

# 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 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](mailto: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:

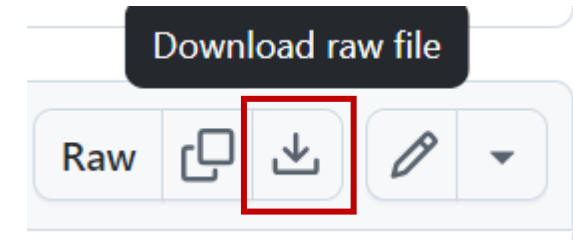
- A. Excel template
- B. Text template

Creating machine-readable (RDF) output:

- C. Online form
- D. Turtle file

## Option A: Excel template

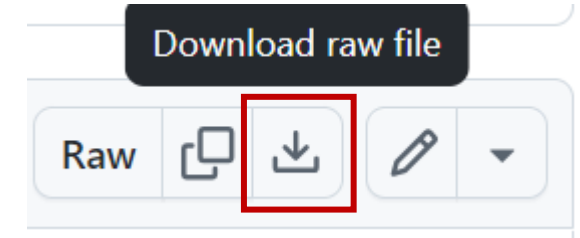
- Go to this [template](#) and download it
- Use one tab per variable, copying the template to each tab
- Name the tab with the provided variable name
- Use new rows for multiple Constraints or ContextObjects as shown in the provided example
- Green columns are mandatory for a variable to be valid
- 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/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 name
- List additional information you used for the modelling process, if you like (doesn't score)



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

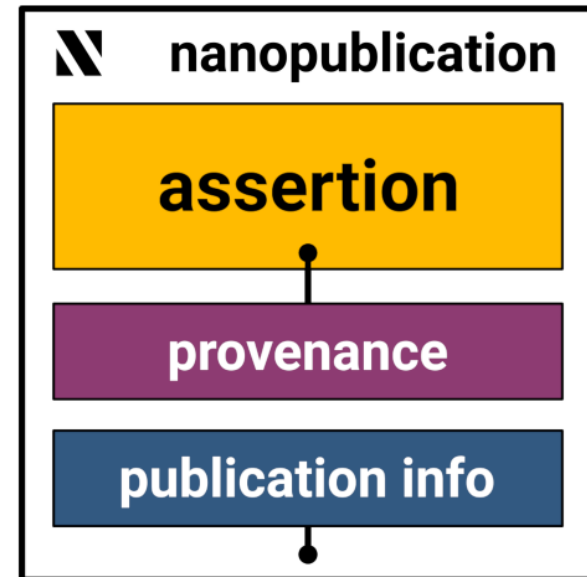
- The online form is a nanopublication template.
- A nanopublication is a small RDF knowledge graph which allows to create machine readable RDF statements with associated provenance information.
- To use the [template](#) you need to have an ORCID. Please follow the instructions online. Find [here](#) 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-LVXIEnnGdAuzFZKR9FZsXHJsxQ>

Example:

[https://w3id.org/np/RANsVBnIjFjay8xxt\\_lw3io3zq4lOei23TkTUPx4WsLFC](https://w3id.org/np/RANsVBnIjFjay8xxt_lw3io3zq4lOei23TkTUPx4WsLFC)



## 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/variables/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

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