Self-documented Metamodels with Abstractions

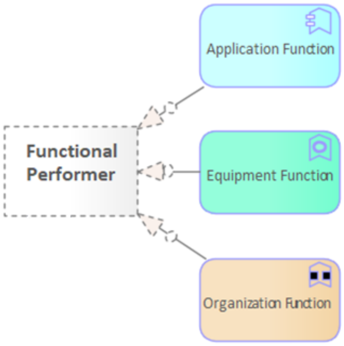
Labnaf 6.0

Labnaf metamodels have always been self-documenting as they are expressed using the same language as the one used for modeling your strategy and architecture.

The ability to create abstract metamodel elements and metamodel element generalizations dramatically diminishes the number of metamodel connections.

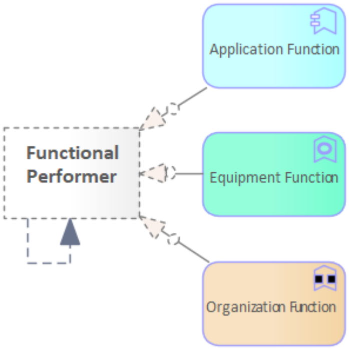
And it simplifies the process of creating, modifying, reading, and documenting metamodels.

How to Create a Self-documented Metamodel with Abstractions



Step1: Create a taxonomy of metamodel elements

This very basic example uses one abstract metamodel element, three concrete elements, and three metamodel element generalization connectors.

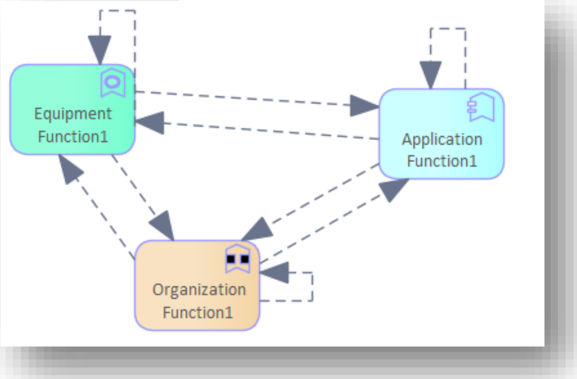


Step 2: Define concrete connectors in the metamodel

You can now add concrete elements between abstract and/or concrete elements.

In this basic example, we just added a single concrete 'Flow' connector on the abstract element 'Functional Performer'.

Based on the above metamodel, Labnaf dynamically generates quick linkers and model validation rules.



Step 3 (Usage): Create a model that is compliant with the metamodel

All the model connections shown here are compliant with the above metamodel.

Quick linkers and model validation rules are dynamically generated.

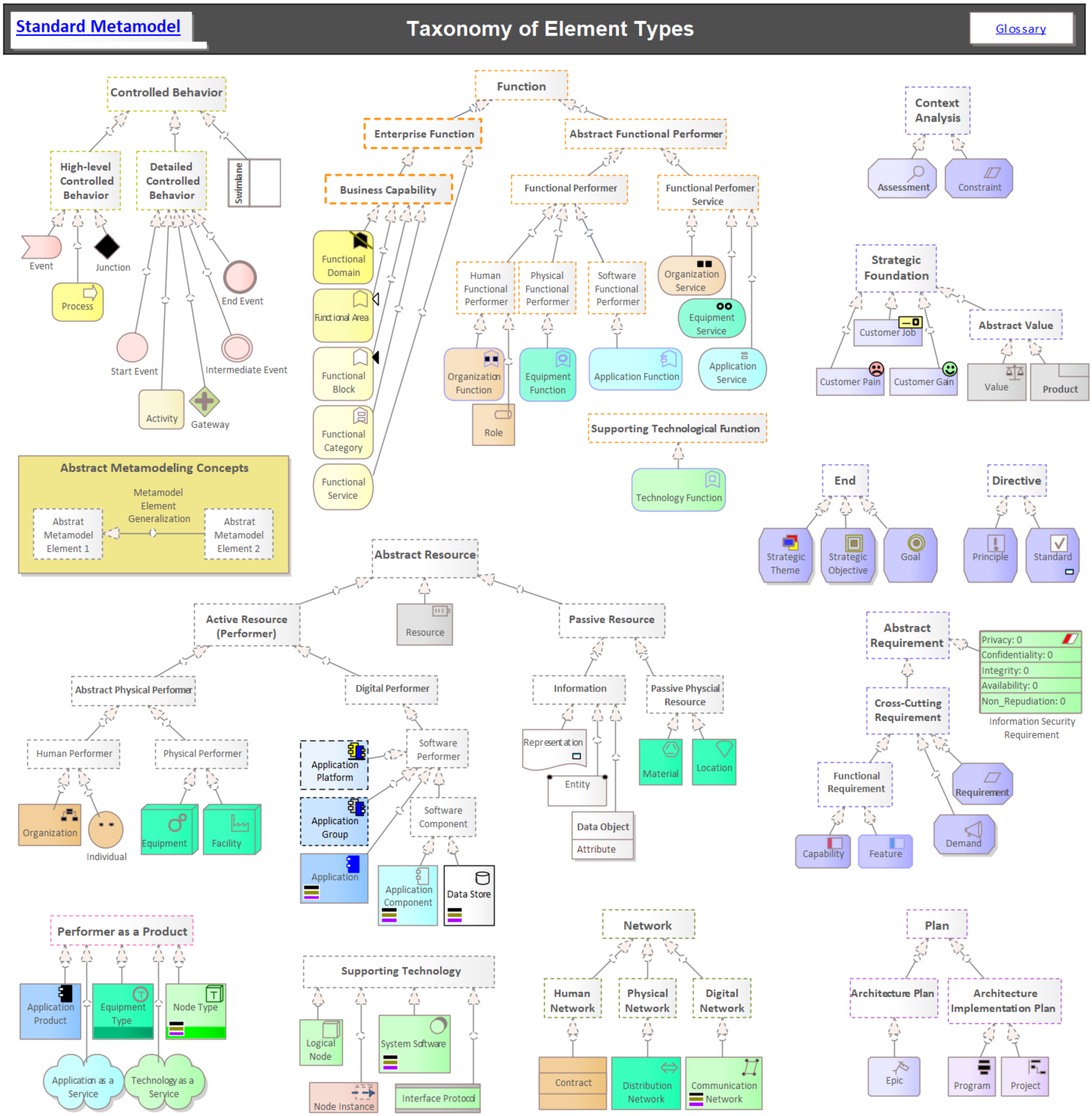
Tool Support

To change a metamodel, you simply add or delete elements and connectors, and then you press the 'Commit Last Changes' button in the Instant Metamodel Manager to commit your changes. The new validation rules become instantly active, and the quick linkers get automatically updated as well.

The Standard Metamodel Uses Abstractions

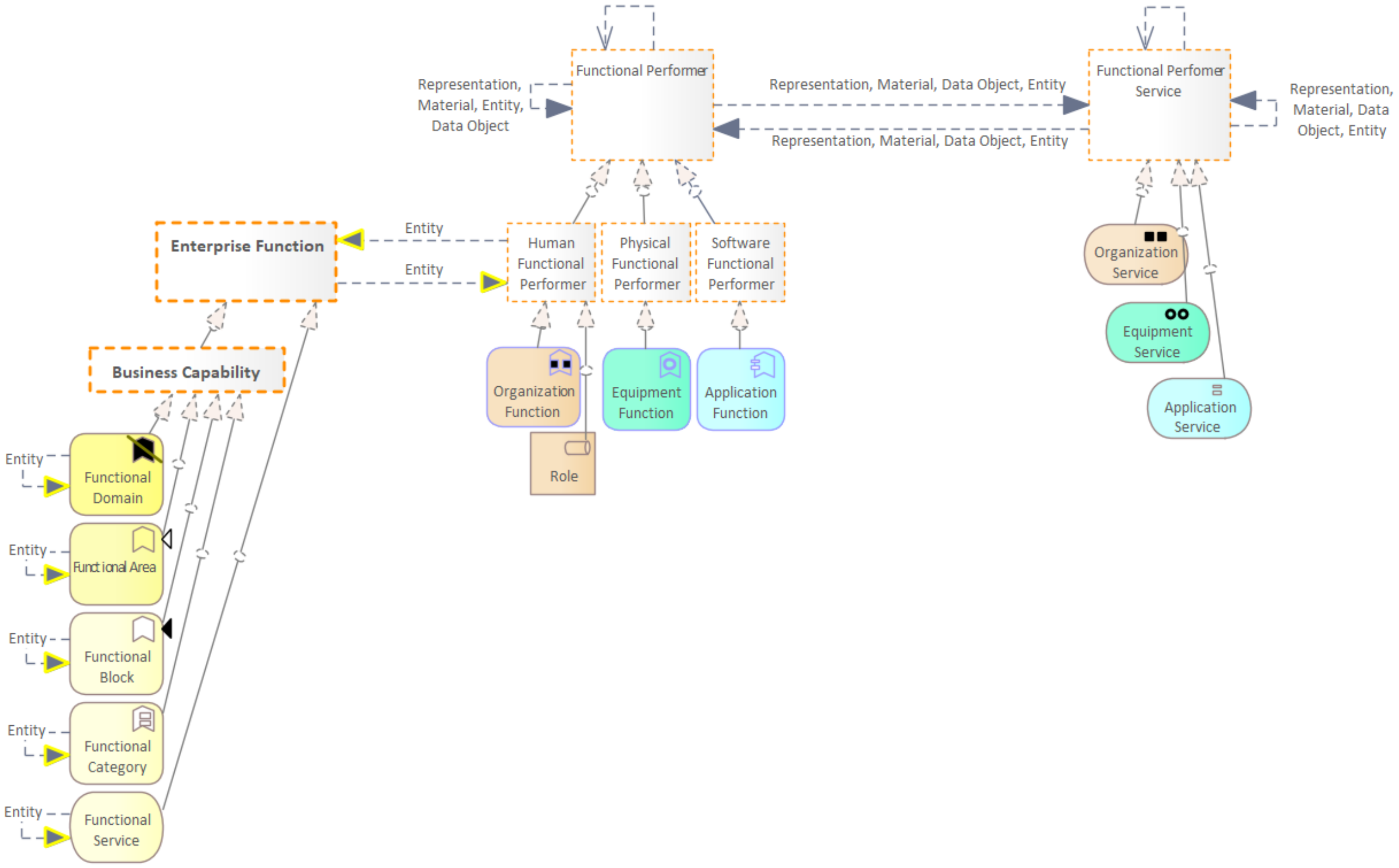
The standard Labnaf metamodel is entirely based on abstract metamodel elements and metamodel element generalizations.

Taxonomy of Element Types

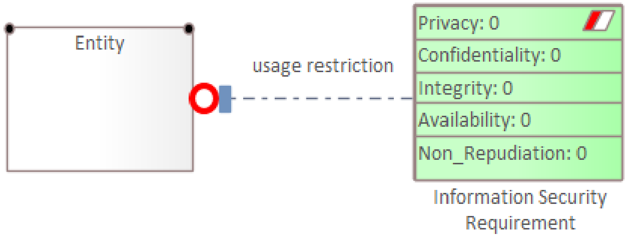


Sample concrete connectors in the standard metamodel

In the following example, most concrete connectors connect abstract metamodel elements.



In the following example, a concrete connector connects concrete metamodel elements.



Upgrading the standard metamodel to a new version of Labnaf

If you upgrade your customized standard metamodel using the Instant Metamodel Manager, Labnaf will correctly integrate the new connectors that you have added in that metamodel with the latest Labnaf changes in that same metamodel.

Visualizing the Standard Metamodel Customizations

Labnaf generates documentation diagrams showing, notably, the connections that you added to the standard metamodel.

In other words, these are the differences between the built-in standard metamodel and the customized standard metamodel.

In case your changes to the standard metamodel involve ...

- **only concrete metamodel elements**, like for example, Application or Process, then the generated diagram shows the impacted metamodel elements along with the connectors that you added.

- s**ome abstract metamodel elements**, like for example, Digital Performer or Function, then the generated diagram contains a textual list of your added connectors.