

The REUSE Company

How to import Knowledge Libraries

By The REUSE Company

Import Knowledge Libraries using KM capability to pack pieces of knowledge to be further tailored and reused in different kind of projects.



THE
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HOW TO IMPORT KNOWLEDGE LIBRARIES

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2020 Edition



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Version	Date	Changes
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1. Introduction

Knowledge Manager (**KM**) provides the capability to pack pieces of knowledge to be further tailored and reused in different kind of projects. This concept is known as **Knowledge Library**.

Therefore, we can say that a *Knowledge Library* is a combination of *Knowledge items*, of different nature and at different levels of abstraction. At the end of the day, a Library holds the same type of information as a regular *Knowledge Base* that is managed by KM, as shown in Figure 1.

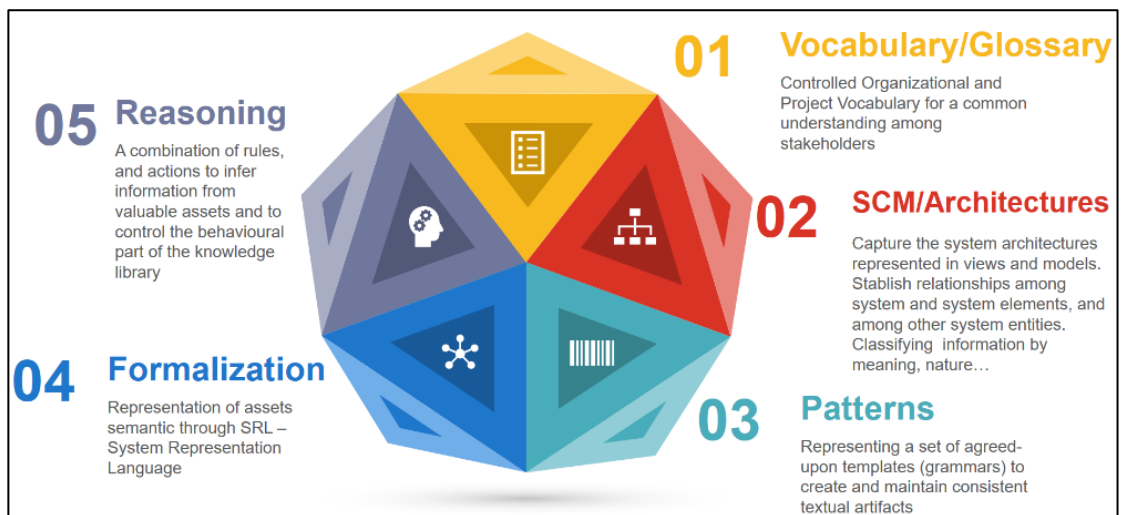


FIGURE 1

The main benefit of using libraries is that they represent a specific business domain or **area of knowledge**, so that just by *plug-and-play* their knowledge can be reused in an existing knowledge base without any effort of creating terminology, semantics or patterns manually.

The TRC website contains a [Library Store](#) that holds a bunch of already developed libraries that can be downloaded and imported in your *knowledge base* by following this guide. At the time of writing, the following libraries can be found:

- **SOPHIST Master Patterns:** includes Master Patterns and 18 rules for Requirements Engineering.
- **INCOSE Requirements Guide Knowledge Library:** focused mainly on the metrics defined as quality rules in the INCOSE Guide for Writing Requirements.
- **ECSS Knowledge Library:** includes the glossary and the requirements patterns as rules, as defined by the European Cooperation for Space Standardization.

- **EARS Knowledge Library:** includes mainly the patterns described as requirements syntax in the Easy Approach To Requirements Syntax.
- **Procurement Quality Suite Knowledge Library:** includes tools and templates for a good quality bidding documentation to a Public Procurement Project.

2. Getting a Library from the Libraries Store

The first step is downloading a library from the TRC Libraries Store. For that purpose, we just access to <https://www.reusecompany.com/libraries-documents> and select the library we want to use. For the purpose of this guide we'll be playing around with the **SOPHIST Master Patterns Library**.

The current list of available Knowledge Libraries is:

<p>ECSS Knowledge Library</p> <p>Including the glossary, requirements patterns as rules as defined by the European Cooperation for Space Standardization</p>	<p>INCOSE Requirements Guide Knowledge Library</p> <p>Focused mainly on the metrics defined as quality rules in the INCOSE Guide for Writing Requirements</p>
<p>EARS Knowledge Library</p> <p>Including mainly the patterns described as requirements syntax in the Easy Approach to Requirements Syntax</p>	<p>Procurement Quality Suite Knowledge Library</p> <p>Include tools and templates for a good quality bidding documentation to a Public Procurement project.</p>
<p>SOPHIST Master Patterns Library</p> <p>Include Master Patterns and 18 rules for Requirements Engineering.</p>	

<p>The Reuse Company</p> <ul style="list-style-type: none"> Mission & Vision Video Channel Customers 	<p>Technology Areas</p> <ul style="list-style-type: none"> Knowledge Centric Systems Engineering Semantic Technology Quality Management Knowledge Reuse 	<p>Products and Solutions</p> <ul style="list-style-type: none"> RQA - Quality Studio V&V Studio - Verification and Validation RAT - Authoring Tools Traceability Studio KM - Knowledge Manager 	<p>Contact us</p> <ul style="list-style-type: none"> The REUSE Company Marganilla Salas 16, 28919 Leganés Madrid - Spain (+34) 91 217 25 96 contact@reusecompany.com
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FIGURE 2

SOPHIST Master Patterns Library

Sophist is a German training & consulting firm created in 1996, co-creator of the IREB standard and counting almost 60 members today. The SOPHIST Master patterns library has been built from the methods & knowledge provided by Sophist in the following free accessible books:

- MASTER patterns (German edition): Requirements patterns to enhance the structuration of requirements documentation
- A short RE Primer: Overall description of the requirements engineering phase and set of rules (SOPHISTen-Regelwerk) for Requirements Engineering

Content of the knowledge library:

- The Master Patterns ready to use for authoring help (RAT - Authoring Tools):
 - Functional Requirements (+ conditional sentences)
 - Non-functional requirements (+ conditional sentences)
- The implementation of the set of 18 rules for Requirements Engineering in RQA - Quality Studio

[Download Library](#)

FIGURE 3

You'll be asked for your **professional email** to complete the download. Just check your inbox in a minute.

First name*

Last name*

Email*

Please, enter professional email

The REUSE Company needs the contact information you provide to us to contact you about our products and services. You may unsubscribe from these communications at any time by clicking the link [Unsubscribe](#). For information on our privacy practices and commitment to protecting your privacy, please review our [Privacy Policy](#).

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[Download presentation](#)

FIGURE 4

In a couple of minutes, you will receive a link in your inbox to download the library.
Thank you!

FIGURE 5

After completing the process, you'll get a message in your inbox with access to the requested Library. Just click on "**Download**" to start downloading the Library file.

Hello,

I'm glad to see that you are interested in our Library. Now you can download it here: [Download](#)

If you want to know what else we are up to, please update your email preferences on the bottom line.

FIGURE 6

Now it's time to select where to store the library file. Depending on your browser configuration, it will go directly to the Downloads folder, or you'll get a prompt to decide where to store. For the purpose of this guide, let's store it on the Desktop.

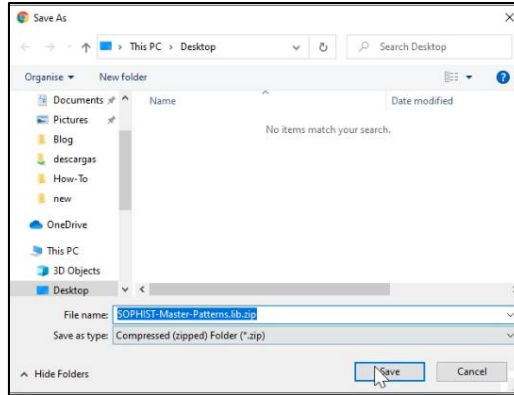


FIGURE 7

Last step is **extracting** the file since it is a *ZIP* file. For that, just right click on the just downloaded file and extract it in the same folder. The resulting file (with *Lib* extension) will be suitable to be imported in KM.

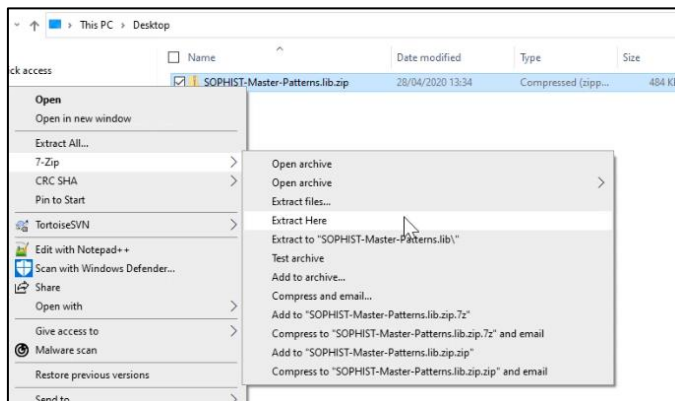


FIGURE 8

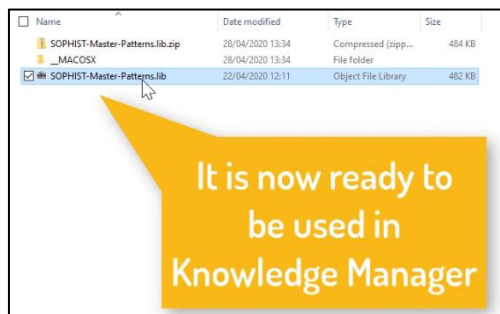


FIGURE 9

NOTE: If you don't have any contextual menu option to extract the file, you'll need to install Zip, 7-Zip or any other tool to extract *Zip* files.

3. Importing a Library in KM

Once we have downloaded and extracted the library in our computer (Figure 9), now it's time to run KM and import it so that the content comes into our knowledge base.

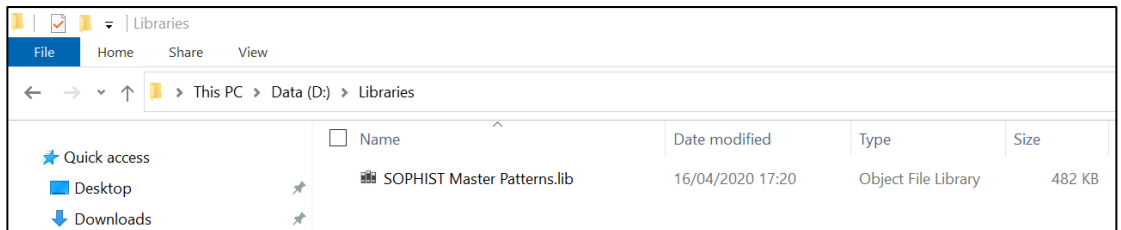


FIGURE 10

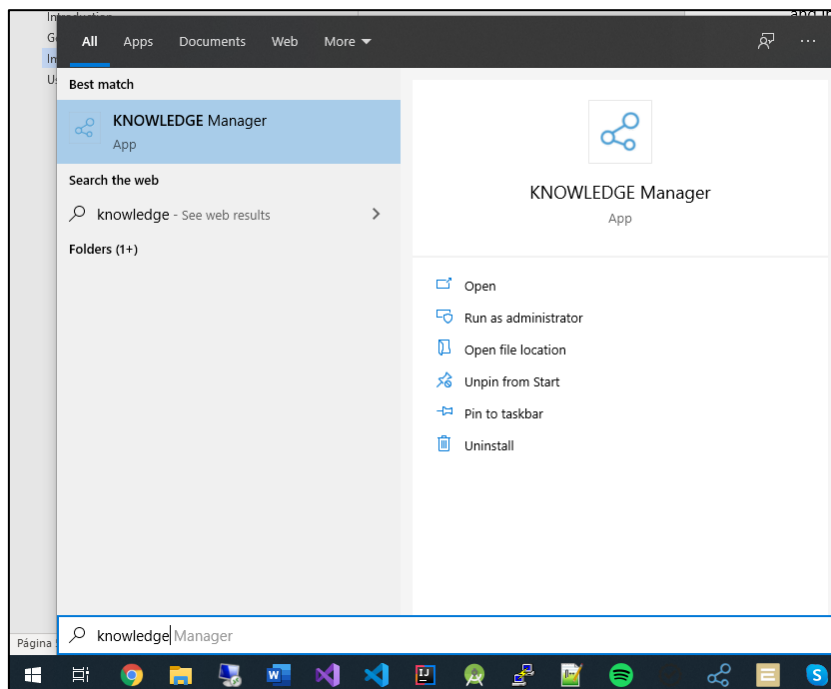


FIGURE 11

NOTE: If you don't have KM installed yet, you can get it from our website ([link](#)) and install it by following this guide ([link](#)).

In this case, I'll be connecting to the out-of-the-box knowledge base that can be found in our website ([link](#)), in Microsoft Access format. You can be using your own knowledge bases in Access, SQL Server or MySQL.

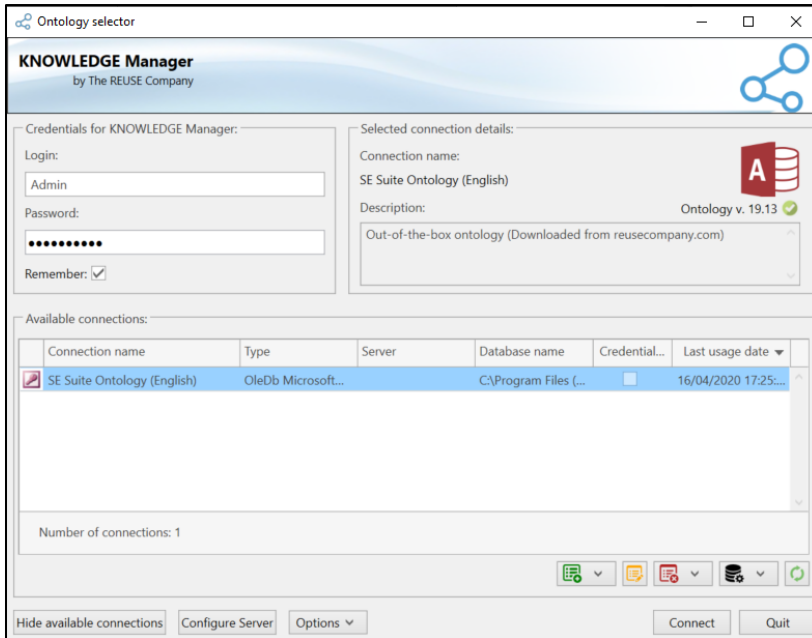


FIGURE 12

Once connected into KM, we can navigate to the Extensibility tab on the top menu, so that we can see the libraries that are being handled in our knowledge base (none in my case). Now it's time to import the library that we downloaded before, so we just click on the **"Import Library"** button.

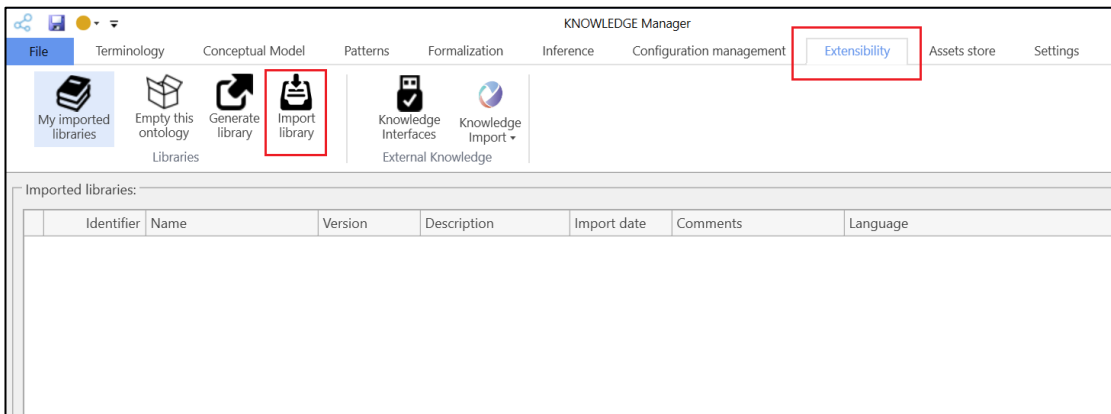


FIGURE 13

After this, a file dialog will be shown so that we must navigate to the folder where we downloaded the library. Just select it and click on the Open button.

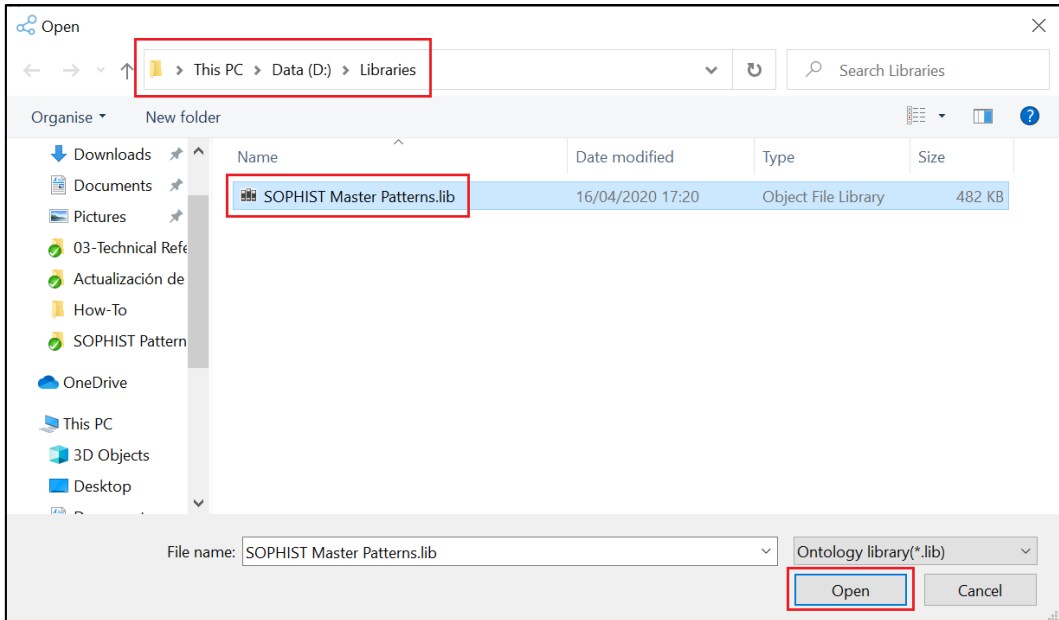


FIGURE 14

After few seconds, a confirmation message will show up and the library will appear with the name that was set on it.

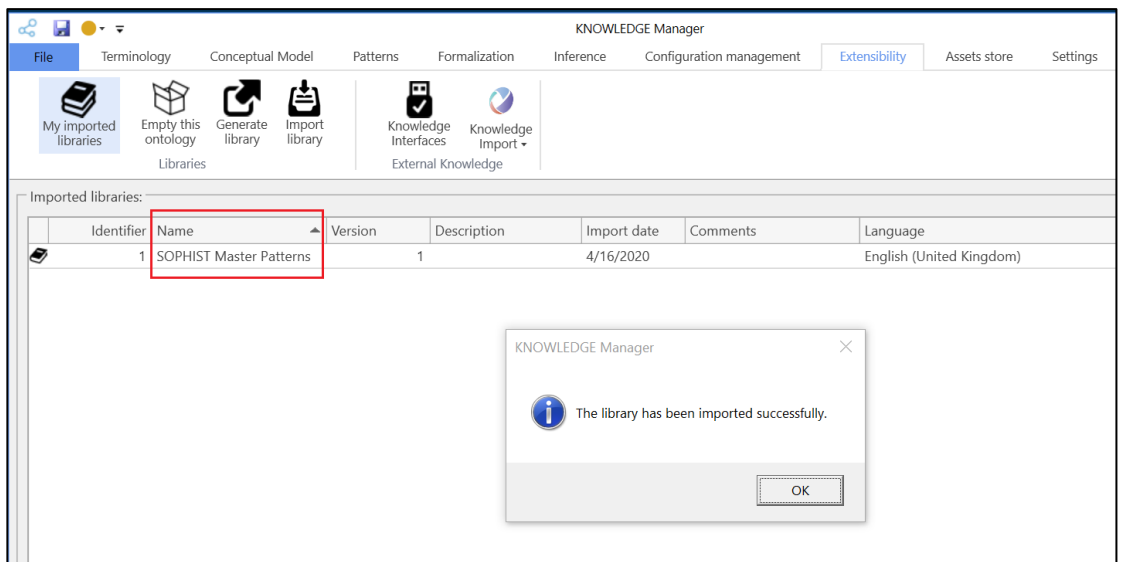
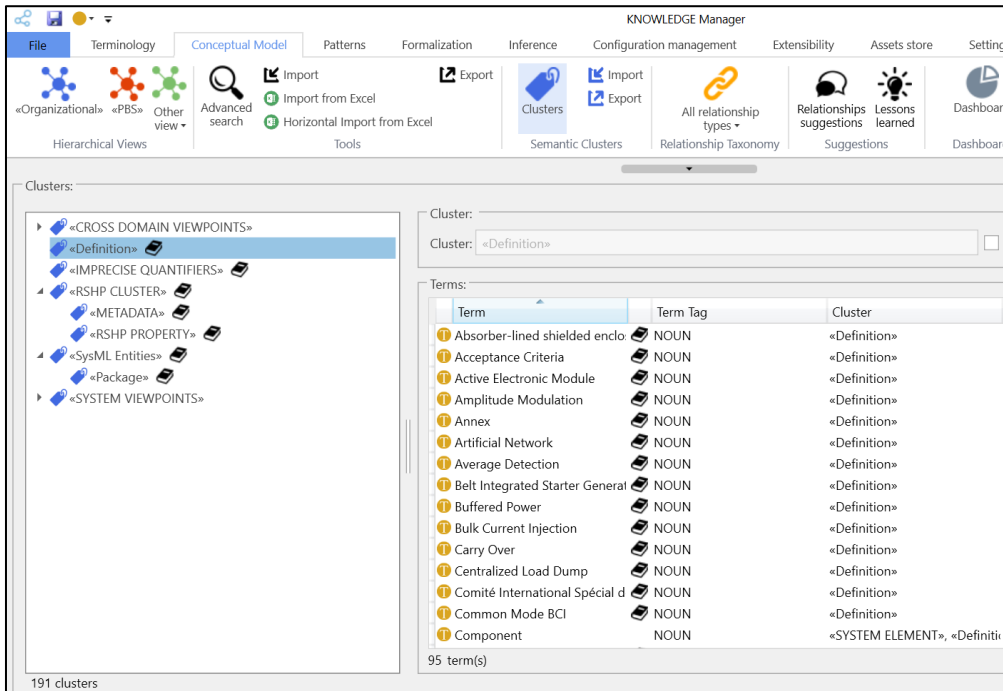


FIGURE 15

At this point, the content of the incoming library has been added to our *knowledge base*. We can go through some of the KM zones to check what knowledge base items were imported, for instance we can navigate to Conceptual Model → Semantic Clusters.



The screenshot shows the KNOWLEDGE Manager interface with the 'Conceptual Model' tab selected. The 'Clusters' section is active, displaying a tree view of clusters on the left and a list of terms on the right. The 'Terms' list includes items like 'Absorber-lined shielded encl' and 'Acceptance Criteria', each with a term tag (NOUN) and a cluster name (e.g., «Definition»).

Term	Term Tag	Cluster
Absorber-lined shielded encl	NOUN	«Definition»
Acceptance Criteria	NOUN	«Definition»
Active Electronic Module	NOUN	«Definition»
Amplitude Modulation	NOUN	«Definition»
Annex	NOUN	«Definition»
Artificial Network	NOUN	«Definition»
Average Detection	NOUN	«Definition»
Belt Integrated Starter General	NOUN	«Definition»
Buffered Power	NOUN	«Definition»
Bulk Current Injection	NOUN	«Definition»
Carry Over	NOUN	«Definition»
Centralized Load Dump	NOUN	«Definition»
Comité International Spécial d	NOUN	«Definition»
Common Mode BCI	NOUN	«Definition»
Component	NOUN	«SYSTEM ELEMENT», «Definiti

FIGURE 16

In Figure 16 we can see that there is a book icon next to some of the elements. This means that those elements are not native in my *knowledge base*, but they come from an imported library. Just by hovering the mouse over one of the elements we get information about its owner library, which will be helpful in case of having several libraries imported.

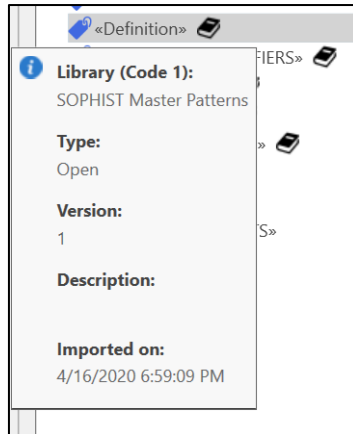


FIGURE 17

Or if we navigate to Terminology, we can have a glimpse of the terms glossary that has been imported from the SOPHIST Master Patterns Library.

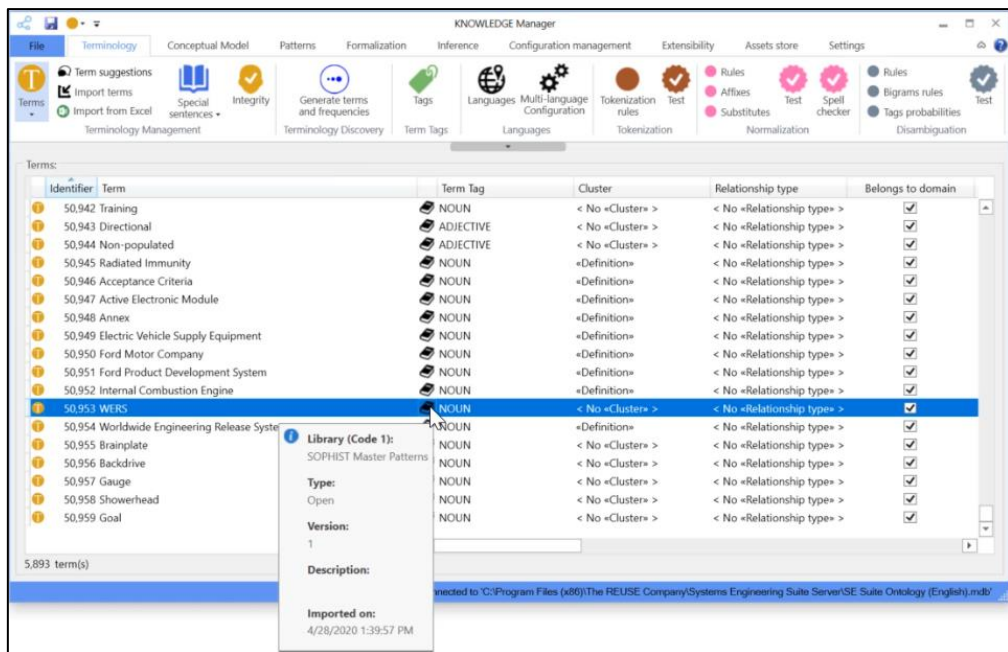


FIGURE 18

3.1 Updating with a new version of the library

If the library that we are using (e.g. v1.0) keeps evolving and there's a new version published (e.g. v1.1), we can update the library contents in our ontology.

For that purpose, we need to navigate again to “Extensibility → My imported libraries”, right click on the library that we want to update, and finally select “Overwrite library”. This will prompt us to select the *Lib* file of the new library so that its content can be updated in our ontology.

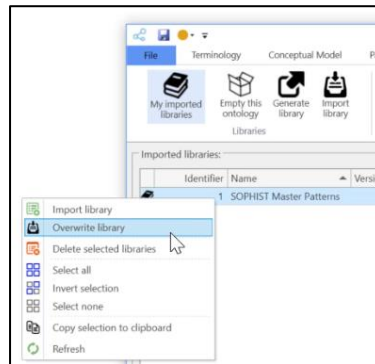


FIGURE 19

3.2 Removing a library

In case that we no longer need the content of the library, we can get rid of those elements imported with the library.

For that purpose, we need to navigate to “Extensibility → My imported libraries”, right click on the library that we want to get rid of and select “Delete selected libraries” (note that it’s possible to delete several ones in a single action).

The REUSE Company

The REUSE Company is an organization specialized in the application of Semantic Representation and Analysis Technologies to a wide range of industries (Aerospace, Defense, Automotive, Naval, Health, ...). Our customers are usually (but not limited to) safety-oriented organizations.

Our focus is on System/Software Reuse, Traceability and Quality applied to all types of work-products throughout the whole SE lifecycle (requirements, SysML Models, physical models, tests cases, data results, manuals, natural language descriptions, fault trees, etc.). The integration of tools and technology from The REUSE Company facilitates the representation, analysis and exploitation of knowledge allowing for a knowledge-centric system engineering approach.

Our mission is to promote system/software and knowledge reuse within any organization, by offering processes, methods, tools and services that make it possible. We offer technology that is fully integrated within the organization's production chain.

