

# The I-ADOPT Variable Modelling Challenge

[RDA Interoperable Descriptions of Observable Property Terminology  
WG \(I-ADOPT WG\)](#)

*Core members:*

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**Anusuryia Devaraju**, CSIRO, AU

**Maria Stoica**, University of Colorado, US

**Sirko Schindler**, German Aerospace Center, DE

**Alison Pamment**, Centre for Environmental Data Analysis, UK

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## Participation, submission and scoring rules

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# Participation Rules

- Subscribe to the Challenge before September 22
- 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
- Via email: [iadopt.variable@gmail.com](mailto:iadopt.variable@gmail.com)
- Include the questions and your answers (next slide)
- Submission period during the Challenge Week:

**16 - 22 September, 2024 - 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:

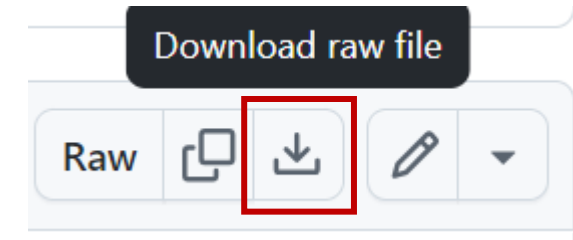
- A. Excel template
- B. Text template

Creating machine-readable (RDF) output:

- C. Online form
- D. Turtle file

## Option A: Excel template

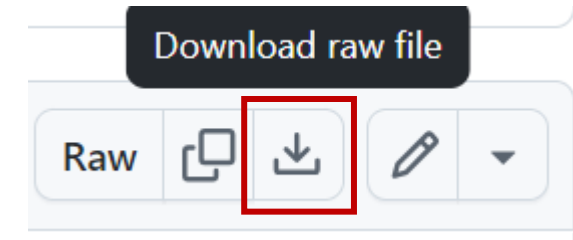
- Go to this [template](#) and download it
- Use one tab per variable, copying the template to each tab
- Use new rows for multiple Constraints or ContextObjects as shown in the provided example
- Green columns are mandatory
- White columns are optional
- Purple columns are for the links (URIs) to semantic concepts
- Yellow columns can be filled out to support the modelling process



Template: <https://github.com/i-adopt/variables/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 label
- Mandatory variable components are:
  - Preferred Variable Label
  - Property Label
  - Object of Interest Label
- All other elements are optional
- Please list additional information you used in the variable analysis



Template: <https://github.com/i-adopt/variables/blob/main/templates/VariableModellingTemplate.txt>

Example: <https://github.com/i-adopt/variables/blob/main/templates/VariableModellingExample.txt>

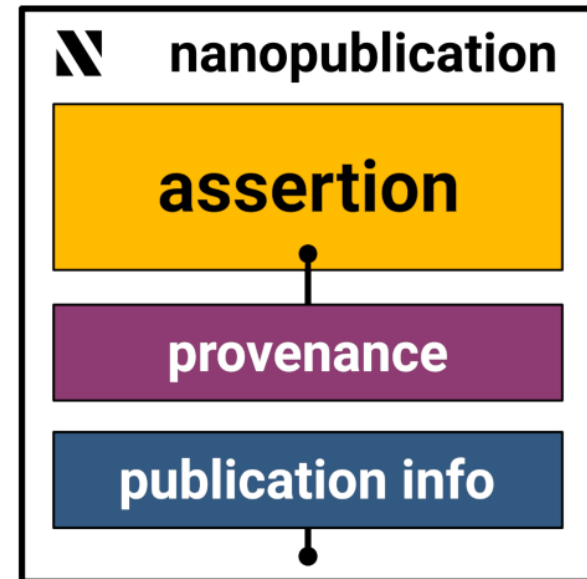


## Option C: Online form

- 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.
- In the submission email provide the full identifiers of the published variable nanopublications.

Template:

<https://nanodash.knowledgepixels.com/publish?16&template=https://w3id.org/np/RAGUWnXKhfKYwmMoDK-LVXIEnnGdAuzFZKR9FZsXHJsxQ>



## Option D: Turtle file

- See this RDF [turtle file](#) as a reference
- Use a local identifier for your variable
- You might use terms instead of external references for the different components in case you cannot find any semantic concepts for them

Reference file: <https://raw.githubusercontent.com/i-adopt/variables/main/templates/full.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/variables/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

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