

Migration Guide

Estimated time to read: 4 minutes

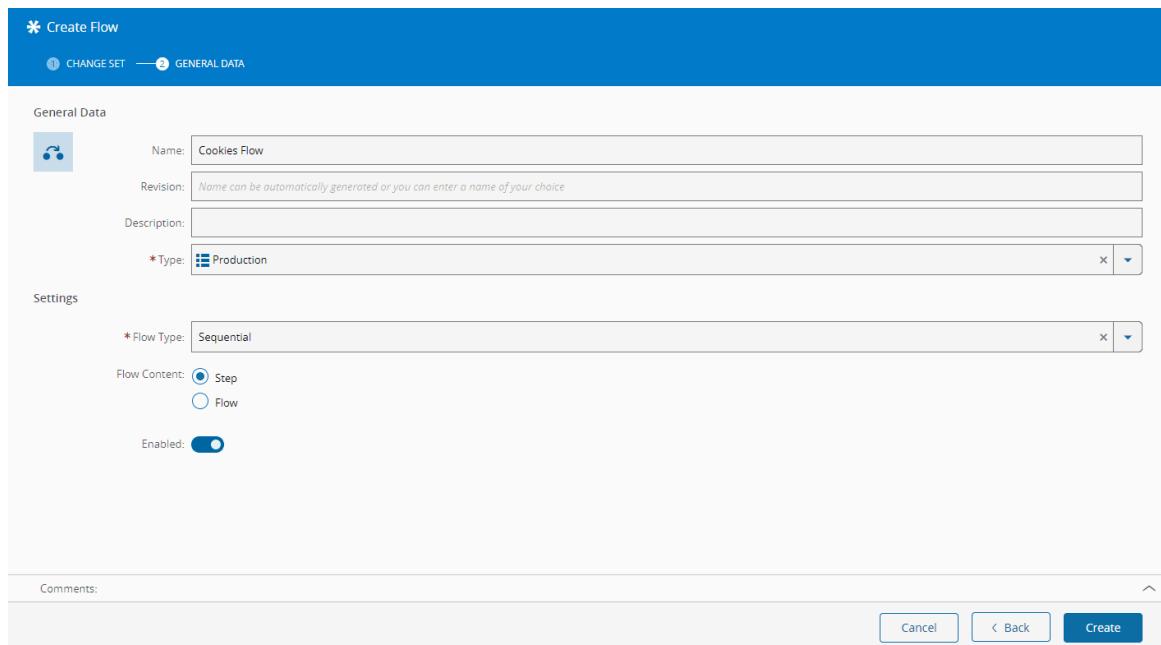
Version 11.0 introduced significant changes to Critical Manufacturing MES system, impacting several aspects of how you create and manage **Flows**, **Rework Paths**, and **Master Data Packages**. This guide highlights the key differences and provides step-by-step instructions to help you navigate these updates.

Creating a Flow

General Data

Before version 11.0, in the General Data wizard, when the Flow Type was Sequential or Alternate, you had to specify the type of child nodes for the **Flow**, whether they were **Steps** or **Flows**. After version 11.0, you only need to specify the Flow Type from the following options:

- Sequential
- Alternate (choose Single or Multiple Selection)
- Non-Sequential Block
- Line



*** Create Flow**

1 CHANGE SET — 2 GENERAL DATA

General Data

Name: Cookies Flow

Revision: Name can be automatically generated or you can enter a name of your choice

Description:

* Type: Production

Settings

* Flow Type: Sequential

Flow Content: Step Flow

Enabled:

Comments:

Cancel < Back Create

After version 11.0

* Create Flow

1 CHANGE SET — 2 GENERAL DATA

General Data

Name: Standard Cookie Flow

Revision: *Name can be automatically generated or you can enter a name of your choice*

Description:

* Type:  Production

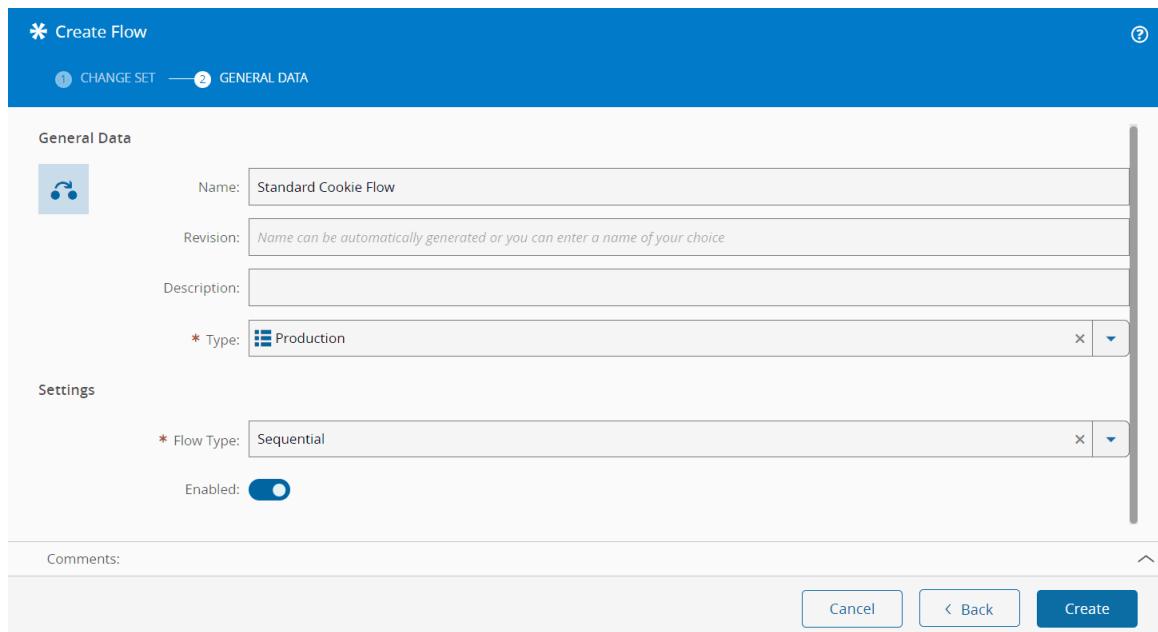
Settings

* Flow Type: Sequential

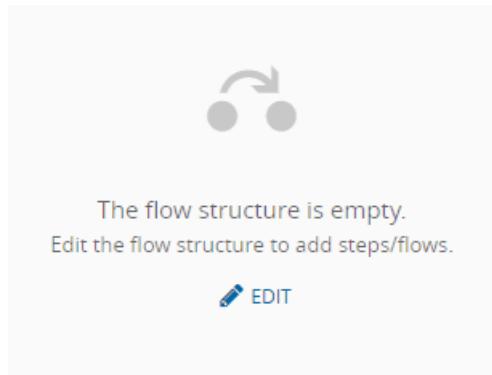
Enabled: 

Comments:

Cancel Back Create



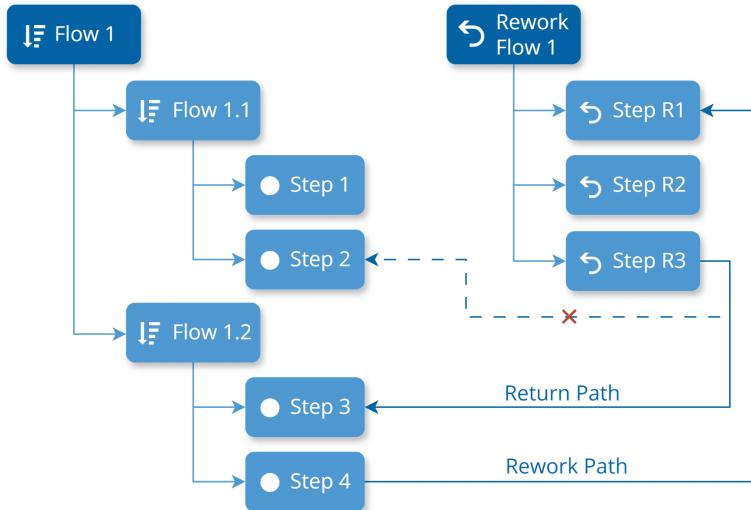
This means you don't have to indicate whether your **Flow** comprises only **Steps** or **Flows**; it can include both at the same level. You can add as many **Flow Items** as you like by selecting the  button.



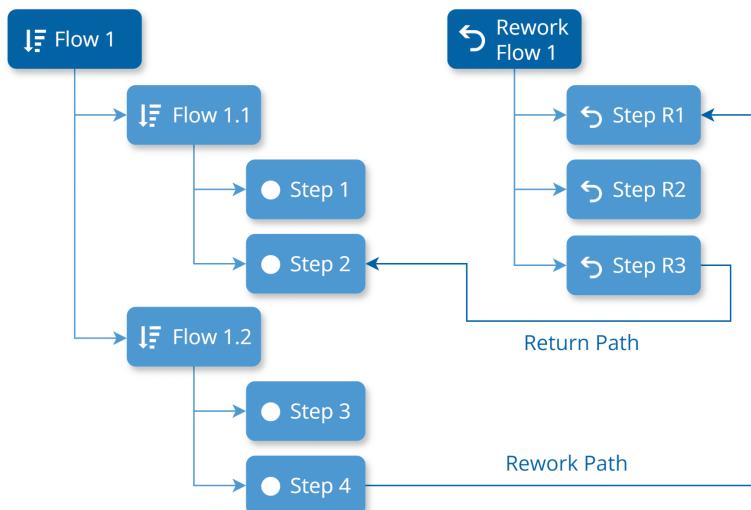
Rework Paths

Before version 11.0, when configuring Rework Flows, the Return Path had to be a **Step** within that **Flow**. So, in the **Before version 11.0** example shown below, if the Rework Path was configured in Step 4, the Return point would have to be Step 3. After version 11.0, Rework Paths can be defined at the **Parent Flow** level, allowing Return Paths to any **Step** within its structure. These Return Paths are anchored to the **TopMost Flow** where they are defined, rather than to a specific **Flow Item**. For instance, in the **After version 11.0** diagram, the Return Path can be any **Step** (e.g., Step 1, Step 2, Step 3, or Step 4) within the **TopMost Flow** (Flow 1).

Before version 11.0



After version 11.0



Master Data Template

Before version 11.0, the **Flow** sheet in the Master Data required specifying the Child Type (column D), indicating whether it was a **Step** or a **Flow**. After version 11.0, this requirement moved to the **Flow Items** sheet (column B).

Before version 11.0

A	B	C	D	E	F	G	H	I	J	K	L
Name	Description	Type	ChildType	IsAlternate	IsEnabled	IsNonSequentialBlock	IsLineFlow	DocumentationURL	IsTemplate	LastCorrelationID	ContainsLogicalNames
CookieProductionFlow [C.2]	Cookie Production Flow	Production	Step	No	Yes	No	No	No	No	5	No
Main Flow [A.2]	Flow with Flows	Production	Flow	No	Yes	No	No	No	No	No	No
Alternate Flow Example [A.1]	Alternate Flow Example	Production	Step	Yes	Yes	No	No	No	No	No	No
Non-Sequential Block [A.1]	Non-Sequential Block	Production	Step	No	Yes	Yes	No	No	No	No	No
Flow With Rework Paths [A.1]	Flow With Rework Paths	Production	Step	No	Yes	No	No	No	No	No	No
7											
8											
9											
10											
11											
12											
13											

After version 11.0

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Name	Type	Target	IsOptional	Reworks	IsLine	LineFlow	LogicalName	OnEnterRule	OnExitRule	ConditionType	ConditionExpression	ConditionRule	Conditions												
2 Alternate Flow Example [A.1]	Flow	Alternate Flow Multiple Selector	No	No	No					Expression	\$contains(Name, "Material01")														
3 Alternate Flow Example [A.1]	Flow	Alternate Flow Single Selector	No	No	No					Expression	\$contains(Name, "Material02")														
4 Alternate Flow Multiple Selection [A.1]	Step	Step 01	No	No	No					Rule	isMaterial01														
5 Alternate Flow Multiple Selection [A.1]	Step	Step 02	No	No	No					Rule	isMaterial02														
6 Alternate Flow Multiple Selection [A.1]	Step	Step 03	No	No	No					Rule	isMaterial01														
7 Alternate Flow Multiple Selection [A.1]	Step	Step 04	No	No	No					Rule	isMaterial02														
8 Alternate Flow Multiple Selection [A.1]	Step	Step 05	No	No	No					Expression	\$contains(Name, "Material01")														
9 Alternate Flow Single Selection [A.1]	Step	Step 01	No	No	No					Expression	\$contains(Name, "Material02")														
10 Alternate Flow Single Selection [A.1]	Step	Step 02	No	No	No					Rule	isMaterial01														
11 Alternate Flow Single Selection [A.1]	Step	Step 03	No	No	No					Rule	isMaterial02														
12 Alternate Flow Single Selection [A.1]	Step	Step 04	No	No	No					Expression	\$contains(Name, "Material01")														
13 Chocolate [A.1]	Step	Chocolate Preparation	No	No	No					Expression	\$contains(Name, "Material02")														
14 Chocolate [A.1]	Step	Chocolate Mixing	No	No	No					Rule	isMaterial01														
15 Chocolate [A.1]	Step	Chocolate Cooking	No	No	No					Rule	isMaterial02														
16 Chocolate [A.1]	Step	Chocolate Packaging	No	No	No					Expression	\$contains(Name, "Material01")														
22 CookiesFlow [A.2]	Step	Woolding	No	No	No					Expression	\$contains(Name, "Material02")														
23 CookiesFlow [A.2]	Step	Baking	No	No	No					Rule	isMaterial01														
24 CookiesFlow [A.2]	Step	Cooling	No	No	No					Rule	isMaterial02														
26 CookiesFlow [A.2]	Step	Packing	No	No	No					Expression	\$contains(Name, "Material01")														
27 Flow With Enter and Exit Rules [A.1]	Step	Step 01	No	No	No					NotificationOnEnter	NotificationOnExit														
30 Flow With Inherited Rework Paths [A.2]	Step	Step 01	No	No	No					Expression	\$contains(Name, "Material01")														
32 Flow With Inherited Rework Paths [A.2]	Step	Step 02	No	No	No					Expression	\$contains(Name, "Material02")														
49 Main Flow [A.2]	Step	Step 01	No	No	No					Expression	\$contains(Name, "Material01")														
50 Main Flow [A.2]	Step	Step 02	Yes	No	No					Expression	\$contains(Name, "Material02")														
51 Main Flow [A.2]	Step	Step 03	No	No	No					Rule	isMaterial01														
52 Main Flow [A.2]	Step	Sequential Flow With Condition	No	No	No					Rule	isMaterial02														
53 Main Flow [A.2]	Flow	Alternates Flow Multiple Selector	No	No	No					Expression	\$contains(Name, "Material01")														
54 Main Flow [A.2]	Flow	Alternate Flow Single Selector	No	No	No					Expression	\$contains(Name, "Material02")														
55 Main Flow [A.2]	Flow	Flow With Enter and Exit Rules	No	No	No					Rule	isMaterial01														
56 Main Flow [A.2]	Flow	Flow With Inherited Rework Paths	No	No	No					Rule	isMaterial02														
165 Non-Sequential Block [A.1]	Step	Step 01	No	No	No					Expression	\$contains(Name, "Material01")														
167 Non-Sequential Block [A.1]	Step	Step 02	No	No	No					Expression	\$contains(Name, "Material02")														
180 Non-Sequential Block [A.1]	Step	Step 03	No	No	No					Rule	isMaterial01														
181 Non-Sequential Block [A.1]	Step	Step 04	Yes	No	No					Rule	isMaterial02														
186 Sequential Flow With Conditional Steps [A.1]	Step	Step 01	Yes	No	No					Expression	\$contains(Name, "Material01")														

After version 11.0, it is also possible to choose whether your **Alternate Flow** uses Single or Multiple Selection (column J). Single Selection considers only the first **Flow Item** whose condition resolves to true when attempting to move the **Material** to the next **Step**, while Multiple Selection allows choosing from any **Flow Items** with true conditions. Before version 11.0, Multiple Selection was the default setting, and this choice wasn't available.

Before version 11.0

A	B	C	D	E	F	G	H	I	J	K	L
Name	Description	Type	ChildType	IsAlternate	IsEnabled	IsNonSequentialBlock	IsLineFlow	DocumentationURL	IsTemplate	LastCorrelationID	ContainsLogicalNames
2 AlternateProductionFlow [C.2]	Alternate Production Flow	Production	Step	No	Yes	No	No	No	No	5	No
Main Flow [A.2]	Flow with Flows	Production	Flow	No	Yes	No	No	No	No	No	No
Alternate Flow Example [A.1]	Alternate Flow Example	Production	Step	Yes	Yes	No	No	No	No	No	No
Non-Sequential Block [A.1]	Non-Sequential Block	Production	Step	No	Yes	Yes	No	No	No	No	No
Flow With Rework Paths [A.1]	Flow With Rework Paths	Production	Step	No	Yes	No	No	No	No	No	No
7											
8											
9											
10											
11											
12											
13											

After version 11.0

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Name	Description	Type	ChildType	IsAlternate	IsEnabled	IsNonSequentialBlock	IsLineFlow	DocumentationURL	IsTemplate	LastCorrelationID	ContainsLogicalNames	AlternateFlowSelectionType													
2 Alternate Flow Example [A.1]	Alternate Flow Example	Production	Step	Yes	No	No	No	No	No	No	No	Multiple													
3 Alternate Flow Multiple Selection [A.1]	Alternate Flow Multiple Selection	General	Step	Yes	No	No	No	No	No	No	No	Multiple													
4 Alternate Flow Single Selection [A.1]	Alternate Flow Single Selection	General	Step	Yes	No	No	No	No	No	No	No	Single													
5 Chocolate [A.1]	Chocolate Flow	Production	No	Yes	No	No	No	No	No	No	No														
7 CookiesFlow [A.2]	CookiesFlow Flow	Production	No	Yes	No	No	No	No	No	No	No														
8 Flow With Enter and Exit Rules [A.1]	Flow With Enter and Exit Rules	General	No	Yes	No	No	No	No	No	No	No														
10 Flow With Inherited Rework Paths [A.2]	Flow With Inherited Rework Paths	General	No	Yes	No	No	No	No	No	No	No														
12 Line Flow [A.1]	Flow With Line Flow	FrontEnd	No	Yes	No	No	No	Yes	No	No	No														
14 Line Flow [A.1]	Line With Sampling Steps	General	No	Yes	No	No	No	No	No	No	No														
16 Non-Sequential Block [A.1]	Non-Sequential Block	Production	No	Yes	Yes	No	No	No	No	No	No														
17 Sequential Flow With Conditional Steps [A.1]	Sequential Flow With Conditional Steps	General	No	Yes	No	No	No	No	No	No	No														
18 Standard Cookie Flow [A.1]	Standard Cookie Flow	Production	No	Yes	No	No	No	No	No	No	No														
24																									

In version 11.0, the **Flow Structure** sheet was renamed to **Flow Items**, requiring you to change the name of this sheet in your Master Data template to be compatible with versions above 11.0. In addition, it's now possible to set Rework Path conditions, such as Expressions (column L), Rules (column M), Sampling Steps (column N), and Sampling Plans (column O). You can also define entry and exit Rules for **Steps** (columns J and K).

Before version 11.0

A	B	C	D	E	F	G	H
Flow	Target	IsOptional	Reworks	IsLine	LineFlows	LogicalName	CorrelationID
CookieProductionFlow [C.2]	Mixing	No		No			1
CookieProductionFlow [C.2]	Molding	No	description[] gotoflowpath Remolding:A/1/Remixing:1 returnstep[Baking]reason[Deformed] sinlinework[]	No			2
CookieProductionFlow [C.2]	Baking	No		No			3
CookieProductionFlow [C.2]	Cooling	No		No			4
CookieProductionFlow [C.2]	Packing	No		No			5
Main Flow [A.2]	Alternate Flow Example	No		No			1
Main Flow [A.2]	Non-Sequential Block	No		No			2
Flow With Rework Paths [A.1]	Step 01	No	description[] gotoflowpath CookiesFlow:A/1/Mixing:1 sourceflowpath[Flow With Inherited Rework Paths:A/1/Step 01:1]returnflowp No				1
Flow With Rework Paths [A.1]	Step 02	No	description[] gotoflowpath CookiesFlow:A/1/Mixing:1 sourceflowpath[Flow With Inherited Rework Paths:A/1/Step 02:2]returnflowp No				2

After version 11.0

A	B	C	D	E	F	G	H	I	J	K	L	M		
Flow	Type	Target	Alternate Flow Multiple Select	IsOptional	Reworks	IsLine	LineFlows	LogicalName	OnEnterRule	OnExitRule	ConditionType	ConditionExpression	ConditionRule	Conditions
Alternate Flow Example [A.1]	Flow	Alternate Flow Multiple Select	No			No								
Alternate Flow Example [A.1]	Flow	Alternate Flow Single Selection	No			No								
Alternate Flow Multiple Selection [A.1]	Step	Step 01	No						Expression		Sccontains(Name, "Material01")			
Alternate Flow Multiple Selection [A.1]	Step	Step 02	No						Expression		Sccontains(Name, "Material02")			
Alternate Flow Multiple Selection [A.1]	Step	Step 03	No						Rule		isMaterial01			
Alternate Flow Multiple Selection [A.1]	Step	Step 10	No						Rule		isMaterial02			
Alternate Flow Multiple Selection [A.1]	Step	Step 05	No			No								
Alternate Flow Single Selection [A.1]	Step	Step 01	No			No			Expression		Sccontains(Name, "Material01")			
Alternate Flow Single Selection [A.1]	Step	Step 02	No			No			Expression		Sccontains(Name, "Material02")			
Alternate Flow Single Selection [A.1]	Step	Step 03	No			No			Rule		isMaterial01			
Alternate Flow Single Selection [A.1]	Step	Step 04	No			No			Rule		isMaterial02			
Chocolate [A.1]	Step	Chocolate Preparation	No			No								
Chocolate [A.1]	Step	Chocolate Mixing	No			No								
Chocolate [A.1]	Step	Chocolate Cooking	No			No								
Chocolate [A.1]	Step	Chocolate Packaging	No			No								
CookiesFlow [A.2]	Step	Mixing	No			No								
CookiesFlow [A.2]	Step	Molding	No			No								
CookiesFlow [A.2]	Step	Baking	No			No								
CookiesFlow [A.2]	Step	Cooling	No			No								
CookiesFlow [A.2]	Step	Packing	No			No								
Flow With Enter and Exit Rules [A.1]	Step	Step 01	No			No					NotificationOnEnter			
Flow With Enter and Exit Rules [A.1]	Step	Step 02	No			No					NotificationOnExit			
Flow With Inherited Rework Paths [A.2]	Step	Step 01	No		description[] gotoflowpath No	No								
Flow With Inherited Rework Paths [A.2]	Step	Step 02	No		description[] gotoflowpath No	No								
Main Flow [A.2]	Step	Step 01	No		description[] gotoflowpath No	No								
Main Flow [A.2]	Step	Step 02	Yes		description[] gotoflowpath No	No								
Main Flow [A.2]	Step	Step 03	No		description[] gotoflowpath No	No								
Main Flow [A.2]	Flow	Sequential Flow With Condition	No			No								
Main Flow [A.2]	Flow	Alternate Flow Multiple Select	No			No								
Main Flow [A.2]	Flow	Alternate Flow Single Selection	No			No								
Main Flow [A.2]	Flow	Flow With Enter and Exit Rules	No			No								
Main Flow [A.2]	Flow	Flow With Inherited Rework Paths	No			No								
Non-Sequential Block [A.1]	Step	Step 01	No			No								
Non-Sequential Block [A.1]	Step	Step 02	No			No								
Non-Sequential Block [A.1]	Step	Step 03	No			No								
Sequential Flow With Conditional Steps [A.1]	Step	Step 01	Yes			No					Expression			

Beyond the basic information, you can specify additional settings in version 11.0, such as whether the Rework Path applies to Queued and Processed States (columns O and P), and set Rules for On Rework (column Q).

Before version 11.0

A	B	C	D	E	F	G	H	I	J	K	L	M
Flow	SourceStep	ColorFlowPath	ReturnStepPosition	IsLineRework	DocumentationUR	GoToFlow	GoToStep	IsTemplate	ReturnFlowPath	ReturnStep	ReturnReason	
CookieProductionFlow [C.2]	Molding	Remolding:A/1/Remixing:1	3			Remolding [A]	Remixing	No	CookieProductionFlow:C/1/Baking:3	Baking	Deformed	
Flow With Inherited Rework Paths [A.2]	Step 02	CookiesFlow:A/1/Mixing:1	1			CookiesFlow [A]	Mixing	No	Flow With Inherited Rework Paths:A/1/Step 01:1	Step 01	Deformed	
Flow With Inherited Rework Paths [A.2]	Step 01	CookiesFlow:A/1/Mixing:1	1			CookiesFlow [A]	Mixing	No	Flow With Inherited Rework Paths:A/1/Step 01:1	Step 01	Deformed	

A	H	I	J	IsTemplate	K	L	M	N	O	P	Q
Flow	GoToFlow	GoToStep		IsTemplate	ReturnFlowPath	ReturnStep	BeworkReason	SourceFlowPath	SourceFlowVersion	Order	SourceStepPosition
CookieProductionFlow [C.2]	Remolding [A]	Remixing	No	No	CookieProductionFlow:C:1/Baking:3	Baking	Deformed	CookieProductionFlow:C:1/Molding:2	CookieProductionFlow [C.2]	1	2
Flow With Rework Paths [A.2]	CookiesFlow [A]	Mixing	No	No	Flow With Inherited Rework Paths:A:1/Step 01:1	Step 01	Deformed	Flow With Inherited Rework Paths:A:1/Step 02:2	Flow With Rework Paths [A.2]	1	2
Flow With Rework Paths [A.2]	CookiesFlow [A]	Mixing	No	No	Flow With Inherited Rework Paths:A:1/Step 01:1	Step 01	Deformed	Flow With Inherited Rework Paths:A:1/Step 01:1	Flow With Rework Paths [A.2]	1	1

After version 11.0

A	B	C	D	E	F	G	H	I	J
Flow	SourceStep	GoToFlowPath	ReturnStepPosition	IsInLineRework	Description	GoToFlow	GoToStep	IsTemplate	ReturnFlowPath
Flow With Inherited Rework Paths [A.2]	Step 02	CookiesFlow:A:1/Mixing:4	1		CookiesFlow [A] Mixing	No			Flow With Inherited Rework Paths:A:1/Step 01:1
Flow with Inherited Rework Paths [A.2]	Step 01	CookiesFlow:A:1/Mixing:1	1		CookiesFlow [A] Mixing	No			Flow With Inherited Rework Paths:A:1/Step 01:1
Main Flow [A.2]	Step 02	CookiesFlow:A:1/Packing:5	6		CookiesFlow [A] Packing	No			Main Flow:A:1/Step 03:6
Main Flow [A.2]	Step 01	CookiesFlow:A:1/Packing:5	6		CookiesFlow [A] Packing	No			Main Flow:A:1/Step 03:6

K	L	M	N	O	P	Q	R	S	T
ReturnStep	BeworkReason	SourceFlowPath	Order	ApplicableToProcessed	ApplicableToQueued	OnReworkRule	ReturnFlow	SourceFlow	SourceStepPosition
Step 01	Deformed	Flow With Inherited Rework Paths:A:1/Step 02:2	1	Yes	Yes	NotificationOnRework	Flow With Inherited Rework Paths [A]	Flow With Inherited Rework Paths [A]	2
Step 01	Deformed	Flow With Inherited Rework Paths:A:1/Step 01:1	2	Yes	Yes	NotificationOnRework	Flow With Inherited Rework Paths [A]	Flow With Inherited Rework Paths [A]	1
Step 03	Deformed	Main Flow:A:1/Flow With Inherited Rework Paths:A:1/Step 02:2	1	Yes	No	NotificationOnRework	Main Flow [A]	Flow With Inherited Rework Paths [A]	2
Step 03	Deformed	Main Flow:A:1/Flow With Inherited Rework Paths:A:1/Step 01:1	2	Yes	No	NotificationOnRework	Main Flow [A]	Flow With Inherited Rework Paths [A]	1