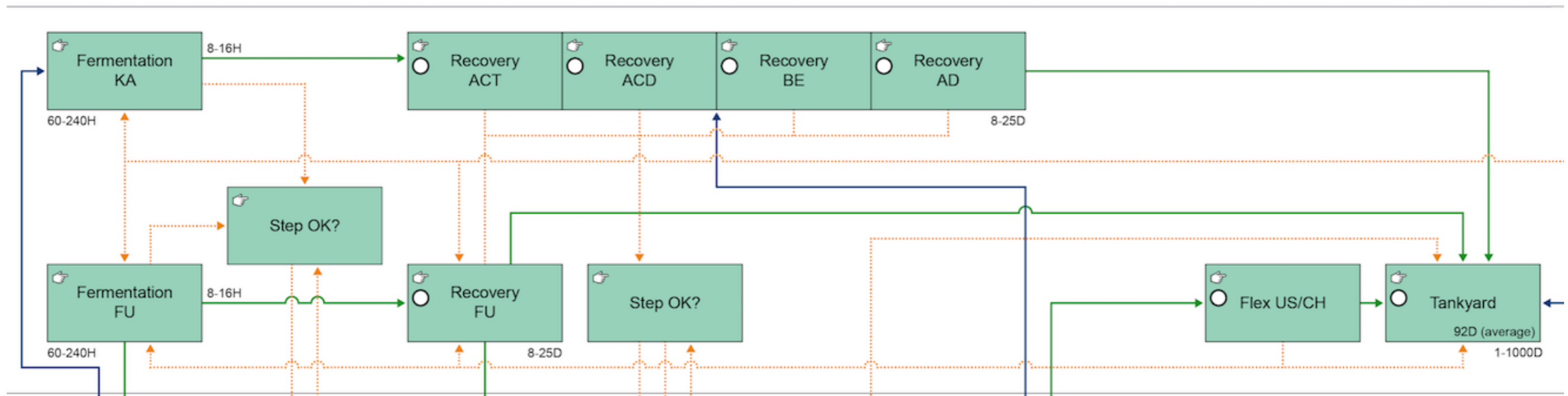


Production Overview

Production is in the EMA Operations functional group and in the SO Business Area. The illustration below provides an overview of the End-to-End Production workflow. This document aims to describe all the tasks involved in the Production function.

Liquid's Workflow:



Fermentation KA - Description

The objective of this task is to "...". It is part of the liquid workflow.

It consists of the following Measurement(s):

- "..."

It delivers the following Service(s):

- "..."

The task has a maturity of "...".

The task consumes service/information flow from:

- "Scheduling Ferm/Rec"
- "Release for Tapping"

It provides process/information flow to:

- "Recovery AD"
- "Recovery ACT"
- "Recovery ACD"
- "Recovery BE"
- "Step OK?"

The time used on the task is estimated at "60-240 hours in Fermentation and 8-16 hours to Recovery" with an estimated rework of "..."

The following are the issues or problems that the task has:

- "..."

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- "..."

Fermentation FU - Description

The objective of this task is to "...". It is part of the liquid workflow.

It consists of the following Measurement(s):

- "..."

It delivers the following Service(s):

- "..."

The task has a maturity of "...".

The task consumes information flow from:

- "Release for Tapping"
- "Flex US/CH"

It provides process/information flow to:

- "Analysis (Fermentation)"

- “Recovery FU”
- “Step OK?”

The time used on the task is estimated at “60-240 hours in Fermentation and 8-16 hours to Recovery” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Step OK? - Description

The objective of this task is to “...”. It is part of the liquid workflow.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes information flow from:

- “Fermentation FU”
- “Fermentation KA”
- “Usage Decision Fermentation (No)”

It provides information flow to:

- “Usage Decision Fermentation”

The time used on the task is estimated at “...” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Recovery ACT - Description

The objective of this task is to “...”. It is part of the liquid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes service/process flow from:

- “ROBEX Detail Planning Downstream”
- “Fermentation KA”

It provides process/information flow to:

- “Tankyard”
- “Step OK?”

The time used on the task is estimated at “...” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Recovery ACD - Description

The objective of this task is to “...”. It is part of the liquid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes service/process flow from:

- “ROBEX Detail Planning Downstream”
- “Fermentation KA”

It provides process/information flow to:

- “Tankyard”
- “Step OK?”

The time used on the task is estimated at “...” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Recovery BE - Description

The objective of this task is to “...”. It is part of the liquid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes service/process flow from:

- “ROBEX Detail Planning Downstream”
- “Fermentation KA”

It provides process/information flow to:

- “Tankyard”
- “Step OK?”

The time used on the task is estimated at “...” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Recovery AD - Description

The objective of this task is to “...”. It is part of the liquid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes service/process flow from:

- “ROBEX Detail Planning Downstream”
- “Fermentation KA”

It provides process/information flow to:

- “Tankyard”
- “Step OK?”

The time used on the task is estimated at “...” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Recovery FU - Description

The objective of this task is to “...”. It is part of the liquid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes process/information flow from:

- “Fermentation FU”
- “Release for Tapping”
- “Flex US/CH”

It provides process/information flow to:

- “Tankyard”
- “Analysis (Service)”
- “Step OK?”

The time used on the task is estimated at “...” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Step OK? - Description

The objective of this task is to “...”. It is part of the liquid workflow.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes information flow from:

- “Recovery ACT”
- “Recovery ACD”
- “Recovery BE”
- “Recovery AD”
- “Recovery FU”
- “DISP (No)”
- “Usage Decision Recovery (No)”

It provides information flow to:

- “Robex Detail Planning Downstream”
- “Usage Decision Recovery”

The time used on the task is estimated at “...” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Flex US/CH - Description

The objective of this task is to “...”. It is part of the liquid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of "...".

The task consumes process flow from:

- "Prioritize Capacity"

It provides process/information flow to:

- "Tankyard (process flow)"
- "Fermentation FU"
- "Recovery FU"
- "Tankyard (information flow)"

The time used on the task is estimated at "..." with an estimated rework of "..."

The following are the issues or problems that the task has:

- "..."

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- "..."

Tankyard - Description

The objective of this task is to "...". It is part of the liquid workflow.

It consists of the following Measurement(s):

- "..."

It delivers the following Service(s):

- "..."

The task has a maturity of "...".

The task consumes service/process/information flow from:

- "Changes to MPS Needed? (No)"
- "Flex US/CH" (process flow)
- "Recovery FU"
- "Recovery ACT"
- "Recovery ACD"
- "Recovery BE"

- "Recovery AD"
- "Flex US/CH" (information flow)
- "DISP (Yes)"

It provides "..." flow to:

- "..."

The time used on the task is estimated at "92 days average (1-1000 Days)" with an estimated rework of "..."

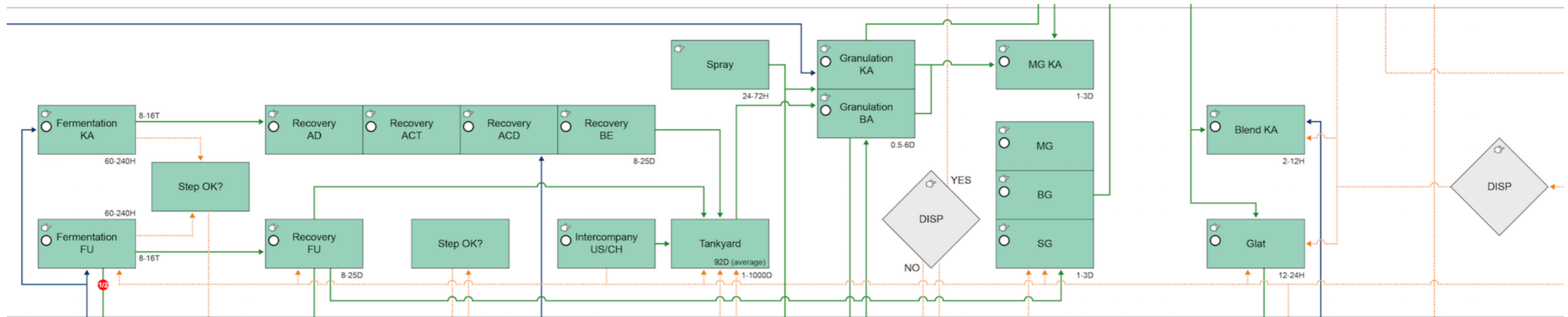
The following are the issues or problems that the task has:

- "..."

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- "..."

Solid's Workflow:



Fermentation KA - Description

The objective of this task is to "...". It is part of the solid workflow.

It consists of the following Measurement(s):

- "..."

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes service flow from:

- “Scheduling Ferm/Rec”

It provides process/information flow to:

- “Recovery AD”
- “Recovery ACT”
- “Recovery ACD”
- “Recovery BE”
- “Step OK?”

The time used on the task is estimated at “60-240 hours in Fermentation and 8-16 hours to Recovery” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Fermentation FU - Description

The objective of this task is to “...”. It is part of the solid workflow.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes service/information flow from:

- “Scheduling Ferm/Rec”
- “Intercompany US/CH”

It provides process/information flow to:

- "Analysis (Fermentation)"
- "Recovery FU"
- "Step OK?"

The time used on the task is estimated at "60-240 hours in Fermentation and 8-16 hours to Recovery" with an estimated rework of "..."

The following are the issues or problems that the task has:

- "..."

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- "..."

Step OK? - Description

The objective of this task is to "...". It is part of the solid workflow.

It consists of the following Measurement(s):

- "..."

It delivers the following Service(s):

- "..."

The task has a maturity of "...".

The task consumes information flow from:

- "Fermentation FU"
- "Fermentation KA"

It provides information flow to:

- "Usage Decision"

The time used on the task is estimated at "...". with an estimated rework of "..."

The following are the issues or problems that the task has:

- "..."

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Recovery ACT - Description

The objective of this task is to “...”. It is part of the solid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes service/process flow from:

- “ROBEX Detail Planning Downstream”
- “Fermentation KA”

It provides process flow to:

- “Tankyard”

The time used on the task is estimated at “...” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Recovery ACD - Description

The objective of this task is to “...”. It is part of the solid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes service/process flow from:

- “ROBEX Detail Planning Downstream”
- “Fermentation KA”

It provides process flow to:

- “Tankyard”

The time used on the task is estimated at “...” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Recovery BE - Description

The objective of this task is to “...”. It is part of the solid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes service/process flow from:

- “ROBEX Detail Planning Downstream”
- “Fermentation KA”

It provides process flow to:

- “Tankyard”

The time used on the task is estimated at “...” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Recovery AD - Description

The objective of this task is to “...”. It is part of the solid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes service/process flow from:

- “ROBEX Detail Planning Downstream”
- “Fermentation KA”

It provides process flow to:

- “Tankyard”

The time used on the task is estimated at “...” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Recovery FU - Description

The objective of this task is to "...". It is part of the solid workflow and is an event.

It consists of the following Measurement(s):

- "..."

It delivers the following Service(s):

- "..."

The task has a maturity of "...".

The task consumes process/information flow from:

- "Fermentation FU"
- "Release for Tapping"
- "Flex US/CH"

It provides process/information flow to:

- "Tankyard"
- "SG/BG/MG"
- "Analysis (Service)"
- "Step OK?"

The time used on the task is estimated at "..." with an estimated rework of "...".

The following are the issues or problems that the task has:

- "..."

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- "..."

Step OK? - Description

The objective of this task is to "...". It is part of the solid workflow.

It consists of the following Measurement(s):

- "..."

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes information flow from:

- “DISP (No)”

It provides information flow to:

- “Robex Detail Planning Downstream”
- “Usage Decision”

The time used on the task is estimated at “...” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Intercompany US/CH - Description

The objective of this task is to “...”. It is part of the solid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes “...” flow from:

- “...”

It provides process/information flow to:

- “Tankyard (process flow)”
- “Fermentation FU”

- "Recovery FU"
- "Tankyard (information flow)"
- "SG/BG/MG"
- "Glat"
- "Pack"
- "Product Inventory & Robustness Check"
- "Check Capacity & Capability"

The time used on the task is estimated at "..." with an estimated rework of "..."

The following are the issues or problems that the task has:

- "..."

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- "..."

Tankyard - Description

The objective of this task is to "...". It is part of the solid workflow.

It consists of the following Measurement(s):

- "..."

It delivers the following Service(s):

- "..."

The task has a maturity of "...".

The task consumes service/process/information flow from:

- "Intercompany US/CH" (process flow)
- "Recovery FU"
- "Recovery ACT"
- "Recovery ACD"
- "Recovery BE"
- "Recovery AD"
- "Intercompany US/CH" (information flow)
- "Usage Decision (Yes)"

- "DISP (Yes)"

It provides process flow to:

- "Granulation KA"
- "Granulation BA"

The time used on the task is estimated at "92 days average (1-1000 Days)" with an estimated rework of "..."

The following are the issues or problems that the task has:

- "..."

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- "..."

Spray - Description

The objective of this task is to "...". It is part of the solid workflow.

It consists of the following Measurement(s):

- "..."

It delivers the following Service(s):

- "..."

The task has a maturity of "...".

The task consumes "... flow from:

- "..."

It provides process flow to:

- "Granulation KA"
- "Granulation BA"
- "Analysis (Service)"

The time used on the task is estimated at "24-72 hours" with an estimated rework of "..."

The following are the issues or problems that the task has:

- "..."

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Granulation KA - Description

The objective of this task is to “...”. It is part of the solid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes service/process flow from:

- “Scheduling Gran/Spray”
- “Spray”
- “Tankyard”
- “Plan for rework/rad”

It provides process flow to:

- “MG KA”
- “Warehouse (Internal & External)”

The time used on the task is estimated at “0.5-6 days” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Granulation BA - Description

The objective of this task is to "...". It is part of the solid workflow and is an event.

It consists of the following Measurement(s):

- "..."

It delivers the following Service(s):

- "..."

The task has a maturity of "...".

The task consumes service/process flow from:

- "Scheduling Gran/Spray"
- "Spray"
- "Tankyard"
- "Plan for Rework/Rad"

It provides process flow to:

- "MG KA"
- "Warehouse (Internal & External)"

The time used on the task is estimated at "0.5-6 days" with an estimated rework of "...".

The following are the issues or problems that the task has:

- "..."

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- "..."

DISP - Description

The objective of this task is to "...". It is part of the solid workflow.

It consists of the following Measurement(s):

- "..."

It delivers the following Service(s):

- "..."

The task has a maturity of "...".

The task consumes service flow from:

- "..."

The task is a gateway and has two variants, Yes and No.

The yes variant provides information flow to:

- "Import Subcontract"

The no variant provides information flow to:

- "Usage Decision (No)"
- "Plan for Rework/Rad"

The time used on the task is estimated at "..." with an estimated rework of "...".

The following are the issues or problems that the task has:

- "..."

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- "..."

MG KA - Description

The objective of this task is to "...". It is part of the solid workflow and is an event.

It consists of the following Measurement(s):

- "..."

It delivers the following Service(s):

- "..."

The task has a maturity of "...".

The task consumes process flow from:

- "Granulation KA"
- "Granulation BA"

- “Warehouse (Internal & External)”

It provides process flow to:

- “Warehouse (Internal & External)”

The time used on the task is estimated at “1-3 days” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

MG - Description

The objective of this task is to “...”. It is part of the solid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes process/information flow from:

- “Recovery FU”
- “Plan for Rework/Rad”
- “Flex US/CH”

It provides process flow to:

- “Warehouse (Internal & External)”

The time used on the task is estimated at “1-3 days” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

BG - Description

The objective of this task is to “...”. It is part of the solid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes process/information flow from:

- “Recovery FU”
- “Plan for Rework/Rad”
- “Flex US/CH”

It provides process flow to:

- “Warehouse (Internal & External)”

The time used on the task is estimated at “1-3 days” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

SG - Description

The objective of this task is to “...”. It is part of the solid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes process/information flow from:

- “Recovery FU”
- “Plan for Rework/Rad”
- “Flex US/CH”

It provides process flow to:

- “Warehouse (Internal & External)”

The time used on the task is estimated at “1-3 days” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Blend KA - Description

The objective of this task is to “...”. It is part of the solid workflow and is an event

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes service/process/information flow from:

- “Create + Plan Blend”
- “Warehouse (Internal & External)”

- “DISP”

It provides “...” flow to:

- “...”

The time used on the task is estimated at “2-12 hours” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

Glat - Description

The objective of this task is to “...”. It is part of the solid workflow and is an event.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes process/information flow from:

- “Warehouse (Internal & External)”
- “DISP”
- “Flex US/CH”

It provides process flow to:

- “Analysis (Service)”

The time used on the task is estimated at “12-24 hours” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

- “...”

DISP - Description

The objective of this task is to “...”. It is part of the solid workflow.

It consists of the following Measurement(s):

- “...”

It delivers the following Service(s):

- “...”

The task has a maturity of “...”.

The task consumes information flow from:

- “Usage Decision (No)”

It provides information flow to:

- “GP BiB”
- “Blend KA”
- “Glat”

The task is a gateway and has two variants, Yes and No.

The yes variant provides information flow to:

- “...”

The no variant provides service flow to:

- “...”

The time used on the task is estimated at “...” with an estimated rework of “...”

The following are the issues or problems that the task has:

- “...”

If you have any questions, comments, changes or need to interact with the accountable of the task, these are the responsible (Novozymes contact acronyms are applied):

