

A HANDBOOK FOR ARGOS

ADMINISTRATORS:

How to create Dataset Templates

Purpose

The purpose of this handbook is to provide guidance on how to create dynamic templates with Argos and improve efficiency of daily data management activities

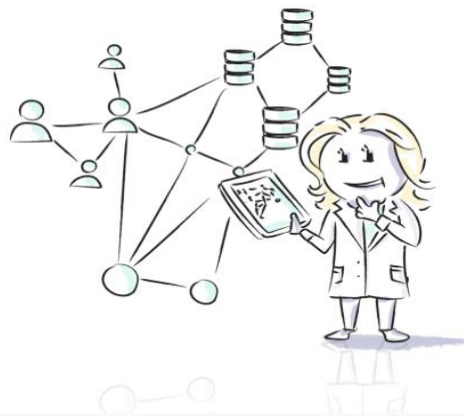
Version 1.0

About

argos is an extensible tool to plan and follow your data. You can create and configure machine-actionable DMPs that fit best to your discipline. Argos links to EOSC components out of the box and you can share easily your repository. It is the joint effort of OpenAIRE and EUDAT to deliver this open platform for Data Management Planning that addresses FAIR and Open best practices and assumes no barriers for its use and adoption. It does so by applying common standards for machine-actionable DMPs as defined by the global research data community of RDA and by communicating and consulting with researchers, research communities, and funders to better reflect on their needs.

APP WEBSITE

<https://argos.openaire.eu/dataset-profiles>



Argos Powered by Athena Research and Innovation team TM

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TOF

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List of Abbreviations

Abbreviation	Definition
API	Application Programming Interface
DMP	Data Management Plan
EOSC	European Open Science Cloud
FAIR	Findable, Accessible, Interoperable and Re-usable
JSON	JavaScript Object Notation
PID	Proportional–Integral–Derivative controller
RDA	Research Data Alliance
ROR	Research Organization Registry

Dataset Template

All available Dataset Templates of Argos are included in its Dataset Template collection. To populate the collection with new templates, you can upload an existing file of the template or develop the template from scratch.

The following figure (1) is a snapshot of the screen:

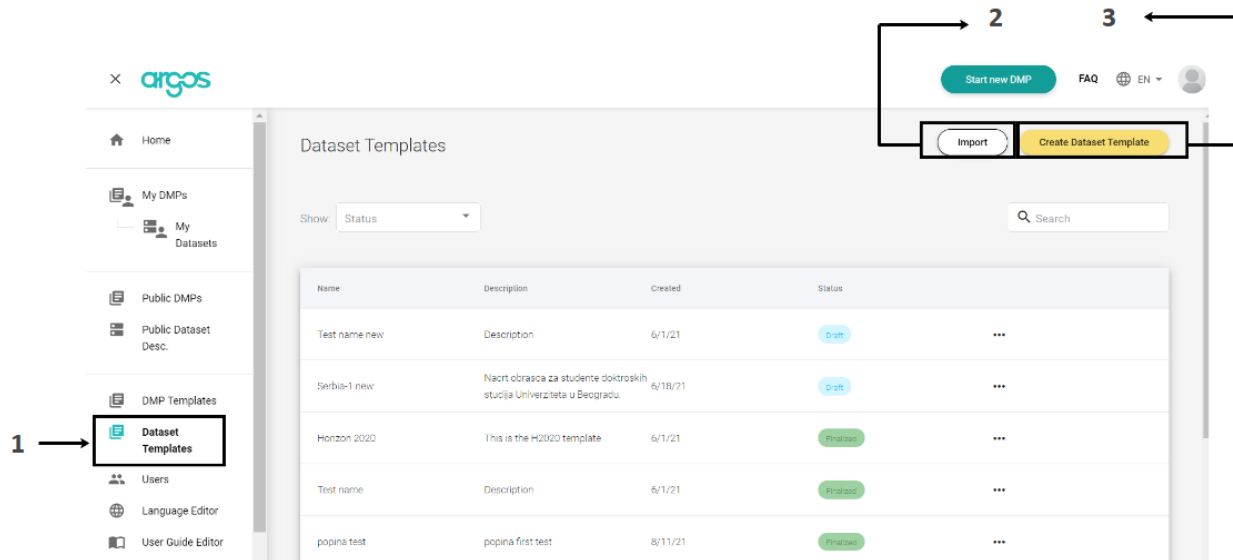


Figure 1. Dataset Template

1. Select *Dataset Template* from the menu on the left side of the screen
2. [Import](#) or
3. [Create Dataset Template](#)

A. Import a Dataset Template

- ✓ **Click** the [Import Button](#)
- ✓ **Upload** the *File* of your Template (JSON, .xml)
- ✓ **Give a Name** to your *Dataset Template* and
- ✓ **Click** *Import* to finish the uploading process

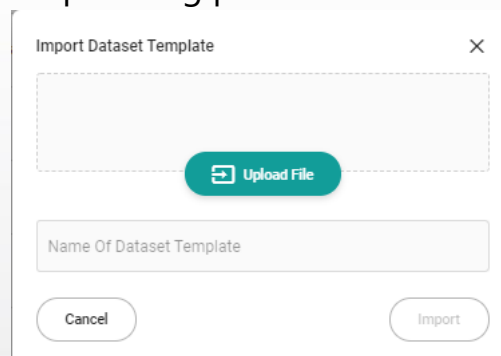


Figure 2. Import a Dataset Template

B. Create Dataset Template

To create the Dataset Template from scratch Click the yellow button [Create](#)

[Dataset template.](#)



Workflow

argos Dataset Templates can be created in three simple steps:

The [first step](#) (*General Info*) contains basic information that identify the Dataset Template: the *name* of the Dataset Template, its *Description*, and the *language* in which the Dataset Template is created.

The [second step](#) (*Form Description*) offers all the functionalities for the Dataset Template to be designed. It is the space to create the outline of the Template (Chapters, Sections, Sub-Sections, etc) and shape its content (add question(s), select question input(s)).

The [third step](#) (*Preview and Finalize*) is where the whole template can be viewed and validated before finalized.

Below, the three steps are explained with screenshots and examples.

Step 1: General Info

The first step to create a Dataset Template is *1. General Info*.

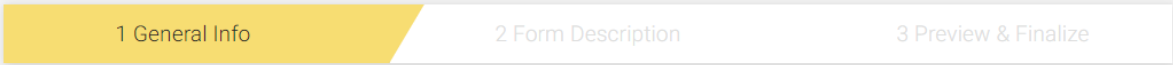


Figure 3. First Step

The initial screen contains mandatory questions that identify the Dataset Template. The following picture is a snapshot of the screen:

Figure 4. General Info

1. **General Info** – you are in the first Step.
2. **Editable Area** – contains fields to be completed with basic information about the template.
3. **Back** – rejects the New Dataset Template.
4. **Next** – moves to the [second step](#) (Form Description).
5. **Save** – saves the General Information of the Dataset Template.

***Note:** Not all the fields are mandatory. The mandatory fields appear with an asterisk (*).

1.1 Dataset template name *

Give a title that determines the Dataset template.

1.1 Dataset template name *
 A title that determines the Dataset template.

Figure 5. Dataset Template Name

1.2 Description *

Briefly describe what the Dataset Template is about, it's scope and objectives.

1.2 Description *
 A brief description of what the Dataset is about, it's scope and objectives.

Rich text editor toolbar: Undo, Bold, Italic, Underline, Strikethrough, x₂, x², Bulleted list, Numbered list, Indent, Outdent, Link, Unlink, Source, Help.

This is the *Horizon 2020* Template.

Figure 6. Description

1.3 Dataset template language *

Define the language for your Dataset Template

1.3 Dataset template language *

Abkhazian

Afar

Afrikaans

Akan

Albanian

Figure 7. Dataset template Language

1.4 Editors

Invite your colleagues and co-create the Dataset Template. Control the rights that co-creators have on your Dataset Templates.

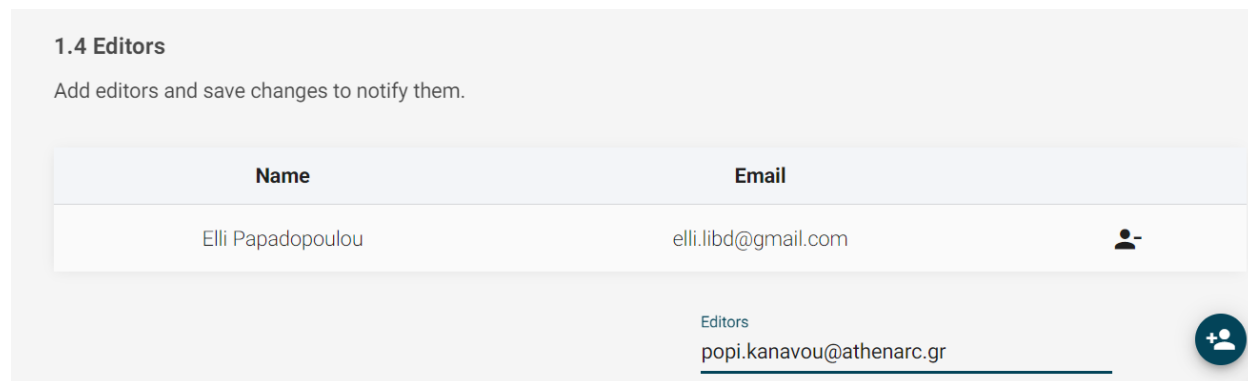


Figure 8. Editors

Step 2: Form Description

The second step to create a Dataset Template is *2. Form Description*.

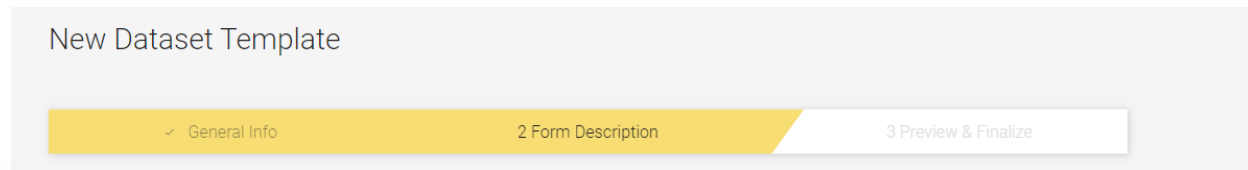


Figure 9. Second Step

Form Description is the main step in the creation of a new Dataset Template. It contains tools that assist with the template's Outline and Content. The Dataset Template is structured in Chapters and Sections which are populated with questions. Chapters and Sections must be given a name and a description.

The image below is a snapshot of the screen for the outline of the Dataset Template:

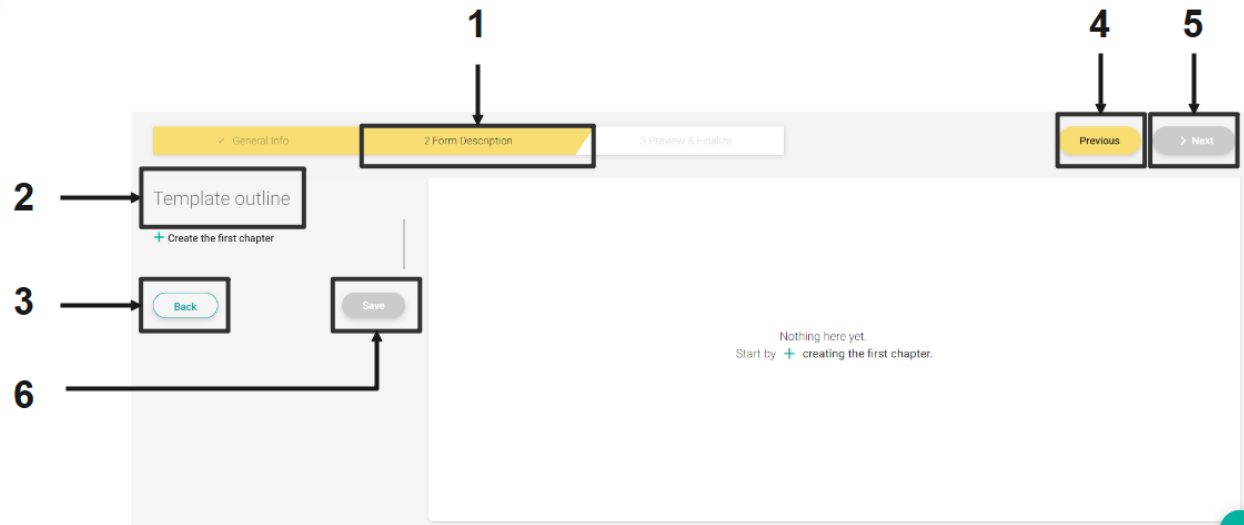


Figure 10. Form Description

1. **Form Description** – You are in the second Step.
2. **Template Outline Area** – the area to start creating the Template.
3. **Back** - rejects the New Dataset Template.
4. **Previous** – navigates back to [step 1. General Info.](#)
5. **Next** – moves to [step 3. Preview & Finalize.](#)
6. **Save** – loads data or files from the persistent storage into main memory.

2.1 Create chapter(s)

A Chapter is the higher division of the Dataset Template. Each chapter has a title and a description and is followed by Sections.

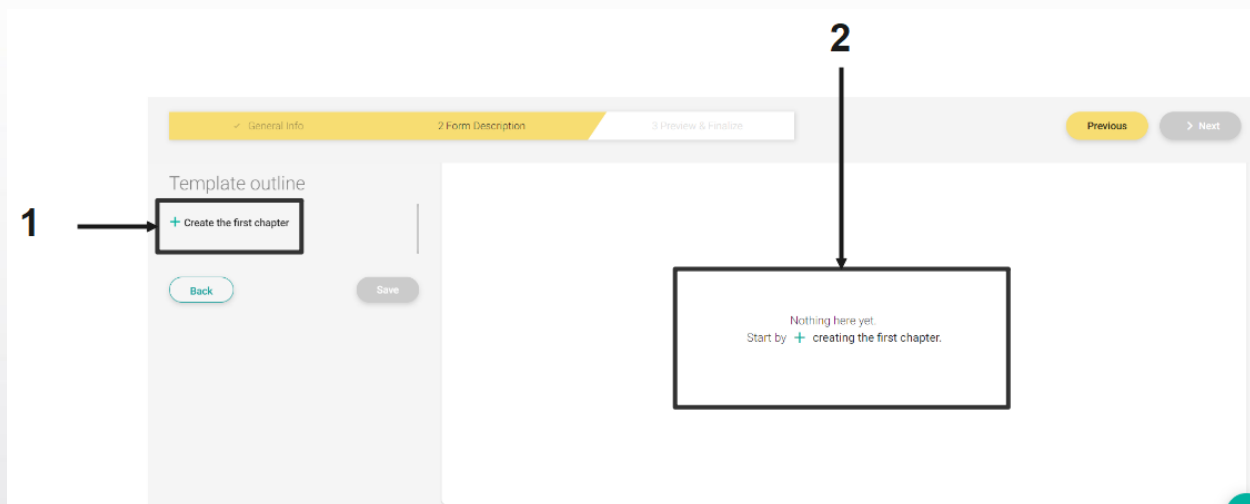


Figure 11. Create the first Chapter

You can create Chapters from the template outline area in the left side or in the center of the screen.

2.1.1 Chapter Name*

Set a name for the dataset chapter.

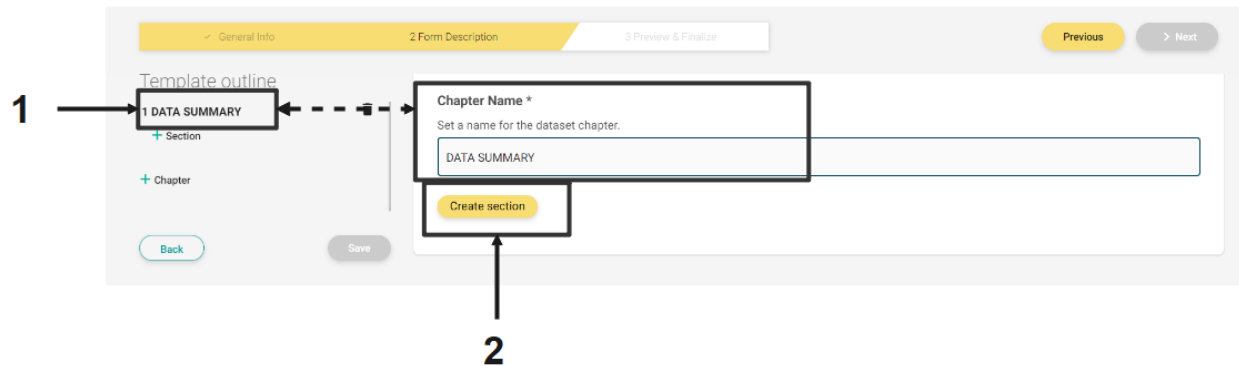


Figure 12. Data Summary

1. **Chapter name** – give a title that determines the Dataset Chapter.

The name of your chapter appears automatically on the Template Outline (left side of the screen).

2. **Create Section** - creates a sub-division within the main division of the Dataset Template.

2.2 Create Section(s)

A Section can be one or more sub-divisions of a Chapter in the Dataset Template. Each Section has questions and is identified with a name and a description.

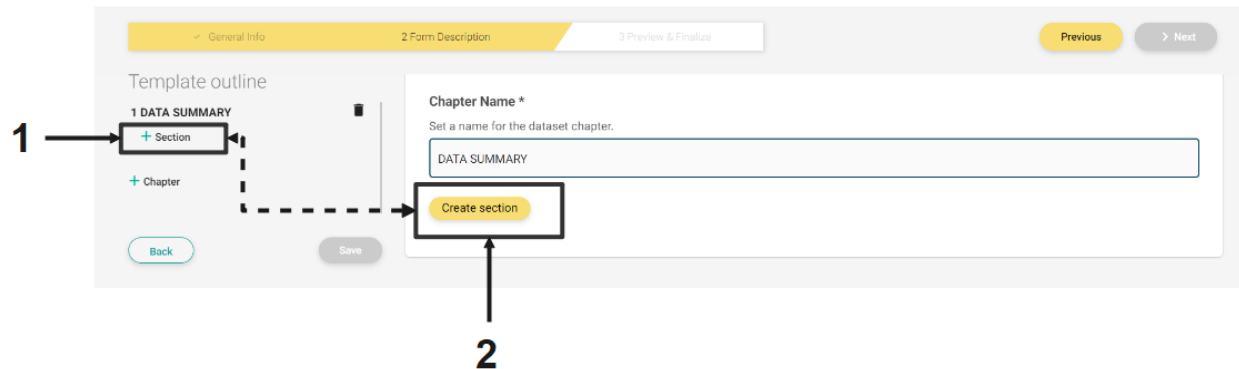


Figure 13. Create Section

You can create Section(s) from the template outline area in the left side or in the center of the screen.

2.2.2 Section Name*

Set a name for the section.

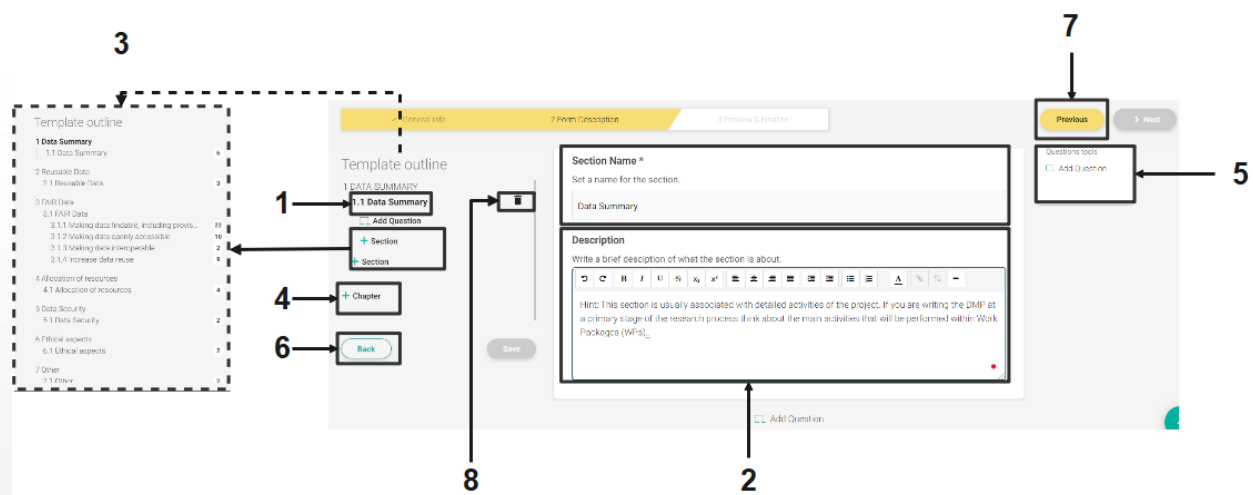


Figure 14. Section Name

1. **Section name** – sets a name for the Section.

The name of your section(s) appears automatically on the Template Outline (left side of the screen).

2. **Description** - provides a summary of the scope and objectives of the section.
3. **Section** - adds more than one Section(s) and sub-sections (sections within Sections)
4. **Chapter** - adds Chapters
5. **Question Toolbox** – contains a set of actions for the created questions.
6. **Back** – rejects the New Dataset Template.
7. **Previous** – moves back to [step](#).
8. **Delete** – permanently removes the selected Section(s).

2.3 Add Question(s)

Add one or more questions in the Dataset Template under your Sections (sub-sections etc).

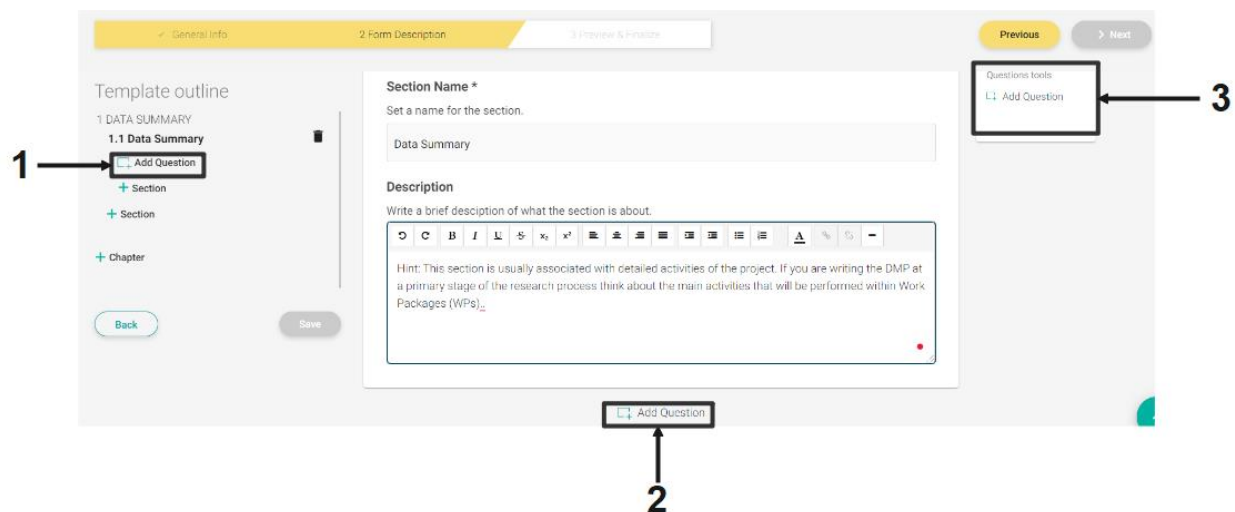


Figure 15. Add a new Question

You can add question(s) by selecting *add question* from:

1. the Template Outline (left side of the screen),
2. the button below the Section panel (when hovering over the center of the screen),
3. the Question tool box (right side of the screen).

***Note:** Actions 1 & 3 execute the same activity: when selected, new question(s) are added after the last question of the section; However, action 2 allows for new question(s) to be added in an ordered manner, on a specific part of the section, e.g. after question 3.

When creating a question, there are couple of new fields that should be filled:

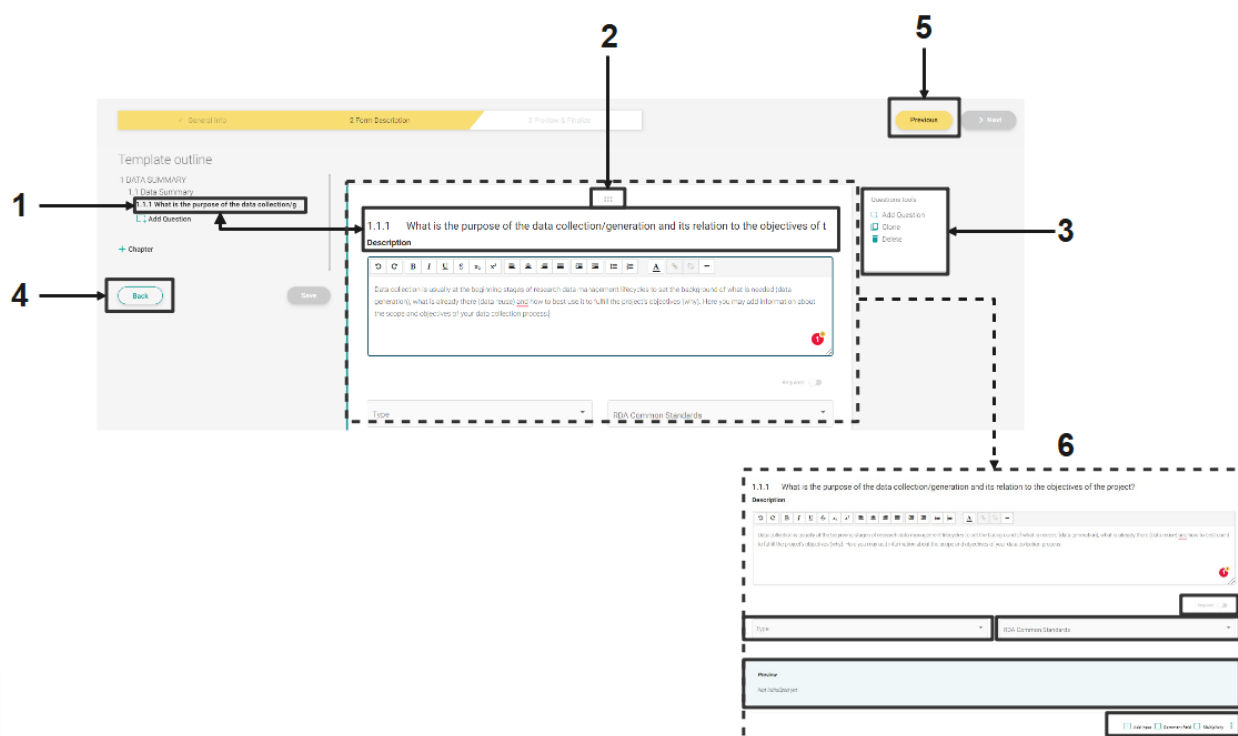


Figure 16. Add question area

1. **Add question** - write the name of the question. The name of your question appears automatically on the Template Outline (left side of the screen).
2. **Dots** - hover over the icon with the dots on top of the editing area of the question, drag and drop the question up and down to change its order.
3. **Question Tool box** - the Question Tools box lets you proceed with the following actions:
 - **Add a question** – opens a new, blank question

- **Clone the question** – copies and re-generates an existing question with all its added properties.
 - **Delete the question** – permanently removes the question from the Dataset Template.
4. **Back**- rejects the New Dataset Template.
 5. **Previous** – moves back to [Step 1. General Info.](#)
 6. **Question Editable Area** - the Area where the question is shaped.

2.3.1 Required

Define if the question is mandatory and, thus, should be always completed.

Required questions do not allow the users to finalize their Data Management Plan without answering them.

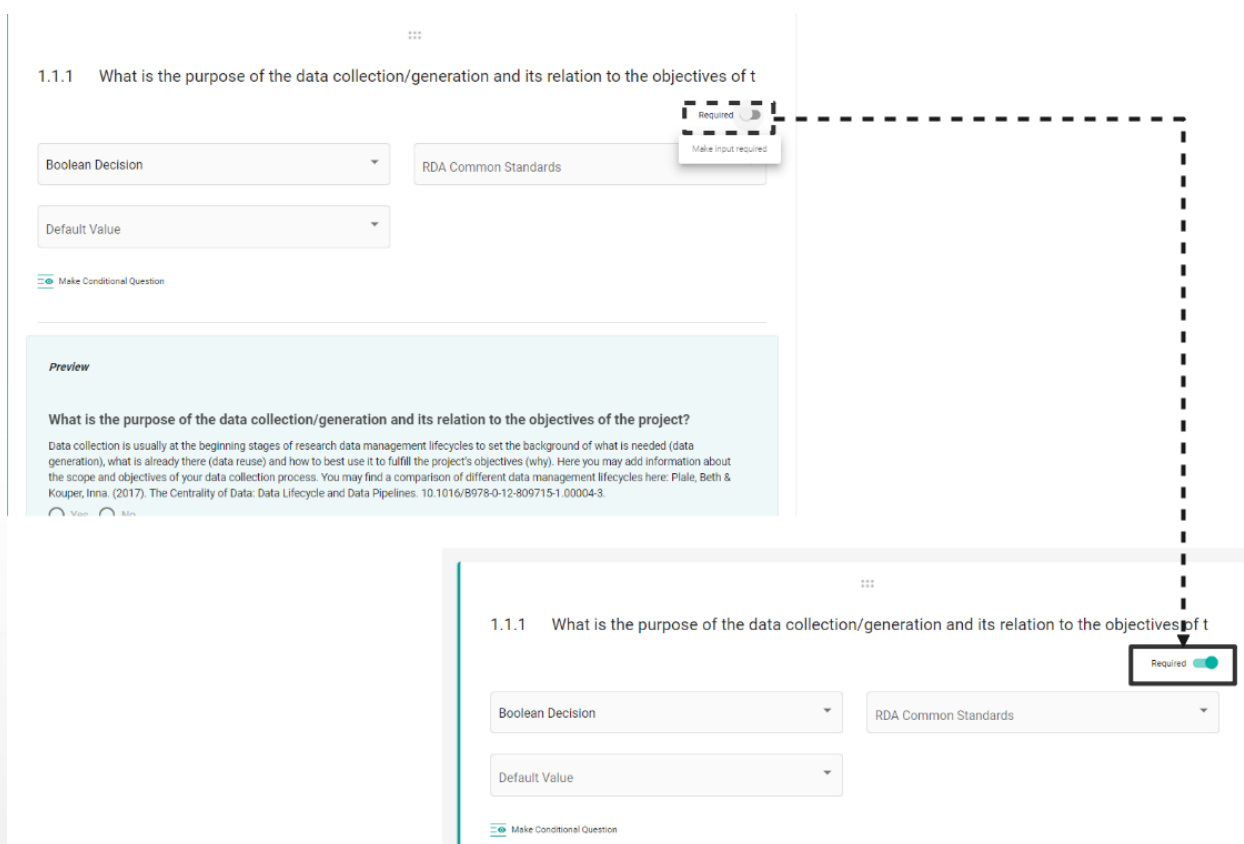
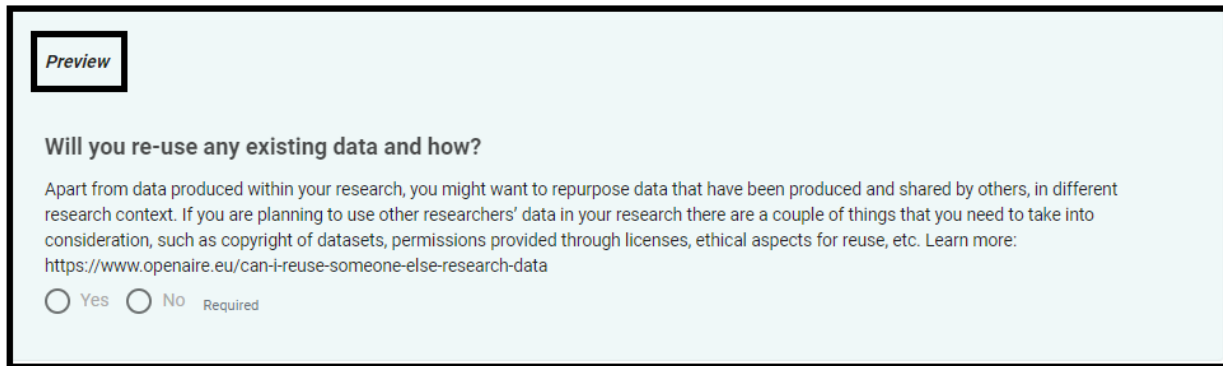


Figure 17. Required

2.3.2. Preview

A preview of the question is automatically created as the question is formulated and is available in the light green box of the Question Editable Area.



The screenshot shows a light green rectangular box with a black border. In the top-left corner, there is a small black box with the word "Preview" in white. Below this, the question text reads: "Will you re-use any existing data and how?". This is followed by a paragraph of explanatory text: "Apart from data produced within your research, you might want to repurpose data that have been produced and shared by others, in different research context. If you are planning to use other researchers' data in your research there are a couple of things that you need to take into consideration, such as copyright of datasets, permissions provided through licenses, ethical aspects for reuse, etc. Learn more: <https://www.openaire.eu/can-i-reuse-someone-else-research-data>". At the bottom of the box, there are two radio buttons: the first is labeled "Yes" and is selected (filled with a grey circle), and the second is labeled "No" and is not selected (empty circle). To the right of these radio buttons, the word "Required" is written.

Figure 18. Preview area

2.3.3 Input Type

The questions are categorized in two major types: open-ended questions and close-ended questions. Other Types of questions are APIs that retrieve data from external authoritative resources and internal Argos Entities.

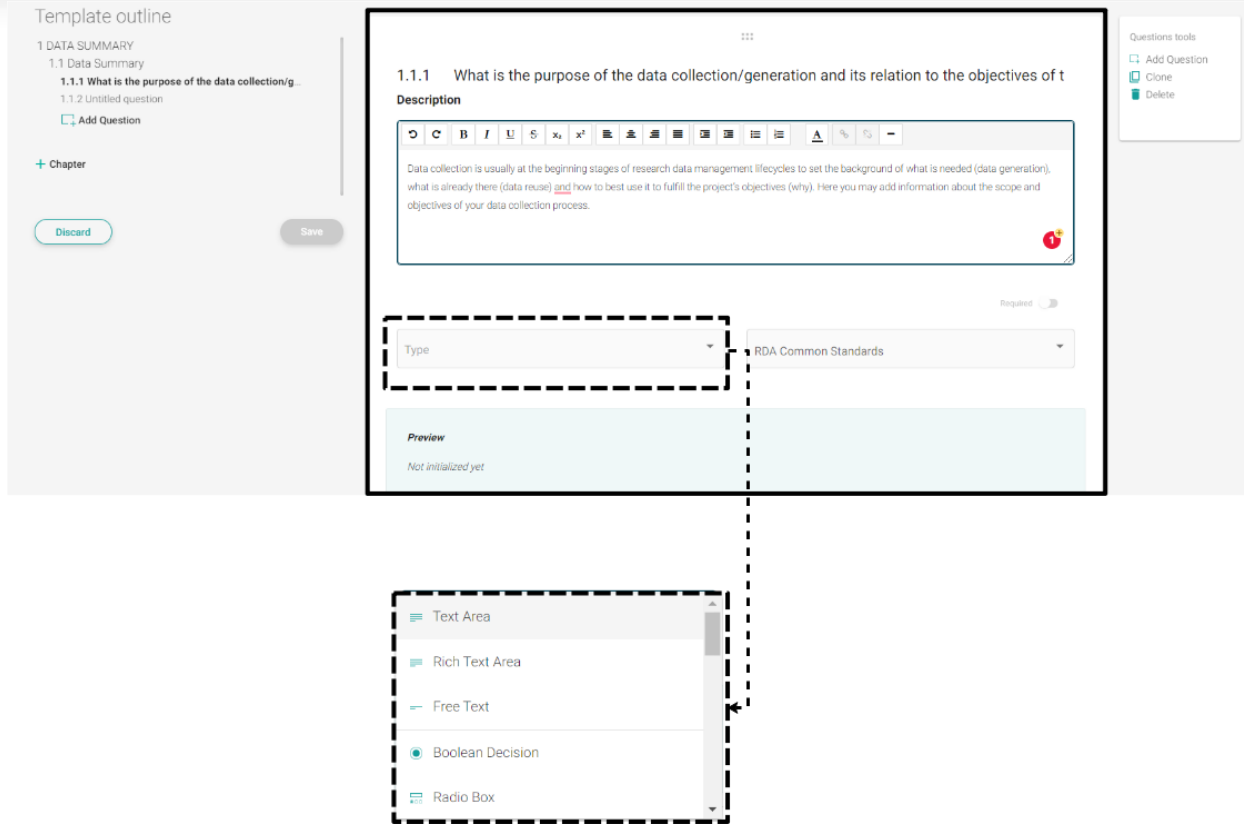


Figure 19. Input Type

Open-ended questions:

- **Text Area**

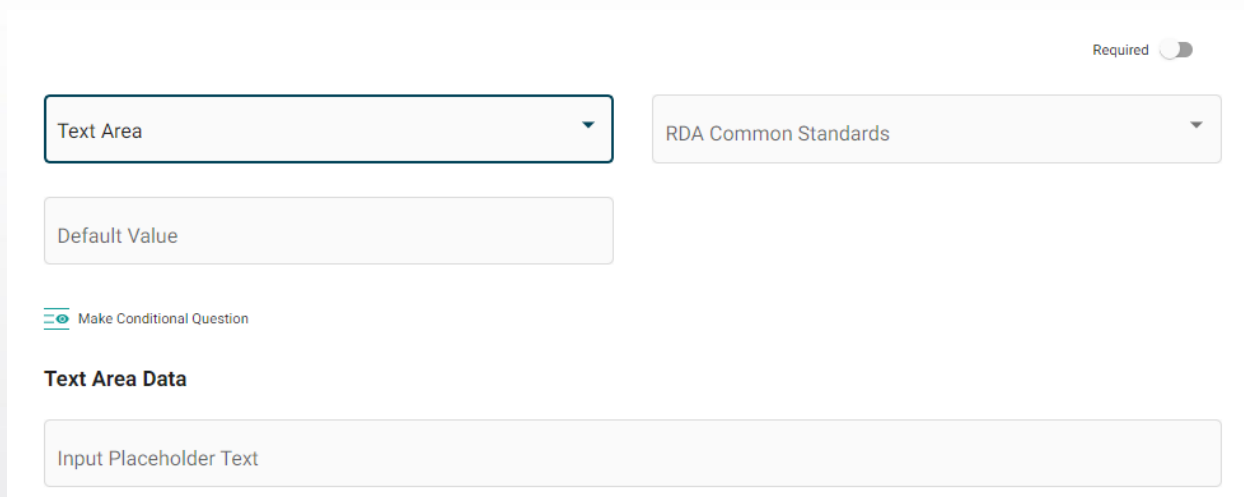



Figure 20. Text Area

- **Rich Text Area**

Required

Rich Text Area RDA Common Standards

Default Value

 Make Conditional Question

Rich Text Area Data

Input Placeholder Text

Figure 21. Rich Text Area

They both define a multi-line text input control where information is represented in an ordinary language without any constraint of format, to numerical, coded, or structured data.

Close-ended questions:

- **Boolean Decision** - A Boolean description is an object that is given the values **Yes** or **No**.

Figure 22. Boolean

- **Radio Box** – A radio box is a graphical control element that allows the user to choose only one of a predefined set of mutually exclusive options.

Figure 23. Radio Box

- **Select** – The Select element defines a drop-down list, each element is normally accompanied by a Label and its Value describing the choice that the Select list represents. Select questions can be single or multiple choice.

Required

Select RDA Common Standards

Default Value

None

[Make Conditional Question](#)

Word List Data

Multiple Selection

Input Placeholder Text

Label Value

+

Preview

Add input Comment field Multiplicity ⋮

Figure 24. Select

- **Checkbox** – A checkbox is a small interactive box that can be toggled by the user to indicate an affirmative or negative choice.

Required

Checkbox RDA Common Standards

Default Value

Checked

Unchecked

Checkbox Data

Input Placeholder Text

Preview

Add input Comment field Multiplicity ⋮

Figure 25. Checked Box

- **Date Picker** – *Date Picker allows the user to select a date from a calendar.*

Figure 26. Date picker

- **Currency** – *a list with currencies of different countries and economic areas.*

Figure 27. Currency

- **APIs** - *API stands for 'Application Programming Interface'. APIs are software intermediaries that allow **argos** to communicate with external authoritative resources. The external resources provided in the form of an*

unordered list. Define to the users to select one or more external resources (Multitude Autocompete). The external resources that **argos** provides are the following:

- **Metadata** – a complete list of metadata standards coming straight from the Research Data Alliance Metadata Directory
- **Services** – a complete list of EOSC resources coming straight from the EOSC Marketplace
- **Researchers** – a list of researcher names and their persistent identifier coming straight from ORCID
- **Organizations** – a complete, deduplicated list of organizations coming straight from OpenAIRE (combines ROR, GRID, Crossref, etc)
- **Datasets** – a list of datasets harvested by OpenAIRE content providers
 - **Type:** a drop-down menu to indicate whether the expected input refers to new, re-used or other kind of dataset.
- **Data Repositories** – a list of data repositories coming straight from OpenAIRE (combines re3data, PROVIDE etc)
- **Add other API** – an empty field to add and configure own APIs
- **Argos Entities**
 - **Internal DMP Entities** – a list of re-usable internal Argos entities
 - **Tags** – a free text registry that stores keywords to ease DMPs searchability
 - **PID Systems** – a pre-defined list of PID systems
 - **Validator** – a field that validates the input against the selected source

2.3.4 RDA Common Standards

argos adopted the [RDA DMP Common Standard](#) to align its practices with the global research data community and to achieve interoperability of DMPs.

You can map the DMP entities and properties from the list to your questions to fit your own, unique Template needs.

⋮

1.1.1 What is the purpose of the data collection/generation and its relation to the objectives of t

Description

☰ ☰ B I U S x₂ x² ☰ ☰ ☰ ☰ ☰ ☰ ☰ ☰ ☰ ☰ A ☰ ☰ ☰

Data collection is usually at the beginning stages of research data management lifecycles to set the background of what is needed (data generation), what is already there (data reuse) and how to best use it to fulfill the project's objectives (why). Here you may add information about the scope and objectives of your data collection process.

Text Area

Default Value

Required

RDA Common Standards

- dataset.data_quality_assurance
- dataset.distribution.access_url
- dataset.distribution.available_until
- dataset.distribution.byte_size

Figure 28. RDA Common Standards

argos RDA field contains all RDA compatible DMP entities and properties:

- dataset.data_quality_assurance
- dataset.distribution.access_url
- dataset.distribution.available_till
- dataset.distribution.byte_size
- dataset.distribution.data_access
- dataset.distribution.description
- dataset.distribution.download_url
- dataset.distribution.format
- dataset.distribution.host.availability
- dataset.distribution.host.backup_frequency
- dataset.distribution.host.backup_type
- dataset.distribution.host.certified_with


```

dataset.distribution.host.description
dataset.distribution.host.geo_location
dataset.distribution.host.pid_system
dataset.distribution.host.storage_type
dataset.distribution.host.supports_versioning
dataset.distribution.host.title
dataset.distribution.host.url
dataset.distribution.license.license_ref
dataset.distribution.license.start_date
dataset.distribution.title
dataset.keyword
dataset.language
dataset.metadata.description
dataset.metadata.language
dataset.metadata.metadata_standard_id
dataset.metadata.metadata_standard_id.identifier
dataset.metadata.metadata_standard_id.type
dataset.personal_data
dataset.preservation_statement
dataset.security_and_privacy
dataset.security_and_privacy.description
dataset.security_and_privacy.title
dataset.sensitive_data
dataset.technical_resource.description
dataset.technical_resource.technical_resource
dataset.technical_resource.technical_resource.description
dataset.technical_resource.technical_resource.name
dataset.type
dataset.issued
dataset.dataset_id
dataset.dataset_id.identifier
dataset.dataset_id.type
dmp.contributor

```

2.3.5 Default Value

Display an answer that has been pre-selected/ pre-defined for the question.

The pre-selected answer can be changed at any time by the users.

1.1.1 What do you plan to do with research data of limited use?

Required

Select ▼

RDA Common Standards ▼

Default Value ▼

Kept on secure, managed storage for limited time

[Make Conditional Question](#)

Word List Data

Multiple Selection

Input Placeholder Text

<p>Label</p> <p>Kept on secure, managed storage for limited time</p>	<p>Value</p> <p>Kept on secure, managed storage for limited time</p>	✖
<p>Label</p> <p>Kept on insecure, unmanaged storage for limited time</p>	<p>Value</p> <p>Kept on insecure, unmanaged storage for limited time</p>	✖
<p>Label</p> <p>Delete at end of project</p>	<p>Value</p> <p>Delete at end of project</p>	✖

+

Preview

What do you plan to do with research data of limited use?

Kept on secure, managed storage for limited time ▼

Add input
 Comment field
 Multiplicity
 ⋮

Figure 29. Default Value

2.3.6 Add Input

Add more than one input(s) to your question. Mix and match different [types](#) of inputs to create unique questions that offer users with multiple ways and guidance on how to answer the question.

Hover over the option *Add Input* and select the extra type of input to be added to the question. Add Input can be used infinite times.

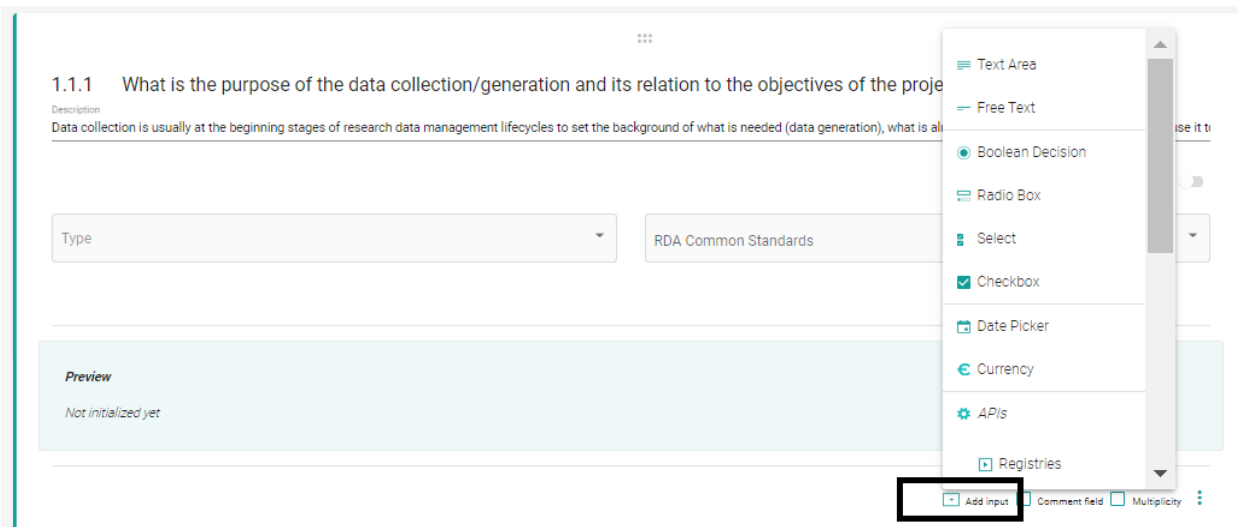


Figure 30. Add input

2.3.7 Input Placeholder

Add a descriptive text to help users with their answer.

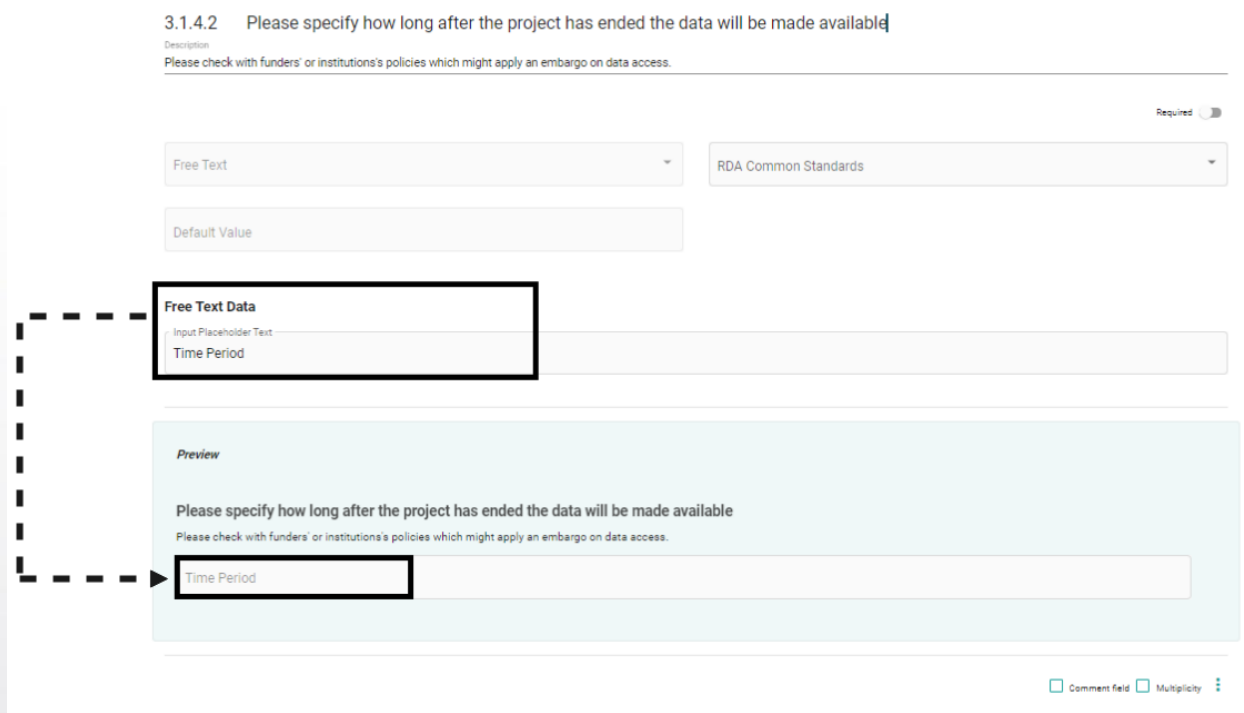


Figure 31. Input Placeholder

* For questions that are designed to accept multiple inputs, this is a good way to distinguish the type of inputs required per answer.

2.3.8 Comment field

Adds an extra free text field to the question. The field is by default configured to receive input that is intended to be used as 'additional information' text with placeholder text "Please specify".

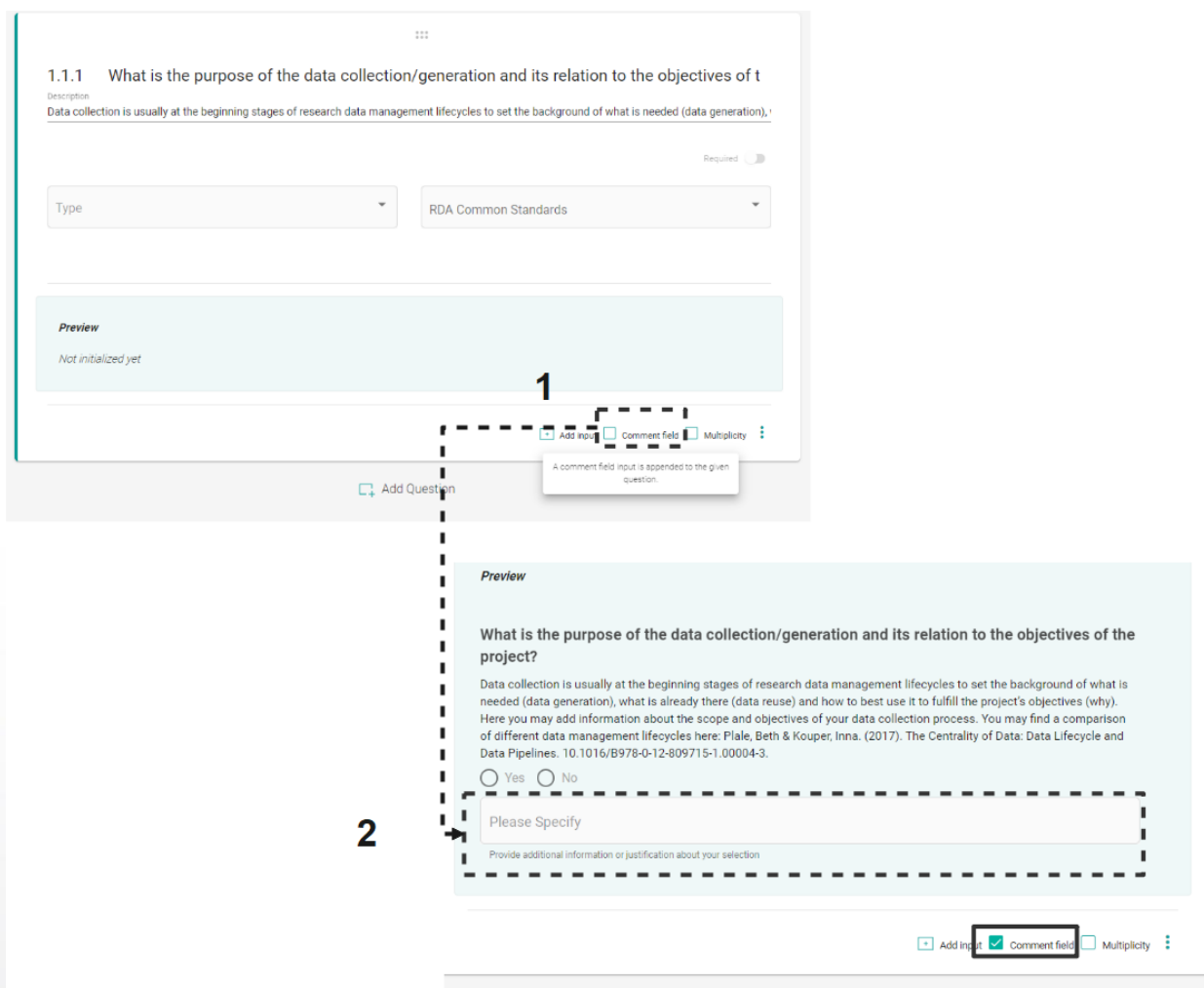


Figure 32. Comment Field

2.3.9 Multiplicity

Control how many times the users can add their input to answer the same question(s).

Arrange the min-max with numbers that indicate the amount of times that input can be provided for the question(s).

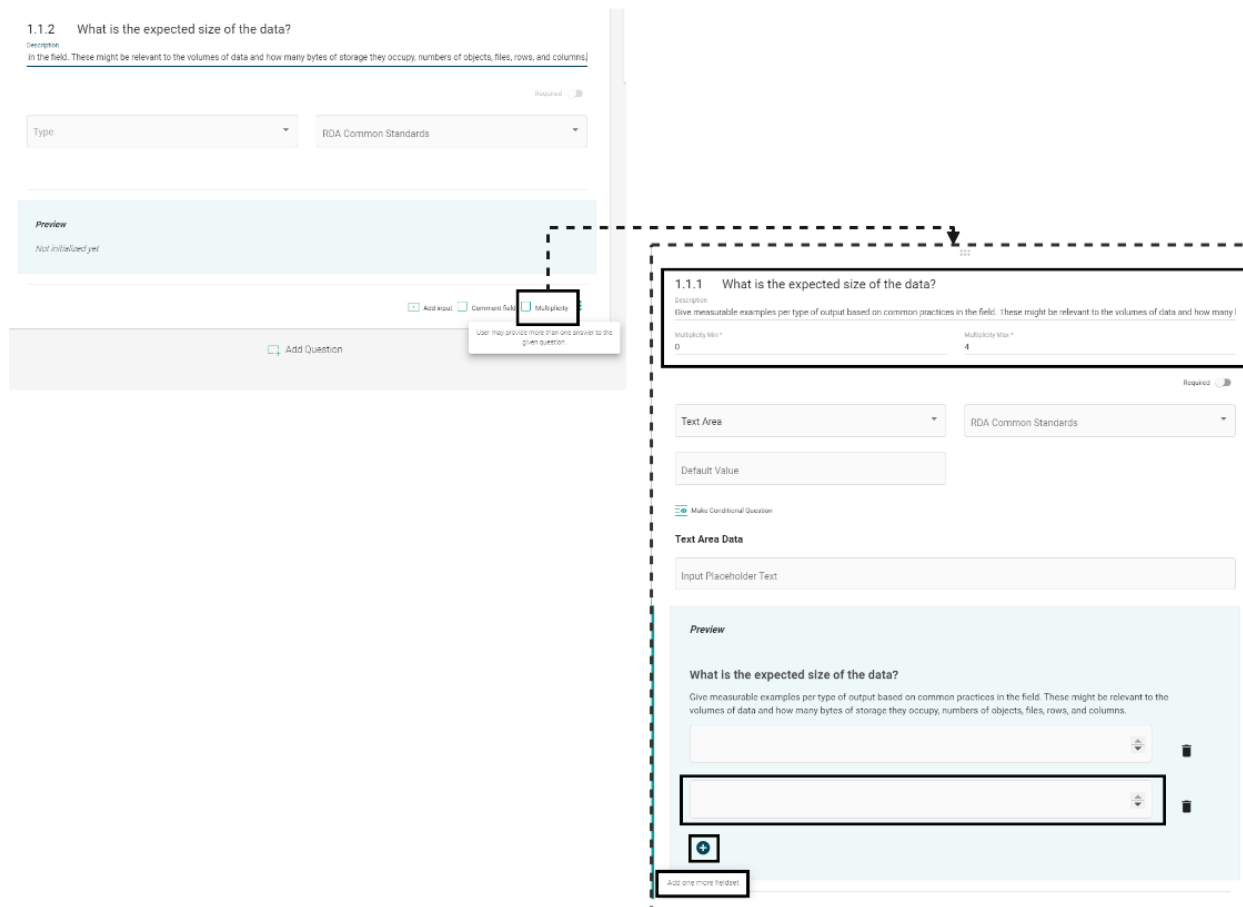


Figure 33. Multiplicity

2.3.10 Description

Add a Description to a given question. Add more information with the Extended Description or/and Additional Information. The description area is placed below the question by default. The user can check/uncheck the Description, Extended Description and/or Additional Information to the icon with the three bullets.

- Description/Extended Description/Additional Information Area

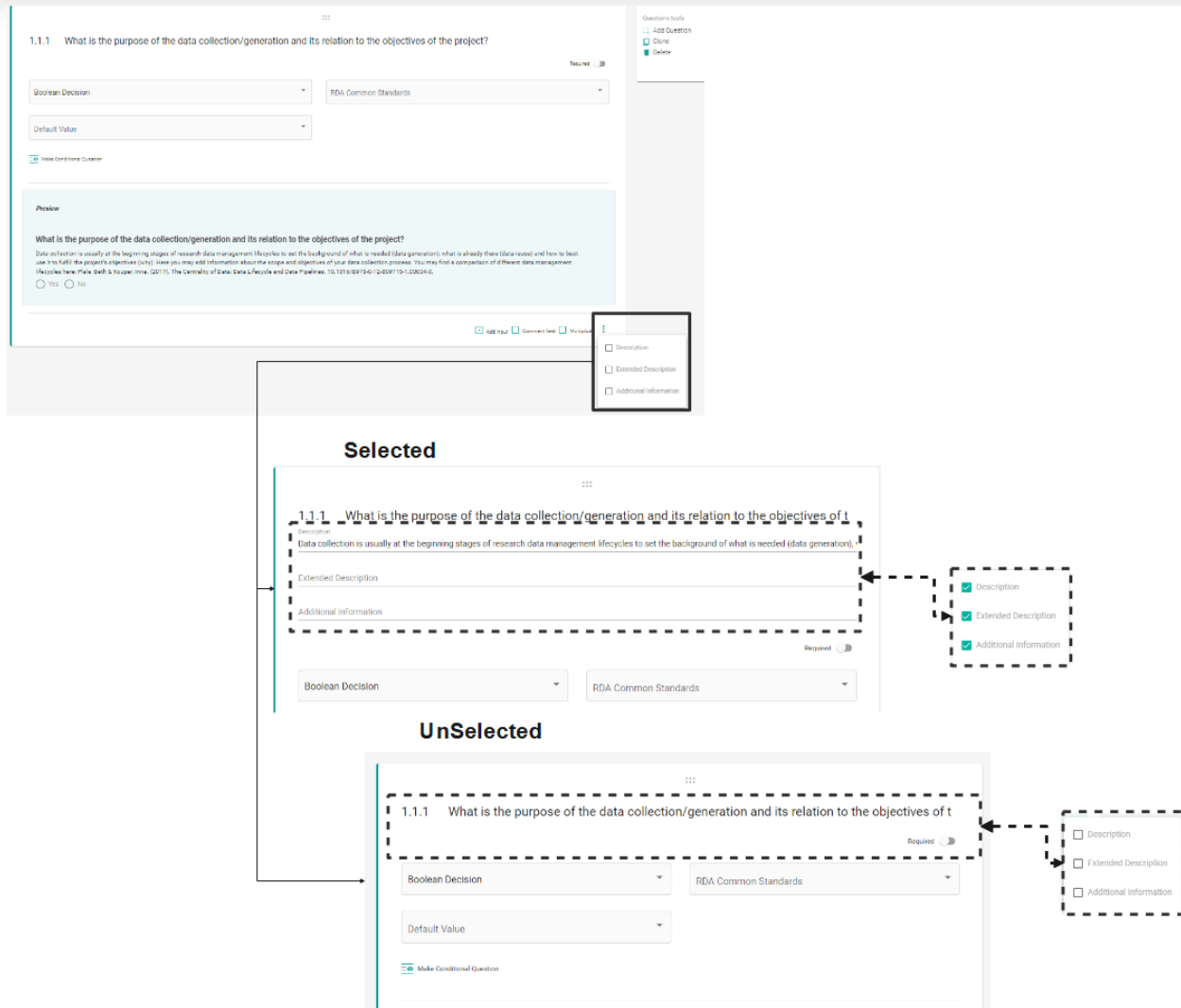



Figure 34. Description

*Additional Information appears as a tip ():

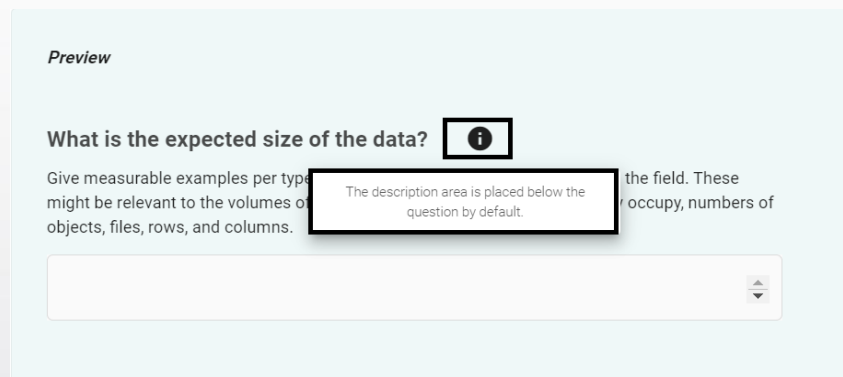


Figure 35. Additional Information

Step 3: *Preview & Finalize*

The third and the last step to Create a Dataset Template is 3. *Preview & Finalize*.

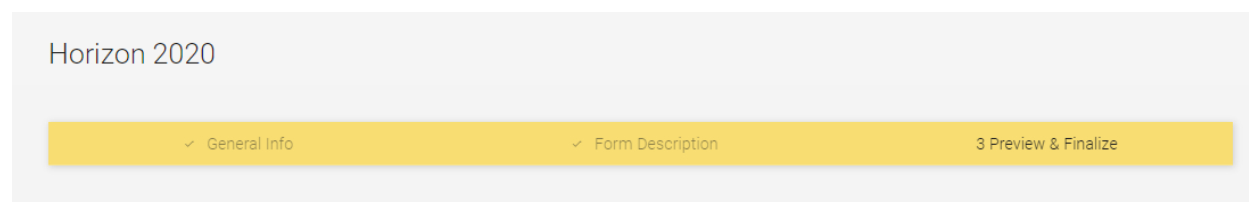


Figure 36. Third Step

3.1 Preview

Preview the New Dataset Template that you created in [Step 2. Form Description](#) before finalized.

The following picture is a snapshot of the screen:

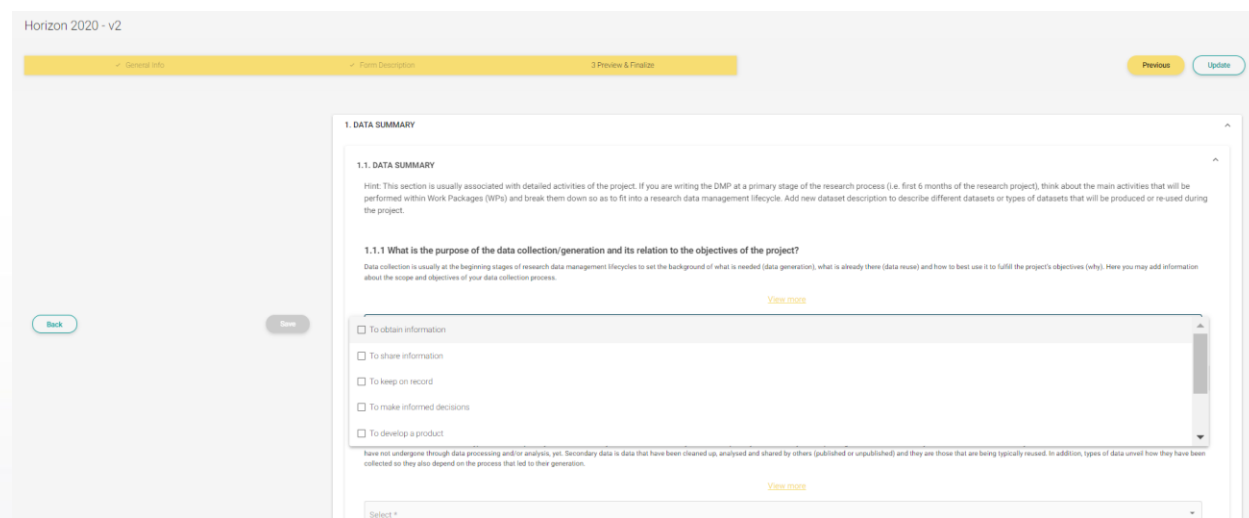


Figure 37. Preview

3.2 Finalize

Publish the Template and make it visible to the users. Finalized Templates are immediately added in the DMP collection and are ready for use by Argos users.

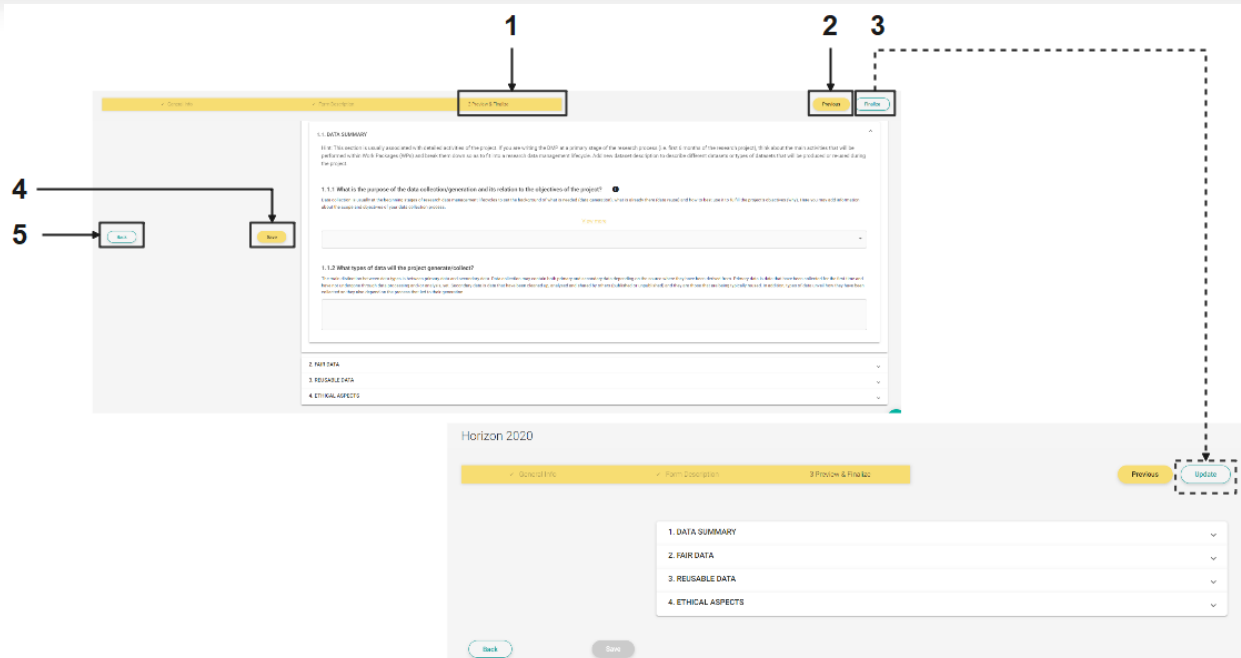


Figure 38. Finalize & Update

1. **Preview & Finalize** - you are in the third step
2. **Previous** – moves to [Step 2. Form Description](#)
3. **Finalize** – publishes the Dataset Template
 - **Update** – refreshes any changes made on the finalized Dataset Template
4. **Back** – rejects the Dataset Template and returns to the main menu
5. **Save** – saves the Dataset Template as a Draft Template

Glossary

DMP

A DMP - short for Data Management Plan - is a document describing the processes that the data have undergone and the tools used for their handling and storage during a research lifecycle. Most importantly, DMPs secure provenance and enable re-use of data by appointing data managers and by including information on how data can be re-used by others in the future. Therefore, a DMP is a living document which is modified according to the data developments of a project before it's completed and handed over at the end of the project. Public funders increasingly contain DMPs in their grant proposals

or policy funding requirements. A good paradigm is the European Commission demands for the production and delivery of DMPs for projects funded under the Horizon 2020 Funding Programme. On that note, and to encourage good data management practices uptake, many European institutions include DMPs in post-graduate researchers policies and offer relevant support to staff and students.

DMP template

DMP template contains general but vital information about the name and the duration of the project that the DMP corresponds to, the contributing organisations and individuals as well as the datasets that are under the Dataset Description section. It also offers the possibility of describing datasets other than primary data generated, under “External References” section. A DMP template can have many Dataset Descriptions.

Dataset Description

Dataset Description documents the management processes of datasets following funder’s or institution’s requirements. A dataset description is essentially a questionnaire template with underlying added value services for interoperability and machine readability of information which is developed based on the given requirements. Management requirements differ from funder to funder and from institution to institution, hence the growing collection of Dataset Descriptions to select from. Moreover, a Dataset Description links to the documentation of one dataset, hence a DMP template may contain more than one dataset descriptions on the occasion when multiple datasets were used during the project. When documentation of some of the project’s datasets falls under additional requirements (e.g. projects receiving multiple grants from different sources), there is the possibility of describing datasets with more than one Dataset Description template.

Administrator

An administrator can be any **argos** user, who has requested advanced rights. Additional features appear on the left side of the home page of the administrator after logging in. An administrator can create DMP and Dataset Templates, can manage/export the rights of other administrators, and make

changes to the Language and the guide with the use of the editors that are available.

Workflow

The administrator creates Dataset Templates defining the description of a Dataset. The description of a dataset is a set of questions created by the administrator following three steps.

Metadata

In the semantic web, the extension of the World Wide Web (www), metadata represents other data, following specific standards and made them findable, accessible, interoperable and reusable.