Introduction

Be Informed offers a fully model driven development environment for business applications, making it easier to implement, test and change these applications than in tradition development environments. The models are used to visually describe cases, registrations, interaction, products and decisions. Having basic knowledge of our modeling approach is for this reason helpful for everyone who is involved in - or considers - a Be Informed implementation.

A Be Informed model consist of concepts, relations and properties. These are the building blocks of an application. A project usually consists of multiple models.

Modeling consists of the following tasks:

1. Choosing the modeling domain
2. Creating a model
3. Creating concepts
4. Creating relations
5. Creating references to other models
6. Checking the models for circular references

Choosing the modeling domain

Be Informed offers four predefined modeling domains. In each domain, a different kind of knowledge is modeled:

- Case management:
  In case management processes and activities are modeled, which result in artifacts.
- Product:
  Declarative models, classifications, calculations and decisions.
- Registration:
  A registration is a centrally managed storage of data that is widely reusable within an application.
- Interaction:
  How these business aspects are mapped to people, competences, applications and services.

The concepts in each domain have a specific color: Green for case management, orange for products, blue for registration and white for interaction.

Every domain is defined by its own meta model. Whenever you create a new model, Studio will ask you to select the appropriate meta model. Choose the meta model that fits the domain: the kind of information you want to model.
Creating a model

Models are explicit representations of knowledge. Be Informed offers two tools for designing models: the graphical model editor and the form model editor. Here, we focus on the graphical editor, the standard editor which helps to get a quick insight in the model with its main constituents and structures.

To create a new model within a project:

1. Select the project and use your right mouse button to view all options. Select **New > Model**.

2. Fill in the name for your model, then click **Next >**.
3. Now select a source language and click **Next >** to continue. The default source language is English.

   ![Configuration dialog](image)

4. Then select the appropriate meta model and click **Finish**.

   ![Select meta model](image)

Be Informed offers four predefined meta models related to the four standard domains: case management, products, interaction and registration.

**Creating concepts**

Within the models we use concepts and relations. Concepts are the building blocks of a model, relations are used to add meaning to the concepts by making their coherence explicit. There are various types of concepts, depending on the domain in which the model is positioned. Each domain contains a different set of concept types. The Concepts palette shows the concept types that are available within the domain that you are modeling in.
To create a concept:

1. Choose a concept type from the concept palette. Mouse over a concept to get a short explanation of the concept type.

2. Select a concept type and drag it into the model.

3. Subsequently fill in the name of the concept.
Creating relations

Relations define how concepts relate to each other. The relations between concepts are important features of a knowledge model as they determine - together with the concepts - how the application will function.

To create a relation:

1. Hover over a concept to make the blue arrow appear.

2. Click on the blue arrow and drag it to the concept that you want it to connect with.

3. Now choose the type of relation. Only the types of relation that are allowed between the two selected concept types will be shown. These restrictions are defined in the meta model.

Another way to create a relation is to select a relation from the palette, drop it on a concept and drag it to another concept.

Creating references to other models

Reference concepts are used to provide cohesion between various models. This means that references are made from within one model to an existing concept in another model.

To create a reference concept:

1. Select the option Reference Concept in the palette.
2. Now click in the model and choose the concept that you want to make a reference to. Hold [CTRL] to select more than one concept from the list. Click Finish when ready.

The reference concept is now in your model and can be connected to the other concepts.

The reference concept has exactly the same properties and relationships as the original concept. This cannot be modified. You can only define incoming relations to the reference concept, outgoing relations are not possible.

**Check models for circular references**

A circular reference is a double arrow between two concepts, often in two different models. In the example of the car insurance, a circular reference will occur when we create a relation from the concept *Car Insurance* to the reference concept *Coverage car insurance* in one model, and a relation from the concept *Coverage car insurance* to the reference *Car insurance* in the other model.
Circular references are not allowed in Be Informed. After saving the models, the reference concepts will be greyed out and the application will not work.

The Be Informed model editor interprets a reference concept in a model as a relation between two models, even when the reference concept is not linked to any concept. So even when two concepts are not related by two arrows but are part of two models, it will be interpreted as a circular reference and result in greyed out reference concepts.

Circular references can be avoided by:

- Modeling out every taxonomy in a separate model
- Modeling decisions and calculations in a separate model with references to the conditions and grounds that are needed for the decision or calculation.
- Modeling out derivable conditions and grounds in separate models
- Modeling out the properties of a subject in a separate model