# The I-ADOPT Variable Modelling Challenge

RDA **I**nteroper**A**ble **D**escriptions of **O**bservable **P**roperty **T**erminology WG (I-ADOPT WG)


*Core members:*
**Barbara Magagna**, GO FAIR Foundation, NL
**Gwenaëlle Moncoiffé**, BODC, UK
**Anusuryia Devaraju**, CSIRO, AU
**Maria Stoica**, University of Colorado, US
**Sirko Schindler**, German Aerospace Center, DE
**Alison Pamment**, Centre for Environmental Data Analysis, UK


**Created by**

**In collaboration with**

# The I-ADOPT Variable Modelling Challenge

## Participation, submission and scoring rules


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RESEARCH DATA ALLIANCE
I-ADOPT WG

# Participation Rules

- Subscribe to the Challenge before September 25
- As individual or as a group
- Reviewers are excluded from participation (I-ADOPT core group & external reviewers)
- Don’t share your modelling results with other competitors
- Per participant we accept only one modelling solution per variable
- Participants can submit as many variables as they wish from the predefined list

# Submission rules

- The list of variables will be published on 16 September
- All submission should be made as a zip file
- Label your zip file with the names of the participant(s)
- Via email: iadopt.variable@gmail.com
- Include the questions and your answers (next slide) in the email
- Submission period during the Challenge Week:

**16 - 25 September, 2024 – Anywhere on Earth (AoE)**

# Questionnaire

1. Are you submitting as a team or as an individual?
2. Please provide your name(s), ORCID and affiliations. Provide one contact email.
3. What is your professional background?
   *(e.g. data steward, researcher, semantic expert, database manager, …)*
4. What research domains are you currently involved in?
   *(e.g. environmental science, social science, health science, ...)*
5. What is your level of knowledge about semantic technologies?
   *(limited knowledge, basic understanding, in-depth knowledge)*
6. Have you worked with the I-ADOPT Framework before, or is this your first time?
7. Have you found the instructional videos helpful?
8. What were the main challenges in modelling variables using I-ADOPT?
9. Why is the I-ADOPT Framework useful in your case? What are your objectives?
10. We are planning to develop an I-ADOPT service for providing FAIR variable descriptions. How likely will you consider using such a service in near future? *(e.g. unlikely, likely, very likely)*

# Different options how to submit your variable

You can choose to submit your variable descriptions in one of the formats below (either human-readable or RDF), depending on your skills. Note, however, that machine-readable output as well as the use of semantic concepts rather than pure terms score higher.

Creating human readable output:

A. Excel template

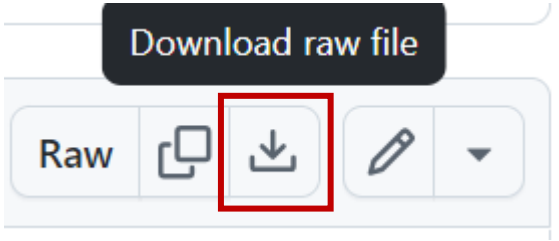
B. Text template

Creating machine-readable (RDF) output:

C. Online form

D. Turtle file

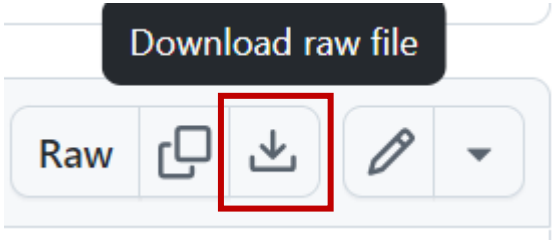
# Option A: Excel template




- Go to this template and download it
- Use one tab per variable, copying the template to each tab
- Name the tab with the provided variable name
- Use new rows for multiple Constraints or ContextObjects as shown in the provided example
- Green columns are mandatory for a variable to be valid
- White columns are optional, but add to the overall score
- Purple columns are for the links (URIs) to semantic concepts, lead to a higher score
- Yellow columns can be useful in the modelling process but don't score

Template: https://github.com/i-adopt/examples/blob/main/templates/VariableModellingTemplate.xlsx

# Option B: Text template



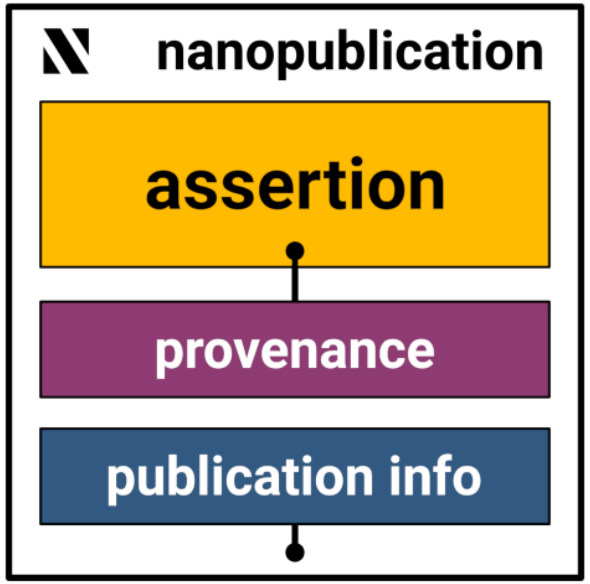

- Go to this template and download it
- Use one text file per variable, see example
- Name the text file with the provided variable name
- List additional information you used for the modelling process, if you like (doesn't score)

Template: https://github.com/i-adopt/examples/blob/main/templates/VariableModellingTemplate.txt

Example: https://github.com/i-adopt/examples/blob/main/templates/VariableModellingExample.txt

# Option C: Online form

- The online form is a nanopublication template.
- A nanopublication is a small RDF knowledge graph which allows to create machine readable RDF statements with associated provenance information.
- To use the template you need to have an ORCID. Please follow the instructions online. Find here an example.
- Provide the full identifiers of the published variable nanopublications in a zipped txt file.




Template:
https://nanodash.knowledgepixels.com/publish?16&template=https://w3id.org/np/RAGUWnXKhfKYwmMoDK-LVXlEnnGdAuzFZKR9FZsXHJsxQ
Example:
https://w3id.org/np/RANsVBnIjFjay8xxt_Iw3io3zq4IOei23TkTUPx4WsLFc

# Option D: Turtle file

- Create one turtle file per variable
- See this RDF turtle file as an example
- Use a mocked, local identifier for your variable (=name of the turtle file)
- If you can not find a semantic concept for a component, use a local identifier and assign a proper label

https://github.com/i-adopt/examples/blob/main/EnvThes/30351.ttl

# Scoring Rules

- Submissions are evaluated according to the following criteria

| | |
|---|---|
| Identify components and roles | up to 5 point(s) per variable |
| Annotate components with concepts | up to 1 point(s) per variable component |
| Provide descriptions of the variable | up to 3 point(s) per variable |
| Provide RDF output | up to 2 point(s) per variable |
| Adhere to formal cardinality requirements | up to 5 point(s) per variable |

- Depending on the difficulty of the variable a modifier is applied:

| | |
|---|---|
| Simple variables | multiply overall score by 1 |
| Advanced variables | multiply overall score by 2 |

# Winners

- Final ranking is based on both quality and quantity.
- Per participant, we select the 10-highest scoring variables.
  The sum of their scores will be the score of the participant.

We have a **prize fund** to distribute among **successful participants**!

# Valid contributions will be published

- We will publish valid contributions on this website:

https://i-adopt.github.io/examples/index.html

- All winners will be listed on the I-ADOPT website
- The challenge outcome will be presented at the RDA 23rd Plenary Meeting in Costa Rica (12-14 November 2024)

# Acknowledgements




**Created by:** GO FAIR Foundation

**In collaboration with:** RDA RESEARCH DATA ALLIANCE I-ADOPT WG

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