



**3DEXPERIENCE®**

# 产品发布工程师

R2019x

# 主题

1

概述

2

业务挑战和目标

3

流程和功能

# 主题

1

概述

2

业务挑战和目标

3

流程和功能

# 产品发布工程师 (XEN)



## 角色 ID

产品发布工程师 (XEN)

## 前置条件)

CSV

## 角色描述

与工程上下游合作，管理产品从早期定义到最终验证的工程定义

## 关键价值

- 简单高效的工程定义初始化，同时最大化数据重用
- 快速的工程项目责任分配加快了开发过程
- 简洁、高效、直观的用户体验，有效地处理复杂的大型产品
- 跨多个学科的高效和标准化的变更流程，可提高运营效率 (\*)

## 提供的App

ENOVIA Engineering Release



(\*) 需要额外的许可证

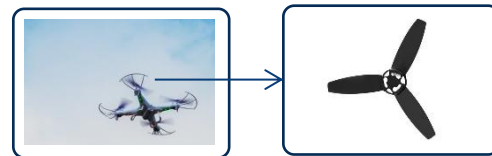
目标  
行业



# 什么是工程项 (Engineering Item) ?

## ► 工程项:

- 对应产品的整体工程 (xCAD、软件、文档) 定义
- 通过3DEXPERIENCE平台中的“物理产品”实现, 从R2018x开始 (即工程项与物理产品是同一对象)



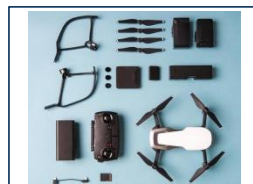
## ► 工程项可以包含以下定义:



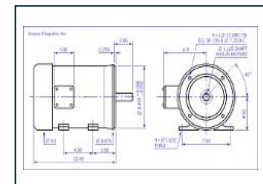
3D 模型



工程定义属性



其他工程项的实例




绘图



参考文档 (Excel, Word ...)

# 工程项： 无人机列表



无人机VX1 工程定义		版本	
		V1	V2
实例 1 的 螺旋桨 CW X10 v1		X	X
实例 2 推进器 CW X10 v1		X	X
实例 1 的 电机 CW M10 v1		X	X
实例 2 的 电机 CW M10 v1		X	X
实例 1 的 框架 VX1 v1		X	X
实例 2 的 框架 VX1-T1 v1		X	X
实例1 电源主板 v1		X	X
实例 1 推进器 CCW X10 v1		X	X
实例 2 推进器 CCW X10 v1		X	X
实例 2 电机 CCW M10 v1			X
实例 3 电机 CCW M10 v1		X	X

ENOVIA - Engineering Release - Drone Program VX1

## Drone Program VX1 V2

Config. context : None  
Responsible : Naim DALAL  
Maturity State : In Work

Creation Date : 6/6/2018 6:16:05 PM  
Modification Date : 6/7/2018 2:19:46 PM  
Part Number : XEN-DroneVX1-001

multi purpose Drone

12 items

Sort by: State ↓ Group by: None + [Icons]

	<b>DroneSpec.docx.0</b> DOC-0000002	Maturity State: IN_WORK Responsible: Marc Olivier MOULET	Creation Date: 6/6/2018 7:21:35 PM
	<b>Propeller CW X10 A.1</b> i1 Propeller CW X10	Maturity State: In Work Responsible: Stephane MAITRE	Creation Date: 6/6/2018 6:09:37 PM Modification Date: 6/7/2018 5:48:04 PM
	<b>Propeller CW X10 A.1</b> i2 Propeller CW X10	Maturity State: In Work Responsible: Stephane MAITRE	Creation Date: 6/6/2018 6:09:37 PM Modification Date: 6/7/2018 5:48:04 PM
	<b>Motor CW M10 A.1</b> i1 Motor CW M10	Maturity State: In Work Responsible: Marc Olivier MOULET	Creation Date: 6/6/2018 6:35:26 PM Modification Date: 6/7/2018 5:48:04 PM
	<b>Motor CW M10 A.1</b> i2 Motor CW M10	Maturity State: In Work Responsible: Marc Olivier MOULET	Creation Date: 6/6/2018 6:35:26 PM Modification Date: 6/7/2018 5:48:04 PM
	<b>FrameVX1 A.1</b> i1 FrameVX1	Maturity State: In Work Responsible: Rodolphe GROULT	Creation Date: 6/6/2018 6:38:12 PM Modification Date: 6/7/2018 3:03:39 PM
	<b>FrameVX1-T1 A.1</b> i2 FrameVX1-T1	Maturity State: In Work Responsible: Rodolphe GROULT	Creation Date: 6/6/2018 6:39:22 PM
	<b>PowerDistributionBoard VX1 A</b> i1 PowerDistributionBoardX	Maturity State: In Work Responsible: Marc Olivier MOULET	Creation Date: 6/6/2018 5:48:03 PM Modification Date: 6/7/2018 5:48:04 PM
	<b>Propeller CCW X10 A.1</b> i4 Propeller CCW X10	Maturity State: In Work Responsible: Marc Olivier MOULET	Creation Date: 6/6/2018 5:48:03 PM Modification Date: 6/7/2018 5:48:04 PM
	<b>Propeller CCW X10 A.1</b> i3 Propeller CCW X10	Maturity State: In Work Responsible: Marc Olivier MOULET	Creation Date: 6/6/2018 5:48:03 PM Modification Date: 6/7/2018 5:48:04 PM
	<b>Motor CCW M10 A.1</b> i4 Motor CCW M10	Maturity State: In Work Responsible: Marc Olivier MOULET	Creation Date: 6/6/2018 5:48:03 PM Modification Date: 6/7/2018 5:48:04 PM
	<b>Motor CCW M10 A.1</b> i3 Motor CCW M10	Maturity State: In Work Responsible: Marc Olivier MOULET	Creation Date: 6/6/2018 5:48:03 PM Modification Date: 6/7/2018 5:48:04 PM

2 推进器 CW 的实例（顺时针）X10

2 电机 CCW 的实例（逆时针）M10

2 推进器 CW 的实例（顺时针）X10

2 电机 CCW 的实例（逆时针）M10

# 主题

1

概述

2

业务挑战和目标

3

流程和功能

# 业务挑战

## ► 不断增加的业务、产品和流程复杂性

- ▷ 这会影响运营利润率，并促使公司寻找能够促进创新和提高效率的商业解决方案。这种复杂性也指产品定义中的多学科交互。

## ► 不断变化的客户需求和产品多样性需要更快的开发速度和业务灵活性

- ▷ 多学科设计团队（机械、电子、软件、流体等）并行工作，每个团队对产品及其结构都有自己的定义
- ▷ 错误、延误和成本增加

## ► 协调工程信息既耗时又容易出错

- ▷ 产品工程师掌握整体产品定义并确保参与者都有完整的、最新的产品定义视图
- ▷ 产品工程师应：
  - 使设计和工程结构保持最新
  - 按正确的领域（设计、工程）维护产品修改所有权



# 目标

- ▶ 掌握产品的整体（多学科）定义
- ▶ 支持移动设备/友好用户界面访问产品定义
- ▶ 通过直观、快速的评审，提升对设计师可交付成果和变更的决策
- ▶ 最大限度地跨产品系列和版本重用产品定义
- ▶ 使用户能够关注（带或不带配置）的大规模定义中的相关组件

# 主题

1

概述

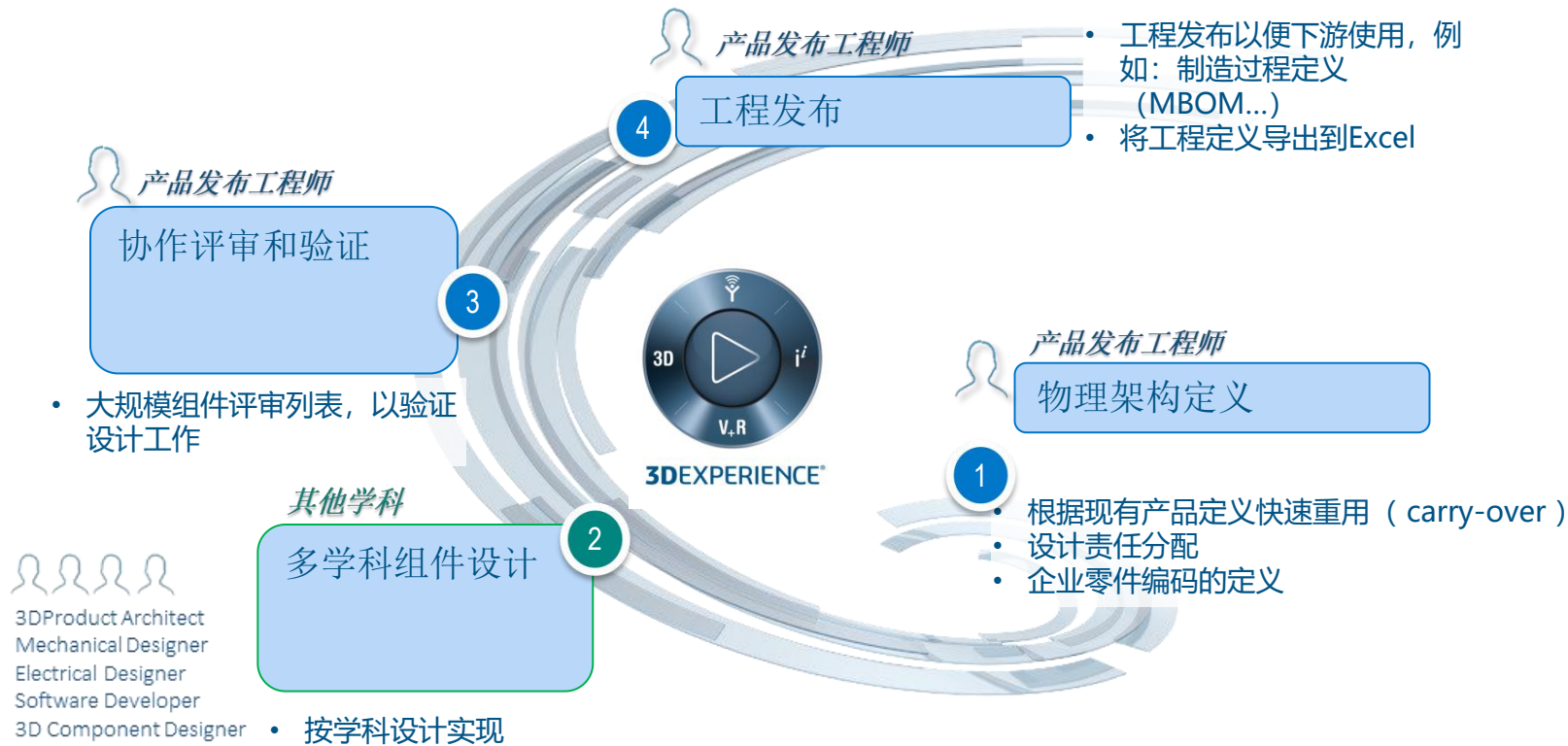
2

业务挑战和目标

3

流程和功能

# 高阶场景



# 访问用户的工程项

对用户拥有的工程项的即时访问，可以缩小到感兴趣的项

我的工程项（完整列表）

The screenshot displays the 'My Engineering Items' section of the ENOVIA - Engineering Release software. The interface includes a sidebar with navigation options like 'Recent engineering items' and 'Create engineering item'. The main area shows a list of items, each with a 3D cube icon, a title, and a description. A 'Sort By' dropdown is set to 'None'. A '6WTags' dropdown menu is open, showing various filters and their counts.

Item Name	Description
Hi speed drone A.1	Naim DALAL prd-96239514-00000041 Hi speed drone
Aerial photo drone A.1	Naim DALAL prd-96239514-00000040 Aerial photo drone
Industrial drone VX2 A.1	Naim DALAL prd-96239514-00000039 Industrial drone
Industrial Drone X1 A.1	Naim DALAL prd-96239514-00000032 Field recognition drone
Drone Program VN1 A.1	Naim DALAL prd-96239514-00000029 Race Drone
Drone Program VT1 A.1	Naim DALAL prd-96239514-00000017 Long range recognition Drone
Drone Program VX1 A.1	Naim DALAL prd-96239514-00000002 multi purpose Drone

6WTags可用于细化"我的工程项"列表

- Last Modified By: 2
- Organization: 1
- Responsible: 1
- Creation Date: 1
- Modification Date: 1
- What: 3
  - Leisure Market: 3
  - Professional Market: 2
  - Racing Market: 2

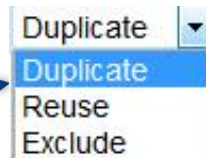
案例:

"作为一名产品发布工程师，我可以查看我负责的所有无人机产品，以便开始掌握它们的工程定义和发布过程"



# 使用高级重用选项进行重用

使用高级重用策略在产品定义（复制）期间进行

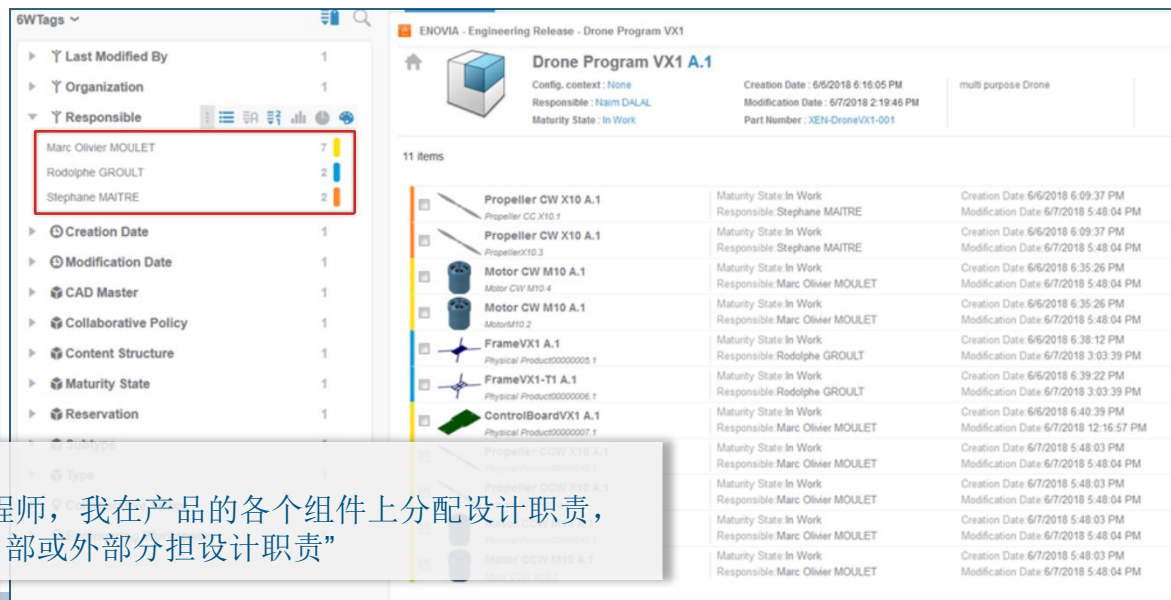
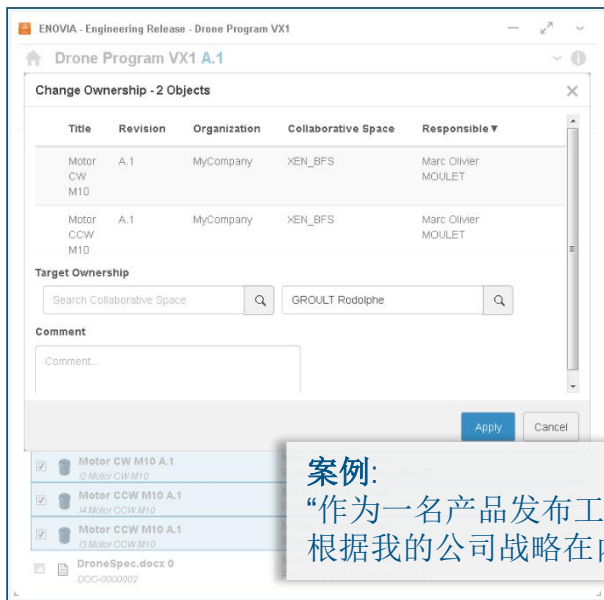


# 工程项职责的分配

职责分配确保为正确的工程项分配合适的人员

更改所有权

将所有权分配给负责组件设计的用户



案例:

“作为一名产品发布工程师，我在产品的各个组件上分配设计职责，根据我的公司战略在内部或外部分担设计职责”

# 零件编码定义

零件编码通常传递给其他下游应用程序，如MPS，是根据公司标准为工程项定义的。这确保了在流程的早期正确定义



**Dup\_MGS7\_Ball JointA.1 A.1**

Config. context : None

Responsible : Release Engineer

Maturity State : In Work

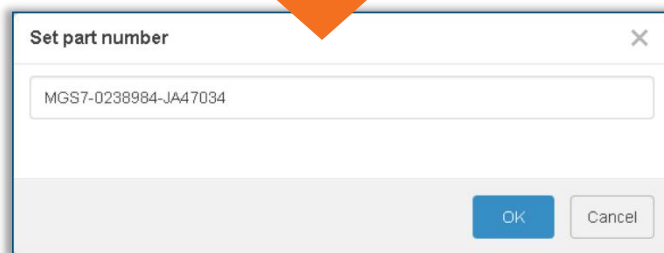
Creation Date : 5/23/2018 12:28:38 PM

Modification Date : 6/6/2018 5:45:23 PM

Part Number : MGS7-0238984-JA47034

## 案例:

“作为产品发布工程师，我为轴零件设置了一个企业编号，该编号将用于机器的工程定义中”



Set part number

MGS7-0238984-JA47034

OK Cancel

# 智能数据的列表视图

协作评审和验证

3

组件列表  
适用于无人机 VX1

按“参考”分组：  
显示每个参考的累积数量

按“成熟度”分组

The image displays three screenshots of the ENOVIA Engineering Release - Drone Program VX1 A.1 interface, illustrating different grouping options for the component list.

**Left Screenshot:** The 'Group by' dropdown is set to 'None'. The list shows 12 items, including DroneSpec.docx 0, Propeller CW X10 A.1, Motor CW M10 A.1, FrameVX1 A.1, FrameVX1-T1 A.1, and PowerDistributionBoard VX1 A.1.

**Middle Screenshot:** The 'Group by' dropdown is set to 'Reference'. The list is grouped by reference, showing cumulative counts for each component. A yellow arrow points to the 'Group by: Reference' dropdown.

**Right Screenshot:** The 'Group by' dropdown is set to 'Maturity State'. The list is grouped by maturity state, showing counts for 'IN WORK', 'Released', and 'Frozen' states. A green arrow points to the 'Group by: Maturity State' dropdown.

**Case Study:** A text box on the left states: "案例: 作为一名产品发布工程师,我在我的产品定义中导航,利用专业视图的优势,以关注我想要查看的数据"



# 文档创建

- 可以创建文档并将其添加到工程项以完成其定义

ENOVIA - Engineering Release - Quadcopter Series VX1

**Quadcopter Series VX1 A.1 VX1 Program Portfolio State1 - All configurations**

Config. context : VX1 Program Portfolio  
Responsible : Marc Olivier MOULET  
Maturity State : In Work

Creation Date : 6/7/2018 5:49:19 PM  
Modification Date : 6/7/2018 6:21:42 PM  
Part Number :-

multi purpose QuadCopter

16 items

Sort by: Owner ↓ Group by: Type

Item	Maturity State	Responsible	Creation Date	Modification Date
<input type="checkbox"/> Motor CCW M10 A.1 <i>Motor CCW M10.1</i>	In Work	Marc Olivier MOULET	6/7/2018 5:49:20 PM	6/7/2018 5:51:15 PM
<input type="checkbox"/> Propeller CW TriX10 A.1 <i>Physical Product00000054.1</i>	In Work	Marc Olivier MOULET	6/7/2018 6:05:07 PM	6/7/2018 6:05:07 PM
<input type="checkbox"/> Propeller CW TriX10 A.1 <i>Propeller CW TriX10.1</i>	In Work	Marc Olivier MOULET	6/7/2018 6:05:07 PM	6/7/2018 6:05:07 PM
<input type="checkbox"/> Propeller CCW TriX10 A.1 <i>Physical Product00000055.1</i>	In Work	Marc Olivier MOULET	6/7/2018 6:10:51 PM	6/7/2018 6:10:51 PM
<input type="checkbox"/> Propeller CCW TriX10 A.1 <i>Propeller CCW TriX10.1</i>	In Work	Marc Olivier MOULET	6/7/2018 6:10:51 PM	6/7/2018 6:10:51 PM

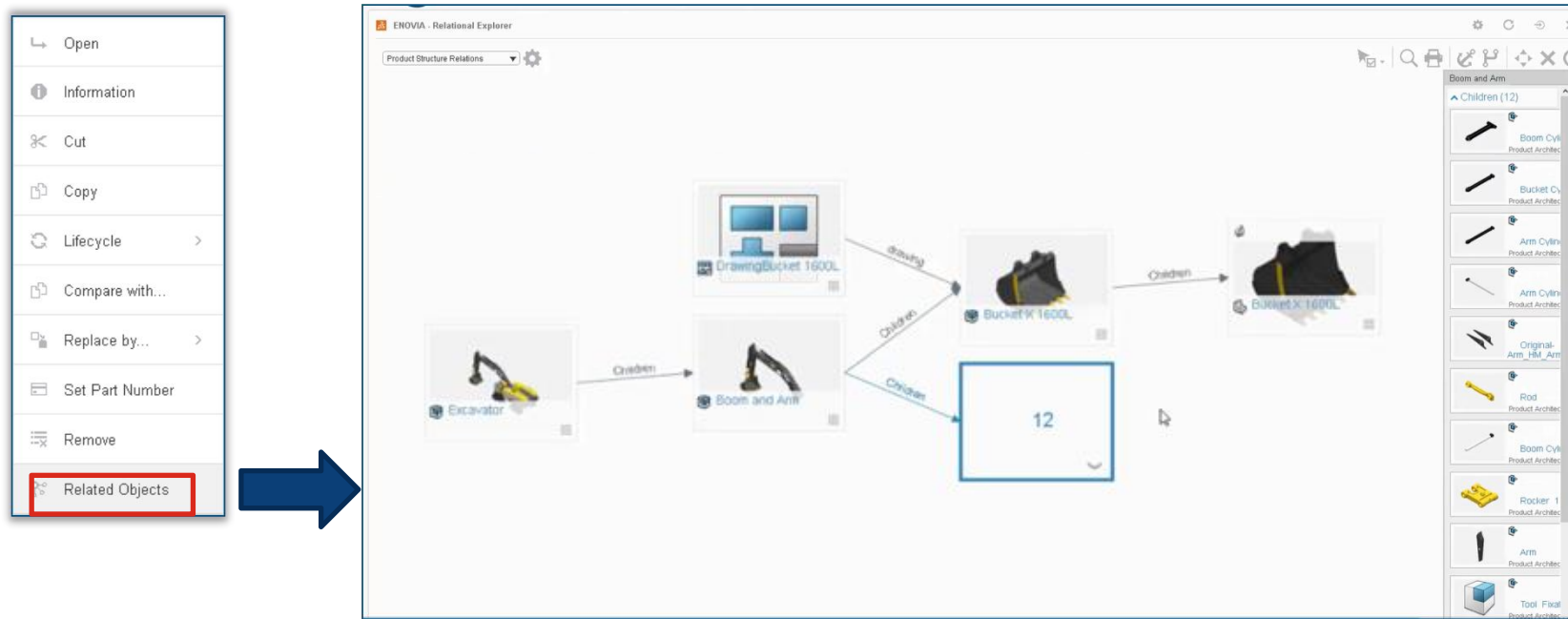
Document

Document	Maturity State	Responsible	Creation Date	Modification Date
<input checked="" type="checkbox"/> QuadSpecs.docx 0 <i>DOC-0000001</i>	IN_WORK	Marc Olivier MOULET	6/7/2018 6:37:16 P	6/7/2018 6:37:1

Download  
Information  
Remove  
Delete Document

# 显示相关对象

- ▶ 关系资源管理器允许在产品结构链接（从子级到父级）和分类链接（从分类对象到文件夹，从子文件夹到父文件夹）上导航



# 工程项目的批量编辑与生命周期 (1/2)

工程发布

4

批量编辑

多选工程项目

多选编辑

The screenshot displays the 'Engineering Item00 A.1 Model01 A - All configurations' interface. On the left, a list of 7 items is shown, with the first three selected: 'Standard A.1', 'Blue A.1', and 'Blue Left A.1'. On the right, the configuration panel for the selected items is shown, with the following details:

- 3 objects selected** (multiple) Standard, Blue Left, Blue
- Properties** button
- Type**: Physical Product
- Title \***: + No changes
- Name**: (multiple) prd-11419382-00000018, prd-11419382-00000020, prd-11419382-00000019
- Revision**: A.1
- Revision Comment**: Enter a value
- Description**: Enter a value
- Creation Date**: (multiple) 5/18/2018, 12:00:01 PM, 5/18/2018, 12:00:43 PM, 5/18/2018, 12:00:24 PM
- Created From**
- Scale**: Normal Range
- Collaborative Policy**: Engineering Definition

Annotations with arrows point from the text labels to the interface elements: '批量编辑' points to the list of items, '多选工程项目' points to the selection checkboxes, and '多选编辑' points to the 'Switch to edition / browse' button.

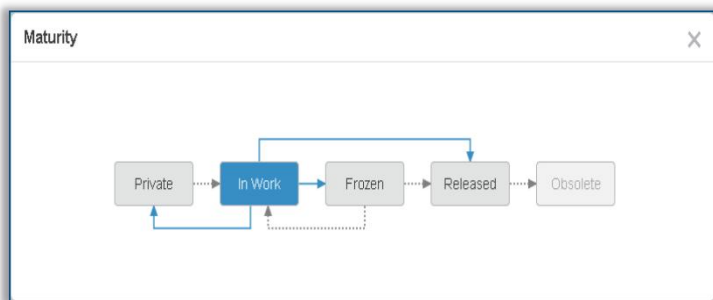
# 工程项目的批量编辑与生命周期 (2/2)

工程发布

4

## 生命 周期

### 成熟度变化



### 版本查看器

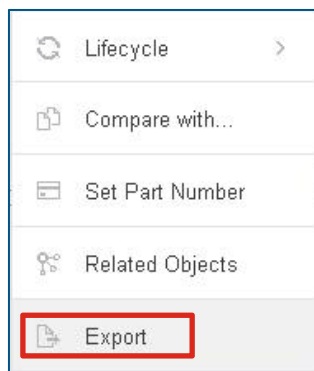
Version Explorer

Evolution filter view: ☒ Official View ☐ Projected View

Graph		Title	Created	Revision	Maturity	Description
●	<input type="checkbox"/>	E Motor CW M10	Fri Jun 22 2018 14:35:3...	E.1	IN_WORK	
●	<input type="checkbox"/>	E Motor CW M10	Fri Jun 22 2018 14:35:2...	D.1	FROZEN	
●	<input type="checkbox"/>	E Motor CW M10	Fri Jun 22 2018 14:35:2...	C.1	RELEASED	
●	<input type="checkbox"/>	E Motor CW M10	Fri Jun 22 2018 14:35:1...	B.1	FROZEN	
●	<input type="checkbox"/>	Motor CW M10	Wed Jun 06 2018 18:35:...	A.1	RELEASED	

# 将工程定义导出到 Excel 文件

轻量级导出，可用于内部或外部重用或其他组织的



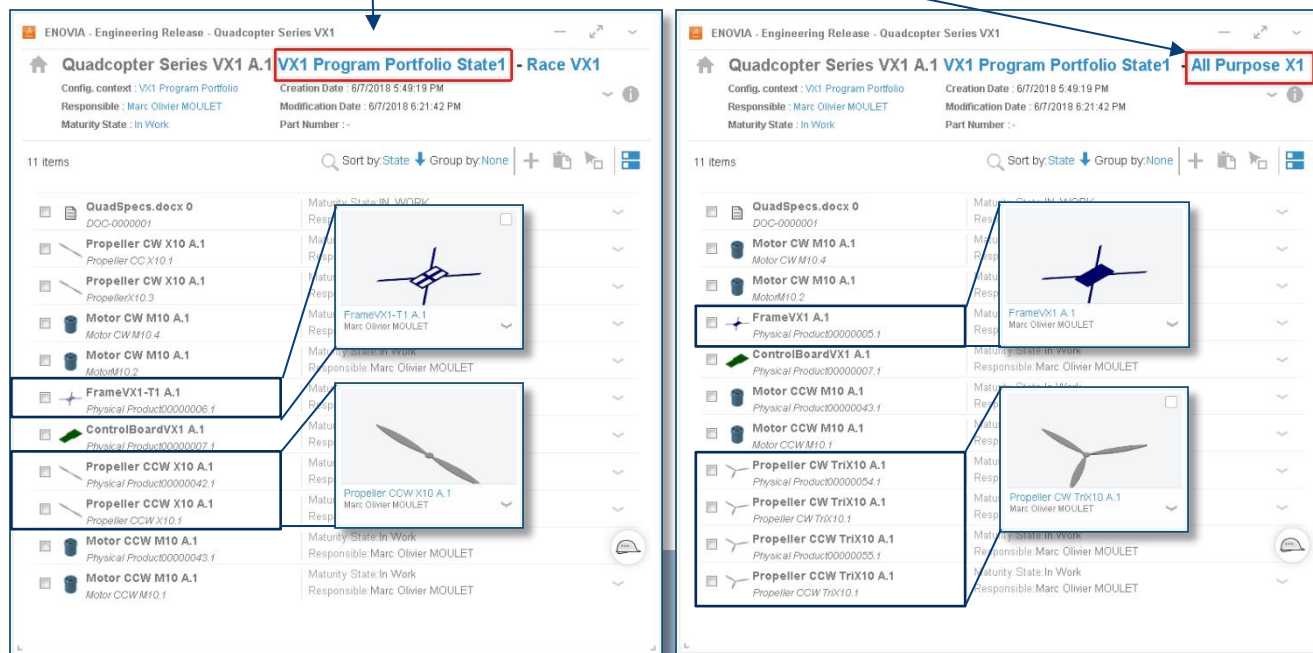
Dup\_Front Suspension Module Sport1527512438343.csv [Read-Only] - Microsoft Excel

A1	Level											
Level	Title	Instance Name	Version	Type	Maturity State	Responsible	Is Last Version	Creation Date	Modification Date	Description		
0	Dup_Front Suspension Module Sport		A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 13:01			
1	Version2_LoadedCaliper_FrLe_SP	LoadedCaliper_FrLe_SP.1	B.1	Physical Product	Released	Design Engineer02	TRUE	5/23/2018 12:47	5/28/2018 14:57			
1	LoadedCaliper_FrRi_SP	LoadedCaliper_FrRi_SP.1	A.1	Physical Product	Released	Release Engineer	TRUE	5/23/2018 6:17	5/23/2018 11:39			
1	BrakeDisk_FrRi_SP	BrakeDisk_FrRi_SP.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 6:17	5/23/2018 8:57			
1	BrakeDisk_FrLe_SP	BrakeDisk_FrLe_SP.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 6:17	5/23/2018 8:57			
1	Dup_AntiRollBarConnectingRod_Left	Phys_AntiRollBarConnectingRod_LeA.1.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Dup_AntiRollBarConnectingRod_Right	Phys_AntiRollBarConnectingRod_RiA.1.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Dup_LowSuspArm_Ri	LowSuspArm_Ri.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Dup_Arm_Joint_Suspension_Ri	Arm_Joint_Suspension_Ri.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Dup_LowSuspArm_Le	LowSuspArm_Le.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Dup_Arm_Joint_Suspension_Left	Phys_Arm_Joint_Suspension_LeA.1.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Dup_FrontSubFrame_Std	FrontSubFrame_Std.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Dup_New FrontSubModule-Chassis InterfaceA.1	New FrontSubModule-Chassis InterfaceA.1.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Dup_Knuckle Pivot Right	_MG57_Knuckle Pivot RightA.1.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Dup_Wheel_Hub_Ri_5x120	Wheel_Hub_Ri_5x120_Ri_5Bolts1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Dup_CarrierKnuckle_BearingWheel	CarrierKnuckle_BearingWheel Left Std	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Dup_Knuckle Pivot Left	_MG57_Knuckle Pivot LeftA.1.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Dup_Wheel_Hub_Le_5x120	_MG57_Wheel Hub 5 x 120A.1.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Dup_Part_Strut_01_FrontLeft	Part_Strut_01_FrontLeft.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Dup_Part_Strut_01_FrontRight	Part_Strut_01_FrontRight.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Dup_CarrierKnuckle_BearingWheel	CarrierKnuckle_BearingWheel Right Std	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:28	5/23/2018 12:31			
1	Version2_Anti roll bar E70A.1A.1	Anti roll bar E70A.1A.1.1	B.1	Physical Product	Released	Design Engineer01	TRUE	5/23/2018 12:46	5/28/2018 14:57			
1	Caliper Support	Physical Product00000242.1	A.1	Physical Product	In Work	Release Engineer	TRUE	5/23/2018 12:43	5/23/2018 12:44			

# 配置管理 (\*)

精益配置模型能够有效地跟踪跨越产品演化和管理多维度的产品工程定义

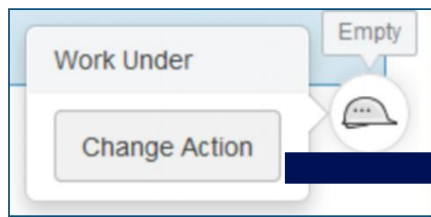
▷ 基于模型版本和产品配置过滤工程定义



案例:  
“作为一名产品工程师, 我  
审查了与以下相关的工程内  
容:  
产品配置“Race VX1”  
或者:  
产品配置“通用X1”

# 在CA下的操作 (\*)

正式变更/发布流程，以跟踪修改和成熟度更改



案例:

“作为一名产品发布工程师，我希望对工程定义的修改和发布管理的正式签核过程进行全面的追溯”

