

## Amsterdam University of Applied Sciences

### How interoperable is our semantic model and for who?

van Ulzen, N.; de Jong, Anne; Kanis, M.; Roos, M.; Kaliyaperumal, R.; Quaralt-Rosinach, N.; Cornet, R.

**Publication date**  
2020

**Document Version**  
Submitted manuscript

**License**  
CC BY

[Link to publication](#)

**Citation for published version (APA):**

van Ulzen, N., de Jong, A., Kanis, M., Roos, M., Kaliyaperumal, R., Quaralt-Rosinach, N., & Cornet, R. (2020). *How interoperable is our semantic model and for who?*. Poster session presented at International FAIR Convergence Symposium 2020.

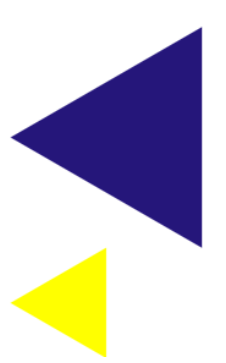
**General rights**

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

**Disclaimer/Complaints regulations**

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please contact the library:

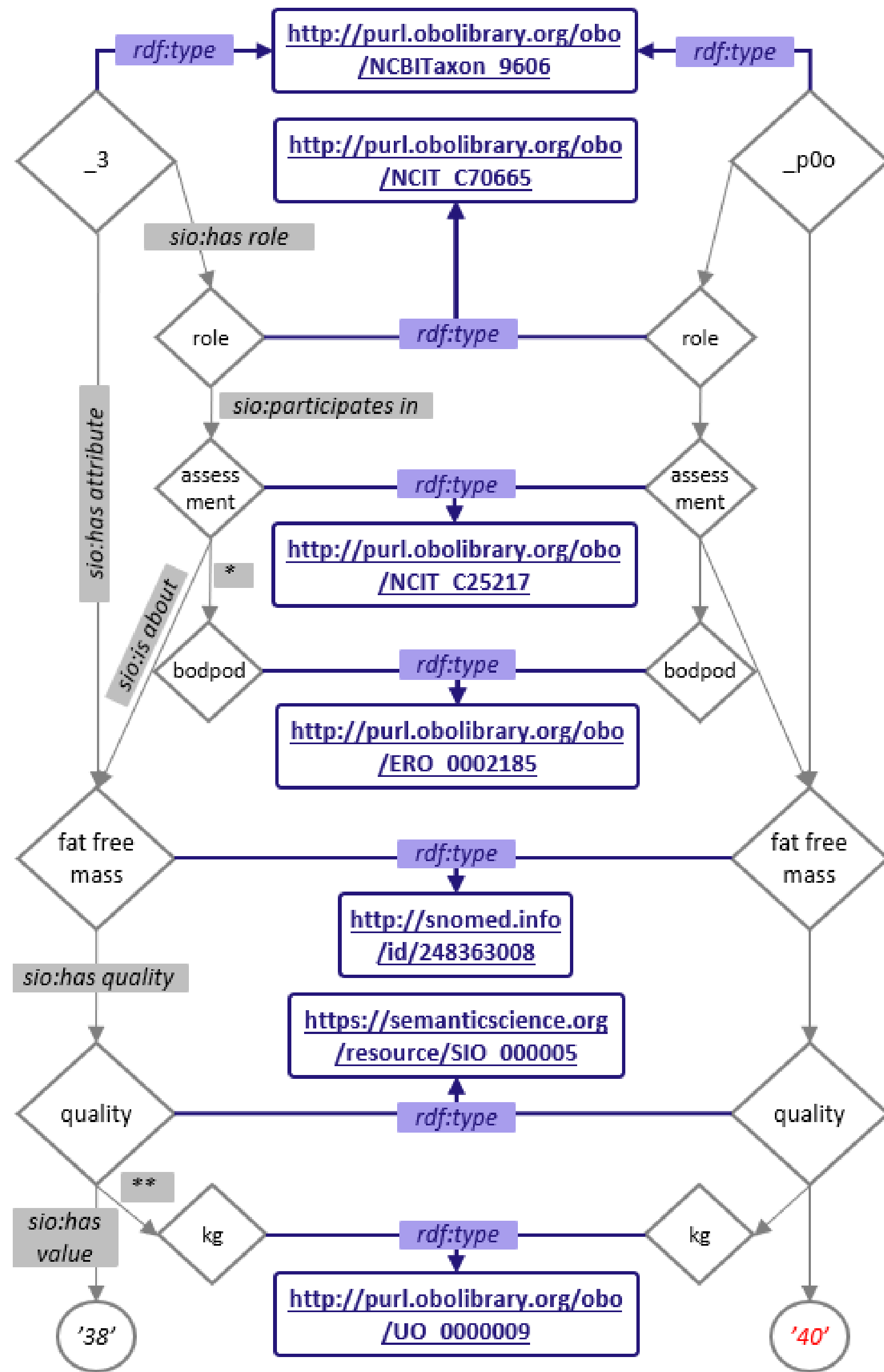
<https://www.amsterdamuas.com/library/contact/questions>, or send a letter to: University Library (Library of the University of Amsterdam and Amsterdam University of Applied Sciences), Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.



Team N. van Ulzen, A. de Jong, M. Kanis, M. Roos, R. Kaliyaperumal, N. Quaralt-Rosinach, R. Cornet & group of domain experts

## Model

Complete model see [here](#)



## Proof of Concept

- ✓ FAIRification-workflow (Jacobsen et al. 2020)
- ✓ FAIRifying 11 existing datasets from body composition measurements of patients and/or research participants
- ✓ Originally in SPSS, Excel or CSV-format
- ✓ Data:

#Age #Gender #Body weight #Body height

#Fat-free mass measured by a BODPOD

#Output from Bioelectrical Impedance Analysis

## Interoperability discussion

1. Different research teams may choose different ontologies and ontology terms for the same concepts
2. Different research teams may develop different semantic models for the same dataset
3. Different research teams may go for different implementation choices
4. The datasets become less interoperable and comprehensible for our researchers not familiar with Turtle, RDF and SPARQL

## Implementation choices



#Body weight

```
<https://www.hva.nl/rdf/person/2335/body_weight_attribute> a <https://loinc.org/29463-7/>;
sio:SIO_000217 <https://www.hva.nl/rdf/person/2335/body_weight_quality> .
```

```
<https://www.hva.nl/rdf/person/2335/body_weight_quality> a sio:SIO_000005;
sio:SIO_000221 <https://www.hva.nl/rdf/unit/kilogram>;
sio:SIO_000300 "100"^^<http://www.w3.org/2001/XMLSchema#float> .
```

```
<https://www.hva.nl/rdf/unit/kilogram> a <http://purl.obolibrary.org/obo/UO_0000009> .
```

n.r.van.ulzen@hva.nl  
[https://uvaauas.figshare.com/projects/FAIR\\_Geen\\_woorden\\_maar\\_data/83840](https://uvaauas.figshare.com/projects/FAIR_Geen_woorden_maar_data/83840)  
<https://www.amsterdamuas.com/uv-openscience>