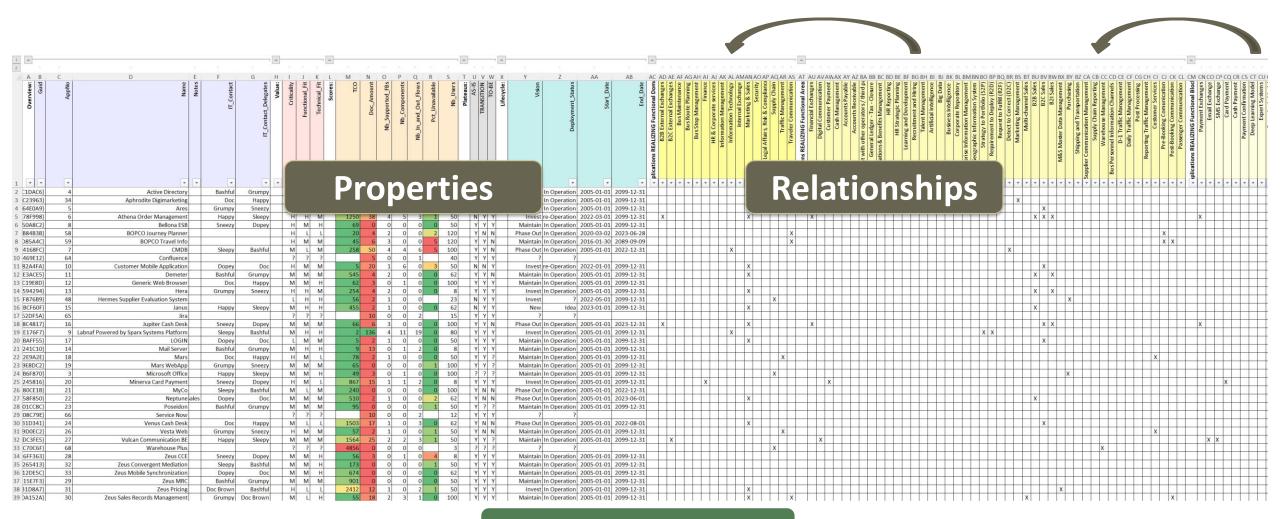


Productivity Tools

Tabular Report Generation

- 1. Scenarios for Starting a New Tabular Report Template
 - a. Custom Report
 - b. Clone & Edit
 - c. Model the Structure
- 2. Collection of Elements to be Reported (scope)
- 3. Reported Element Properties
- 4. Reported Connections
- 5. Report Format
- 6. Summary

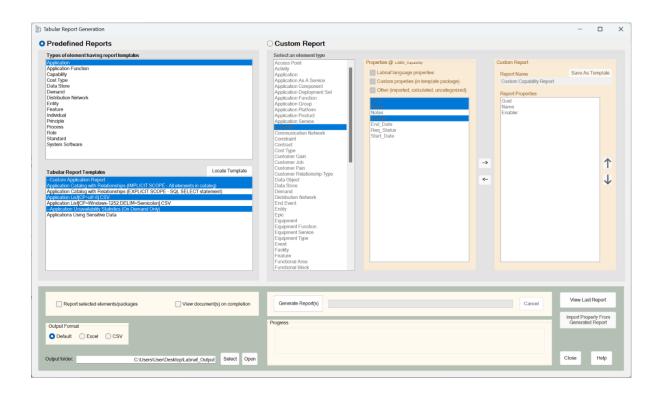
Generated Tabular Reports can be Excel or CSV



Scheduled or On demand



Reports generation can be performed... either **On Demand** or **Scheduled Periodically**



You can use predefined templates, or create custom reports that you can save as templates

Labnaf PowerShell Command: **GenerateTabularReports**

Usage: LNPS GenerateTabularReports [arguments]

Arguments:

- SourceRepoPathName
- OutputDirectoryPath
- [ElementPrototype]
- [TabularReportTemplateName]

To generate a CSV, add a '.CSV' extension to the tabular report template name.

The name of the CSV file can also define the CSV character encoding and column delimiter. For further information, see 'Inbound/Outbound Content Formatting' on the Guidance Web Site

Scheduling

You can use either the built-in Labnaf scheduler, or the Windows task scheduler, or your own scheduler.

If you want a report to be ignored by the Labnaf PowerShell, then add the prefix "--" to its template name. The report can then be generated only on demand/ using the user interface.

- > ## --Application Unavailability Statistics (On Demand Only)
- ▶ III Applications Using Sensitive Data

Using Predefined Report Templates

Select the Templates

- Select an element type that has defined report templates
- Select tabular report templates

Select the Output Location and Format

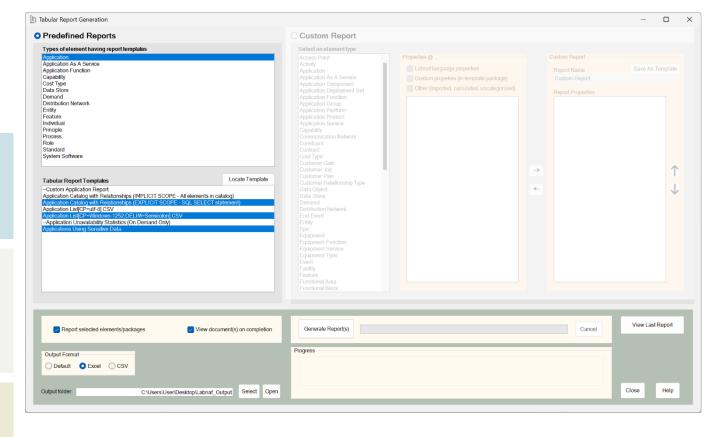
- Select an output folder (typically only once).
- Select an output format (Excel or CSV) i.e. not necessarily using the format defined by the templates.

Define the Scope

Options for defining a selection of elements (scope) to be reported

- Elements or packages selected in the project browser or in the active diagram
- Elements and packages present in a "scope" diagram that belongs to the template
- Elements selected by a SQL select defined in the template note
- All elements in the catalog (default)

If multiple scopes have been defined, then the above sequence corresponds to priorities



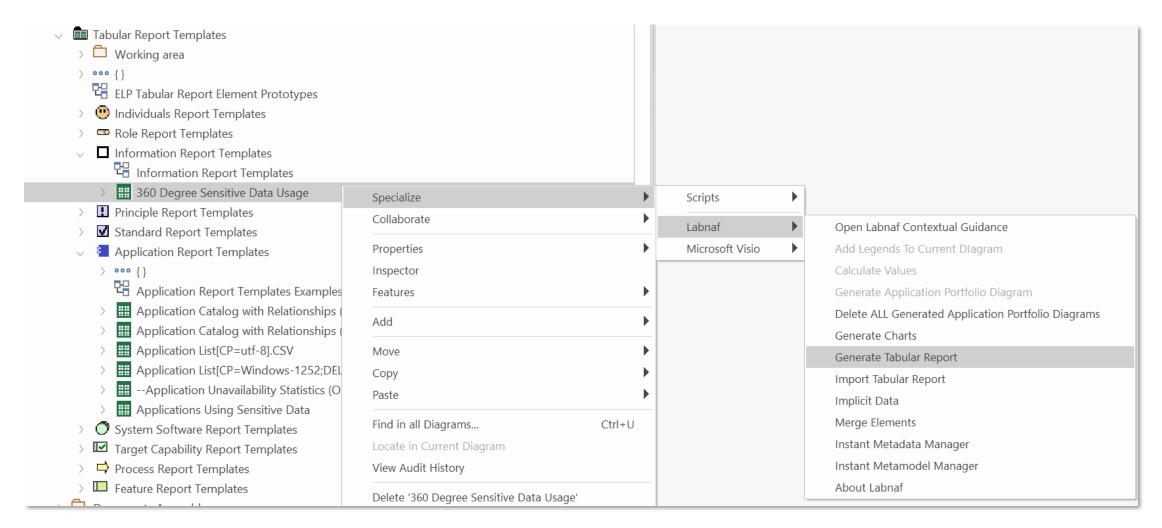
Generate Report(s)

- Generate reports from the selected templates.
- View the generated reports, or just the last one.
- Open the output folder to see all of generated reports.
- Open the "Log" folder that is located just underneath.
- Locate a selected template in the repository in case you want to make some changes, or if you want to clone and adapt it.



Using Predefined Report Templates (cont.)

You can also generate a report by selecting a template from the project browser or from a diagram



[h

Generating Custom Reports

Define the Custom Report Content

- Select an element type
- Select properties
- Easily reorder properties

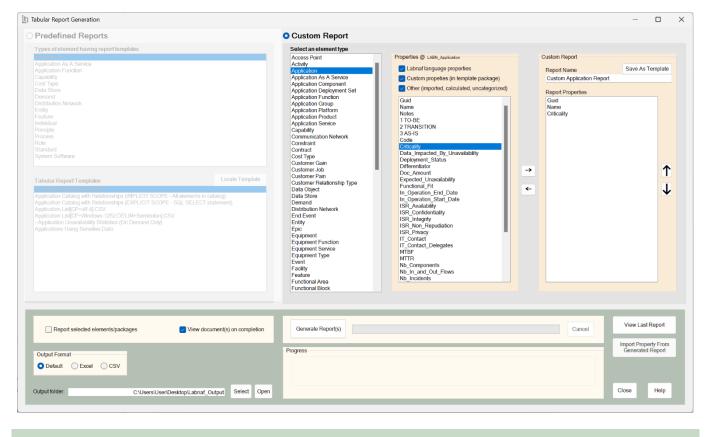
Select the Output Location and Format

- Select an output folder (typically only once).
- Select an output format (Excel or CSV) i.e. not necessarily using the format defined by the templates.

Define the Scope

Define a selection of elements (scope) to be generated (the sequence below corresponds to priorities)

- for elements or packages selected in the project browser (if any),
- or for elements or packages selected in the active diagram (if any),
- or for the entire catalog (default).



Generate, Edit, Import the Custom Report

- Generate and open Excel or CSV, edit values, and import the updates values on the fly if you wish.
- Save the custom report as a template
- Locate and edit the template content and colors, or change the scope of elements to be processed
- Open the output folder to see all the generated reports.
- Open the "Log" folder that is located just underneath.
- Locate a selected template in the repository in case you want to make some changes, or if you want to clone and adapt it.



Scheduling Tabular Reports Generation

See the

Labnaf PowerShell

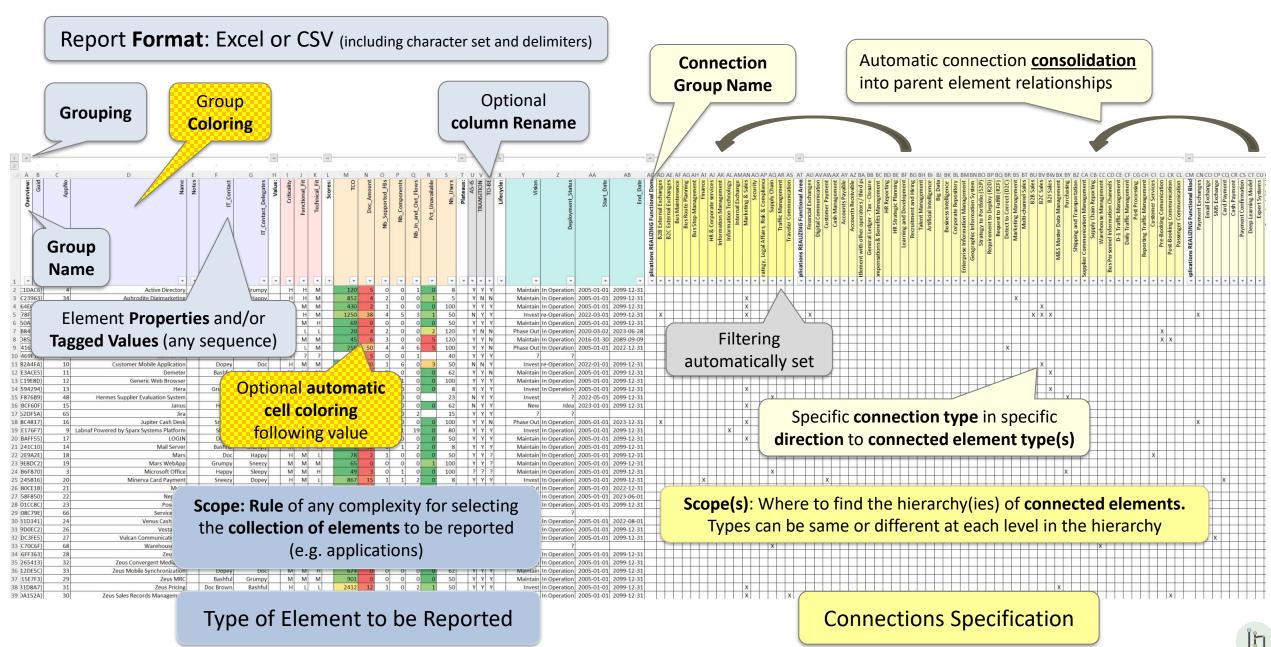
documentation

https://www.labnaf.one/EndUserMaterial/Labnaf PowerShell/

- 1. Scenarios for Starting a New Tabular Report Template
 - a. Custom Report
 - b. Clone & Edit
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- 6. Summary

We will use the creation of an Application Report Template as an example

Predefined Report Templates: What can be configured?



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- 1. Scenarios for Starting a New Tabular Report Template
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3 alternative scenarios for Starting a New Tabular Report Template

Custom Report

Save a custom report as a template



Clone & Edit

Clone and adapt an existing template



Model the Structure

Model the tabular report structure



Then complete/adapt the report template...

- Select the collection of elements to be reported (default = entire catalog)
- Define the properties to be reported
- Define the connections/relationships to be reported

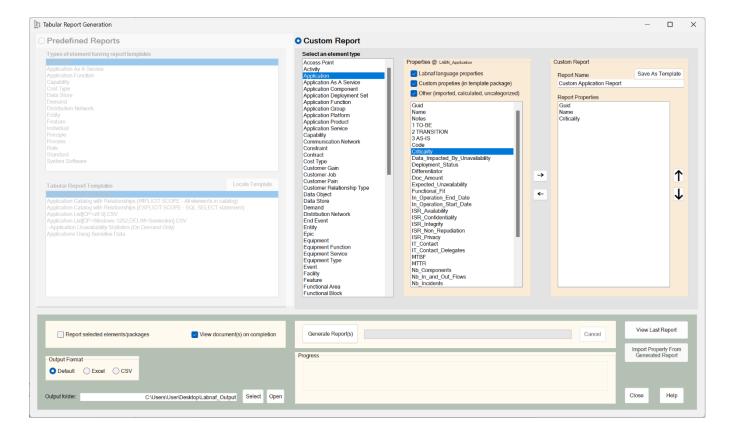


<u>[h</u>

- 1. Scenarios for Starting a New Tabular Report Template
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Creating a Template using the « Custom Reports » option

- 1. Create a custom report as described earlier in « Generating Custom Reports » in the present document.
- 2. Name the report and click « Save as Template »
- 3. Locate and edit the template content and colors, or change the scope of elements to be processed as described further in the present document



<u>[h</u>

- 1. Scenarios for Starting a New Tabular Report Template
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 - b. Clone & Edit
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- 3. Reported Element Properties
- 4. Reported Connections
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- 6. Summary

Cloning and adapting an existing template



Copy an existing application report template



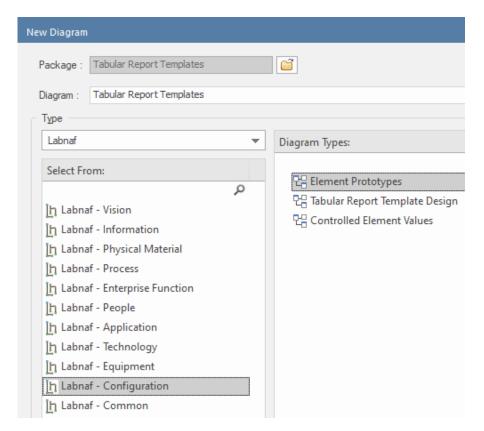
- Paste into the Tabular Report Templates Folder (must be a folder/package)
- Rename the new Tabular Report Template
- Move it into the appropriate element prototype
- Add/remove the content you need.

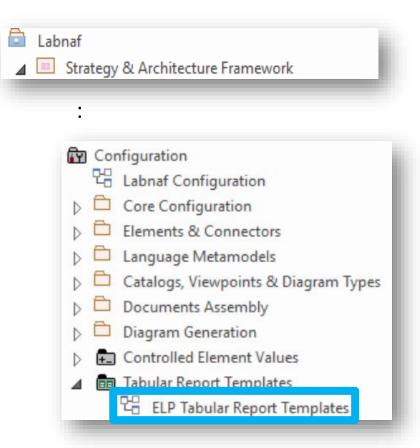
- 1. Scenarios for Starting a New Tabular Report Template
 - a. Custom Report
 - b. Clone & Edit
 - c. Model the Structure
- 2. Collection of Elements to be Reported (scope)
- 3. Reported Element Properties
- 4. Reported Connections
- 5. Report Format
- 6. Summary

Define the type of element to be reported...



- If it does not exist yet, create a diagram of type "Element Prototypes"
- Name it, for example, "ELP Tabular Report Templates"

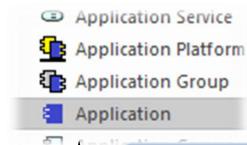




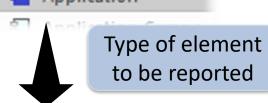
... using an element prototype

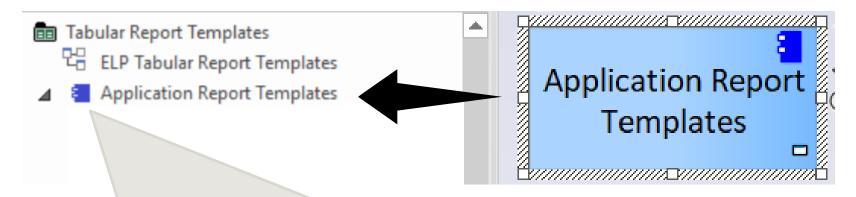


 Select an element in the toolbox You need only one element prototype of each type. But you can have more, for example, to further classify your report templates.



 Name the element prototype for example "Application Report Templates"





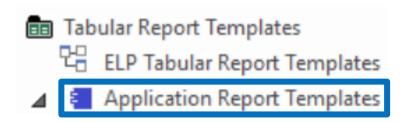
This is an **element protype** that will group all the **application report templates** (Excel and CSV).

By default, the Labnaf PowerShell periodically generates all reports for all element prototypes contained in the "Tabular Report Templates" folder. But you can be selective as well.

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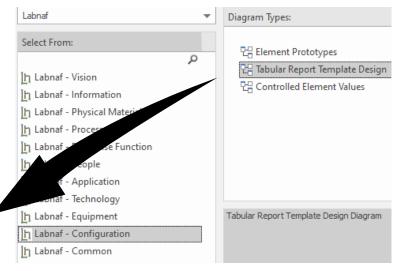




Right click on the element prototype and select "Add Diagram"

Under "Labnaf Configuration", select "Tabular Report Template Design"





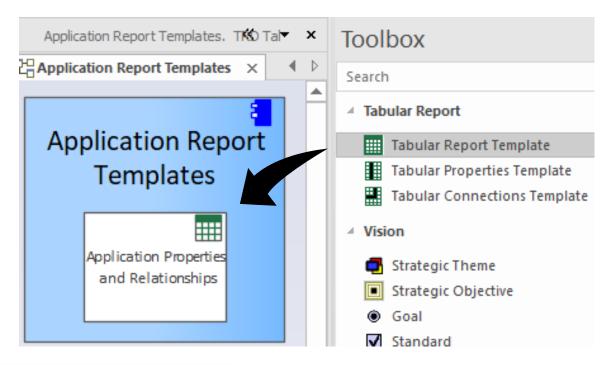
<u>I</u>h

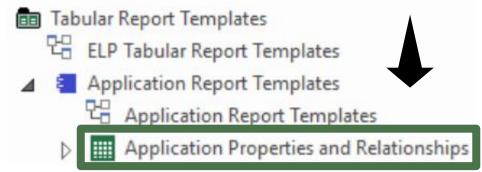
Add a report template from the toolbox



... and name it, for example, "Application Properties and

Relationships"

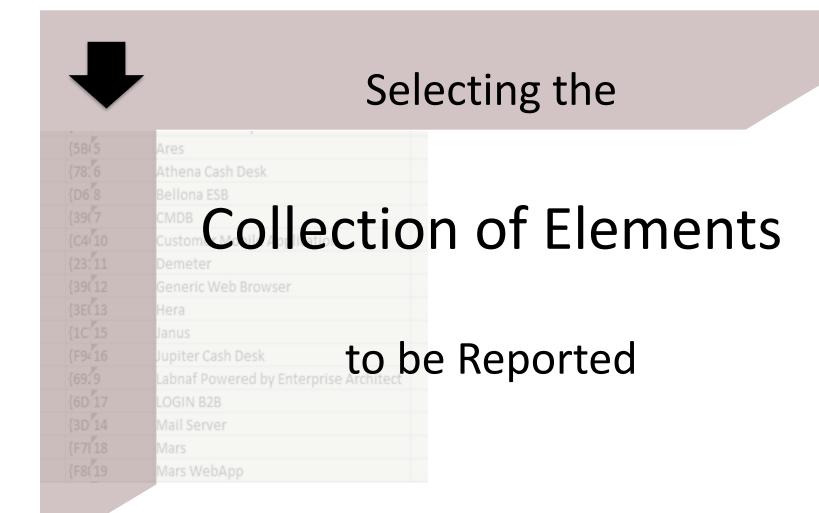




Complete/Adapt the New Tabular Report Template...

- 1. Scenarios for Starting a New Tabular Report Template
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- 4. Reported Connections
- 5. Report Format
- 6. Summary

Scope of Reported Elements (rows)





Defining a selection of elements (scope) to be reported

Options that can be defined in the template

- 1. Elements and packages present in a "scope" diagram that belongs to the template
- 2. Elements selected by some SQL select defined in the template
- 3. All elements in the catalog (default)

If multiple scopes have been defined, then the above sequence corresponds to priorities

Additional option when the report is generated from the user interface

 Report only elements or packages selected in the project browser or in the active diagram

When selected, this option overrides all the other ones.



Creating a "scope" diagram defining the collection of element to be reported

Tabular Report Templates

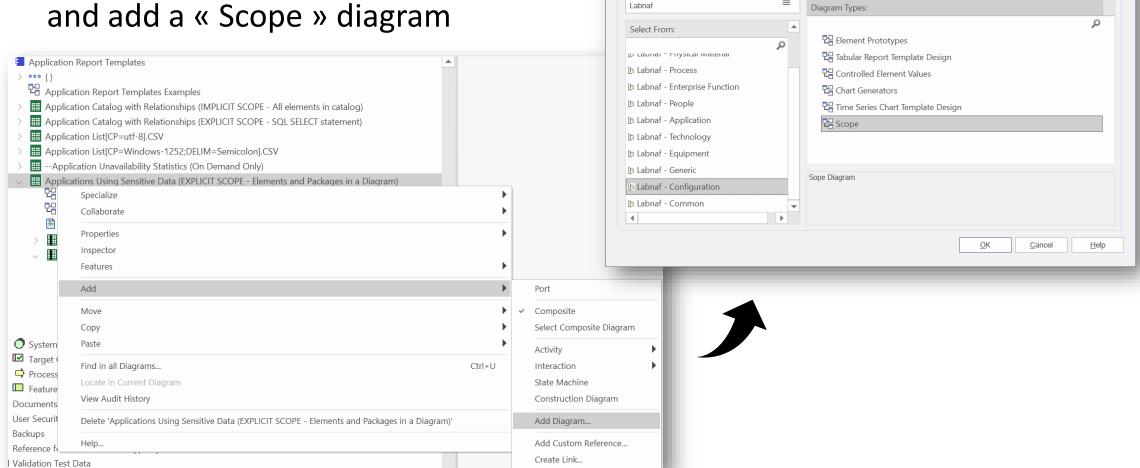
Туре

Parent : Applications Using Sensitive Data (EXPL

A<u>u</u>to

Applications Using Sensitive Data (EXPLICIT SCOPE - Elements and Packages in a Diagram)

 Select a tabular report template and add a « Scope » diagram



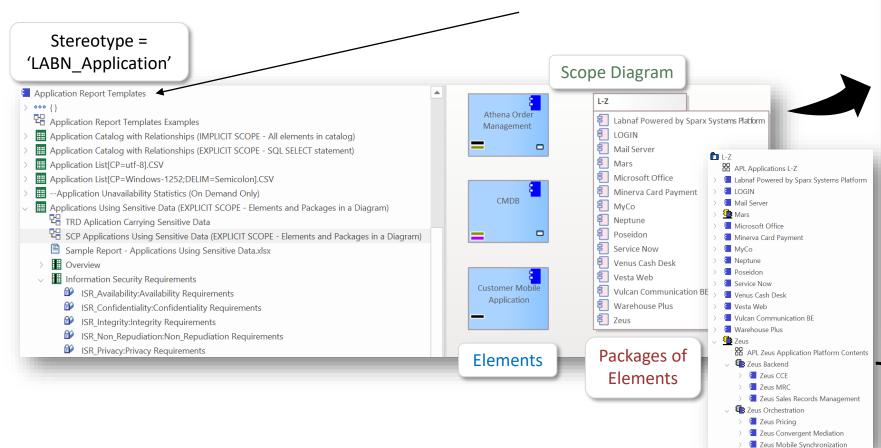
<u>[h</u>

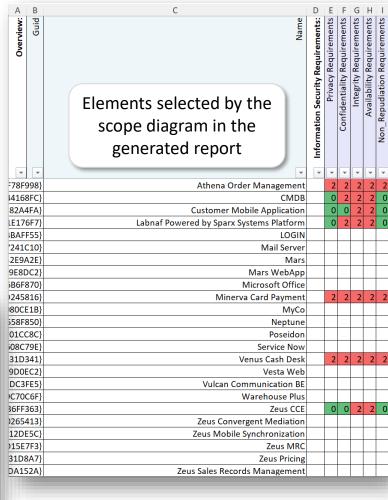
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Populate the Scope diagram

Add the elements and packages to be reported to the scope diagram => the collected elements are

- Elements and packages of elements (including sub-elements) in the scope diagram
- that have the same stereotype as the <u>parent element prototype</u>





Sub-elements in package

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2. Scope As SQL Select

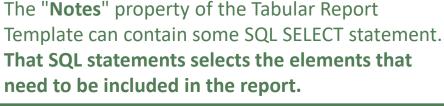
Custom **SQL** for selecting the **collection of elements** to be reported.

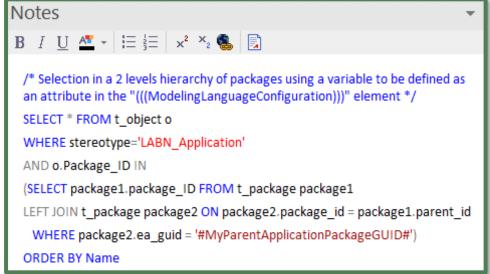
By default, all elements with the same stereotype as the element prototype are selected.

Application Report Templates

Application Report Templates

Application Properties and Relationships





With professional database engines, that SELECT statement can reach a level of sophistication that goes way beyond users' requirements.

File-based databases, on the other hand, have some limitations, but it is still usually sufficient to implement most use cases. File-based databases are anyway not designed for running on professional database servers.



Sample SQL Statements

```
/* Selection in a 2 levels hierarchy of packages */
SELECT * FROM t object o
WHERE stereotype='LABN Application'
AND o.Package ID IN
(SELECT package1.package_ID FROM t_package package1
LEFT JOIN t_package package2 ON package2.package_id = package1.parent_id
 WHERE package2.ea_guid = '#uMyVariableContainingAPackageGUID#')
ORDER BY Name
/* selection in a set of packages
SELECT * FROM t_object WHERE stereotype ='LABN_Application' AND package_ID=550
UNION
SELECT * FROM t object WHERE stereotype ='LABN Application' AND package ID=1126
*/
/* Ordered selection in a set of packages (Access only)
SELECT * FROM (
SELECT * FROM t_object WHERE stereotype ='LABN_Application' AND package_ID=550
UNION
SELECT * FROM t_object WHERE stereotype = 'LABN Application' AND package ID=1126
ORDER BY NAME
```

Statement can include comments

/* my comment */



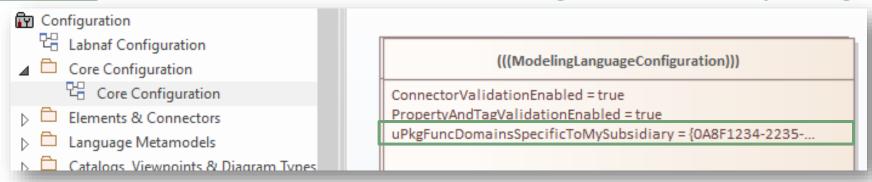
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These SQL statements can include variables

Variables defined in the core configuration can be used in SQL statements. You can add your own variables.

User-define variable must start with the letter 'u'

Example: A user-defined variable containing the GUID of a package:



Usage of the user-defined variable in a SQL statement:

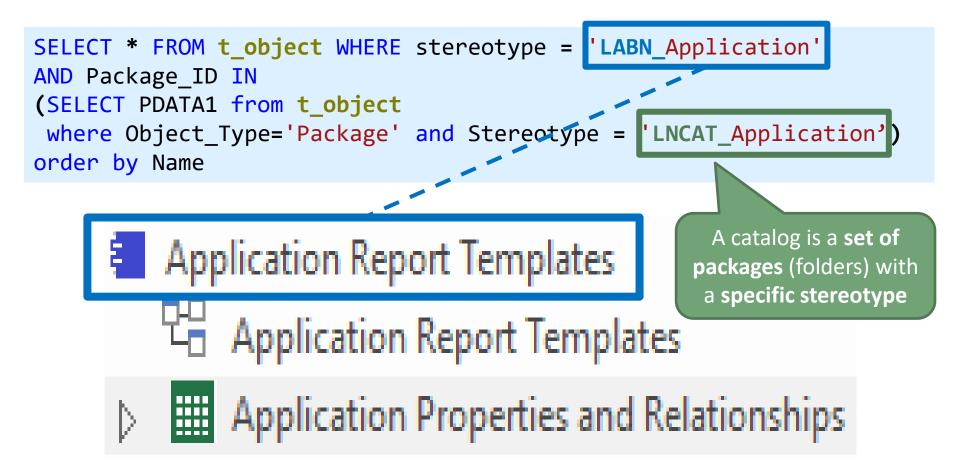
```
select * from t_object o inner
join t_package p on o.package_id = p.package_id
  where o.ParentID = 0 and o.stereotype like 'LABN_%'
  and p.ea guid = \frac{\psi}{\psi}uPkgFuncDomainsSpecificToMySubsidiary#'
ORDER BY o.Name
```

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3. Scope
As Catalog
(Default)

Default Scope = All elements in the catalog

By default, all elements with the same stereotype as the element prototype "LABN_xxx" are selected from the related catalog with stereotype "LNCAT_xxx".



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Properties

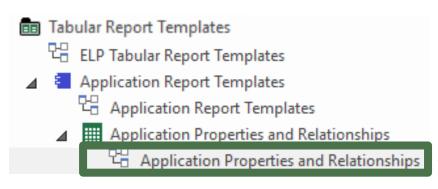
Reporting Element

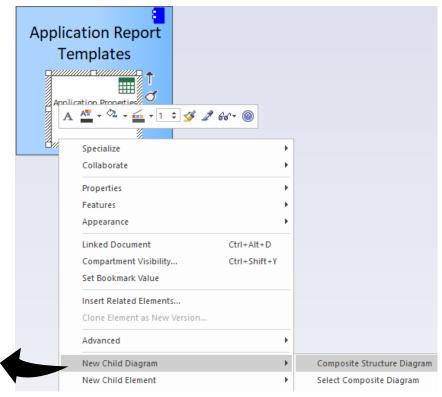
Properties and Tagged Values



Add a diagram to enter properties and connections to the report template

Right click on the report template and select "New Child Diagram > Composite Structure Diagram"

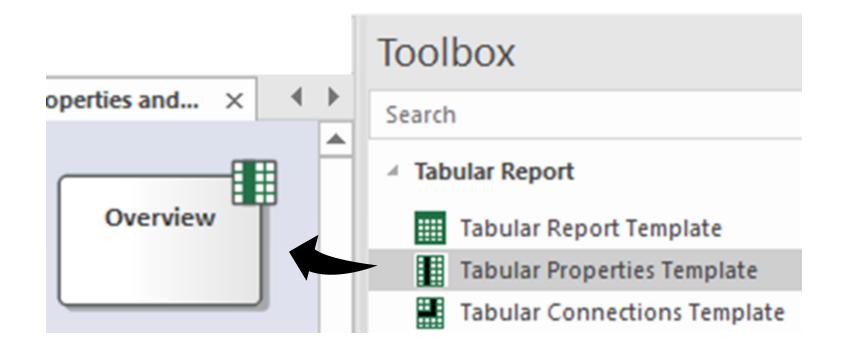




=> A new **Tabular Report Template Design** diagram has been created

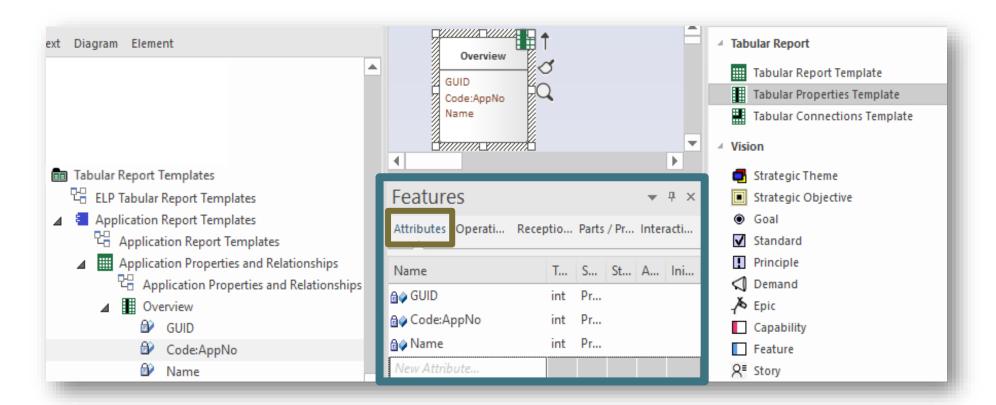
Add a "Tabular Properties Template" to the new Tabular Report Template Design diagram

.... and name if for example "Overview"



Add Properties

- Select the Tabular Properties Template in the diagram
- Press F9 to open the "Features / Attributes" window
- Enter the desired property and/or tagged value names





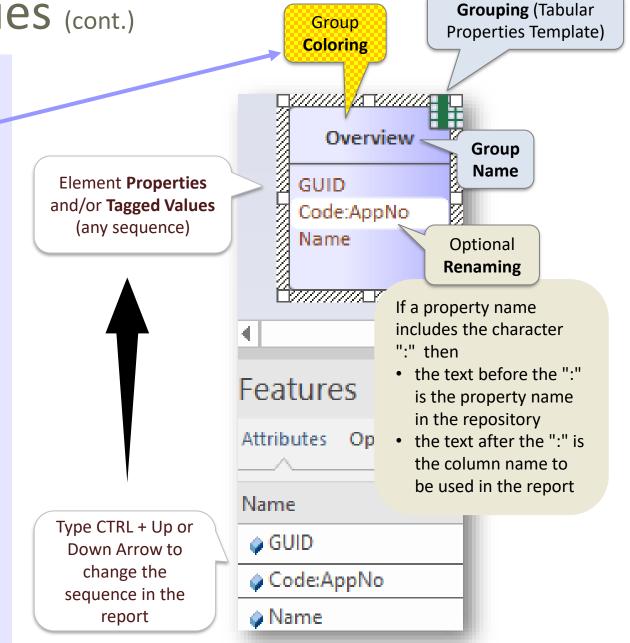
In the output tabular reports...

colors will be assigned to property column groups.

If an element appears in more that one diagram the color is selected from the first diagram found.

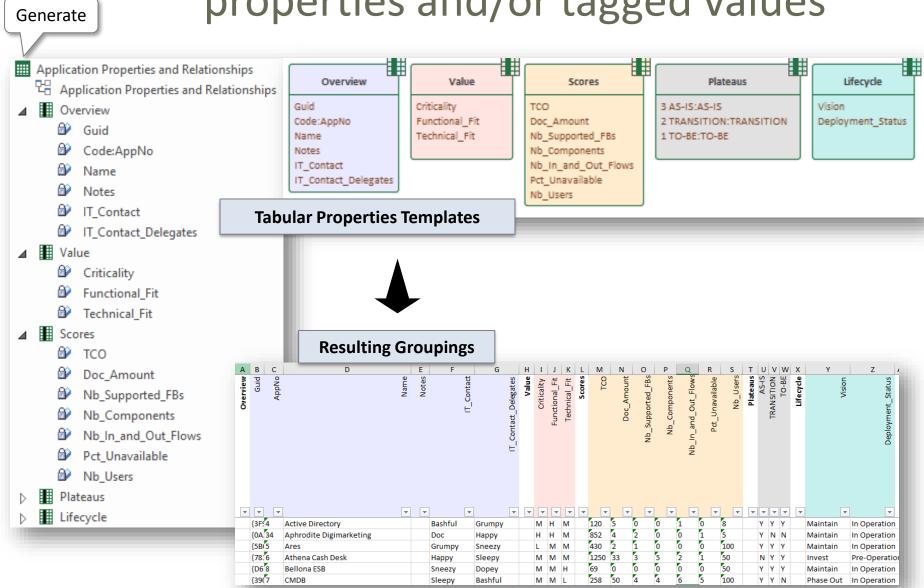
If such diagram exists under the Tabular Report element then this diagram takes precedence.

The color cannot be the default element color (otherwise in will be blank).



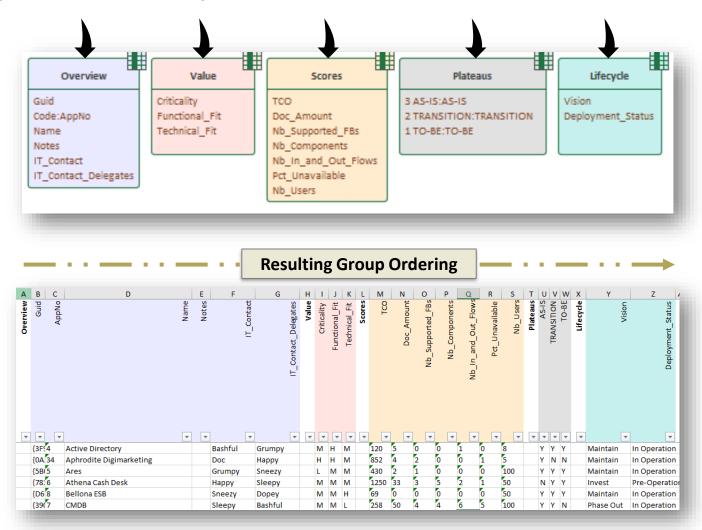
[h

Adding more groups of properties and/or tagged values



Group Ordering

The sequence of elements being added in the diagram defines the sequence in the report



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Auto-coloring cells following their value

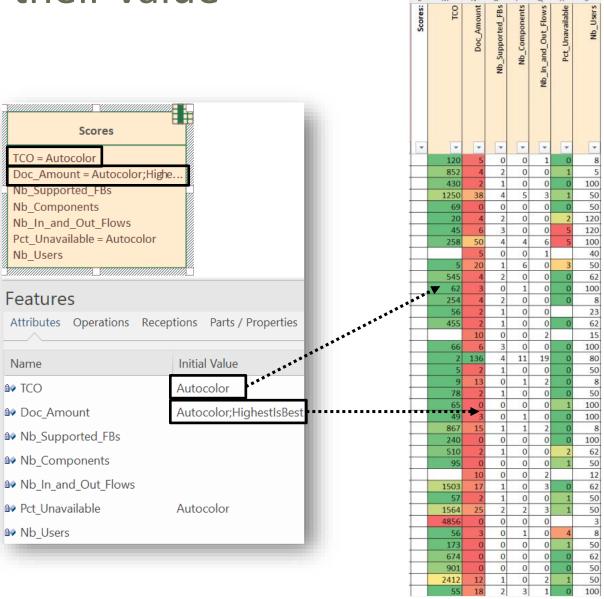
Numeric and date cells are formatted according to the recognized data type.

Numeric cells can be automatically colored by setting parameters in the attribute's Initial Value.

Parameters are separated by a semi-column (";").

Recognized parameters are (in any order):

- Autocolor => numbers will be colored following a green to red scale where the lowest value is best, this being colored in green
- HighestIsBest => Coloring is reversed i.e.
 numbers will be colored following a green to red
 scale where the highest value is best, this being
 colored in green



<u>[h</u>

A. Generating Tabular Reports

B. Creating Tabular Report Templates

- 1. Scenarios for Starting a New Tabular Report Template
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Connections

Reporting

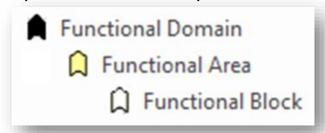
Element

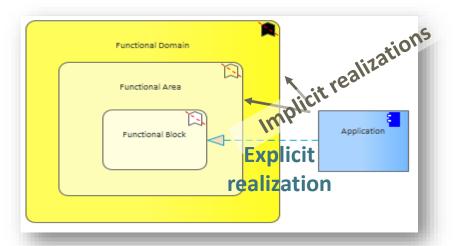
Connections/Relationships



<u>Example</u>: Report the functional blocks, functional areas and functional domains **realized by** the applications

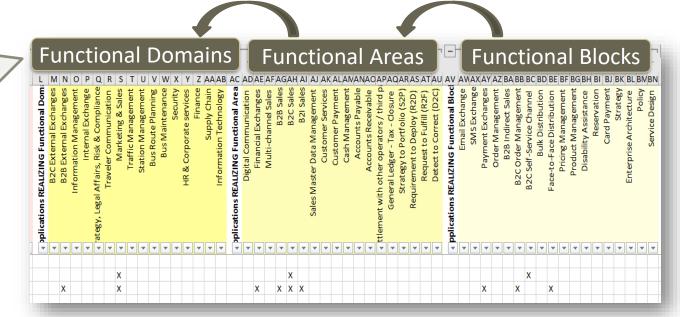
Hierarchy in the model (Browser Window)





Implicit relationships are calculated from explicit relationships

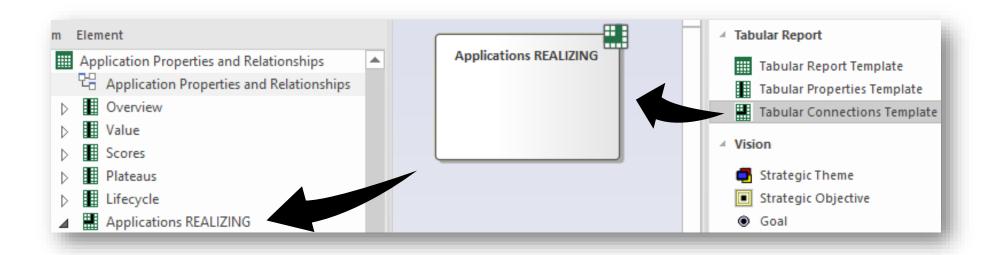
connected element types can be different in the hierarchy

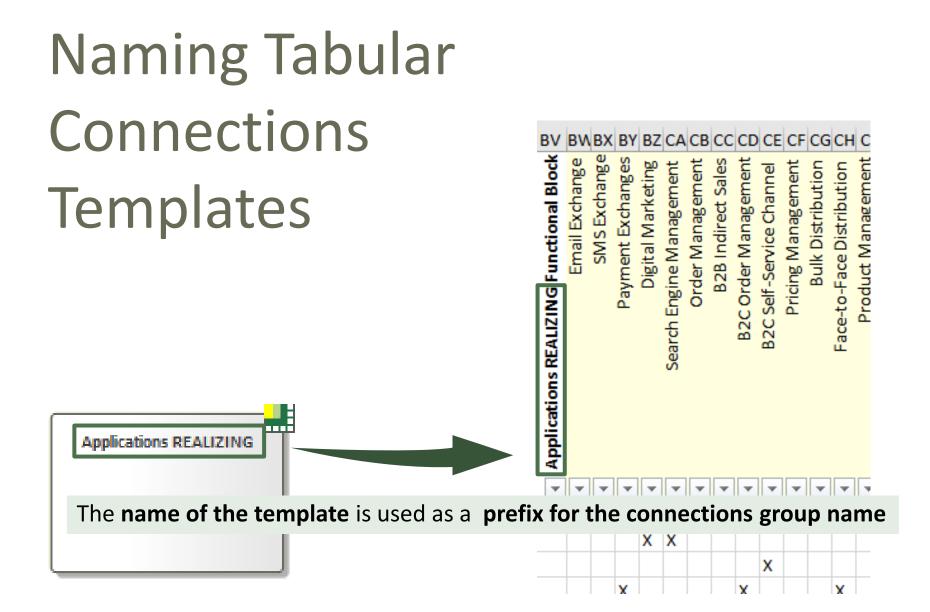




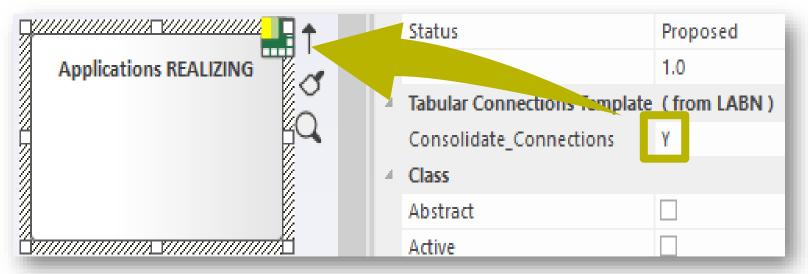
Add a "Tabular Connections Template" to the new Tabular Report Template Design diagram

.... and name it "Applications REALIZING"

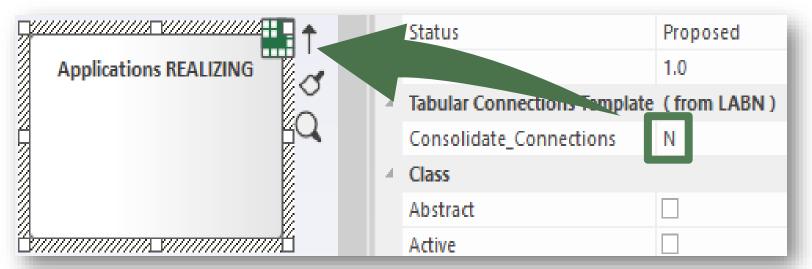




To consolidate ...

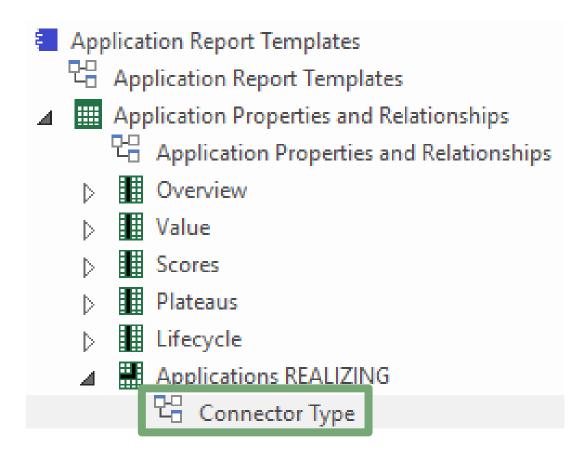


... or not to consolidate connections



Define the type of connection to be reported

Add a diagram of type "Element Prototypes" under the new tabular connection template and name it, for example, "Connection Type"

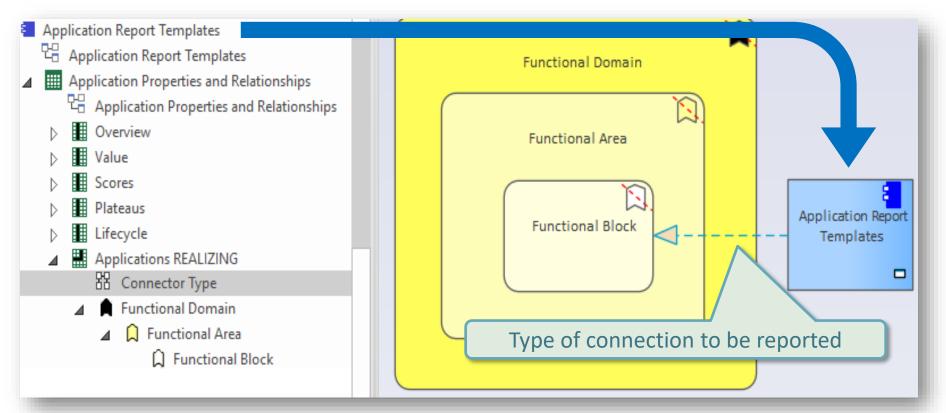


e III

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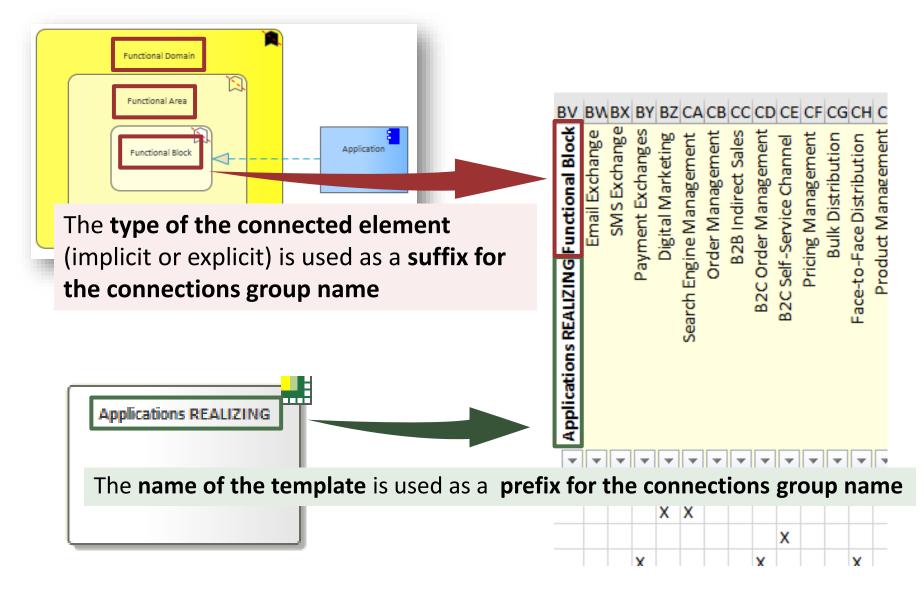
Define the type of connection to be reported

- Add the element prototype to the diagram
- In the browser window, create a hierarchy of elements for which explicit and implicit connections should be reported
- Connect the element prototype to the lowest level in the hierarchy

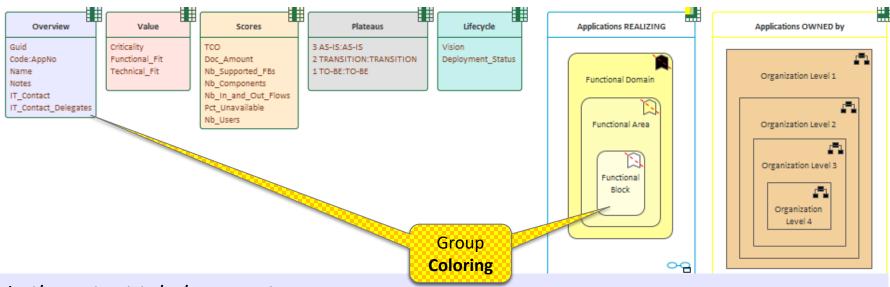


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Resulting Connection Group Name



Colors of Connection Groupings



In the output tabular reports...

Background element colors will be assigned to column groups.

If an element appears in more that one diagram the color is selected from the first diagram found.

If such diagram exists under the Tabular Report element then this diagram takes precedence.

The color cannot be the default element color (otherwise in will be blank).

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Scope of Connected Elements (columns)



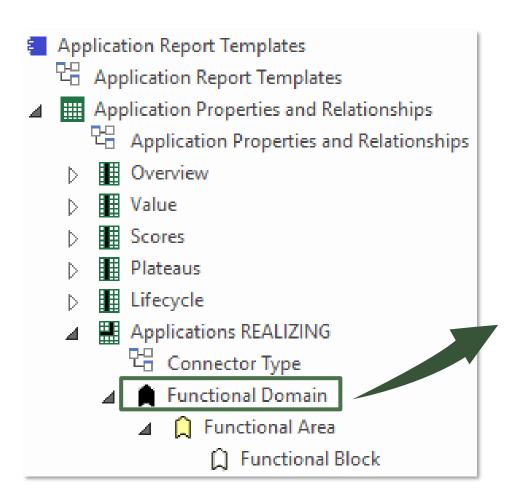
Selecting the

Collection of

Connected Elements

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Selecting <u>connected</u> elements to be reported **Implicit (default) Selection**



By default, Labnaf selects all elements with that same stereotype in the related catalog.

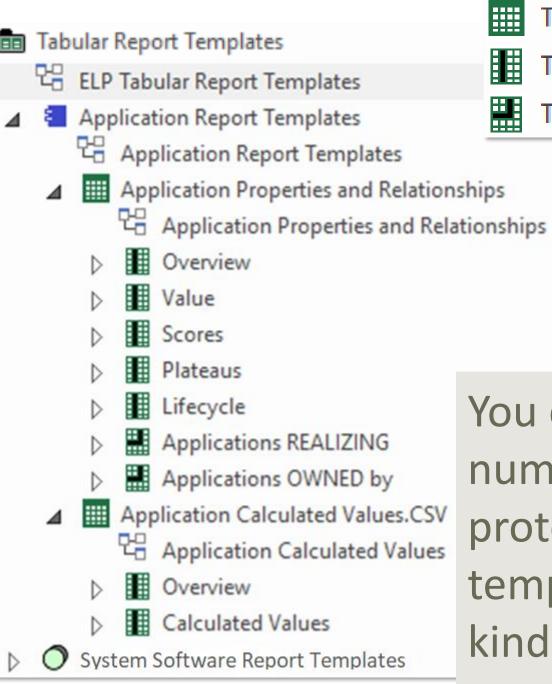
So, in this example, it will collect all elements having a stereotype 'LABN_FunctionalDomain' in all packages having a stereotype 'LNCAT_FunctionalDomain'.

Selecting <u>connected</u> elements to be reported **Explicit Selection**

- Add a diagram of any type under the new tabular connection template and name it, for example, "Connected Root Element or Package".
- Add any number of packages and/or (connected) elements to be reported.
 The elements in the packages or the explicit elements should be at the top level in the connected elements hierarchy

■ Application Report Templates □ Application Report Templates	Enterprise Functions
Application Report Templates Application Properties and Relationships Application Properties and Relationships Overview Value Plateaus Plateaus Lifecycle Applications REALIZING Connector Type Connected Root Element or Package	B2C External Exchanges B2B External Exchanges Information Management Internal Exchange Strategy, Legal Affairs, Risk & Compliance Traveler Communication Marketing & Sales Traffic Management Bus Stop Management Bus Route Planning
☐ Connected Root Element or Package ☐ Functional Domain ☐ Functional Area ☐ Functional Block	Bus Maintenance Security HR & Corporate services

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Tabular Report Template
Tabular Properties Template
Tabular Connections Template

You can create any number of element prototypes and templates of any kind and in any order

A. Generating Tabular Reports

B. Creating Tabular Report Templates

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Defining the Report Format

- The report format is defined in the report template name
- The format is therefore also visible in the generated report name (same name as the template) => by looking at a report name, you can immediately determine its format
- Application Report Templates
- - Application Report Templates Examples
- ▶ ## Application Catalog with Relationships (IMPLICIT SCOPE All elements in catalog)
- Application Catalog with Relationships (EXPLICIT SCOPE SQL SELECT statement)
- ▶ IIII Application List[CP=utf-8].CSV
- ▶ ### Application List[CP=Windows-1252; DELIM=Semicolon].CSV
- -- Application Unavailability Statistics (On Demand Only)
- ▶ IIII Applications Using Sensitive Data

Default report **format** is **Excel**. To generate a **CSV** report, add a ".CSV" extension to the report template name.

Inbound/outbound CSV character encoding and **column delimiters** can be specified in the tabular report name itself.

For further information, see

« Inbound/Outbound Content Formatting »
on the Guidance web site.

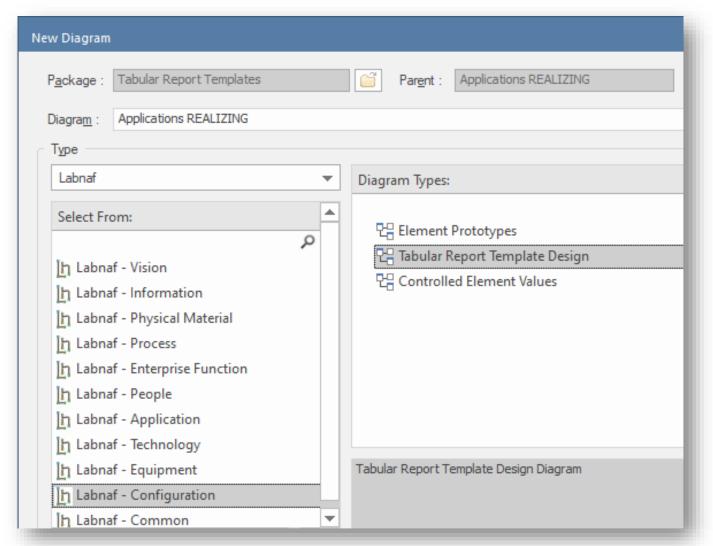
A. Generating Tabular Reports

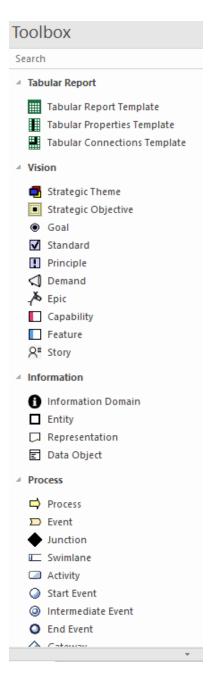
B. Creating Tabular Report Templates

- 1. Scenarios for Starting a New Tabular Report Template
 - a. Custom Report
 - b. Clone & Edit
 - c. Model the Structure
- 2. Collection of Elements to be Reported (scope)
- 3. Reported Element Properties
- 4. Reported Connections
- 5. Report Format
- 6. Summary

Tabular Report Summary

A tabular report can contain tagged values, properties and connections to any kind of element.

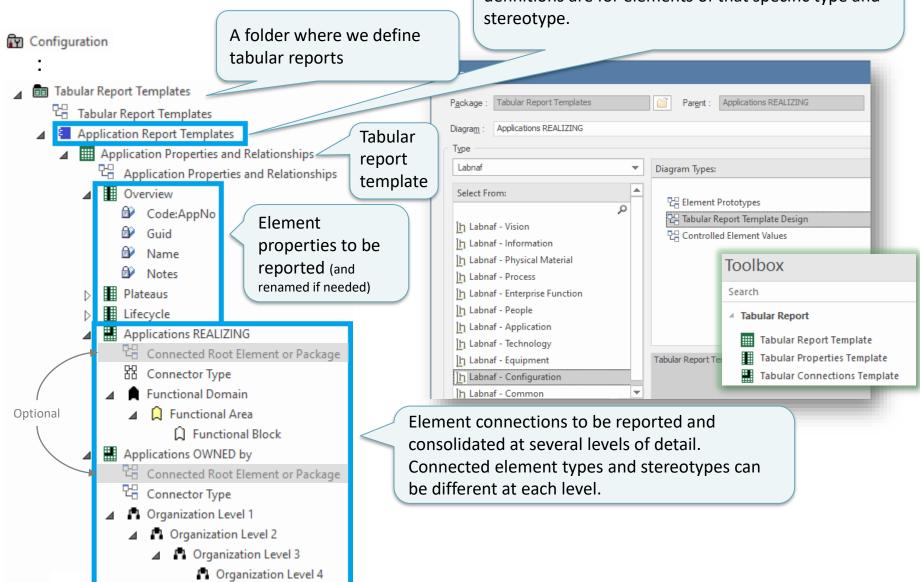




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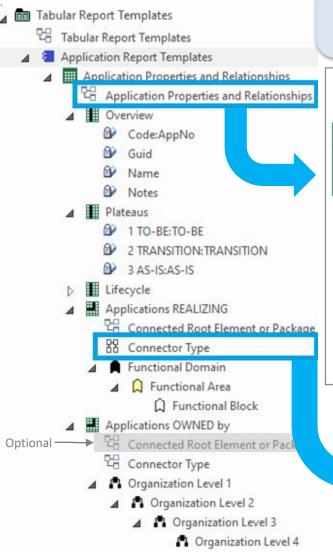


An element prototype for grouping tabular reports So we can see that the embedded tabular report definitions are for elements of that specific type and stereotype.



[h





Model the element properties and/or tagged values with optional renaming and colored groupings

Model the specific connections in specific direction to specific types of elements.

Model the connection consolidation into parent element relationships

