Critical manufacturing
an ASM PT company

Send-Ahead Run

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Send-Ahead Run

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A Send-Ahead Run represents a scenario where a given Sub-Material from a specific Material undergoes certain defined processing Steps while the remaining lot becomes a Waiting Material that is held at a Wait Step.

This document will guide you through the required configurations and set up for the **Send-Ahead Run** functionality.

Overview

The **Send-Ahead Run** functionality is used with **Material** for tracking, connecting, and checking purposes. This is, from a certain material group, a small set of materials are sent ahead to check for equipment and process correctness, while the rest of the material group is put on hold until the results are available. When the processing of the materials that were sent ahead is checked successfully, the rest of the material group can proceed. However, if the send-ahead material processing fails, the send-ahead materials are scrapped or reworked and new send-ahead materials are used.

> **Note**
>
> You can also define a **Send-Ahead Run** via Future Actions or as part of an Experiment.

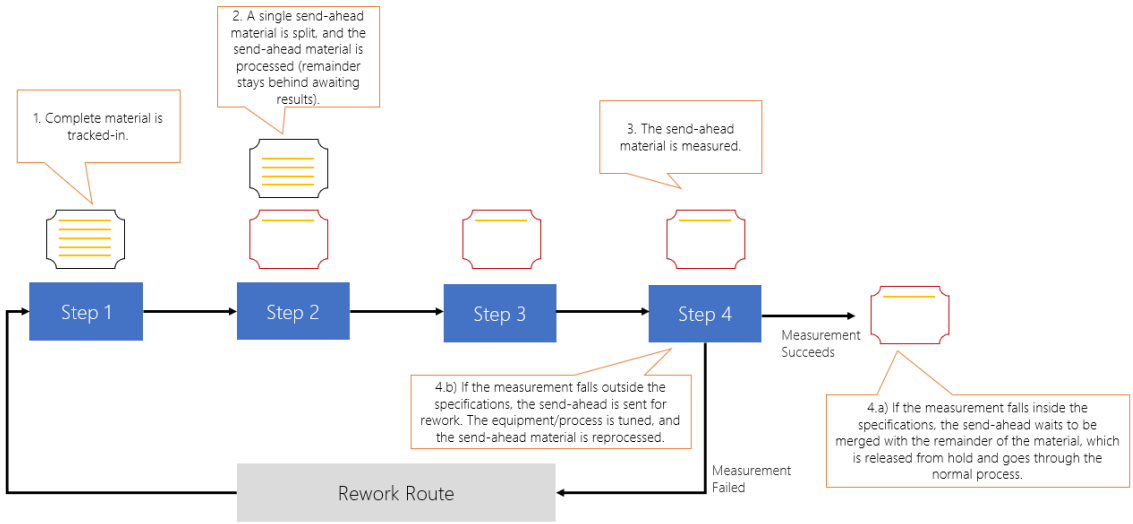
Setting up Send-Ahead Run

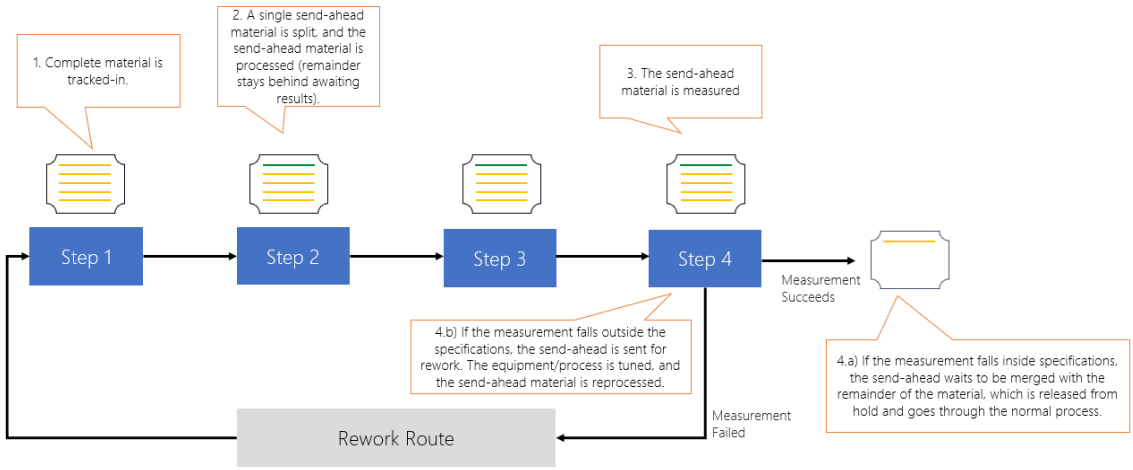
To have a functioning **Send-Ahead Run**, you have to set up other Critical Manufacturing MES entities as shown in the following table:

Step Number	Step	Description
1	**Create a Flow**	Create a **Flow** with **Steps**.
2	**Create a Material**	Create a **Material**.
3	**Create a Reason**	Create a **Reason** of type **Hold** and configure it.

Table: Steps to setup the Send-Ahead Run-related Entities

The ../../images below provide examples of basic **Send-Ahead Run** scenarios:

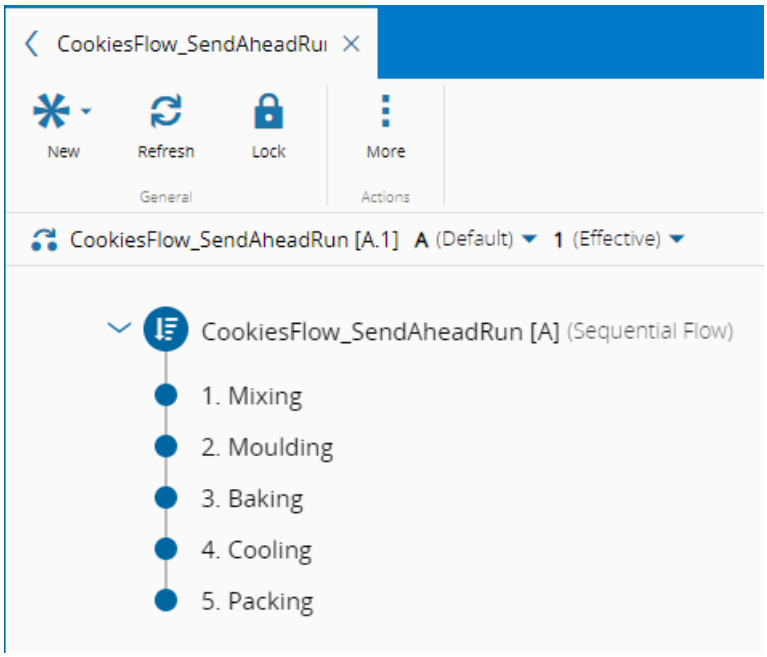




The next sub-sections will cover the required configuration steps in more detail.

Step 1: Create a Flow

1. Create a Flow accordingly and make sure that it has **Steps**. This tutorial will use three different **Steps** for the Wait, Evaluate, and Merge steps in the **Send-Ahead Run**:

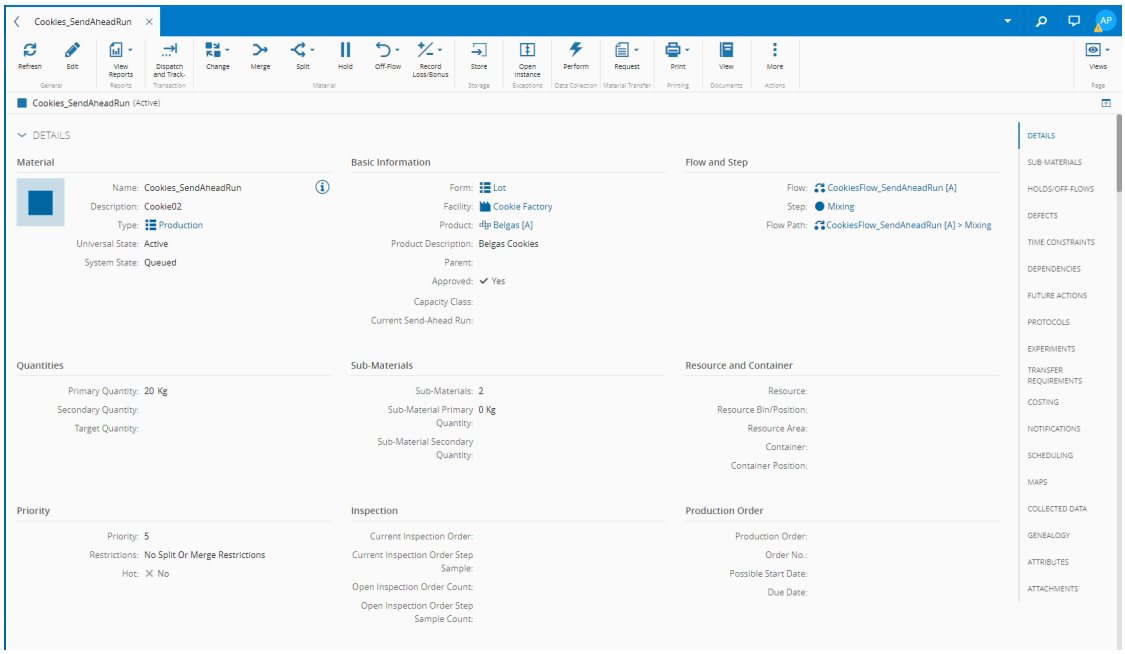


Note

It is not mandatory to have different **Steps**.

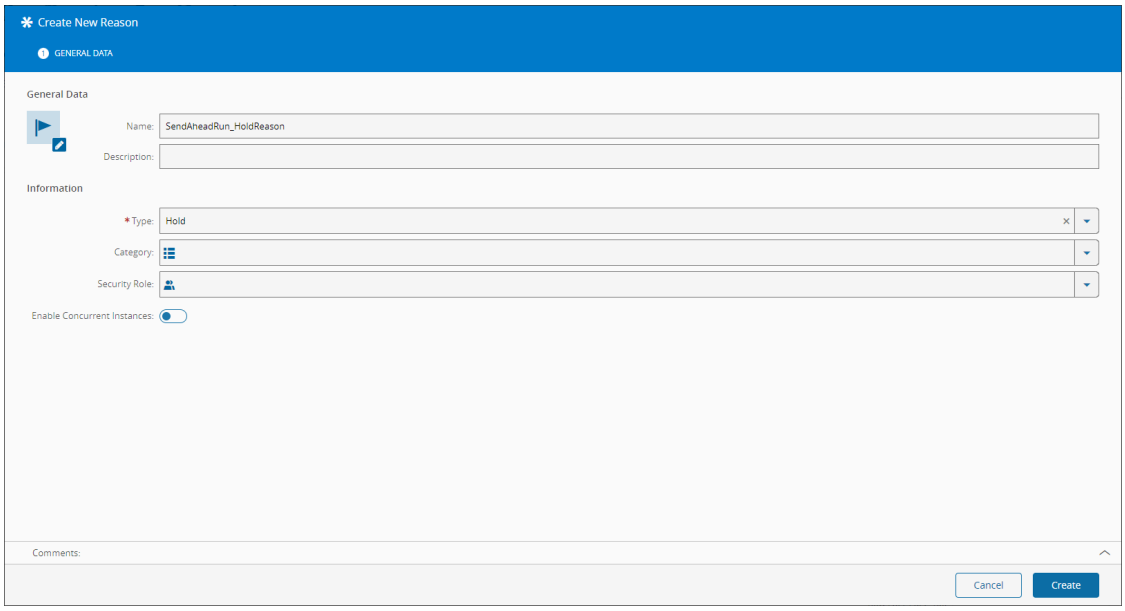
Step 2: Create a Material

1. Create a Material accordingly and make sure that it is configured to use the **Flow** you created. For this tutorial the **Material** is configured with **Sub-Materials**, one of which will be sent ahead:



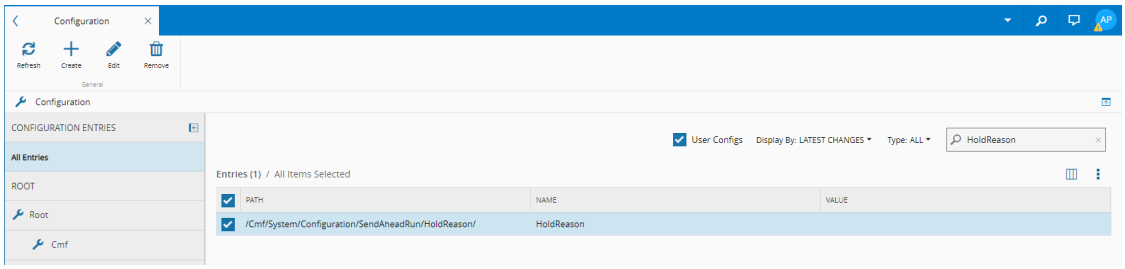
Step 3: Create a Reason

1. Create a Reason accordingly, give it a Name, to use for configuration purposes, and select **Create**:

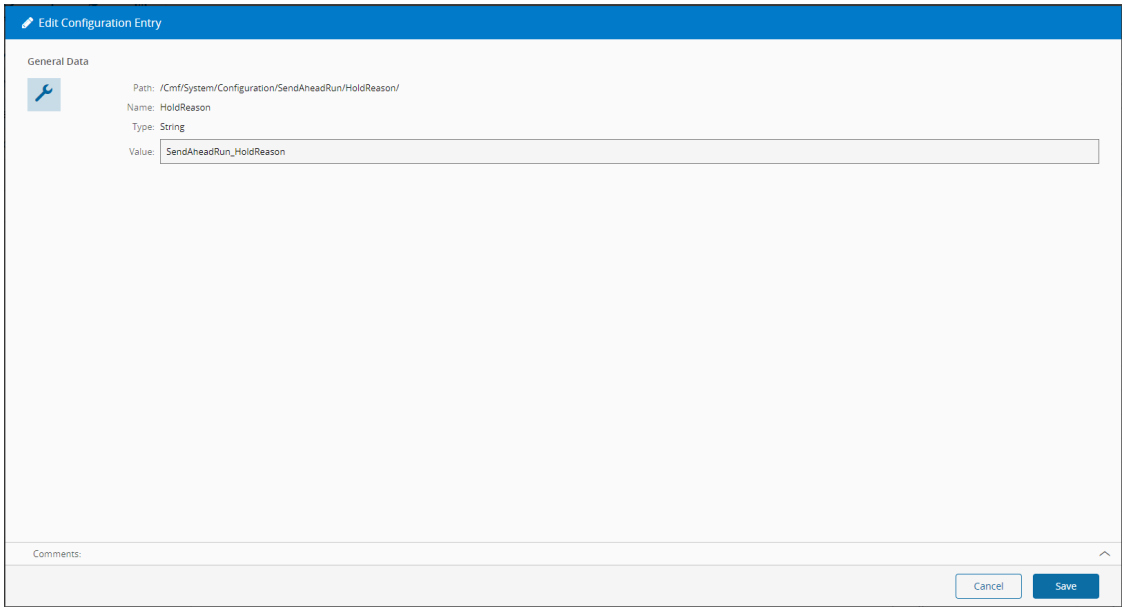


2. Configure the **Reason** by going to **Administration** followed by **Configuration**. Find and select the following key to be able to **Edit** it:

3. `/Cmf/System/Configuration/SendAheadRun/HoldReason/`



4. Select **Edit**, complete the **Value** field with the Name of your **Reason**, and select **Save**:



> **Note**
>
> You can only edit a **Configuration** if it is selected. For more information, see Configuration.

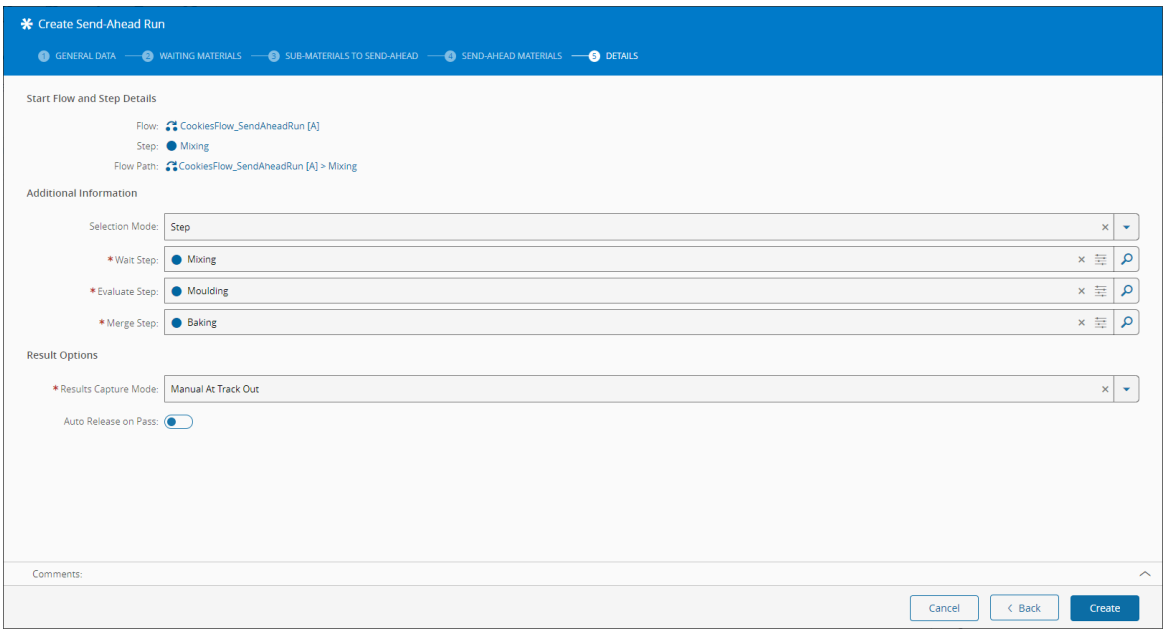
Using Send-Ahead Run

After setting up the required configurations mentioned above, you can create the **Send-Ahead Run** and use it to process your **Material**, as described in the next sections.

Create the Send-Ahead Run

Create the Send-Ahead Run and make sure that you defined a:

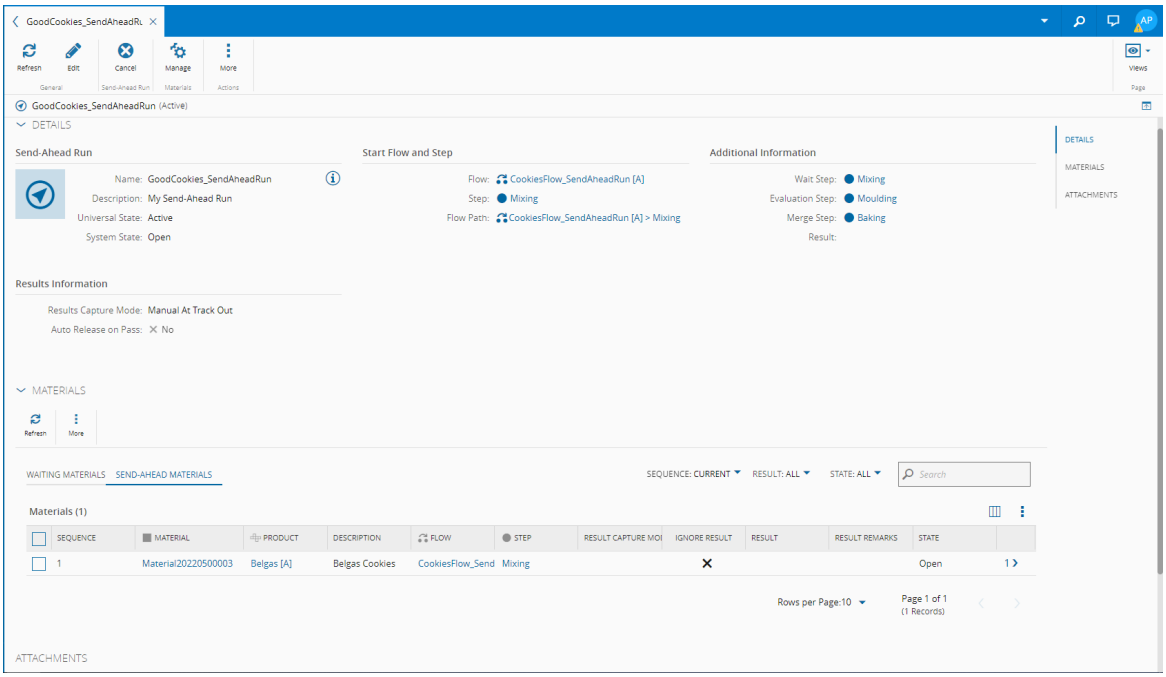
- Wait Step - where the main **Material** will be put on hold.
- Evaluate Step - where you will evaluate the **Material** that was sent ahead.
- Merge Step - where the main **Material** and the **Material** that was sent ahead will merge.
- Results Capture Mode - when results are recorded. For more information on the available options, see Create Send-Ahead Run.



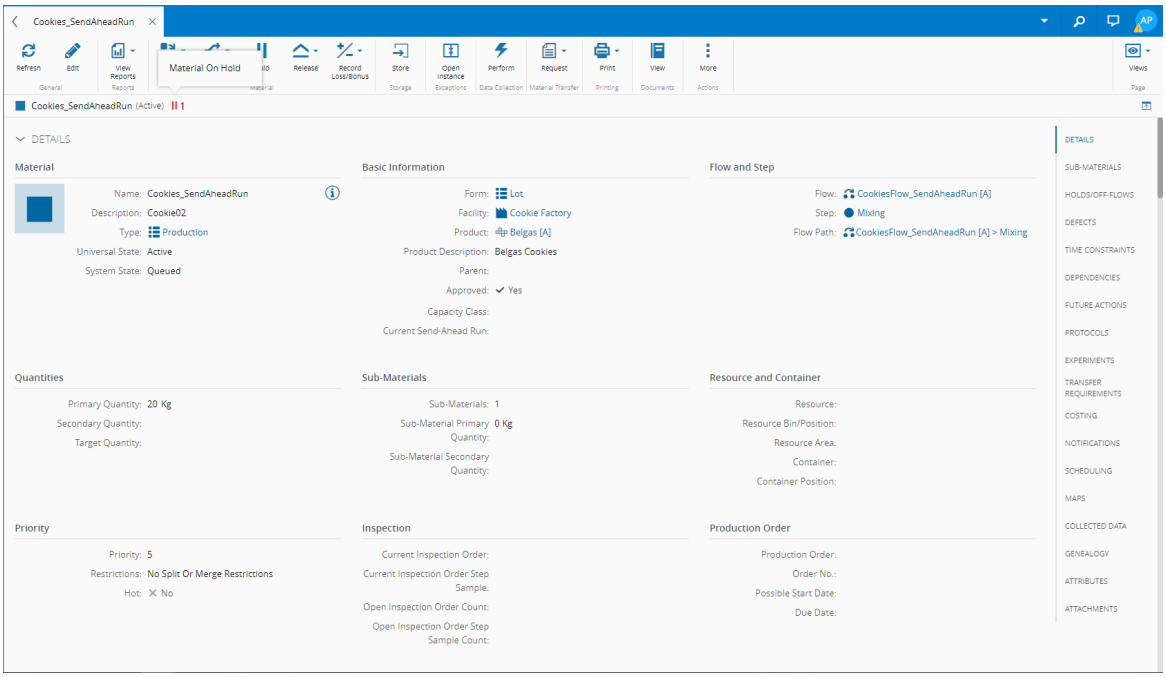
> **Note**
>
> The default of the **Results Capture Mode** is Manual. For this tutorial it is Manual at Track-Out so you can see how it works.

> **Note**
>
> The default of the **Auto Release on Pass** is `true`. For this tutorial it is `false` so you can see the manual release workflow.

When created, the **Send-Ahead Run** page contains all your configurations including details on the **Send-Ahead Materials**:

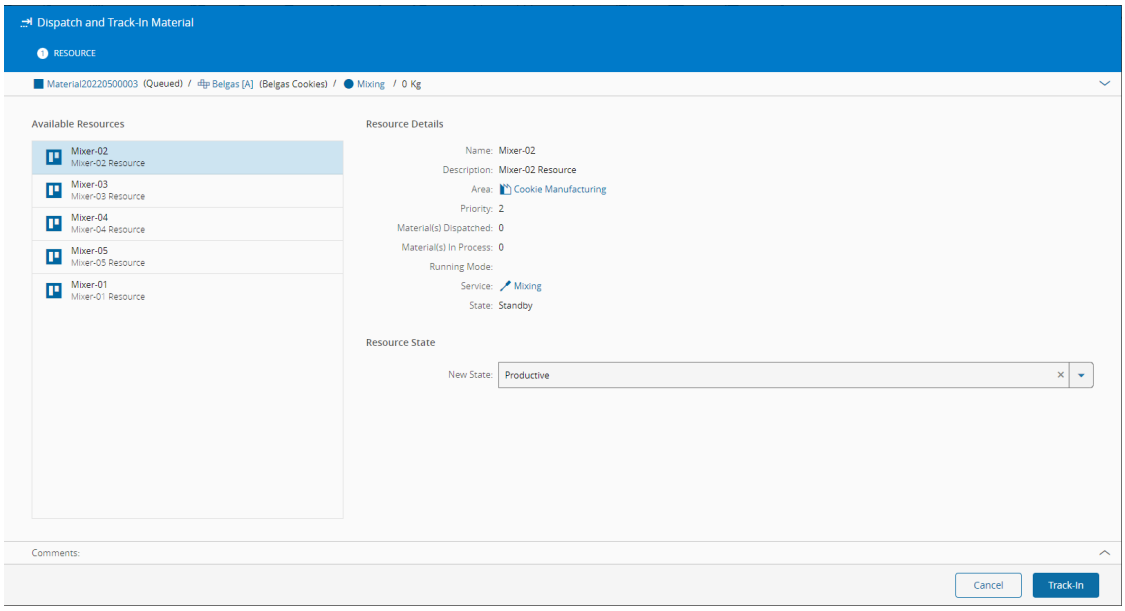


And notice how, as defined in the Wait Step of the **Send-Ahead Run**, the main **Material** is on hold at the Mixing step:

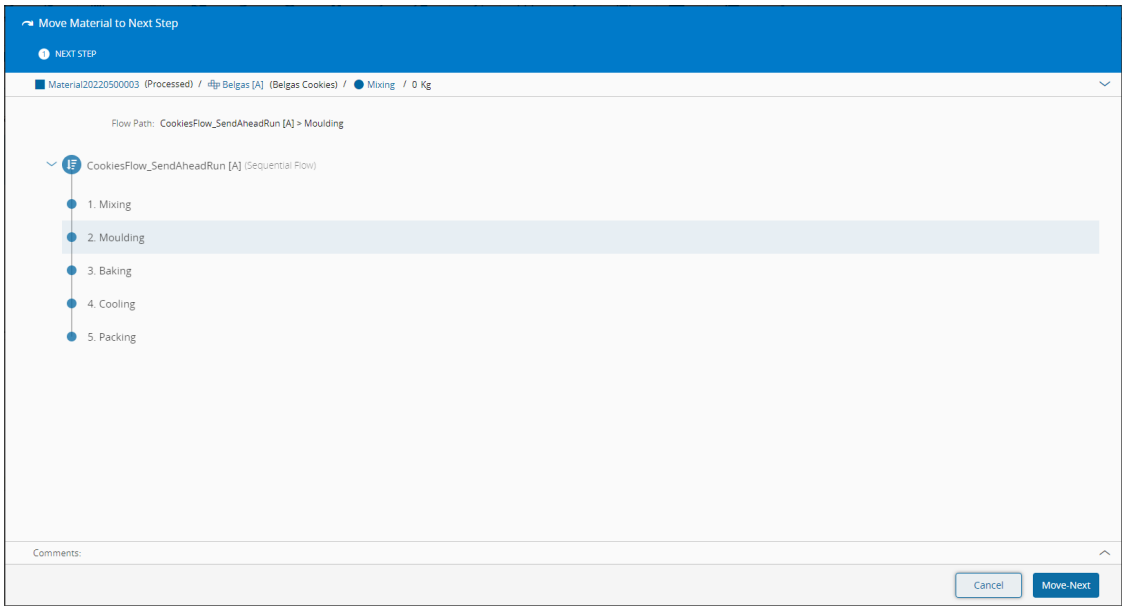


Process the Material

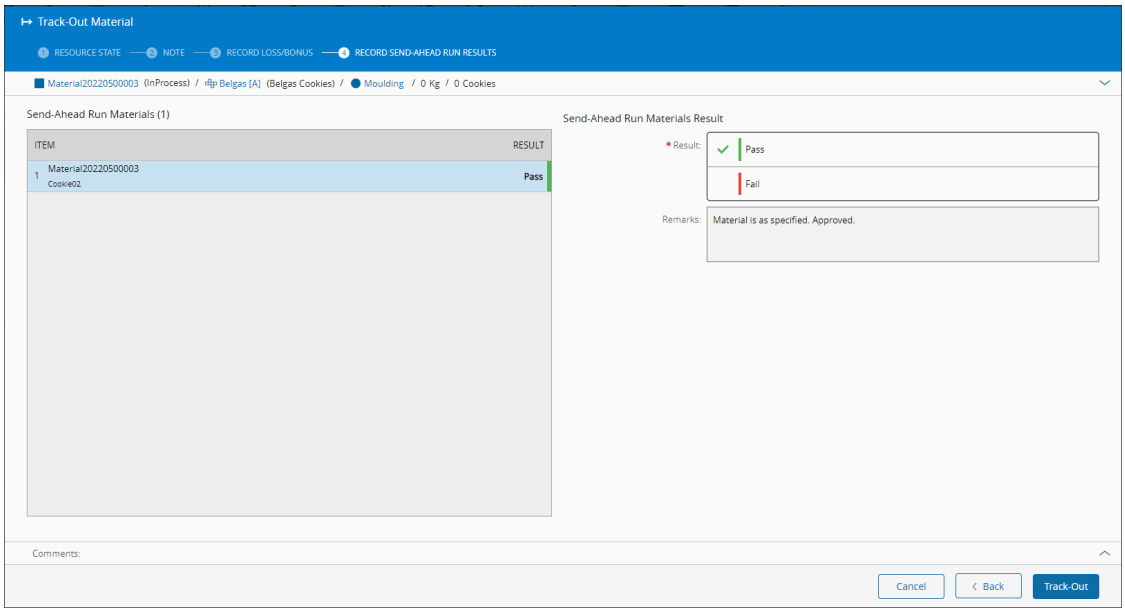
1. From the **Material** to be sent ahead, select **Dispatch and Track-In**.
2. Select an available resource and **Track-In**:



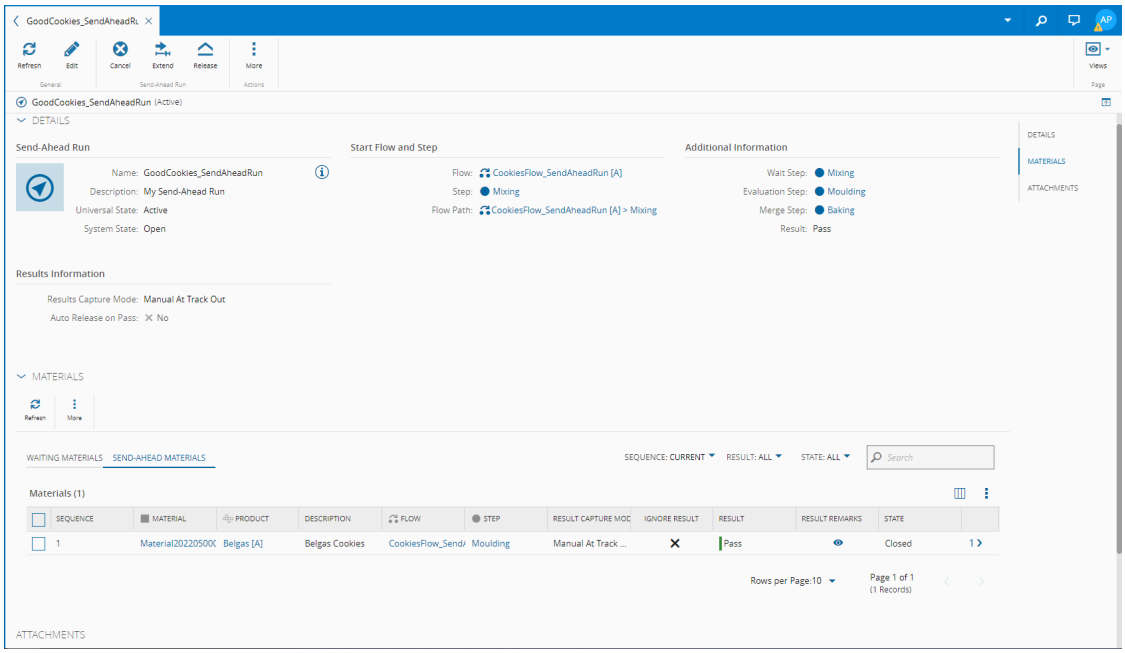
3. Select **Track-Out** and perform the necessary steps in the **Track-Out Material** wizard to **Track-Out**.
4. Select **Move-Next** on the top ribbon and then again in the **Move Material to Next Step** wizard to move the **Material** to the **Evaluate Step**. In this case, Moulding:



5. The **Material** is now in Moulding, the configured **Evaluate Step**, and you need to repeat the **Dispatch and Track-In** and **Track-Out** process.
6. Since you selected Manual at Track-Out as the **Results Capture Mode**, the last step of the **Track-Out Material** wizard is when you manually record the **Send-Ahead Run Materials Result**. The available options are **Pass** or **Fail**, and you can include **Remarks**:



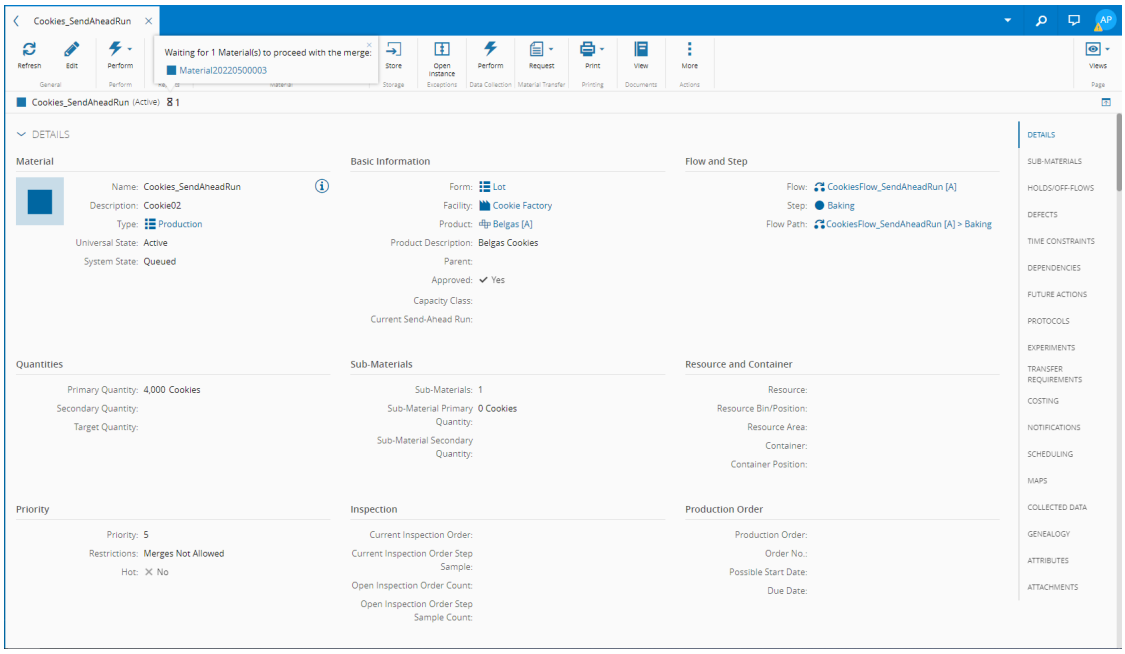
7. Select **Track-Out** and your **Material** is tracked out successfully.
8. Return to the **Send-Ahead Run** and select **Release** on the top ribbon and again in the **Release Waiting Material** wizard:



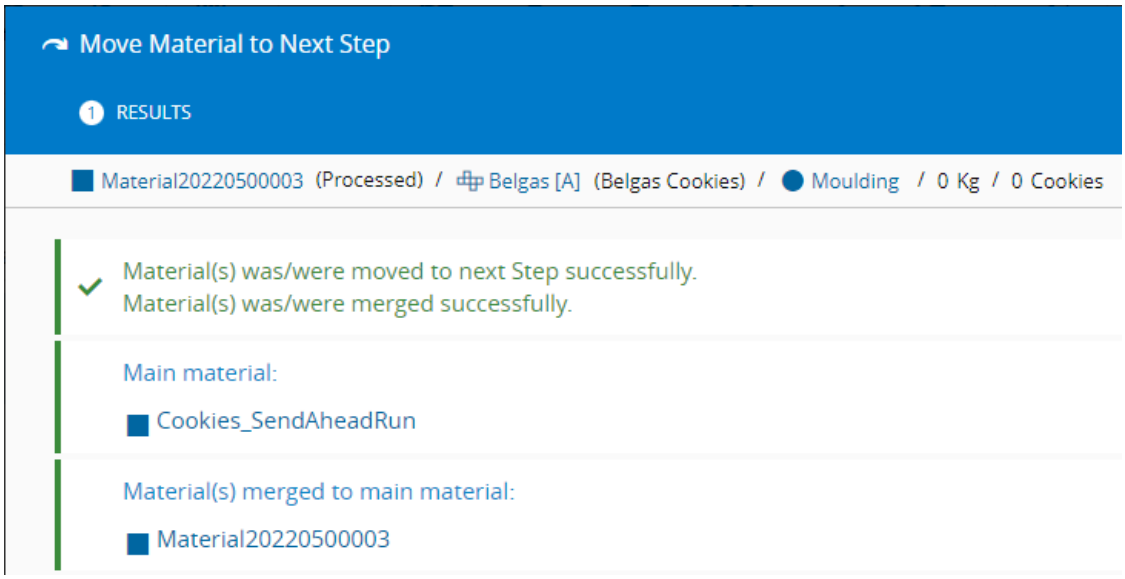
> **Note**
>
> Information regarding the **Send-Ahead Materials** is updated.

> **Note**
>
> This operation is not needed if the **Auto Release on Pass** is set to `true` when creating the **Send-Ahead Run**.

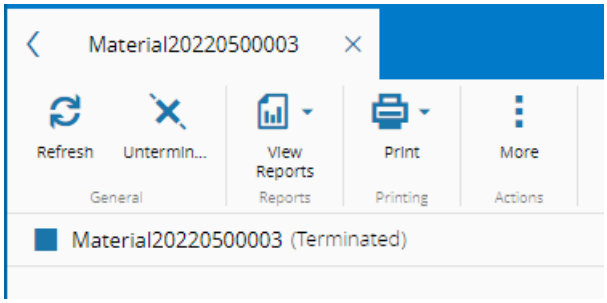
9. Now you need to perform **Dispatch and Track-In**, **Track-Out**, and **Move-Next** to your main **Material** (no longer on hold) until it reaches the **Merge Step** (Baking), at which point it will be waiting for merge:



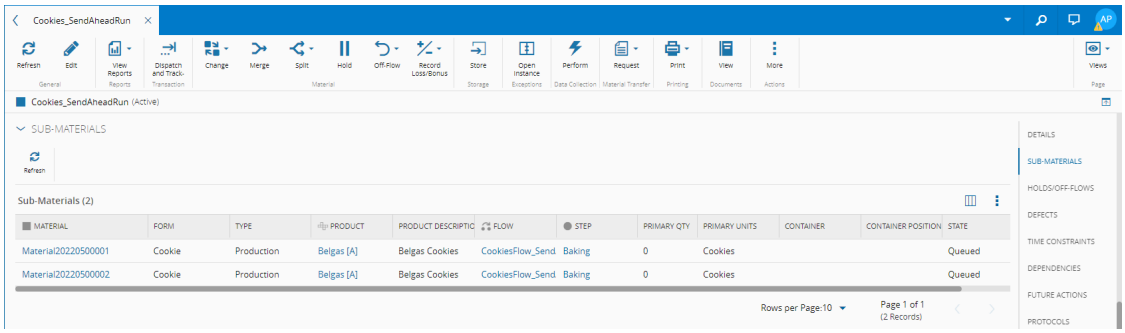
10. Go to the **Material** that was sent ahead, **Move-Next** and the **Materials** will be merged:



11. The **Material** that was sent ahead is now Terminated:



12. The **Sub-Material** that was used for the **Send-Ahead Run** process has returned to the main **Material**:



13. The **Send-Ahead Run** is Terminated and Closed:

Info

When the result of the **Send-Ahead Run** is a `Pass`, you can **Extend Send-Ahead Run**. For more information, see Extend Send-Ahead Run.

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