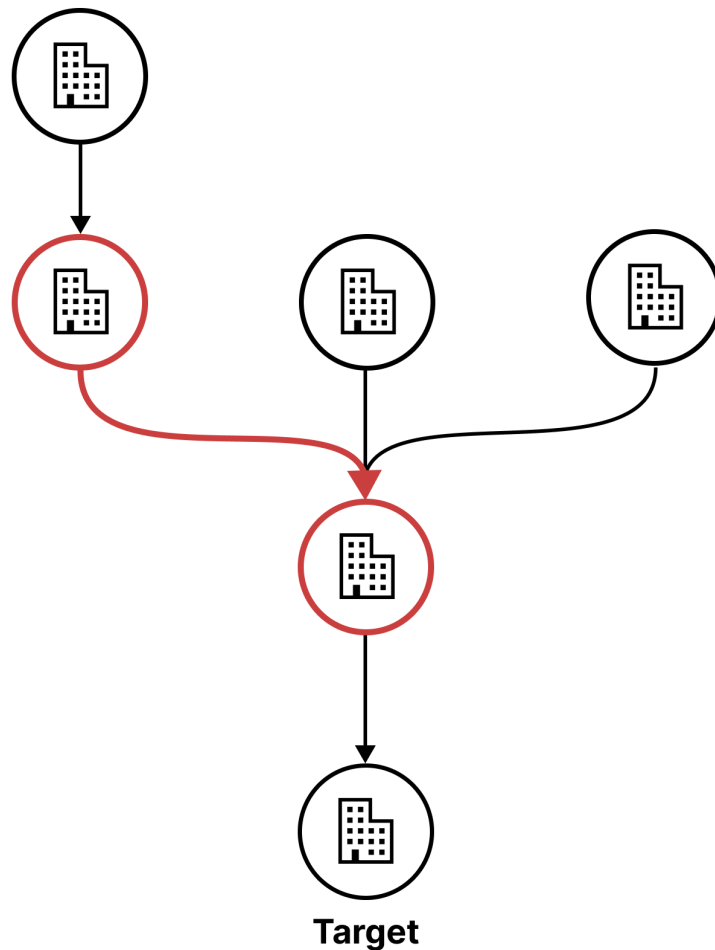
```
        ?s rdf:type bods:Entity .
```

```
    }
```

```
}
```

Querying ultimate parents (2)

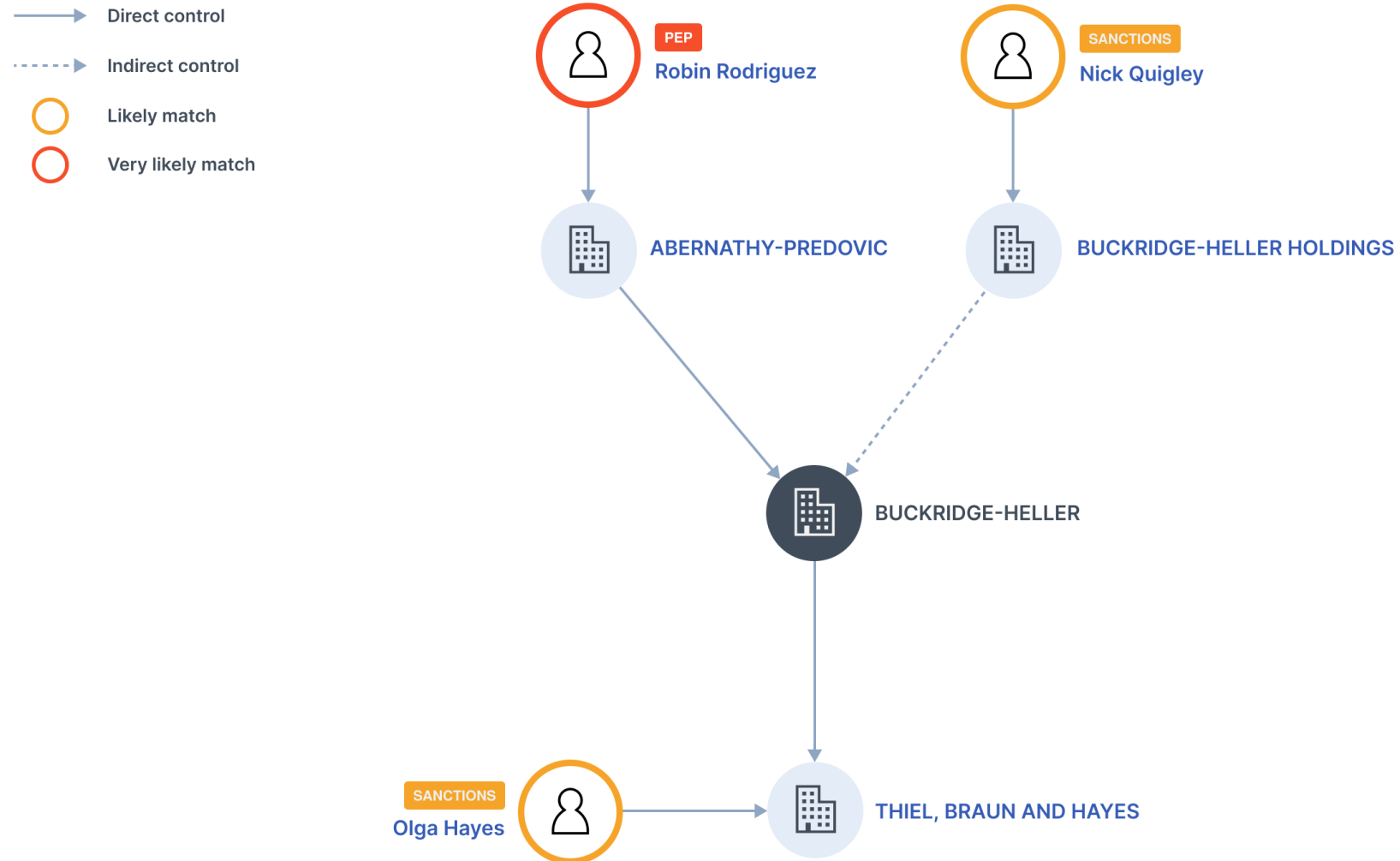
[Gist for this query](#)



```
SELECT ?parent ?child ?controlStatement
WHERE {
    ?controlStatement bods:hasInterestedParty ?parent .
    ?controlStatement bods:hasSubject ?child .

    {
        ?ultimateParent bods:ownsOrControls+ ?parent .
    }
    UNION
    {
        FILTER (sameTerm(?ultimateParent, ?parent))
    }
}
```


Next steps: Flagging (deep) risk



Implementation

```
"statementID": "ownershipCtrl1",  
"subject": {  
  "describedByEntityStatement": "entity1"  
},  
"interestedParty": {  
  "describedByPersonStatement": "person1"  
}
```



Document Store

```
{ "statementID": "ownershipCtrl1" ... }
```

```
{ "statementID": "entity1" ... }
```

```
{ "statementID": "person1" ... }
```



RDF Triple Store

```
bods-res:ownershipCtrl1  
  bods:hasInterestedParty bods-res:person1 ;  
  bods:hasSubject bods-res:entity1 .
```

```
bods-res:person1  
  bods:ownsOrControls bods-res:entity1 .
```

Resources

BODS RDF on GitHub

<https://github.com/blueanvil/bods-rdf>

BODS RDF Proposal

<https://docs.google.com/document/d/1vej-UkK7QtmfKrmU6aD15vcelzJDsCv1jbHCJWgn9hs/edit>

Gists in this slide deck

<https://gist.github.com/cosmin-marginean/7ce1d7498685d47e9d92ed6f7c9c4c61>

<https://gist.github.com/cosmin-marginean/6c75c45c5e655f661b471366e4b212b3>

<https://gist.github.com/cosmin-marginean/f79250a8687465f9c14f53ea57e92253>

Q&A