

BExIS 2.5.1

Data Planning Module

User Guide

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Acknowledgement

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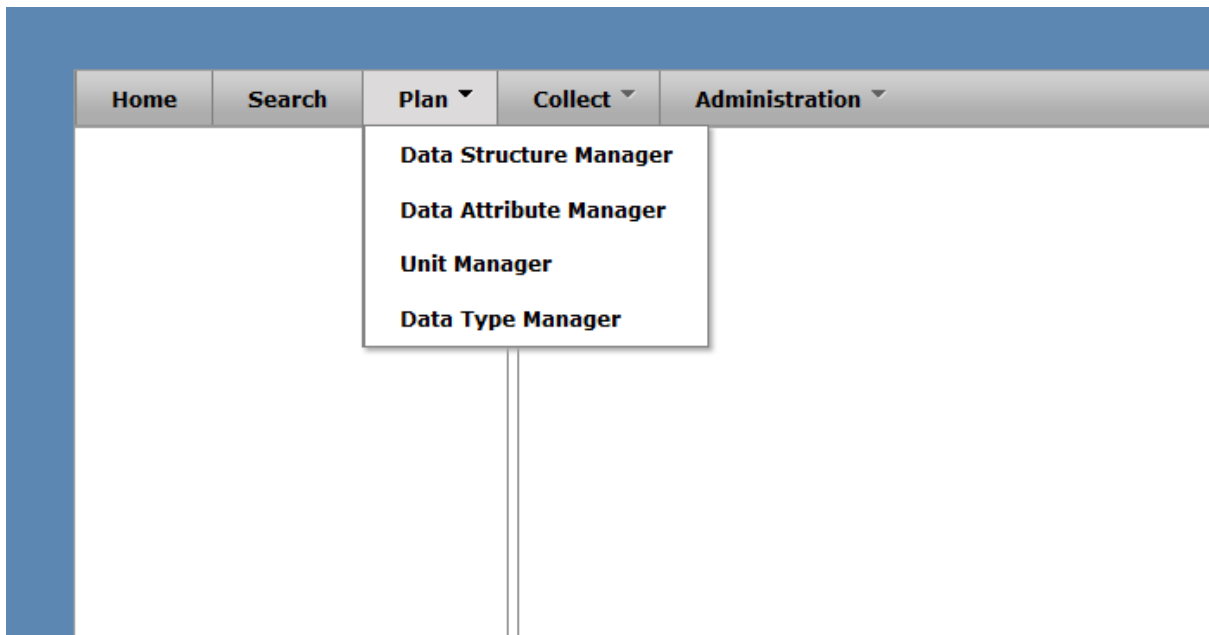
Overview

In BExIS your data is stored and managed as part of a dataset. A dataset may be anything from a single record up to a collection of millions of records and multiple variables. Each dataset may have an individual structure given by the number of variables and their properties. It is up to the user or the data manager of a project to define such Data Structures. This is what the Data Planning Module is for.

The module is called “Data Planning” since it is good practice to specify the Data Structure before collecting your data in the field or the laboratory. Your data can only be uploaded to the system (using the Data Collection Module) if there is a corresponding Data Structure already existing.

A Data Structure contains one or more Data Attributes. Each Data Attribute is defined by its Data Type, a Unit, and a unique name. So defining Data Types and Units would be the first step, if they are not available yet. In a typical project scenario, the responsible data(base) manager would have created the most common Data Types and Units.

The system encourages reuse of Data Attributes, as well as Data Types and Units. For example, there should be only one Data Attribute for temperature values with a Data type of ‘float’ and measured in degree Celsius (i.e. unit). All datasets containing such temperature measurements should use this data attribute in their data structure. The advantage of such reuse is not only to avoid redundancy (e.g. different names for same thing), but is foremost to enable integration of identical variables across different datasets for large synthesis tasks later on.



Data Type Manager

With the Data Type Manager you are able to create, modify and delete Data Types. They are required to specify Data Attributes.

Create a Data Type



- Open **Plan Data Type Manager**
- Click on the **Add Data Type** button

A screenshot of a dialog box titled 'Add'. It has a close button (X) in the top right corner. The dialog contains three input fields: 'Name:' with a red asterisk, 'Description:', and 'SystemType:' with a dropdown menu showing 'Boolean'. Below the fields is a red asterisk followed by the text '* Please don't leave empty'. At the bottom left is a 'Save' button.

- Fill the **Name** and the **Description** field
- Choose **System Type** (is Data Type used form the System to Store values of the Data Attributes using this Data Type)
- Click **Save button**

- The Data Type is stored if all information are correct and it is not a duplicate

Edit/Delete a Data Type

- Open **Plan Data Type Manager**
- To delete a Data Type click the delete button  or the edit button  for editing
- For editing a Unit follow steps 3 – 6 from **Create a Data Type** part

Unit Manager

With the Unit Manager you are able to create, modify and delete Units. Units may be required to define Data Attributes.

Create a Unit

- Open **Plan Unit Manager**
- Click on the **Add Unit** button

Add
✕

Name:*


Abbreviation:*

Description:

Dimension:

Measurement System: Unknown



	Name	Id	System Type	Description
<input type="checkbox"/>	Date	4	DateTime	A Date +Time
<input type="checkbox"/>	String	1	String	A Unicode String
<input type="checkbox"/>	Number	2	Int32	An Integer Number
<input type="checkbox"/>	Decimal	3	Double	A Real Number
<input type="checkbox"/>	Text	5	String	for long text
<input type="checkbox"/>	Test	6	Boolean	sdfsd3



* Please don't leave empty

- Fill the **Name, Abbreviation, Description, Dimension** fields
- Choose **Measurement System** and **Associated Data Types** (optional)
- Click **Save button**
- The Unit is stored if all information are correct and it is not a duplicate

Edit/Delete a Unit

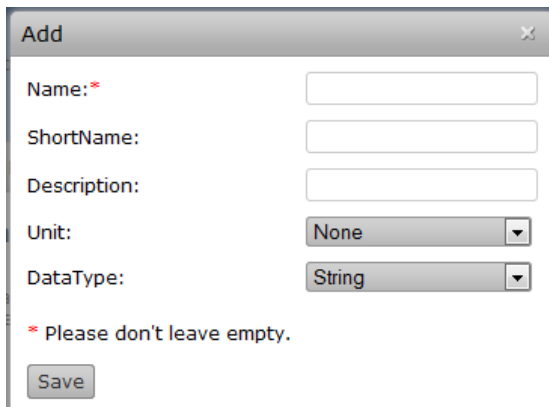
- Open **Plan Unit Manager**
- To delete a Unit click the delete button  or the edit button  for editing
- For editing a Unit follow steps 3 – 6 from **Create a Unit** part

Data Attribute Manager

With the Data Attribute Manager you are able to create, modify and delete Data Attributes. Data Attributes are required to create Data Structures.

Create a Data Attribute


- Open **Plan Data Attribute**
- Click on the **Add Data Attribute** button



- Fill the **Name, Short Name** and the **Description** field

- Choose a **Unit** and a **Data Type**
- Click **Save button**
- Data Type is stored if all information are correct and it is not an duplicate

Edit/Delete a Data Type

- Open **Plan Data Attribute**
- To delete a Data Attribute click the delete button ✕ or the edit button  for editing
- For editing a Unit follow steps 3 – 6 from **Create a Data Attribute** part

Data Structure Manager

The Data Structure Manager is a tool to create, modify and delete Data Structures. Data Structures contain Variables, which are specific instances of Data Attributes. For example, only one Data Attribute 'Count' is needed to build a Data Structure of multiple similar variables where only the name (e.g. species name) is different. Each Variable uses the same Data Attribute (e.g. instances of Count). It is possible to create Data Structures for structured data (Excel tables, CSV-Files, ...) and for unstructured data (images, videos, ...)

Create a Data Structure

- Open **Plan Data Structure Manager**
- Choose **Create Structured** or **Create Unstructured**

New Data Structure

Info:

Name

Number of Variables: 0

Data Structure ID: 0

Description:

- Type the Name of your Data Structure in the **Name** field and a Description in the **Description** field
- Click the **Save** button

Add a Variable to a Data Structure

- Open **Plan Data Structure Manager**
- Select a Data Structure from the **tree** on the Left side

Demo Data Structure

Name:

Number of Variables: **No Variables**

Data Structure ID: 15 Description:



Functions	
Name	
Optional	
VariableID	
ShortName	
Description	
Unit	
Data Type	

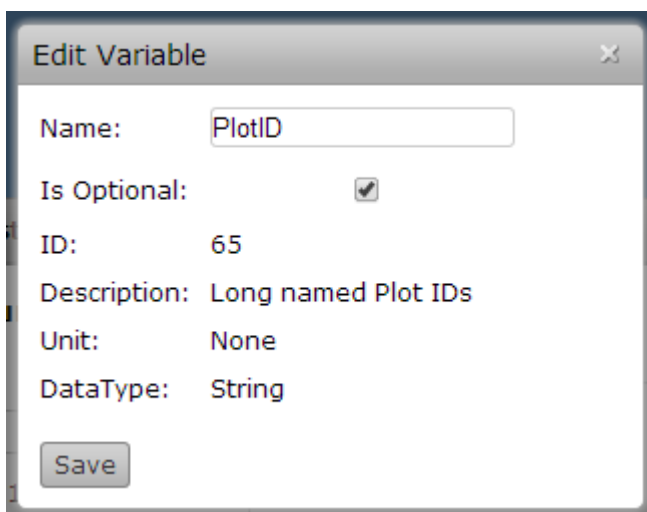
- Click the **Add Variable** button

	Name	Id	Short Name	Description
<input type="text" value="0"/>	Lithology	25	Lithology	The lithology of a rock unit is a description of its physical characteristics visible at outcrop
<input type="text" value="0"/>	Roughness average	29	rough_avg	surface/ground ratio
<input type="text" value="0"/>	Ground hits	31	Ground hits	Fraction of echos hitting ground
<input type="text" value="0"/>	Roughness standard derivation	32	rough_sd	surface/ground ratio standard derivation
<input type="text" value="0"/>	ID	22	ID	Identifier
<input type="text" value="0"/>	EP PlotID	30	EP PlotID	Name for experimental plots
<input type="text" value="0"/>	Individuals total	33	ind_total	Total number of sampled specimens
<input type="text" value="0"/>	Species	34	Species	Taxonimc rank species
<input type="text" value="0"/>	Regime	21	Regime	
<input type="text" value="0"/>	Ecke	28	Ecke	corner of the EP which is in center, if -1, then around original plot center

- Select all **Attributes** you want to add by increasing the counter in the first column and click the **Save** Button. If you add an attribute multiple times, it is recommended to change the names of the resulting variables to something meaningful, once the Add Variable Window is closed.
- Note: The name and the order of variables do not matter to the system (only the ID is used internally), so you are free to adjust them as needed.

Edit/Remove a Variable

- Open **Plan Data Structure Manager**
- Select a Data Structure from the **tree** on the Left side
- To delete a Variable click the delete button  or the edit button  for editing (the Variable is deletable/editable if the Data Structure is not used by an Dataset)



- If you use one Attribute multiple times you should change the name of the Variable and click Save

Copy a Data Structure

- Open **Plan Data Structure Manager**
- Select a Data Structure from the **tree** on the Left side
- Click the **Save as** button and enter a new name and description

Delete a Data Structure

- Open **Plan Data Structure Manager**
- Select a Data Structure from the **tree** on the Left side
- Click the **Delete** button (the Data Structure is deletable if the Data Structure is not used by an Dataset)