# CONFIGURING SAFE® 5.0 IN THE IBM ENGINEERING LIFECYCLE MANAGEMENT (ELM) SOLUTION


## Abstract

In this document, we provide step-by-step guidance to configure support for the SAFe 5.0 methodology in ELM tooling, building on an environment configured for SAFe 4.6.



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# CONFIGURING

## IBM ENGINEERING LIFECYCLE MANAGEMENT (ELM)

# FOR SAFE® 5.0

*Note: This document includes new solution and application names. Please review this jazz.net blog post to understand the mapping between old and new names.*

## Introduction

Complete end-to-end support for SAFe 4.6 was delivered in version 7.0 of the IBM Engineering Lifecycle Management (ELM) solution in April 2020.
In January 2020, Scaled Agile Inc. announced SAFe 5.0. This document describes how to configure an ELM tooling environment based on the SAFe 4.6 templates to support SAFe 5.0. You may use this document to update existing project areas based on SAFe 4.6 templates.
If you are interested in doing these kinds of configurations but you are not starting from a SAFe 4.6-based environment, consult documentation provided in the Configuring the SAFe® Methodology in ELM article to access additional configuration guidelines as necessary to bring your environment up to the correct level.
To learn more about what's new in ELM SAFe support, refer to the **What's New** presentations available here: Agile@Scale Overview Series.

## What's New in SAFe 5.0?

The template changes covered in this document primarily impact IBM Engineering Requirements Management (DOORS NEXT) and IBM Engineering Workflow Management (EWM). Beyond new templates with the SAFe 5.0 name, There are no content changes in IBM Engineering Test Management (ETM) templates. Each application's template updates are covered in a separate section, so you can easily find what you need for your environment.

## Summary of Key Changes

**I. EWM Changes**

- Updated Portfolio Epic workflow
- Updated enum values for Scope enumeration

**ii. DOORS NEXT Changes**

- New SWOT artifact type
- New TOWS artifact type
- Updated Strategic Theme artifact template
- Updated Vision artifact type

## Define External URIs

It is important to define RDF URIs for attributes, types, link types, and enumeration values defined in your project areas and components, especially where these are shared or common. URIs were added to the out of the box templates in SAFe 4.6 templates. It is strongly advised that if your existing project does not have RDF URIs defined, pl. refer to the IBM Enterprise Scaled Agile Vocabulary and add them.

To learn more, refer to the best practices of defining external URIs for artifact types and attributes, you can equate attributes across project areas to facilitate cross-project reporting.

**ASSUMPTIONS**

The steps in this document assume that:

- You have *existing* **SAFe 4.6** project areas configured in one of three ways:
  - *a.* Using the templates delivered in the 7.0 or later release of ELM
  - *b.* Configured by hand using the guidelines documentation referenced above
- You have Administrative authority and experience configuring process/project templates.

***Note:*** *If you have already customized some of the constructs delivered out of the box with the SAFe templates, some of the instructions and/or screen captures may not match your environment.*

# 1 EWM SAFE® 5.0 CONFIGURATIONS

## 1.1 SAFE® FULL OR PORTFOLIO CHANGES

The remainder of the Full or Portfolio level updates will be done in the Eclipse client.

__1. Launch the EWM Administration Page in your browser and log on as an Administrator and navigate to your existing SAFe 4.6-based project area.

__2. Right-click on the Repository Connection, choose Managed Connected Project Areas and select your project area to connect to it.

__3. Right-click to open your project area for editing.

### 1.1.1 UPDATE SCOPE TYPE ENUMERATION

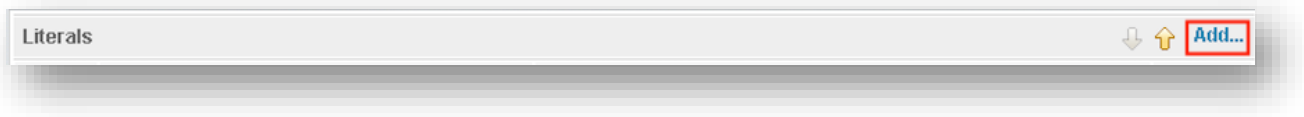
*NOTE: Complete the steps below, only for Full or Portfolio SAFe.*

__1. Launch the EWM Administration Page in your browser, log on as an Administrator and navigate to your existing SAFe 4.6-based project area.

__2. In the Browser user interface, select **Work Items** in the left navigation bar, then select **Enumerations.**

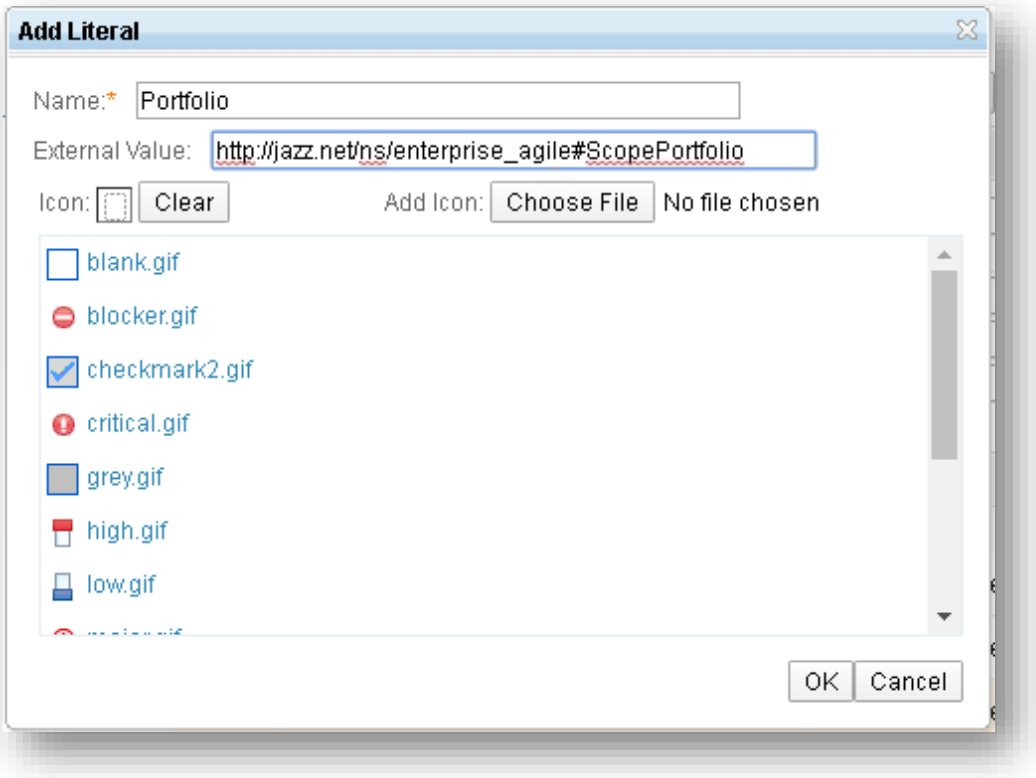
__3. Select the enumeration **Scope.**

__4. Scroll to the **Literals section** and click the **Add… button** to create the new literal value.

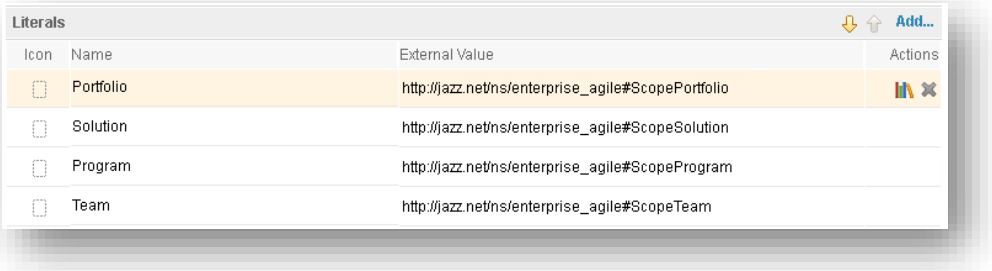



__5. Specify the following details:

**Name:** `Portfolio`
**External Value:**
`http://jazz.net/ns/enterprise_agile#ScopePortfolio`



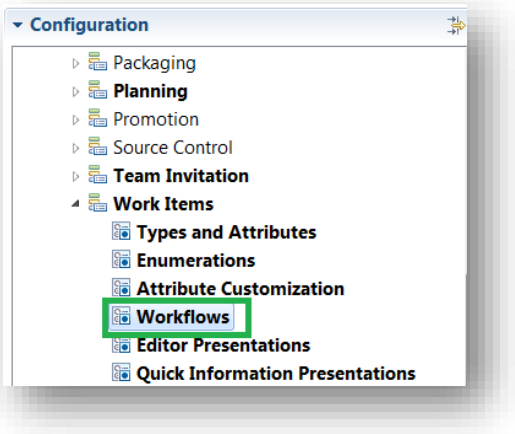

__6. **Reorder the literal values** to match below:




__7. Click the **Save** button in the top right corner of the browser window to save your changes.

### 1.1.2 PORTFOLIO EPIC WORKFLOW

__1. Navigate to *Project Configuration* > *Configuration Data* > *Work Items* > *Workflows* in the **Configuration** box on the left:




**__2.** Scroll up to the **Choose the Workflow to Edit:** selection list. Select the *Portfolio Epic Workflow*.

__3. Scroll to **States** section.

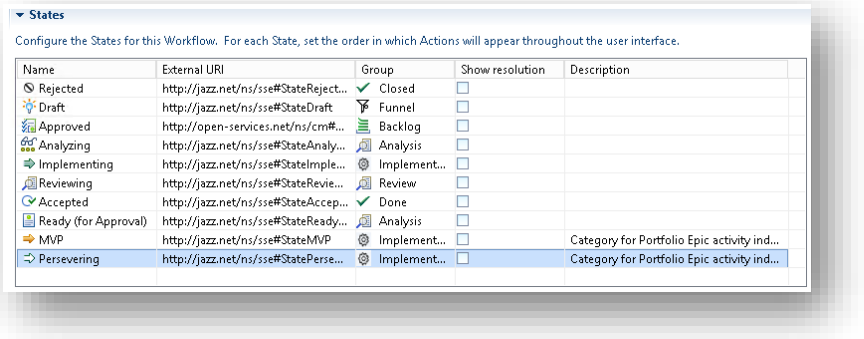
__4. Click the **Add…** button to add the following states:

__*a.* *MVP:*

**External URI:** `http://jazz.net/ns/enterprise_agile #StateMVP`
**Group:** `Implementation`

__b. *Persevering*:

**External URI:** `http://jazz.net/ns/enterprise_agile #StatePersevering`
**Group:** `Implementation`
Add icons if you wish.




__5. Click the **Add…** button to add the following actions:

__a. MVP:

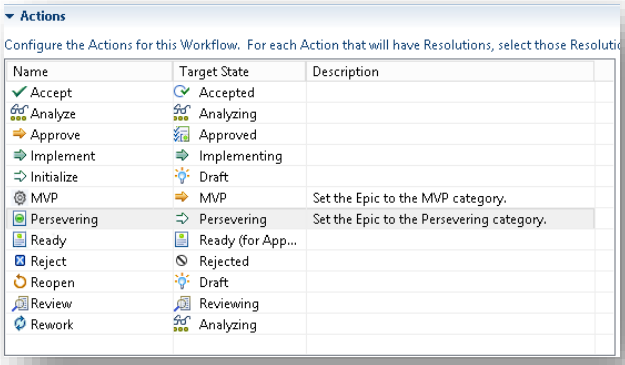
**Target State:** `MVP`
**Description:** `Set the Epic to the MVP category.`

__b. Persevering:

**Target State:** `Persevering`

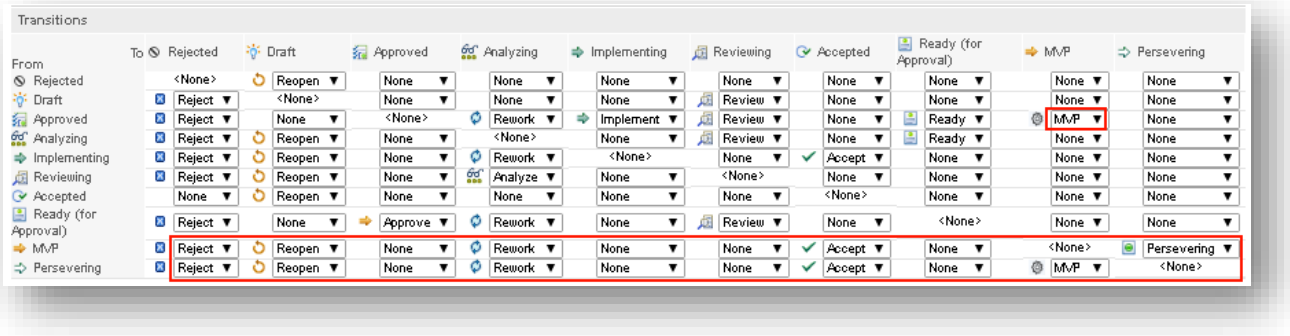
**Description:** `Set the Epic to the Persevering category.`

Add icons if you wish. Your actions should look similar to this:




__6. Scroll up to the **Transitions section.**

__7. **Set transitions** to look like this:




__8. **Save** the changes.

Congratulations! You've made the common updates for all SAFe configurations.
There are no additional changes required for Large Solution and Essential SAFe configuration.
*You can now proceed to make the changes for* SAFe 5.0 to your DOORS NEXTconfiguration.

# 2 DOORS NEXT SAFE 5.0 CONFIGURATIONS

## 2.1 ALL SAFE 5.0 LEVEL CHANGES

In this section, you configure your existing SAFe 4.6-based DOORS Next project area(s) to support SAFe 5.0.
The following changes apply to the all SAFe level:

- Create artifact template for **Role**

## Instructions

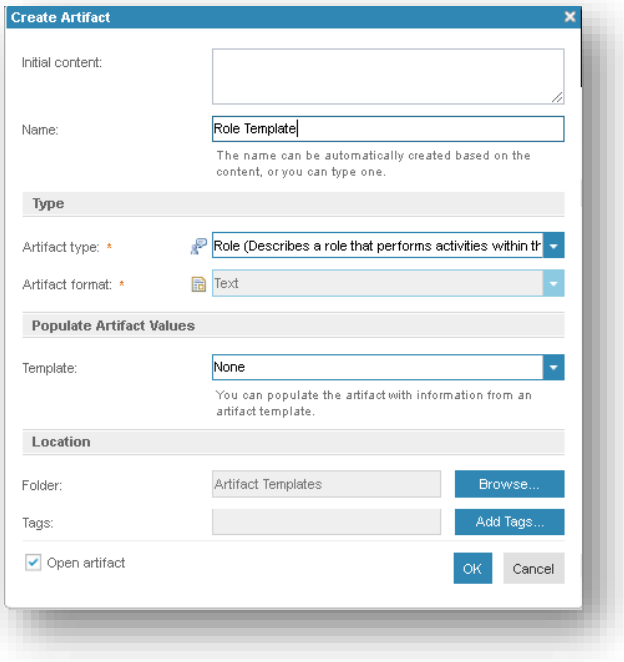
__1. Launch DOORS Next in your browser.

__2. Navigate to the your SAFe 4.6 portfolio-level project area to be updated.

### 2.1.1 Add Template for Role Artifact Type

__1. Select **Artifacts** from the menu bar and then *Create > Role*:

__2. Specify these details:




__3. Click **OK** to edit the new artifact.

__4. Select the following text and **copy-paste** it into the new artifact:

Click to view Type Description

# [*Name of the Role*]

<Description of user role>

## Sample Persona

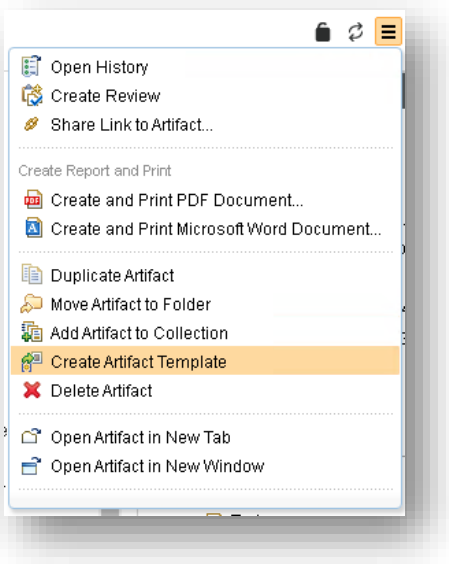
*<The purpose of personas is to create reliable and realistic representations of the user role>*

| | |
|---|---|
| *<Picture>* | **Name:** <Persona Name> |
| | **Job Title:** |
| | **Key Scenarios:** |
| **Description:**<br>1.<br>2.<br>3.<br>4.<br>5. | |
| **Responsibilities:**<br>1.<br>2.<br>3.<br>4.<br>5. | |
| **Pain Points:**<br>1.<br>2.<br>3.<br>4.<br>5. | |

__5. Click **Save** and then **Done**.

__6. Click on **'More Actions'** menu.

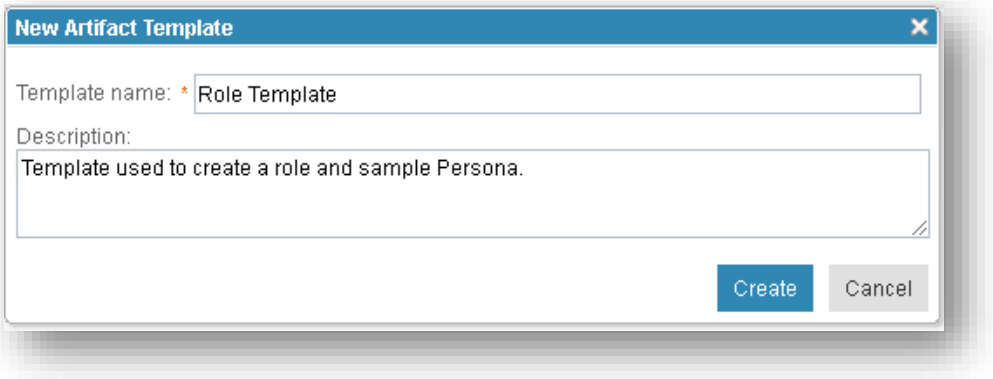
__7. Select **Create Artifact Templates.**




__8. Specify the following details:

**Name:** `Role Template`

**Description:** `Template used to create Role and a sample Persona.`




__4. Click on **Create.**

__5. Click on **Close** to complete the process.

Congratulations! You've made the common updates for all SAFe configurations. Now, proceed to the section 2.2 to make change to your Full, Large Solution or Portfolio SAFe configuration *or else proceed to* section 2.3 to make change to your Essential SAFe configuration.

## 2.2 SAFE 5.0 FULL, LARGE SOLUTION OR PORTFOLIO CHANGES

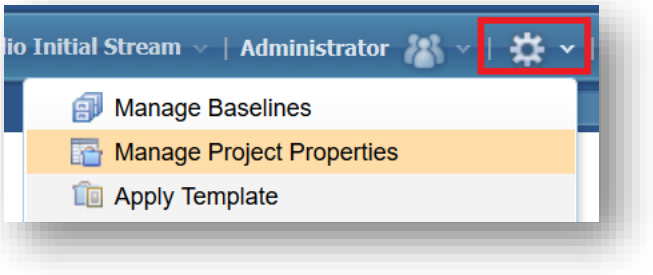
In this section, you configure your existing Full, Large Solution or Portfolio SAFe 4.6-based DOORS Next project area(s) to support SAFe 5.0.
The following changes apply to the Portfolio level:

- Add additional attribute '**Scope**' to the **Vision** artifact type
- Add a new **SWOT** artifact and associated template
- Add a new **TOWS** artifact and associated template
- Update artifact template for **Strategic Theme**

### 2.2.1 ADD 'SCOPE' ATTRIBUTE TO EXISTING VISION ARTIFACT TYPE

#### 2.2.1.1 CREATE SCOPE ARTIFACT ATTRIBUTE

__1. Select *Manage Project Properties* from the **Administration** drop-down menu:




__2. Create new Scope attribute type:

__a. Select **Attribute Data Types** and then click

to create a new attribute type.

__b. Enter the following details:

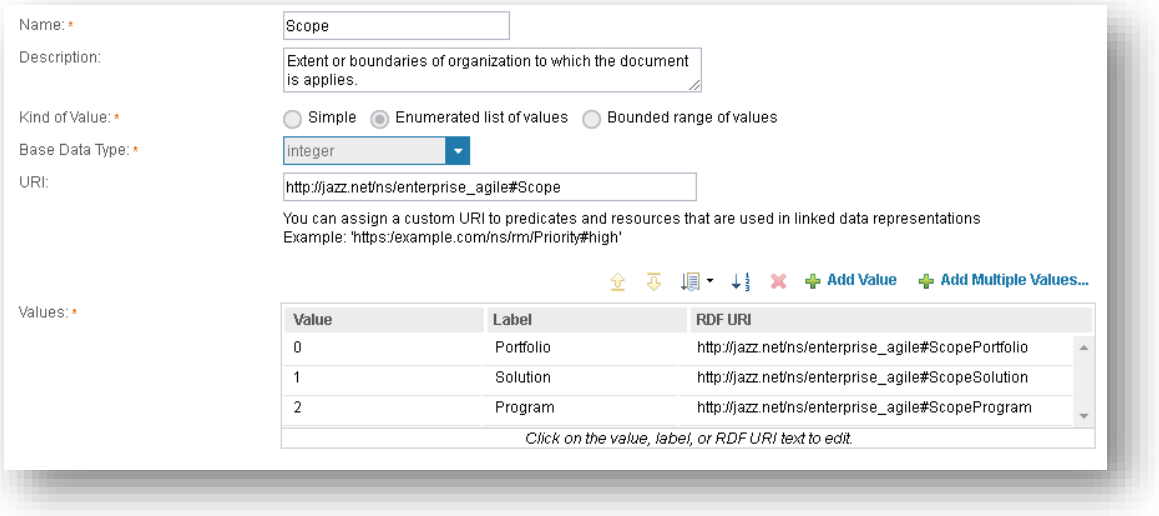
**Name:** Scope
**Description:** Extent or boundaries of organization to which the document is applies.
**Kind of value:** Enumerated list of values
**URI:** http://jazz.net/ns/enterprise_agile#Scope

__c. Add the following values:

**Portfolio**
http://jazz.net/ns/enterprise_agile#ScopePortfolio
**Solution**
http://jazz.net/ns/enterprise_agile#ScopeSolution

**Program**
http://jazz.net/ns/enterprise_agile#ScopeProgram
**Team**
http://jazz.net/ns/enterprise_agile#ScopeTeam

__d. The form should look like:




__e. Click **Save.**

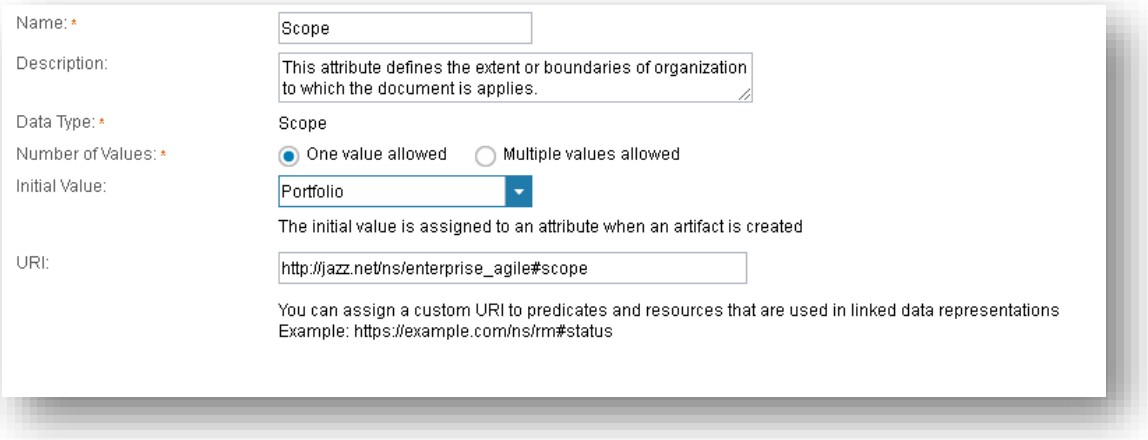
__3. Create new **Scope** artifact attribute:

__a. Select **Artifact Attributes** and then click New Attribute... to create a new artifact attribute.

__b. Enter the following details:

**Name:** Scope
**Description:** This attribute defines the extent or boundaries of organization to which the document is applies.
**Data Type** Scope
**Initial Value** Portfolio
**URI:** http://jazz.net/ns/enterprise_agile#scope

__c. The form should look like:




__d. Click **Save.**

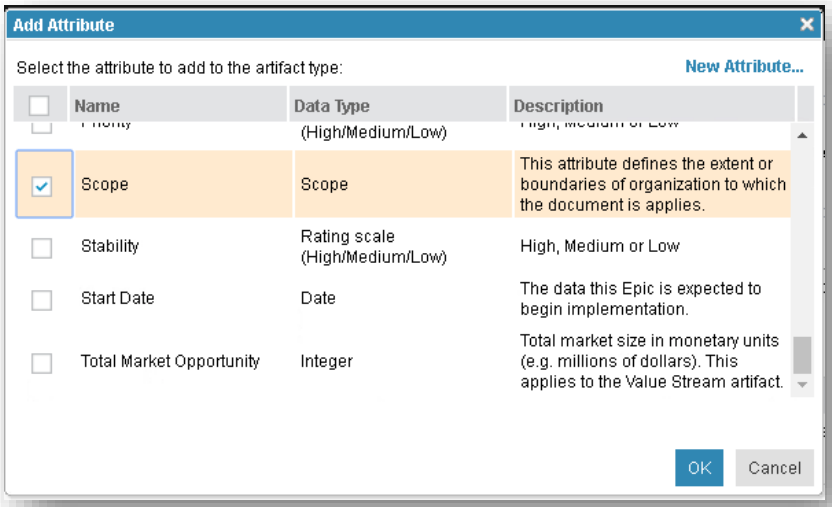
### 2.2.1.2 ADD SCOPE ATTRIBUTE TO VISION ARTIFACT TYPE

__1. Select **Artifact Types**

__2. Select **[SAFe] Vision**

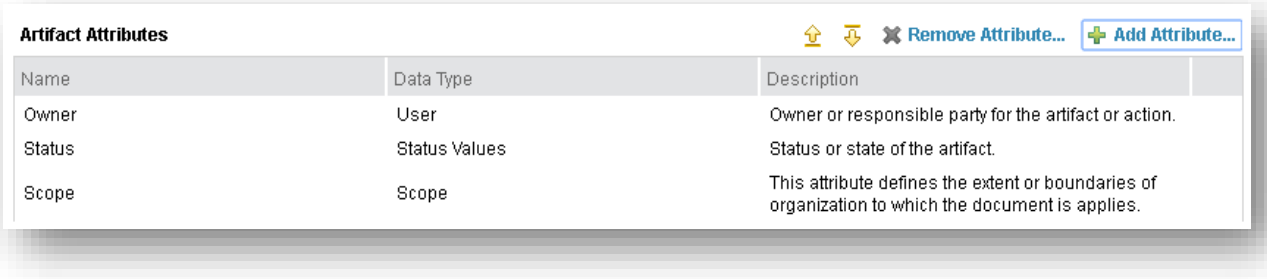
__3. Click **Add Attribute**

__4. Select the attribute **Scope**, created in the previous section, from the list




__5. Click **OK**

__6. The attribute list for the artifact type [SAFe] Vision should look like:

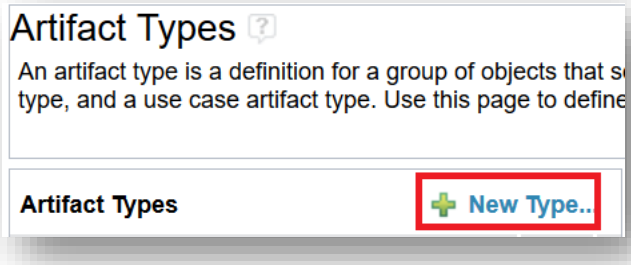



__7. Click **Save.**

## 2.2.2 ADD NEW ARTIFACT AND ATTRIBUTE TYPES

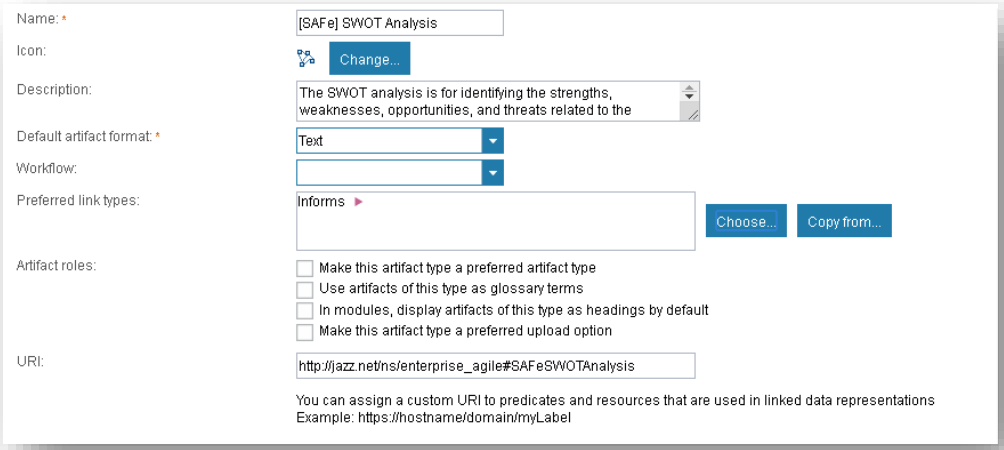
### 2.2.2.1 SWOT ARTIFACT TYPE

__1. Click New Type... to create a new artifact type:

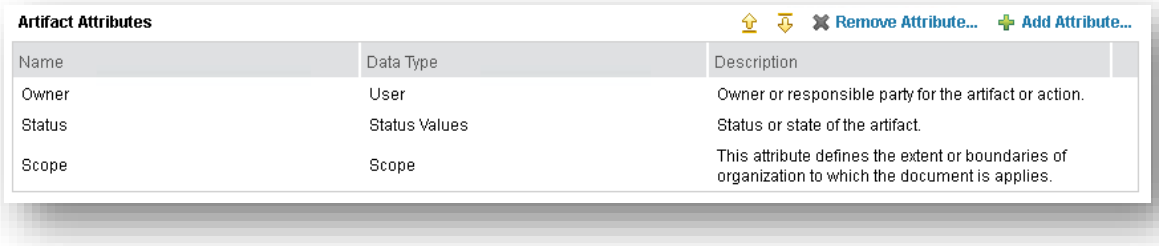



__2. Specify these details:

**Name:** `[SAFe] SWOT Analysis`
**Icon:** Goal Modeling
**Description:** `The SWOT analysis is for identifing the strengths, weaknesses, opportunities, and threats related to the current business situation.`
**Default artifact format:** `Text`
**Preferred link types:** `Informs >`
**URI**: `http://jazz.net/ns/enterprise agile#SAFeSWOTAnalysis`



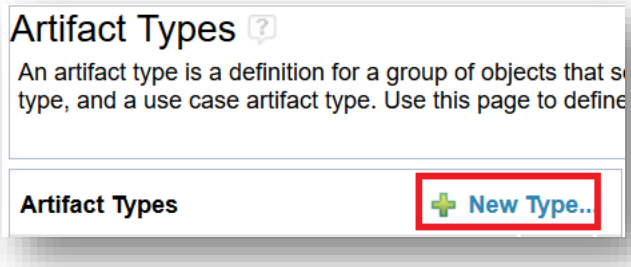

__3. Add the **Owner, Scope** and **Status** attributes to the artifact type.




__4. Click **Save.**

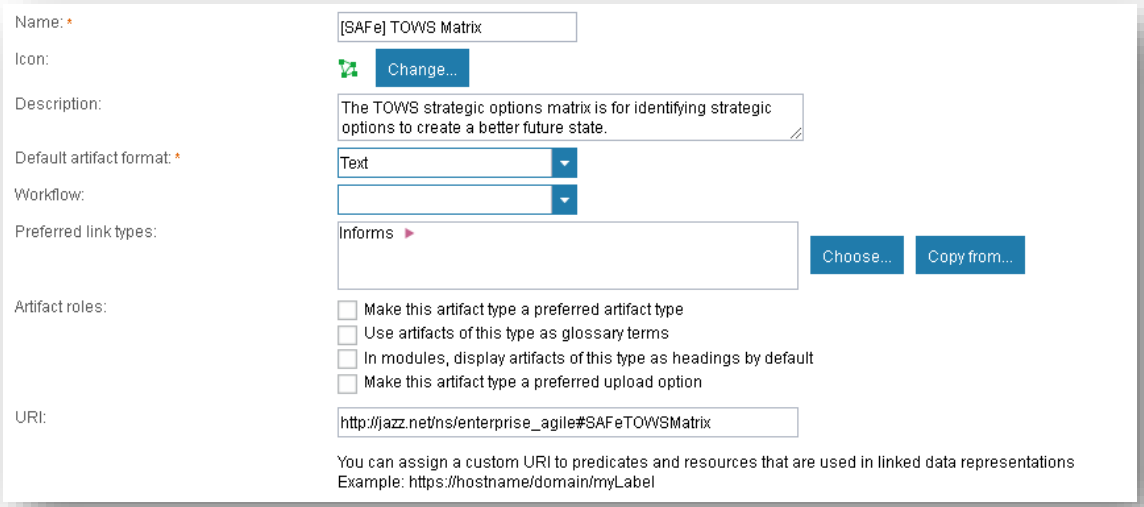
### 2.2.2.2 TOWS ARTIFACT TYPE

__1. Click New Type... to create a new artifact type:

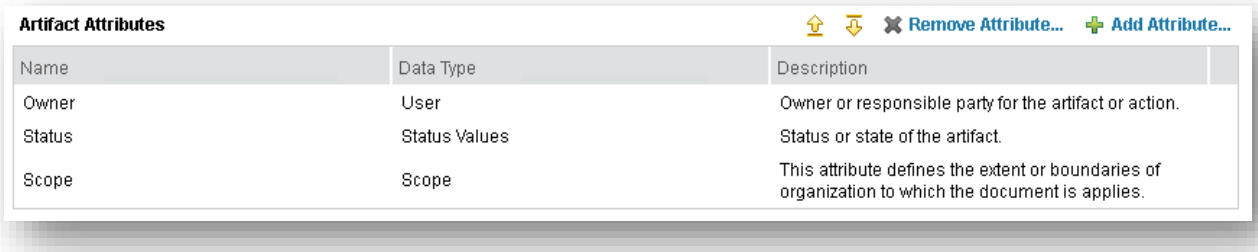


__2. Specify these details:

**Name:** [SAFe] TOWS Matrix
**Icon:** Green Diagram
**Description:** The TOWS strategic options matrix is for identifying strategic options to create a better future state.
**Default artifact format:** Text
**Preferred link types:** Informs >
**URI:** http://jazz.net/ns/enterprise_agile#SAFeTOWSMatrix




__3. Add the **Owner, Scope** and **Status** attributes to the artifact type.



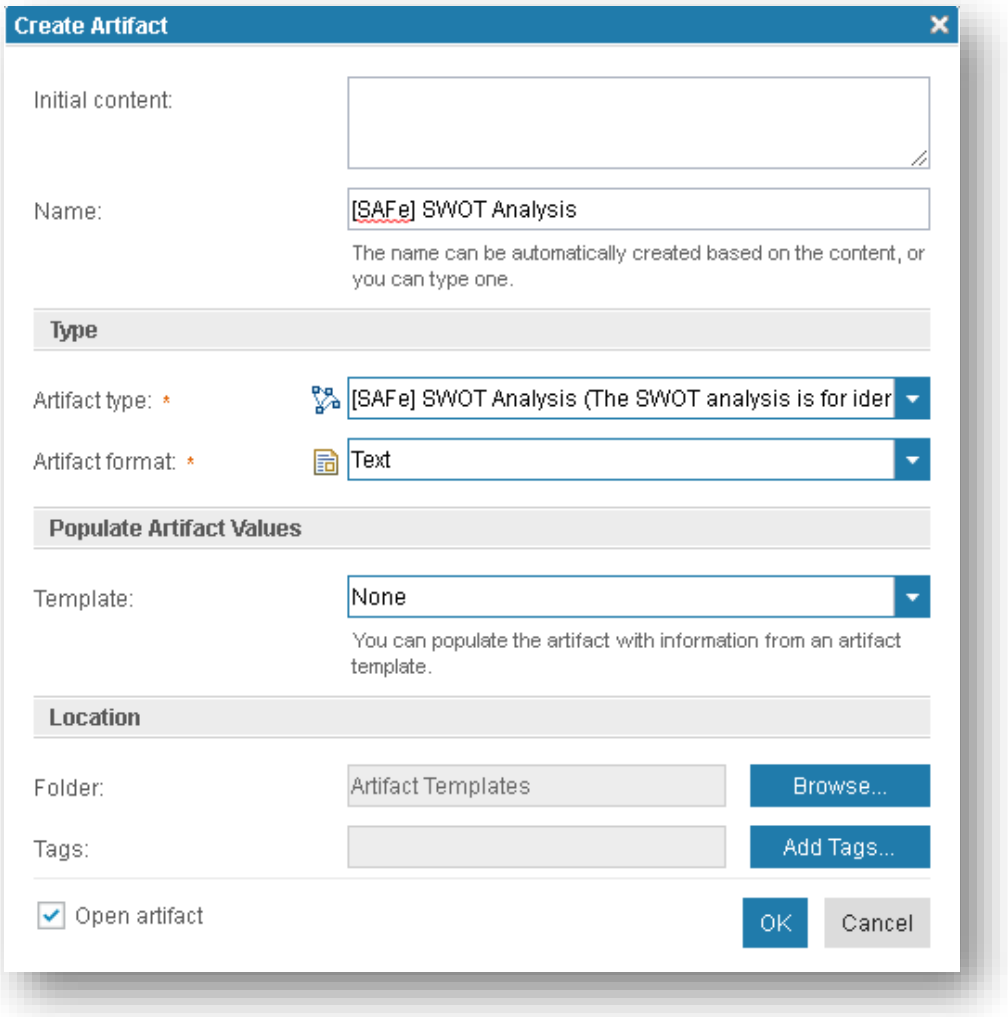

__4. Click **Save.**

## 2.2.3 CREATE NEW ARTIFACT TEMPLATES

### 2.2.3.1 SWOT ANALYSIS ARTIFACT TEMPLATE

__1. Select **Artifacts** from the menu bar and then *Create > [SAFe] SWOT Analysis* Template.

__2. Specify these details:




__3. Click **OK** to edit the new artifact.

__4. Select the following text and **copy-paste** it into the new artifact:

Click to view Type Description

# [Portfolio/Value Stream Name] SWOT Analysis

< The SWOT analysis is used to identify the strengths, weaknesses, opportunities, and

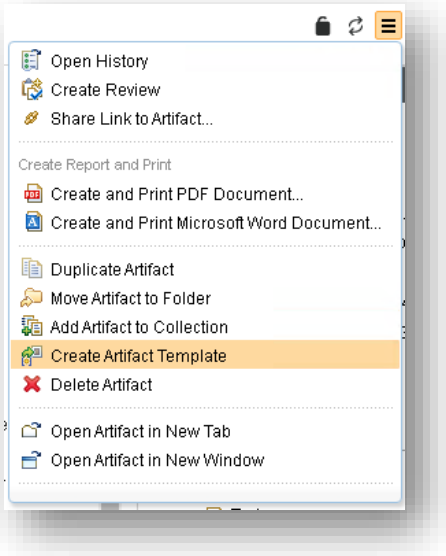
threats related to the current business situation. A SWOT analysis is a great way to uncover the current situation of your value stream, product, or a portfolio. The information from the SWOT analysis below is used to fill-in the strengths, weaknesses, opportunities, and threats of the TOWS strategic options matrix. >

| | | |
|---|---|---|
| **Internal Origin** | **STRENGTHS**<br><br>6. Strength 1<br>7. Strength 2<br>8. Strength 3<br>9. Strength 4<br>10. Strength 5 | **WEAKNESSES**<br><br>6. Weakness 1<br>7. Weakness 2<br>8. Weakness 3<br>9. Weakness 4<br>10. Weakness 5 |
| **External Origin** | **OPPORTUNITIES**<br><br>6. Opportunity 1<br>7. Opportunity 2<br>8. Opportunity 3<br>9. Opportunity 4<br>10. Opportunity 5 | **THREATS**<br><br>1. Threat 1<br>2. Threat 2<br>3. Threat 3<br>4. Threat 4<br>5. Threat 5 |

__5. Click **Save** and then **Done.**

__6. Click on **'More Actions'** menu.

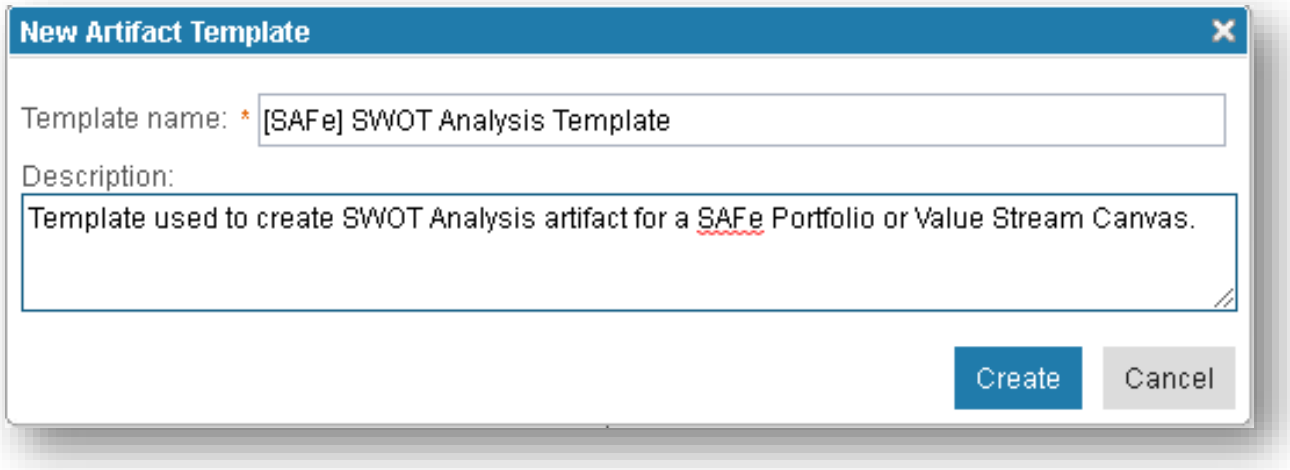
__7. Select **Create Artifact Templates.**




__8. Specify the following details:

**Name:** `[SAFe] SWOT Analysis Template`

**Description:** `Template used to create SWOT Analysis artifact for a SAFe Portfolio or Value Stream Canvas.`



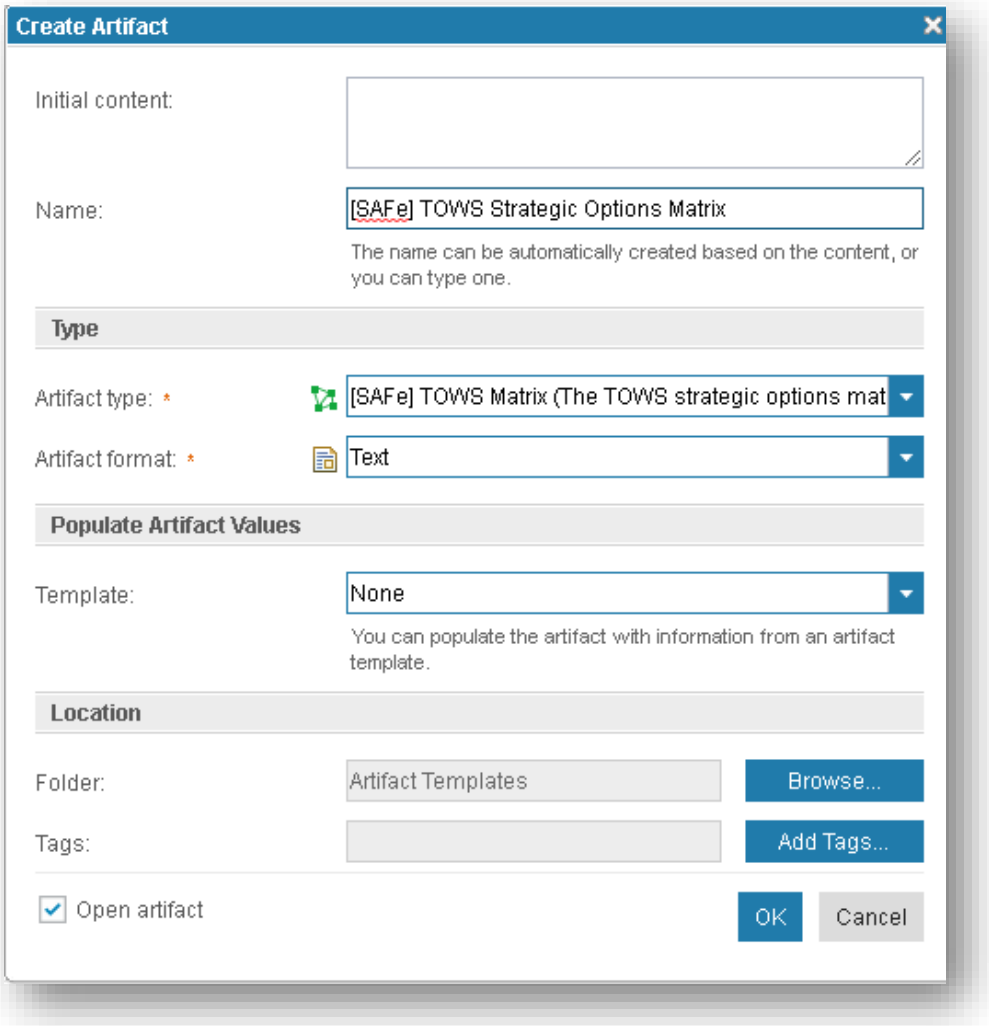

**__9.** Click on **Create.**

__10. Click on **Close** to complete the process.

### 2.2.3.2 TOWS STRATEGIC OPTIONS MATRIX ARTIFACT TEMPLATE

__1. Select **Artifacts** from the menu bar and then *Create > [SAFe] TOWS Strategic Options Matrix Template.*

__2. Specify these details:




__3. Click **OK** to edit the new artifact.

__4. Select the following text and **copy-paste** it into the new artifact:

Click to view Type Description

# *[Portfolio/Value Stream Name]* TOWS Strategic Options Matrix

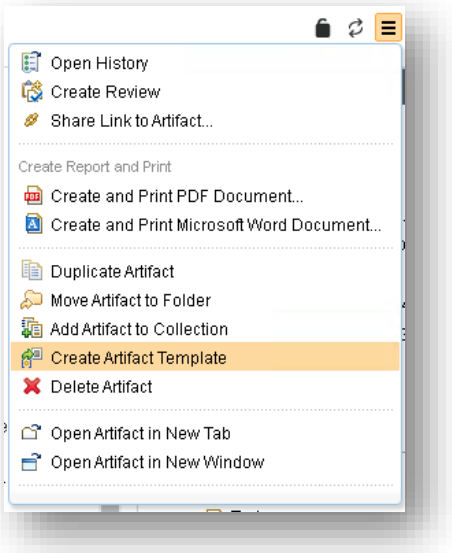
< The TOWS strategic options matrix is for identifying strategic options to create a better future state. The information from the SWOT analysis is used to fill-in the strengths, weaknesses, opportunities, and threats of the TOWS strategic options matrix. >

| | **External Opportunities (O)**<br><br>1.<br>2.<br>3.<br>4. | **External Threats (T)**<br><br>1.<br>2.<br>3.<br>4. |
|---|---|---|
| **Internal Strengths (S)**<br><br>1.<br>2.<br>3.<br>4. | **SO**<br><br>**How can your strengths be used to maximize opportunities?** | **ST**<br><br>**How can you apply your strengths to overcome present and potential threats?** |
| **Internal Weakness (W)**<br><br>1.<br>2.<br>3.<br>4. | **WO**<br><br>**How can your opportunities be leveraged to overcome weaknesses?** | **WT**<br><br>**How can you minimize weaknesses and avoid threats?** |

__5. Click **Save** and then **Done.**

__6. Click on **'More Actions'** menu.

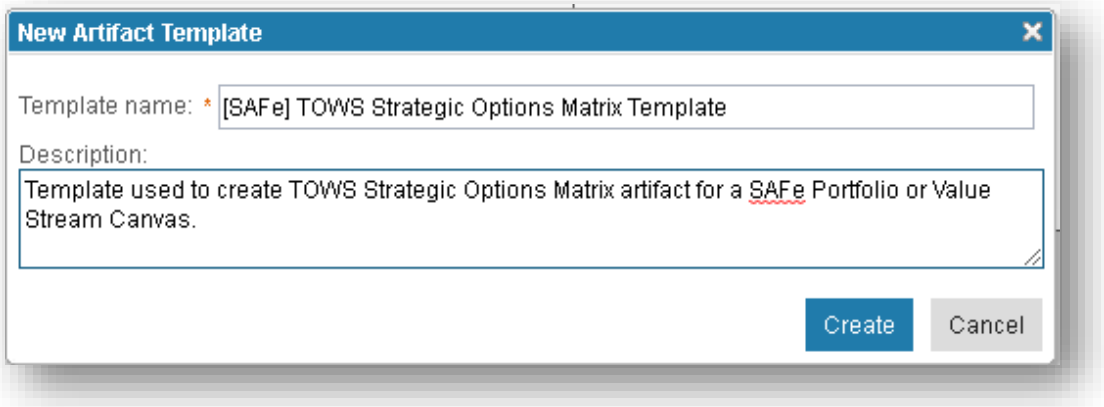
__7. Select **Create Artifact Templates.**




__8. Specify the following details:

**Name:** `[SAFe] TOWS Strategic Options Matrix Template`

**Description:** `Template used to create TOWS Strategic Options Matrix artifact for a SAFe Portfolio or Value Stream Canvas.`




__9. Click on **Create.**

__10. Click on **Close** to complete the process.

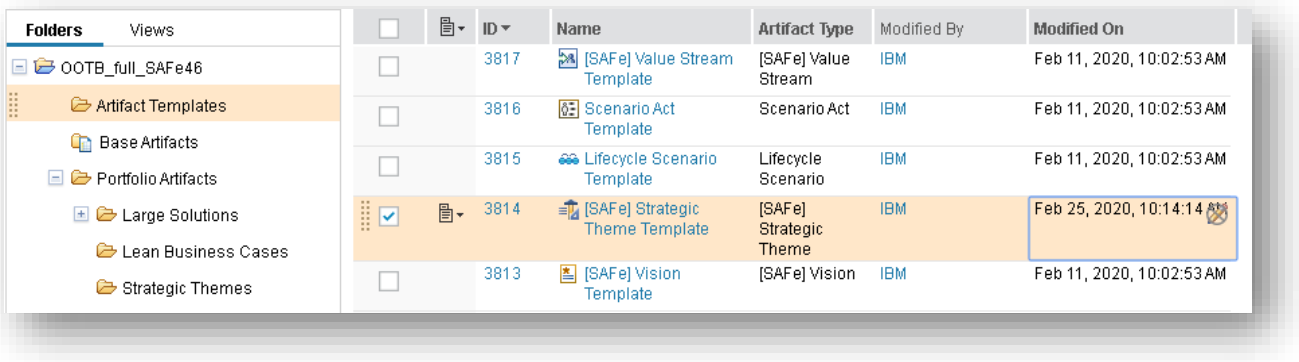
### 2.2.4 UPDATE EXISTING ARTIFACT TEMPLATES

#### 2.2.4.1 STRATEGIC THEME ARTIFACT TEMPLATE

__1. Selects **Artifacts** from the menu bar and then *Create > [SAFe] Strategic Theme*:

__2. Navigate to the Artifacts Template folder.

__3. Click on [SAFe] Strategic Theme Template document to open it.




__4. Click on the **Edit** button.

__5. Select the entire existing content to delete it.

__6. Select the following text and **copy-paste** it into the artifact:

Click to view Type Description

# [Strategic Theme Title]

## Summary

< Short summary>

## Objectives and Key Results (OKR)

< OKR is used to define, organize, and communicate critical information about a strategic theme. It provides a simple approach to create alignment and engagement around measurable and ambitious goals.
Objectives are a memorable description of what you want to achieve. They should be short, inspirational, and challenging. Key results are a set of metrics that measure your progress towards the strategic theme. For each objective, there should be a set of two to five key results. >

Example:

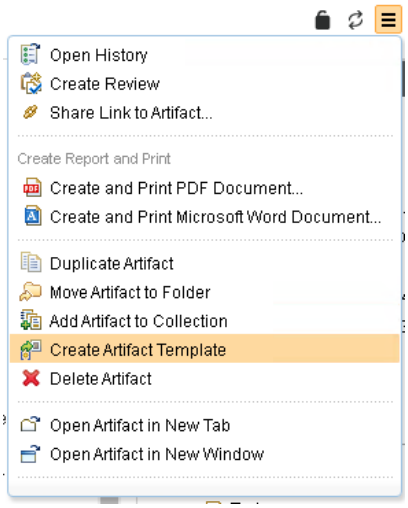
| Objective | Key Results |
|---|---|
| *Increase customer engagement in our community platform* | *Reduce membership churn from 20% to 5%* |
| | *Increase Net Promoter Score from 35 to 60* |

| | |
|---|---|
| | *Improve average weekly visits per active user from 5,000 to 20,000* |
| | *Increase non-paid (organic) traffic from 1,500 to 5,000* |
| | *Improve engagement from 30% to 60%* |

__7. Click **Save** and then **Done.**

__8. Click on **'More Actions'** menu.

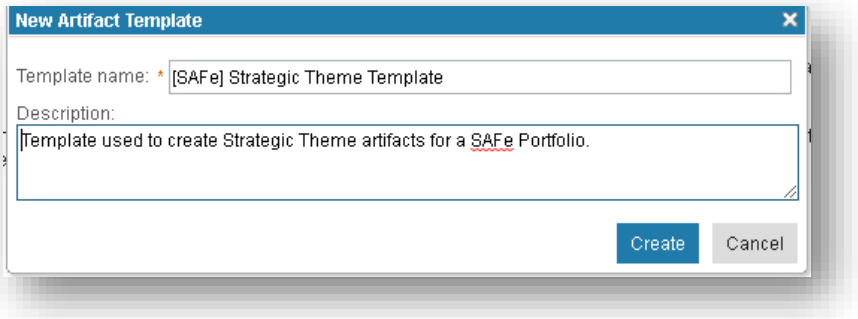
__9. Select **Create Artifact Templates.**




__10. Specify the following details:

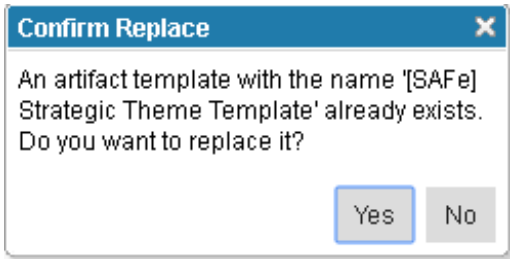
**Name:** `[SAFe] Strategic Theme Template`

**Description:** `Template used to create Strategic Theme artifact for a SAFe Portfolio.`

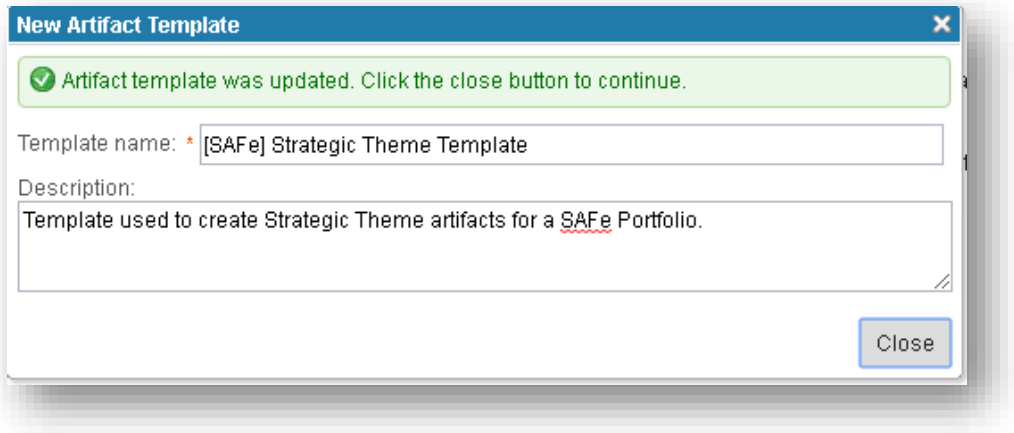



__11. Click on **Create.**

__12. Click on **Yes** to replace the existing template with the new template.




__13. Click on **Close** to complete the process.




*Congratulations! You have completed the SAFe 5.0 configuration for your DOORS Next SAFe Full, Large Solution or Portfolio environment!*

## 2.3 SAFE 5.0 ESSENTIAL CHANGES

In this section, you configure your existing SAFe 4.5-Essential based DOORS Next project area(s) to support SAFe 5.0 Essential.

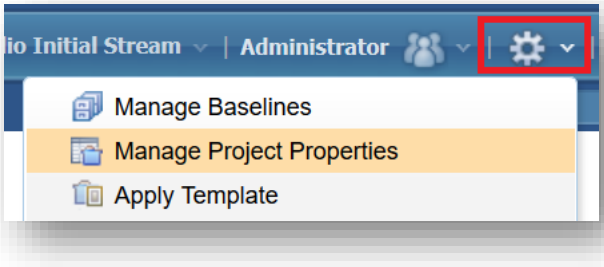
The following changes apply to the Portfolio level:

- Add an additional attribute '**Scope'** to the **Vision** artifact type
- Add a new **Solution Context** artifact and associated template

## 2.3.1 ADD 'SCOPE' ATTRIBUTE TO EXISTING VISION ARTIFACT TYPE

### 2.3.1.1 CREATE SCOPE ARTIFACT ATTRIBUTE

__4. Select *Manage Project Properties* from the **Administration** drop-down menu:




__5. Create new Scope attribute type:

__f. Select **Attribute Data Types** and then click

to create a new attribute type.

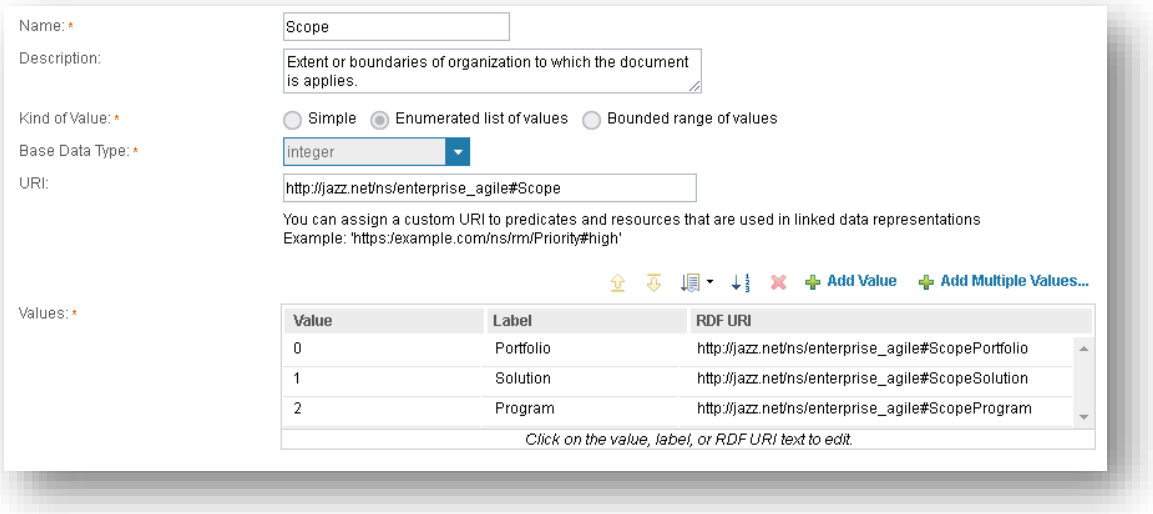
__g. Enter the following details:

**Name:** `Scope`
**Description:** `Extent or boundaries of organization to which the document is applies.`
**Kind of value:** `Enumerated list of values`
**URI:** http://jazz.net/ns/enterprise_agile#Scope

__h. Add the following values:

**`Program`**
`http://jazz.net/ns/enterprise_agile#ScopeProgram`
**`Team`**
`http://jazz.net/ns/enterprise_agile#ScopeTeam`

__i. The form should look like:




__j. Click **Save.**

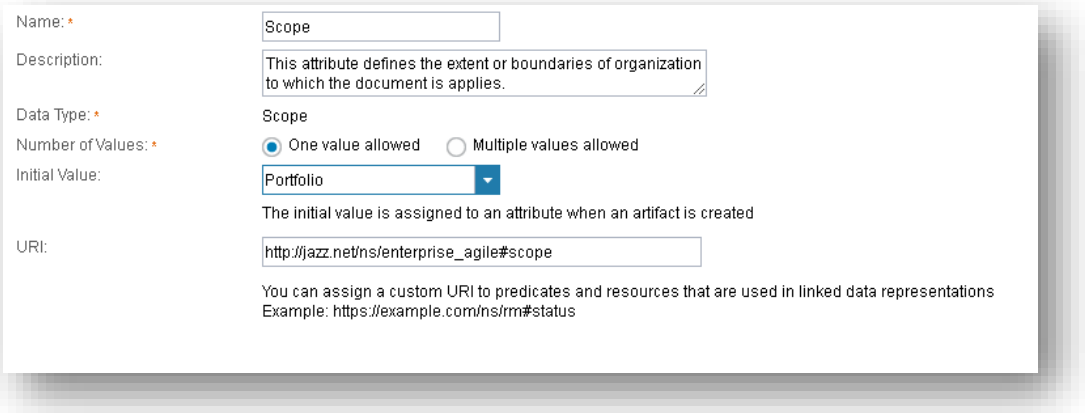
__6. Create new **Scope** artifact attribute:

__e. Select **Artifact Attributes** and then click New Attribute... to create a new artifact attribute.

__f. Enter the following details:

**Name:** `Scope`
**Description:** `This attribute defines the extent or boundaries of organization to which the document is applies.`
**Data Type** `Scope`
**Initial Value** `Portfolio`
**URI:** `http://jazz.net/ns/enterprise_agile#scope`

__g. The form should look like:




__h. Click **Save.**

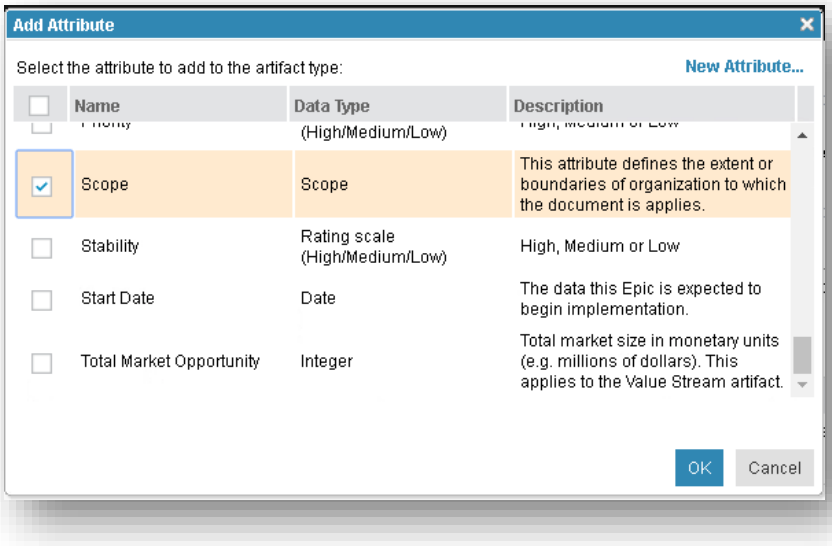
#### 2.3.1.2 ADD SCOPE ATTRIBUTE TO VISION ARTIFACT TYPE

__1. Select **Artifact Types**

__2. Select **[SAFe] Vision**

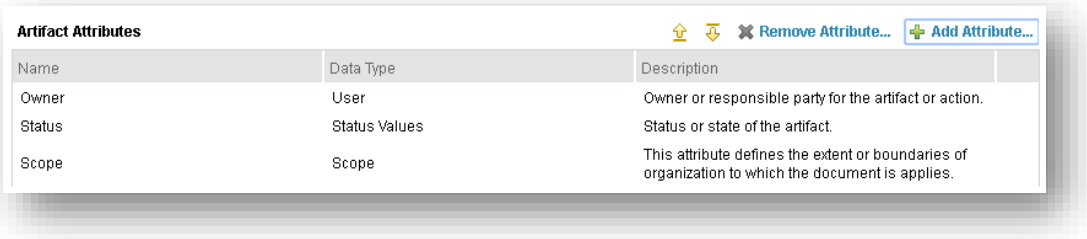
__3. Click **Add Attribute**

__4. Select the attribute **Scope**, created in the previous section, from the list




__5. Click **OK**

__6. The attribute list for the artifact type [SAFe] Vision should look like:

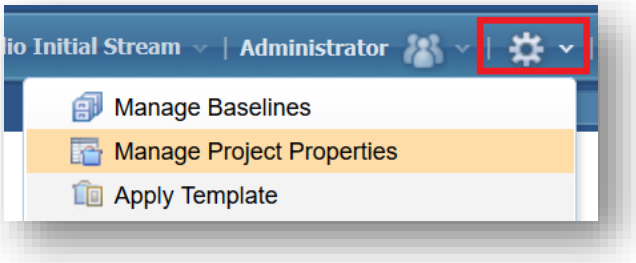



**__7.** Click **Save.**

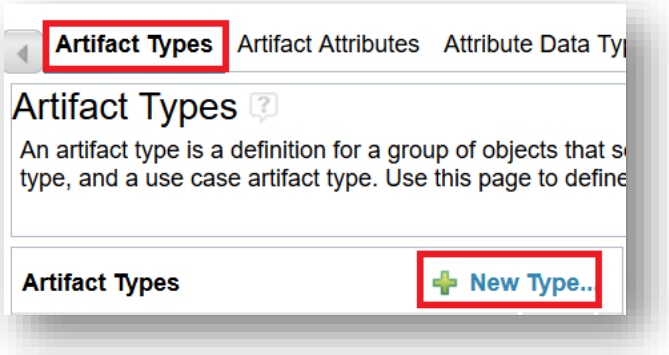
### 2.3.2 ADD NEW SOLUTION CONTEXT ARTIFACT TYPE

#### 2.3.2.1 CREATE SOLUTION CONTEXT ARTIFACT TYPE

__2. Select *Manage Project Properties* from the **Administration** drop-down menu:

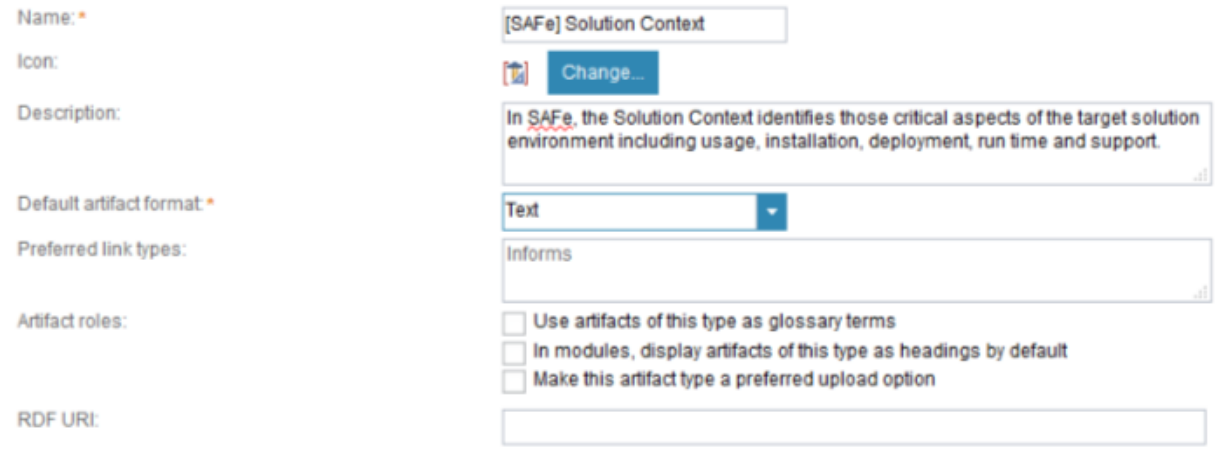



__3. Select **Artifact Types** and then click New Type... to create a new artifact type:



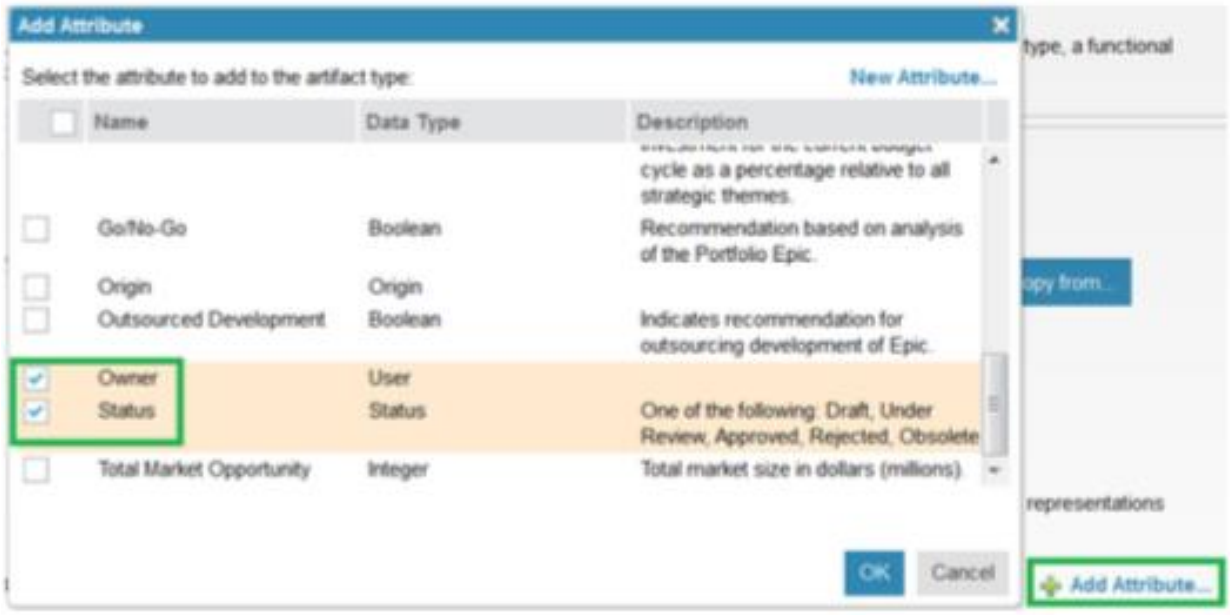

__4. Specify these details:

**Name: :**[SAFe] Solution Context
**Description:** In SAFe, the Solution Context identifies those critical aspects of the target solution environment including usage, installation, deployment, run time and support.
**Default artifact format:** Text
**Preferred link types:** Informs
**URI:** http://jazz.net/ns/enterprise_agile#SAFeSolutionContext



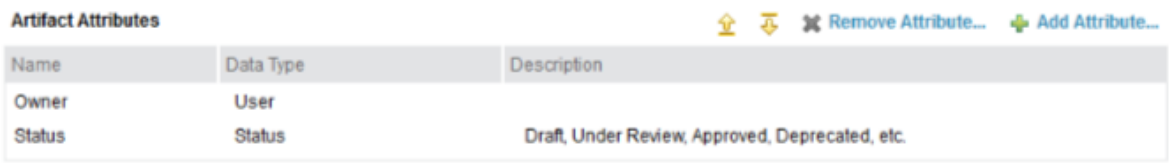

__5. In the **Artifact Attributes** pane, select **+ Add Attribute...**

__6. Click the checkbox next to **Owner** and **Status**:




__7. Click **OK.**

__8. The resulting set of attributes should look like this:



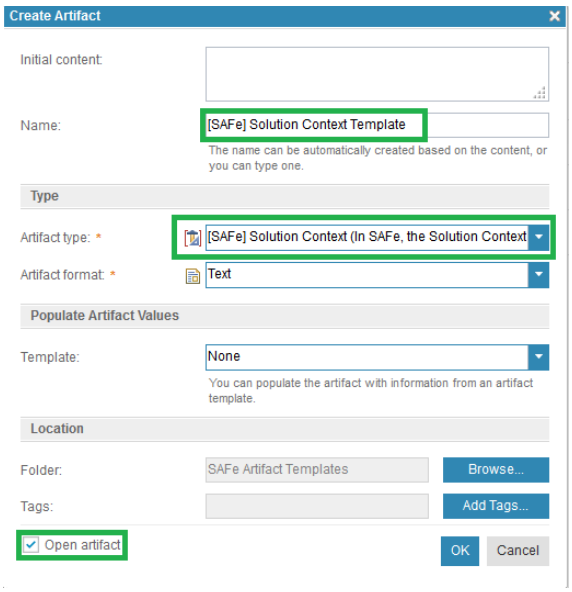

__9. Click **Save** to save your changes.

### 2.3.2.2 CREATE SOLUTION CONTEXT ARTIFACT TEMPLATE

__1. Select the drop-down arrow to create a new [SAFe] Solution Context artifact:

Note: If you do not see the artifact type in the list, you need to click More... and then specify the type in the Create Artifact dialog box:

__2. Specify these details:




__3. **Copy and paste** the following text into your new artifact:

Click to view Type Description

# [*Solution Name*] Solution Context

<Mapped to the Solution Intent title that is informed by this context.>

## Installation

<Identify any installation considerations and constraints.>

### Operating Environment

<Describe the operating environment, highlighting any distinctions for this solution above and beyond the Value Stream operating environment.>

### Packaging

<Describe how the solution will be packaged, highlighting unique considerations.>

### Support

<How will the solution be supported? List specific resources charged with ensuring that Support collateral is developed along with the solution. >

### Enablement

<How will sellers and customers be enabled on the solution? List specific resources charged with ensuring that Enablement collateral is developed along with the solution. >

### Services

<Will there be services associated with, or even packaged with, the solution? List specific resources charged with ensuring that Services collateral is developed along with the solution. >

### Marketing

<How will the solution be marketed so that it is easily discoverable by customers? List specific resources charged with ensuring that Marketing collateral is developed along with the solution. Specifically describe the digital “try, buy, sell” plan.>

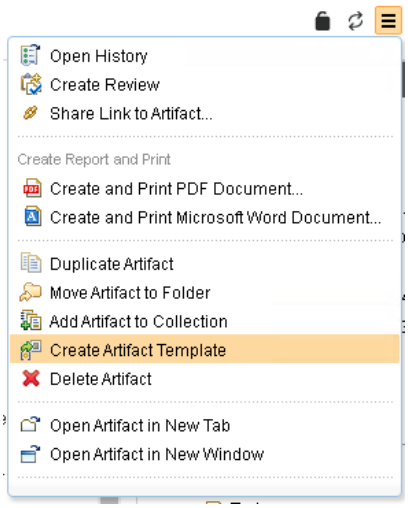
### Selling

<How will the solution be sold? List specific resources charged with actually selling or developing the  Sales collateral associated with the solution. >

__4. Click **Save** and then **Done.**

__5. Click on **‘More Actions’** menu.

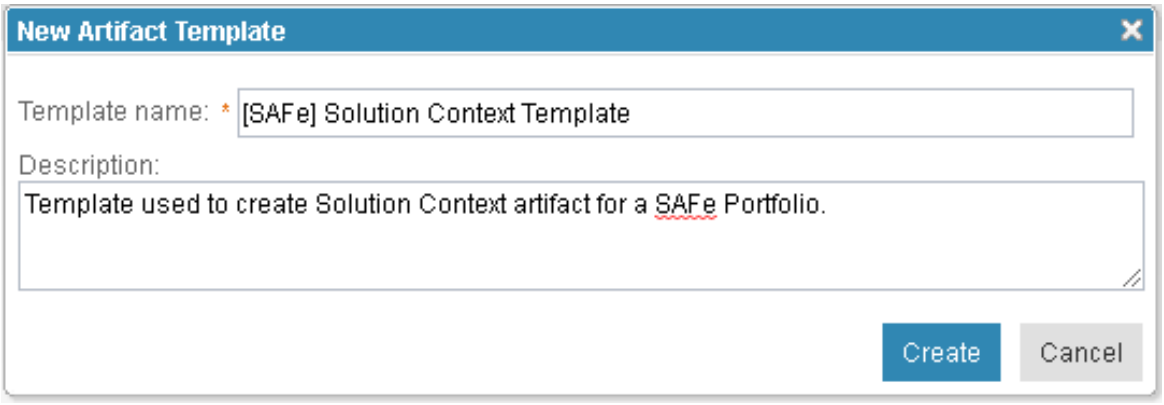
__6. Select **Create Artifact Templates**.



__7. Specify the following details:

**Name:** `[SAFe] Solution Context Template`

**Description:** `Template used to create Solution Context artifact for a SAFe Portfolio.`




__8. Click on **Create.**

__9. Click on **Close** to complete the process

*Congratulations! You have completed the SAFe 5.0 configuration for your DOORS Next SAFe Essential environment!*