Functional Requirements Document- Production

Prepared for
Technica

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Prepared by:
Abdo Khoury

Contributors:
Antonio Saleh

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Introduction

1.1 Purpose

The Functional Requirements Document (FRD) describes in common terms:

- An overview of the processes comprising each Work stream
- An overview of each sub-process comprising the Work stream
- Major gaps between the business requirements and the functionality supported by the standard Microsoft Dynamics 365 solution
- The problem summary including current business/environment issues
- Proposed technology to support the new or altered business processes
- How implementation of the proposed solution will benefit the users/stakeholders

The FRD is the starting point of the solution and system development and is a collaborative effort between all business and technology stakeholders. The purpose of the Functional Requirements Document (FRD) is to document requirements for the requested system solution.

The objective of the Functional Requirements Document is to provide enhanced documentation for requirements that are a gap or will require a workaround or process change in order to fit the system solution of the client. The need for any modifications is clarified through the FRD. The FRD forms the basis of the subsequent task concerning the system design.

This document focuses on Production requirements.

1.2 Acronyms

Abbreviation	Explanation
FRD	Functional Requirement Document
System	Dynamics 365 Finance & Operation
D365	Dynamics 365 Finance & Operation
Backoffice	D365 F&O

1.1 Business Processes List

1.2 Processes List

To elaborate and define the functionality, the following processes have been presented in the subsequent sections:

Process ID	Name
PRD001	Production Order Lifecycle
PRD002	3D Drawing
PRD003	BOM
PRD004	Routes
PRD005	Track Open Purchase Order Lines
PRD006	Production Orde Generation
PRD007	Production order Schedule
PRD008	Release Production Order
PRD009	Resource Consumption
PRD011	Shop Floor Execution
PRD012	Report As Finished
PRD013	Non-Conformance

Commented [EA1]: PRD005 missing from here.

1.3 Production Processes

PRD001 – Production Order Lifecycle

1.3.1.1 Process Overview

The production order lifecycle is as follows:

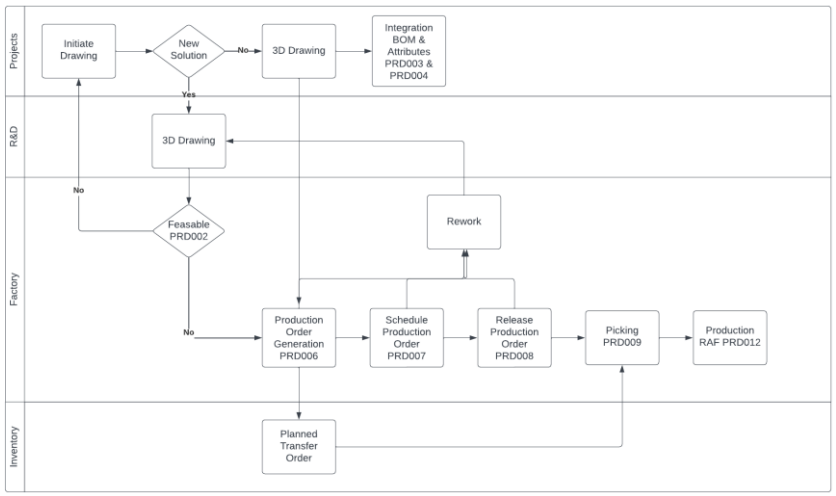


Figure 1 Factory Overview

1. 3D Drawing will be drawn up by the R&D if it is a new solution or by the Project Engineers if solution already exists.
2. BOM lines are Integrated from CAD to D365 F&O , *refer to Integration FRD for More details*
3. Once production orders are created or firmed from master planning the need to be scheduled by the production manager
    a. The production manager can then accept or reject the drawing for feasibility, if not feasible, the drawing will be sent back as Re-work to be re-drawn

Commented [EA2]: No Re-Work in the workflow

Commented [AK3R2]: done

Commented [AK4R2]: Reasable No goes to R&D

Commented [AK5R2]: Explain Re-work

Commented [AK6R2]: Existing Solution Doesn't need feasibility check

Commented [AK7R2]: Done

Commented [EA8]: How the integration is going to happen?

Commented [AK9R8]: Refer to Integration FRD

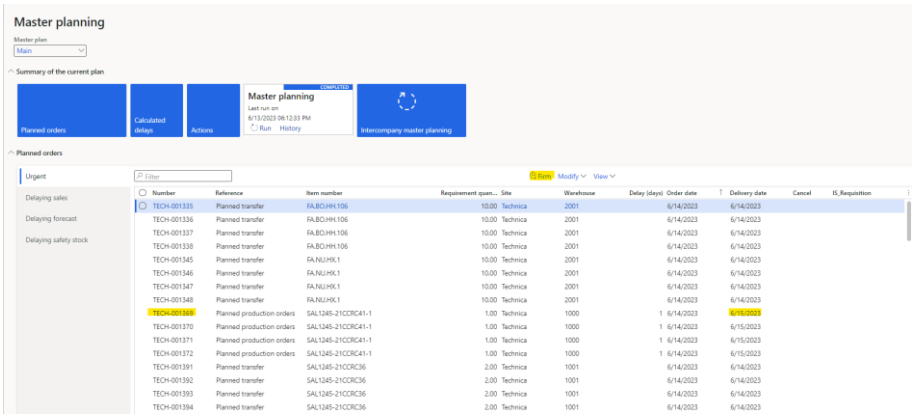
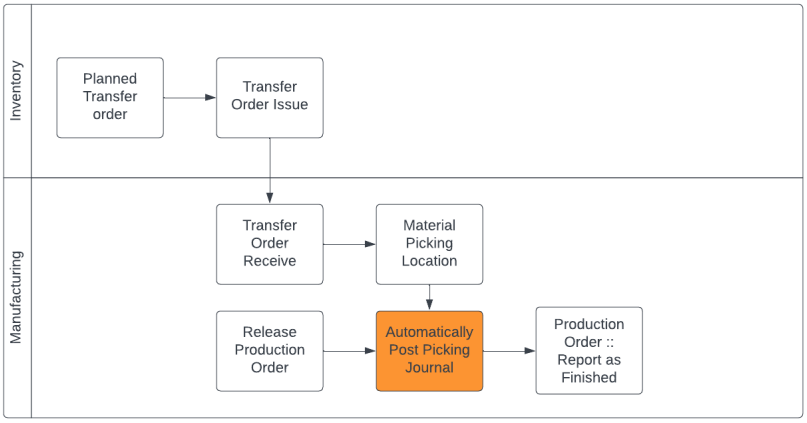
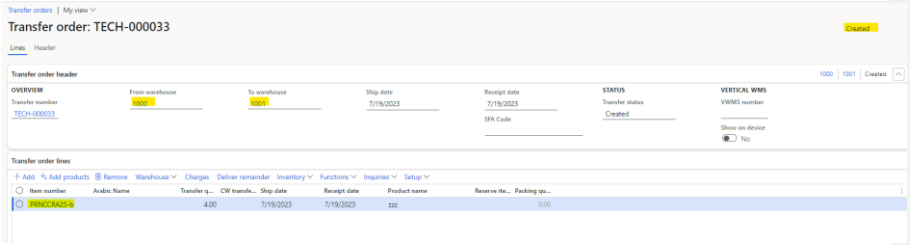


Figure 2 Master Planning

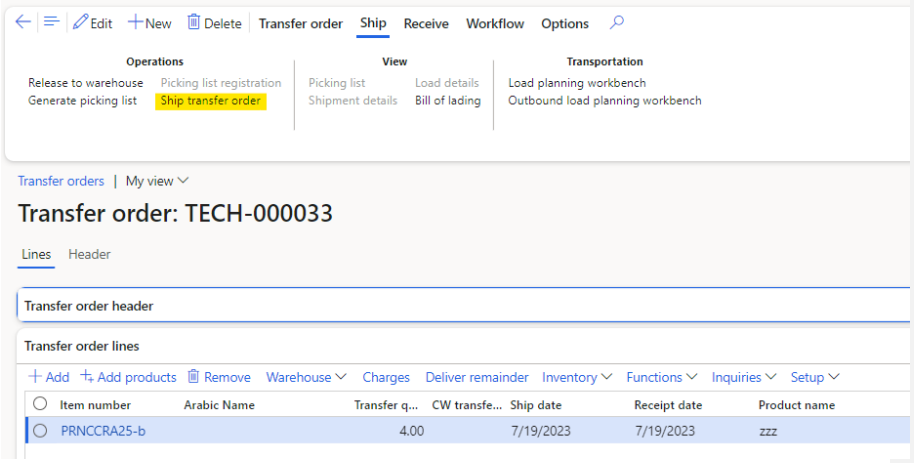
4. Once the Production manager has scheduled the production order, the production manager can release the production order for execution; once done, a picking journal is created and posted automatically; the picking Journal will consume parts needed during the execution from the Picking Location in the Manufacturing warehouse



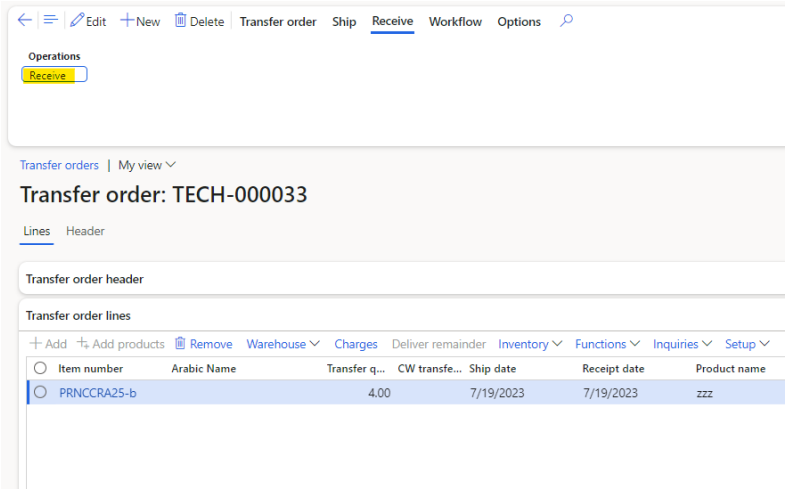
a. For the good to be transferred from the main warehouse to the Picking location, the MASTER Planning will generate planned transfer orders on certain dates respective of the production order lead time.



b. The warehouse have to issue the transfer order by SHIPPING the transfer order and by moving the parts physically to the manufacturing picking location.



c. The manufacturing will then receive the parts/raw material in the picking location to confirm receipt. By receiving this transfer goods would have transferred from the **Main** to the **Factory** warehouse



5. Once the Production is done the Production order is reported as Finished. Any level of the assembly is a separate production order (Not assembly), so when we say a production order is reported as finished, we mean a semi-finished part of the assembly is ready.

Commented [GB10]: (If we are considering the order as a complete assembly in that case the order shouldn't be reported as finished)

Commented [AK11R10]: This is not an assembly , Assembly is PRD014

PRD002 – 3D Drawing

1.3.1.2 Process Overview

The Projects initiate the 3d drawing order, it is requested from the R&D if it is a new solution otherwise the Projects' engineers will handle the drawing, the drawing is sent to the factory for feasibility checking, this is going to be a Activity in the WBS and the drawing will be attached to it, nevertheless the feasibility itself will be an activity in F&O ; if the design is not feasible it is sent back as re-work, otherwise if the design is feasible then the factory can proceed. A counter will be added on the WMS Activity details line to display the number of times that the BOM where integrated from CAD.

Once the production manager approves the 3D drawing, they can proceed with the manufacturing.

Commented [GB12]: (Should be done through the system in order to be able to calculate the number of re-works)

Commented [AK13R12]: We will add a counter to display the number of times the assembly we integrated

Commented [EA14]: There is no feasibility check coming from projects team if it's an existing equipment. Only for new equipment or solution. Note: Feasibility check with factory can be initiated also at the level of sales support before project is won.

1.3.1.3 Requirements

ID	Description	Fit/Gap

PRD002-01	Notification to Production Manager when engineer releases drawing to be executed	GAP
PRD002-02	Notification of Re-Work to certain key positions	GAP
PRD002-03	Put Production Order on Hold once Re-Work is issued	GAP
PRD002-04	Softcopy of drawing to be integrated from CAD to F&O	GAP
PRD002-05	Count number of times Integration was run as Rework	GAP

Commented [EA15]: Not clear! What do you mean? and why it's a Gap?

Commented [AK16R15]: The GAP is importing the URL from the CAD of this particular drawing to be displayed on Production order , to be later displayed on shop floor

PRD003 – Bill of Material

1.3.1.4 Process Overview

Commented [EA17]: Need more clarification!! Nothing explained here concerning this BOM process.

BOM Configuration, explanation and usage?

Commented [AK18R17]: Expand on BOM Section

Commented [AK19R17]: Explain BOM form

A bill of materials (BOM) defines the components that are required in order to produce a product. The components can be raw materials or semi-finished products. BOMs typically describe the *material resources* that are required.

Now in this can once the integration occurs CAD and F&O, the BOM lines are going to be integrated in D365 F&O.

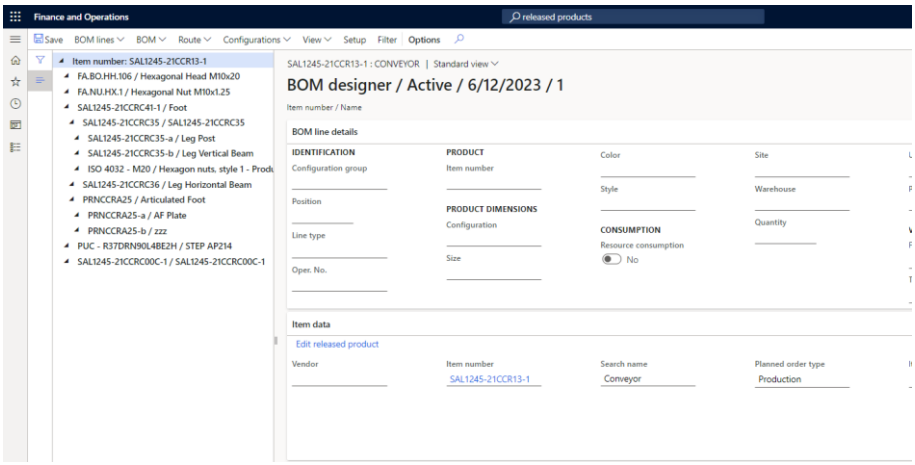


Figure 3 BOM

The BOM version will be populated from CAD system; the item can have a configuration variant which can be tracked;

In order for a BOM to be used in production, it first needs to be Approved & then Activated. This will give the user more control while managing the BOM's

In the BOM line section, the item type could be product or nested BOM; moreover the quantity on the BOM lines will specify how much quantity is needed for the production of the main item.

The BOM forms allows the user to track multiple BOM versions for the same product in order to maintain different configuration; not to mention, that depending on the item configuration, if the item is tracked by definition group, you can track your BOM by variant, depending on the configuration of the item

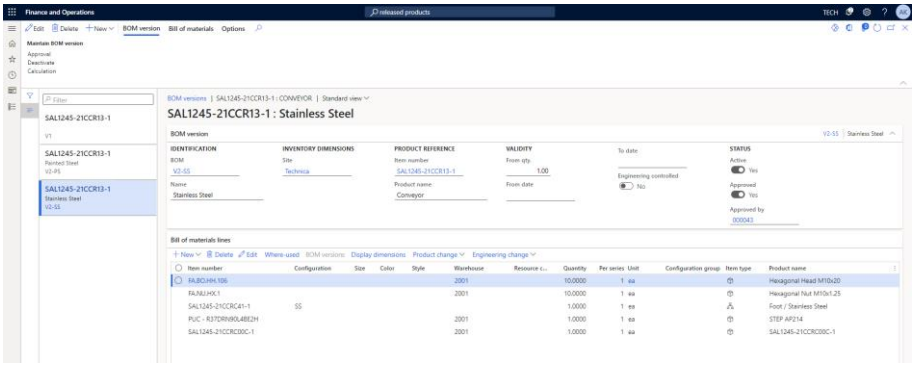
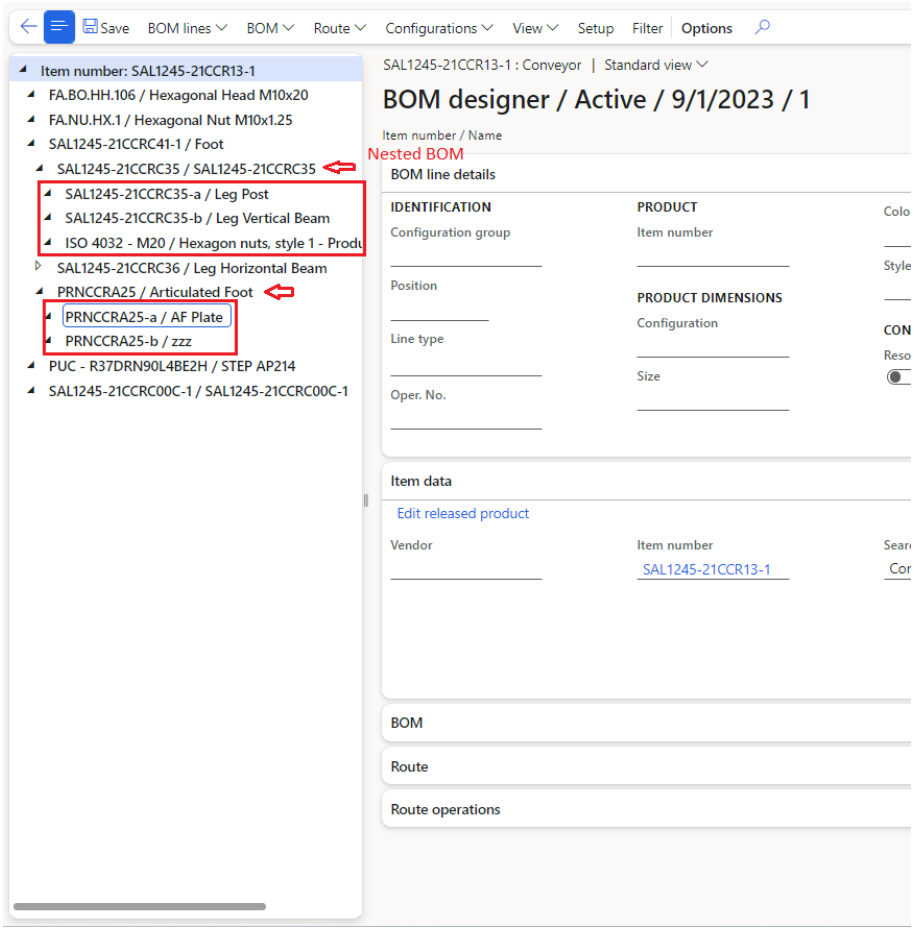


Figure 4 Multiple BOM Versions

From the his screen you can, run cost calculation for a specific BOM and specific configuration.

The nested BOM is a BOM in the line of a parent BOM; if you take any assembly, the parts used in it are going to be nested BOM , the nested BOM is a stand alone BOM that is used in an assembly and this nested BOM could have a BOM as a sub-part in it.



1.3.1.5 Requirements

ID	Description	Fit/Gap
PRD003-01	Ability to create BOM with Nested BOM	FIT
PRD003-02	Factory requests the BOM needed to be produced	FIT

Commented [GB20]: (BOM should be released automatically with the drawing)

Commented [AK21R20]: Resolved

PRD004 – Routes

1.3.1.6 Process Overview

In the integration between CAD and D365, (in addition to the BOM mentioned in PRD003) the item attributes will also be integrated into D365 in order to identify the manufacturing route.

The Item Attributes are values that will be identified by the factory in order to give more information about the item, these attributes are yet to be provided by the factory; the attributes will be pushed from CAD to F&O and these will help identify which route should be used for the production of specific items.

The route will determine what operation is done in sequence for production to happen. Operations are the activities inside the route that need to happen during the manufacturing process.

Technica will have two types of Route

- **Manufacturing Routes**: These will be determined as per attributes that will be integrated from CAD system into F&O,
- **Assembly Routes**: these routes will determine how a final product is assembled once the manufacturing phase is complete; the route of the assembly will be chosen manually based on the Test Strategy Meeting by the Assembly Manager, which occurs after the kickoff of the projects; *the Manufacturing route will be determined automatically from the product attribute whereas the assembly route will be determined from the test strategy meeting that will define how the final product will be assembled and tested, which will contain the , schedule date backward*

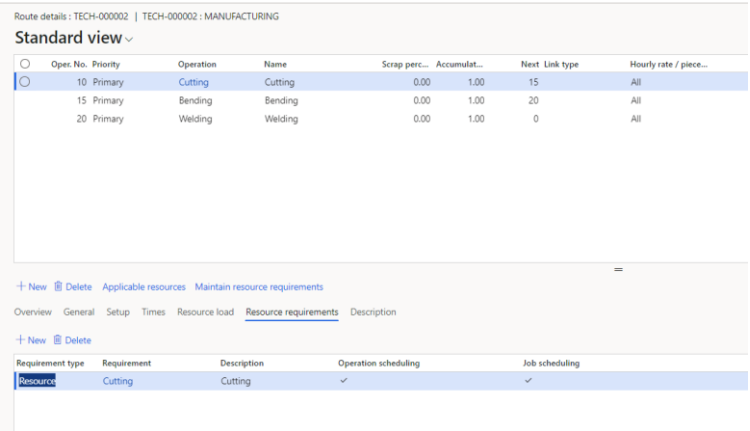


Figure 5 Routes

Commented [EA22]: Should be PRD0003

Commented [EA23]: Give example of item attributes.

Commented [AK24R23]: Attributes where not provided during the analysis phase, we need this input from the factory

Commented [AK25R23]: Expand on item Attributes needed for route selection

Commented [AK26R23]: Done in beginning of p 11

Commented [GB27]: (Routes selected should be reflected in the master schedule of the project based on manual entry from PM or assembly manager)

Commented [AK28R27]: Assembly Manager

All routes need to be provided by Techica during the migration phase;

1.3.1.7 Requirements

ID	Description	Fit/Gap
PRD004-01	Ability to create Routes	FIT
PRD004-02	Ability to identify a route based on product family	GAP

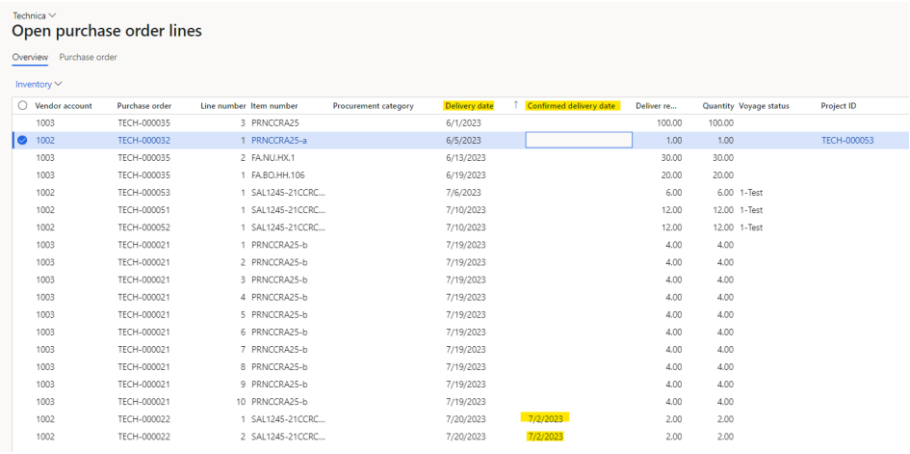
PRD005 – Track Open Purchase Order lines

1.3.1.8 Process Overview

If the production manager want to track any inbound purchase order lines, they can access the open purchase order lines view and track the delivery as well as the confirmed delivery date

Commented [GB29]: (He should be able also to track the percentage complete by order)

Commented [AK30R29]: If above comment is about Production order % of completion then it is mentioned in PRD011



Vendor account	Purchase order	Line number	Item number	Procurement category	Delivery date	Confirmed delivery date	Deliver re...	Quantity	Voyage status	Project ID
1003	TECH-000035	3	PRNCCRA25		6/1/2023		100.00	100.00		
1002	TECH-000032	1	PRNCCRA25-a		6/5/2023		1.00	1.00		TECH-000053
1003	TECH-000035	2	FA.NU.HX.1		6/13/2023		30.00	30.00		
1003	TECH-000035	1	FA.BO.HH.106		6/19/2023		20.00	20.00		
1002	TECH-000053	1	SAL1245-21CCRC...		7/6/2023		6.00	6.00	1-Test	
1002	TECH-000051	1	SAL1245-21CCRC...		7/10/2023		12.00	12.00	1-Test	
1002	TECH-000052	1	SAL1245-21CCRC...		7/10/2023		12.00	12.00	1-Test	
1003	TECH-000021	1	PRNCCRA25-b		7/19/2023		4.00	4.00		
1003	TECH-000021	2	PRNCCRA25-b		7/19/2023		4.00	4.00		
1003	TECH-000021	3	PRNCCRA25-b		7/19/2023		4.00	4.00		
1003	TECH-000021	4	PRNCCRA25-b		7/19/2023		4.00	4.00		
1003	TECH-000021	5	PRNCCRA25-b		7/19/2023		4.00	4.00		
1003	TECH-000021	6	PRNCCRA25-b		7/19/2023		4.00	4.00		
1003	TECH-000021	7	PRNCCRA25-b		7/19/2023		4.00	4.00		
1003	TECH-000021	8	PRNCCRA25-b		7/19/2023		4.00	4.00		
1003	TECH-000021	9	PRNCCRA25-b		7/19/2023		4.00	4.00		
1003	TECH-000021	10	PRNCCRA25-b		7/19/2023		4.00	4.00		
1002	TECH-000022	1	SAL1245-21CCRC...		7/20/2023	7/2/2023	2.00	2.00		
1002	TECH-000022	2	SAL1245-21CCRC...		7/20/2023	7/2/2023	2.00	2.00		

Figure 6 Open Purchase Order Lines

1.3.1.1 Requirements

ID	Description	Fit/Gap
PRD005-01	Ability to track inbound purchases delivery date	FIT

PRD006 – Manufacturing Order Generation

1.3.1.2 Proposed Process Flow

Technica differentiate between two groups of production orders: Manufacturing & Assembly; each group has a responsible HOD.

- Manufacturing Production orders: will contain all the production order that produce all components and subcomponents needed during the assembly process
- Assembly Production Orders: the assembly production order will assemble all produce & purchased items to form the final assembly.

There is no notification to inform that production manager that certain components are ready for assembly however there is a too to be used for this specific purpose, (this is detailed in PRD008) it's not clear in PRD008 how the assembly manager or assembly team will be aware when a manufacturing order is complete so they can proceed with the assembly

The master planning engine checks all item requirement and once run, will generated Planned Production orders (for items that need production) and planned purchase order (for items that need purchasing)

Production order are created by firming the planned production orders; these planned production orders can be generated by the master planning or by manual creation

The Master Planning Engine job is to generate ***Planned Production Orders*** *,* ***Planned Purchase orders*** *&* ***Planned Transfer Orders***

Planned Production Orders: are draft production order that are generated by master planning and firmed by the production manager with delivery date respective of the item requirement receipt date (which is when the customer was promised to get the assembly)

Planned Transfer Orders: transfer Raw Material/Components from Main Warehouse to Manufacturing Warehouse through planned transfer Order, that are firmed by the procurement and by the warehouses on a specific date respective of the production order delivery date

Commented [GB31]: (We have to clarify the link between the two types of orders, "so in case the parts for a specific assembly are completed in manufacturing how the assembly teams will be notified)

Commented [AK32R31]: Explained in PRD008

Commented [AK33R31]: Mention that there is no Notification

Commented [AK34R31]: Done

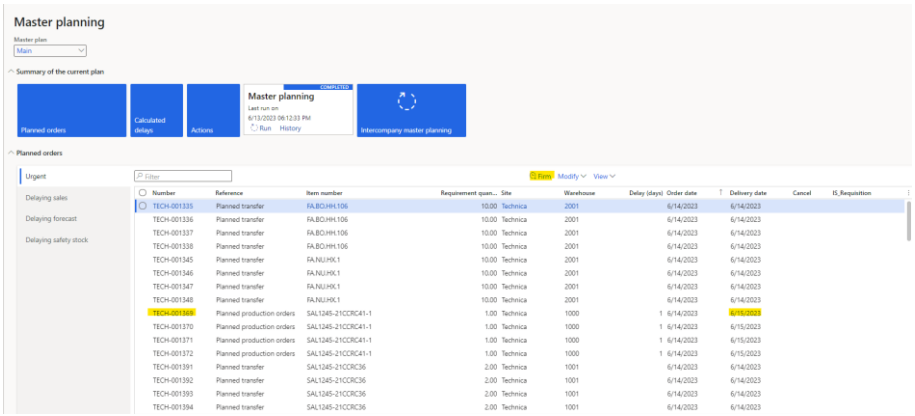
Commented [AK35]: Not Clear

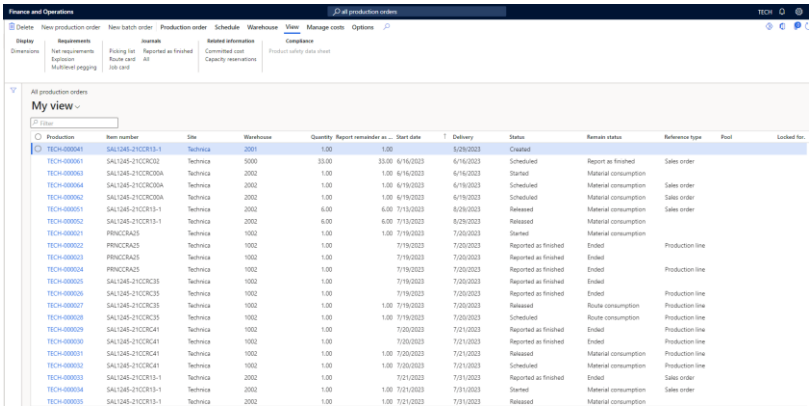
Commented [EA36]: Not Clear!

Commented [AK37R36]: rephrased

Commented [EA38]: Must define what is Master Planning first!

Commented [AK39R38]: Explained





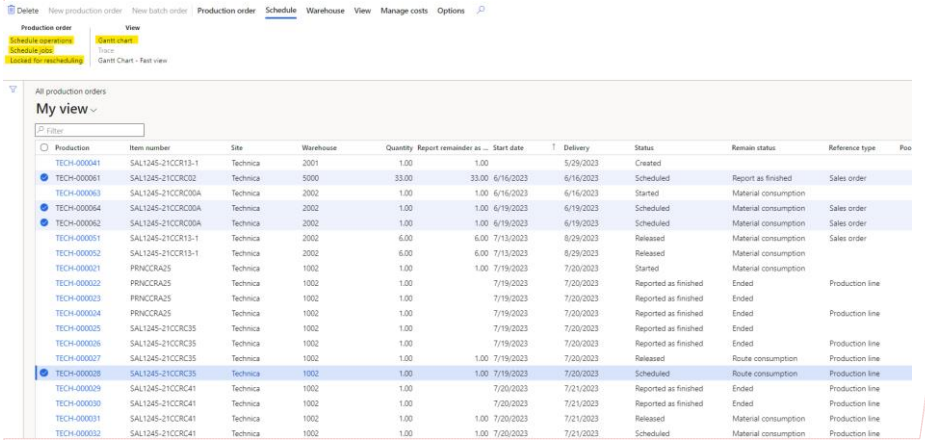
1.3.1.1 Requirements

ID	Description	Fit/Gap
PRD006-01	Ability to track two kinds manufacturing and assembly orders	FIT
PRD006-02	Ability to Create Production Orders Manually	FIT
PRD006-03	Ability to Generate Production orders from Master planning	FIT
PRD006-04	Ability to group Production order by pool ID	FIT

PRD007 – Schedule Production Orders

1.3.1.2 Process Overview

Once the production orders are generated automatically from the master planning, the Production manager will release selected production orders for automatic scheduling as per the available capacity; production manager has the ability to update the schedule of the production order if required.



Commented [GB40]: (Not clear, the scheduling should be done automatically and the Production manager adjust the plan in case needed)

Commented [AK41R40]: It is automatic

Commented [AK42R40]: Explain more how Prod order are selected and scheduled

Commented [AK43R40]: done

Or if needed by the Production Manager access the Gantt chart and manually override the automated schedule previously suggested by the system; ; The scheduling engine automatically schedules production order based on capacity planning and the production calendar.

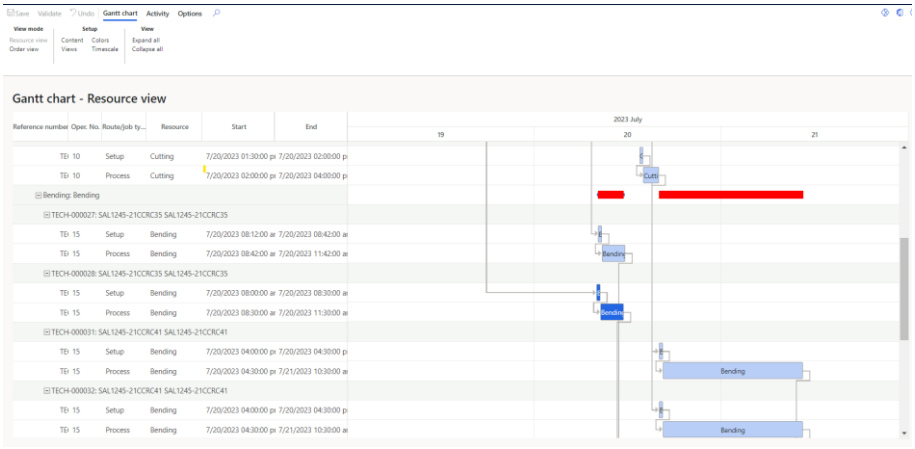


Figure 7 Gantt Chart

1.3.1.3 Requirements

ID	Description	Fit/Gap
PRD007-01	Ability to Manage Factory Master Plan	FIT
PRD007-02	Ability to manipulate production order delivery date	FIT
PRD007-03	Ability to push jobs forward and backward on time scale	FIT
PRD007-04	Ability for system to automatically schedule Production order jobs based on resource capacity	FIT

PRD008 – Release Production Order

1.3.1.4 Process Overview

By Releasing a production order, the factory floor is ordered to start executing jobs for a specific production order

In order for the production manager to release a production order, he needs to have visibility whether the production order BOM components are available or not, to do that

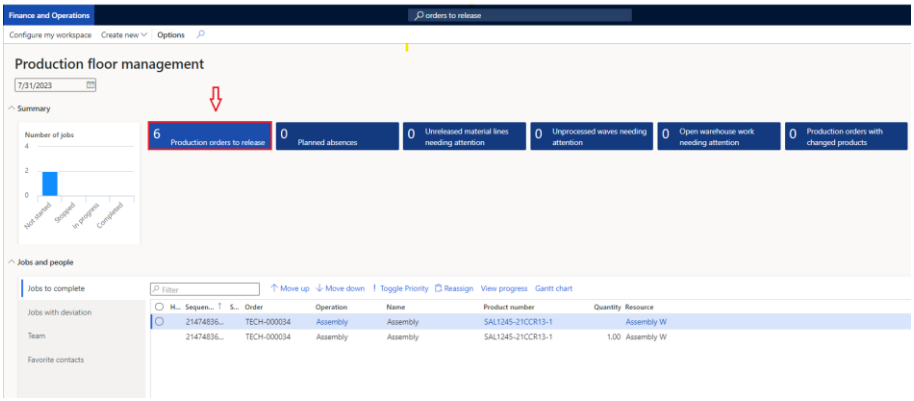
1. The Production Manager accesses the Production Floor Management dashboard

Commented [GB44]: (Schedule should be generated automatically based on the capacity and occupation of each division, the production manager can modify manually the schedule in case needed)

Commented [AK45R44]: It is automatic

Commented [EA46]: Fix sentence!

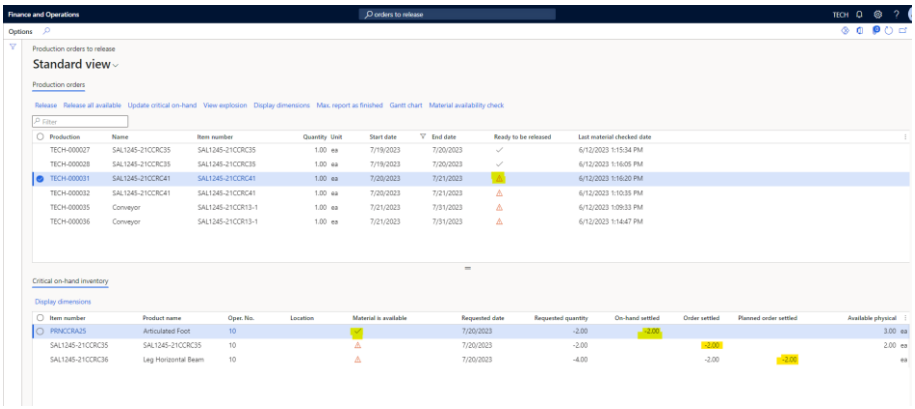
Commented [AK47R46]: done



2. The **Production order to Release** will allow the production manager or the assembly to check which of the production order has all necessary components(BOM) and is ready to be Released

Commented [GB48]: or assembly manager

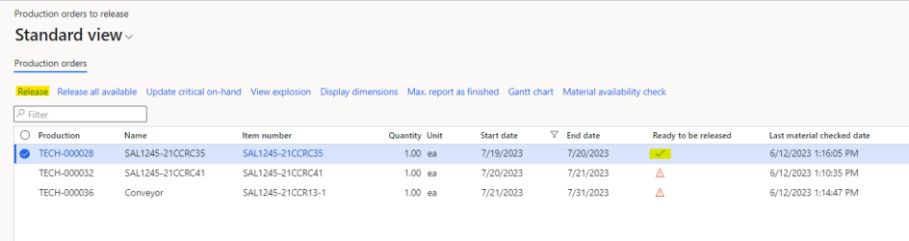
Commented [AK49R48]: Done



Production orders that are marked as ✓ , means that all necessary BOM are available and the production order can be released.

Production orders that are marked as ! mean that they have missing quantity and they can't be released; *in the above example, you will notice that the system will display which of the components can be covered by available ON-HAND quantity, Orders or Planned Orders*.

Once decided the production manager can release a production order



1.3.1.1 Requirements

ID	Description	Fit/Gap
PRD008-01	Ability to Release Production Orders	FIT
PRD008-02	Ability to check component availability	FIT

PRD009 – Resource Consumption

1.3.1.2 Process Overview

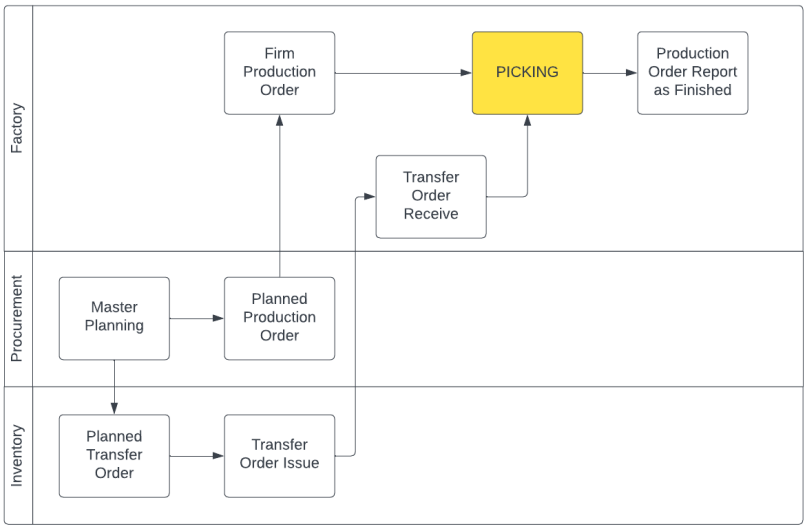


Figure 8 Production Resource Consumption

The consumption of resources happens once the production order is released and depending on the resource consumption of the route operation;

Commented [GB50]: (Not clear)

Commented [EA51]: Re-Work not included in the process

Commented [AK52R51]: Not related to Re-work

Commented [EA53]: What is "Planned Transact Order" in inventory section

Commented [AK54R53]: fixed

The warehouse will get planned transfer order to be executed **on specific delivery dates** from the master planning, once firmed they will issue the transfer order **on their respective dates** and it will be received by the factory in a specific location; once the production order is released, the pick journal will be posted and will consume the (the components or parts or material) quantity needed from the PICK location.

Commented [EA55]: Must mention the delivery of the receipt that will done on a specific planned date.

Commented [AK56R55]: done

Posting of item Consumption will be done automatically.

Whatever remains in the PICK location once production is complete, will be transferred back to inventory once the production orders are completed or these material, parts or components are not needed anymore.

Commented [GB57]: (Depend on the type of materials, for profiles the warehouse can directly issue a transfer order while for sheets he should get the requirements form laser team)

Commented [AK58R57]: Done

Transfer orders can also be created manually (not through the master planning functionality) by the warehouse department from the Main warehouse to the Manufacturing Warehouse; the transfer order issue is executed by the warehouse while the transfer order receiving is executed by the Manufacturing department.

1.3.1.1 Requirements

ID	Description	Fit/Gap
PRD009-01	The warehouse transfer goods to the factory picking area were the factory pick the need good in their manufacturing process	FIT
PRD009-02	Factory return the remaining goods to picking area	FIT

PRD010 – Splitting Production Order

1.3.1.2 Process Overview

Splitting of production order was a common practice in the legacy process for the production manager to manage production order,

But on F&O this will not be necessary as the production manager can release quantity less the total of the production order and track the remaining;

The only reason we are addressing this scenario is because Technica used to get production orders with certain quantity (QTY 3) and for business and production reasons they decide to release partially less than that, in this situation the best practice is to update the production order quantity to the desired quantity and estimate and release it so that the Production order quantity will be equal to the produced quantity.

Commented [GB59]: Not clear, we have to clarify how the tracking is done in case of splitting (because two separate orders are being executed in the factory and each one has its own progress)

Commented [AK60R59]: done

In all cases if splitting a production order is needed, then a production order can be split automatically or manually, then the production manager can track two separate production orders with two separate delivery dates.

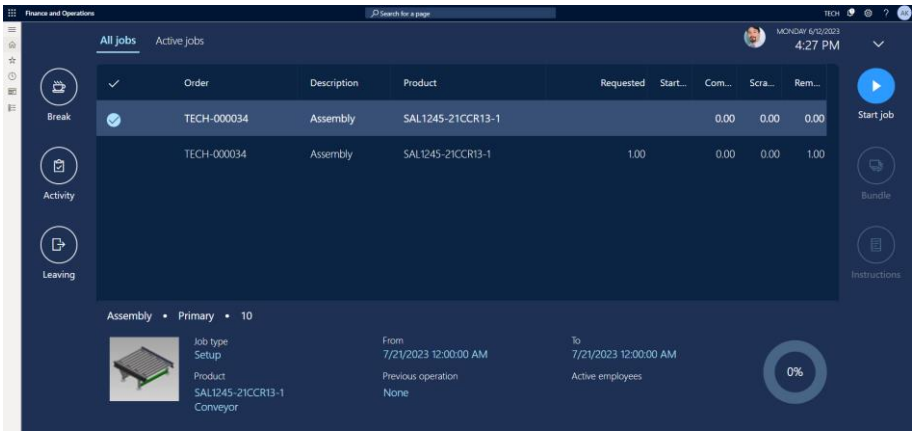
1.3.1.3 Requirements

ID	Description	Fit/Gap
PRD009-01	Ability to split production orders	FIT

PRD011 – Shop Floor Execution

1.3.1.4 Process Overview

Once a production order is released the jobs (cutting, bending, drilling, welding…etc) in the route will be tracked on the shop floor application; this application will allow each resource to know which jobs he/she has and when to execute



Each job will be started by the responsible for each operation and ended once the job is done in order to track the time consumed to execute a specific job; jobs can't be updated, deleted or changed while the production order is in progress however a production order route or bill of material can be updated (line deleted, added) if the production order status is still in status Created.

Commented [EA61]: Must define jobs (is it one or a group of tasks?)

Commented [AK62R61]: Group of tasks depending on the route

Commented [EA63]: Can we update, delete change any job? Must explain more.

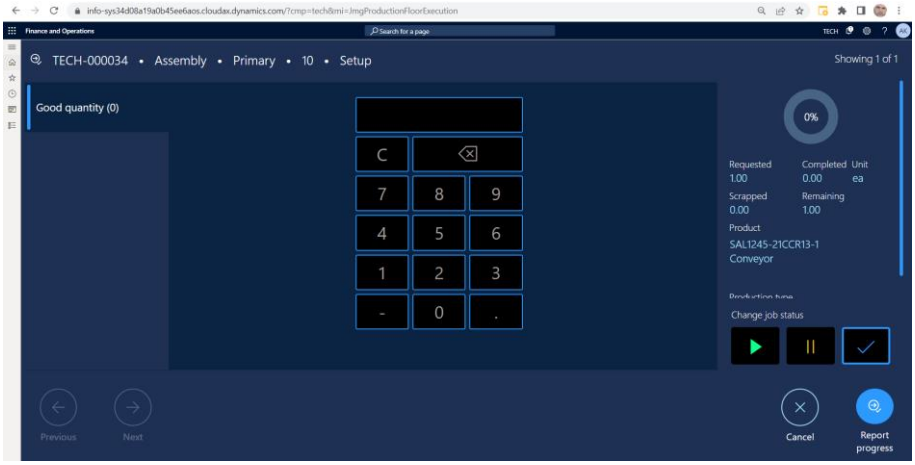
Commented [AK64R63]: done

Commented [GB65]: (Notification should be sent to the responsible team leader in case the execution time exceeded the estimated one, and the notification shouldn't disappear unless a reason is added)

Commented [AK66R65]: Mentioned as GAP

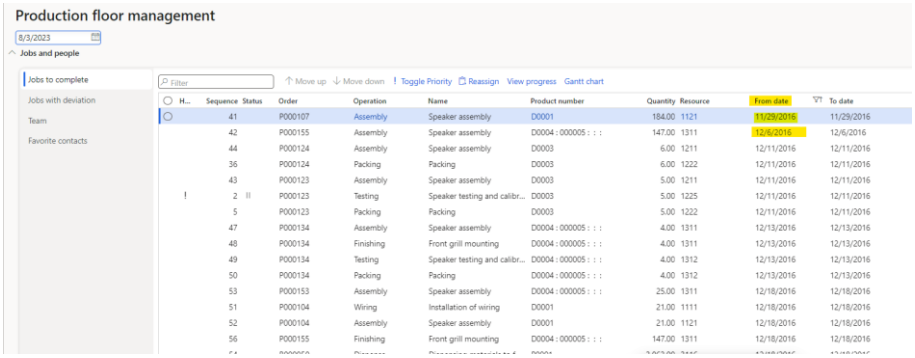
Commented [AK67R65]: Mention GAP or Screen in document

Commented [AK68R65]: Suggested workaround p 22 & 23

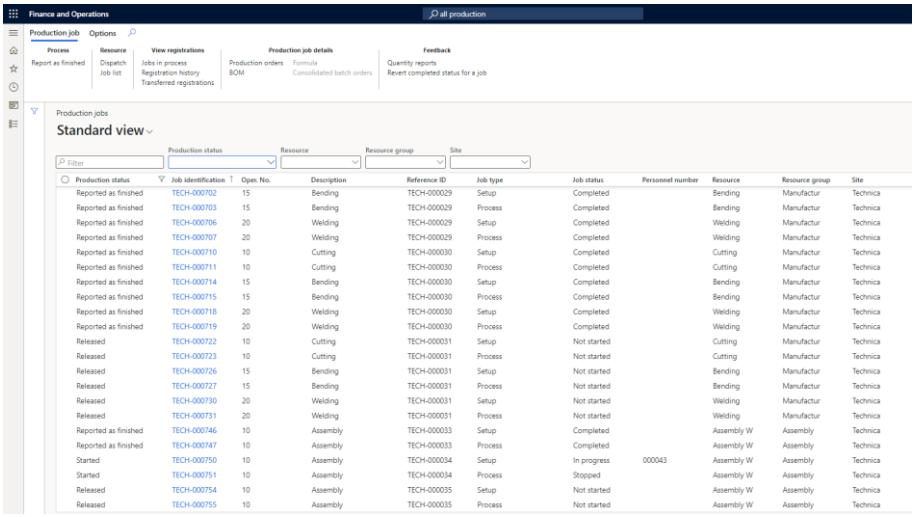


There is no notification sent to the responsible if a job exceeded the expected execution time however the team leader can check the Production Floor Management screen where he can track the jobs that are still open. *Technica want to be able to track the estimated time v/s the actual time to assist at the level of each production operation to assist the team leader to determine whether a operation is on track or going overboard in terms of effort.*

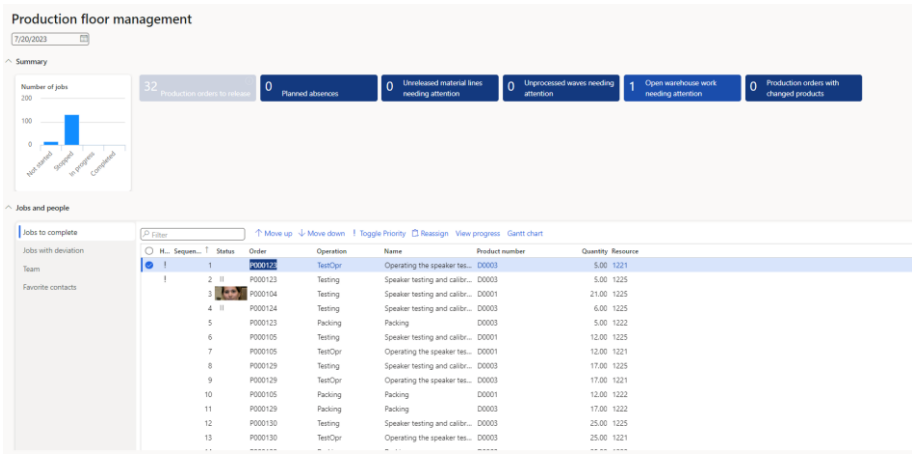
Commented [AK69]: Ability to track Estimated vs actual



Also, the production manager can track the jobs in progress from the Production Jobs inquiry



The Production manager can also check the Production floor Management workspace to track each project status, which operation it is at and which resource is assigned to it



1.3.1.5 Requirements

ID	Description	Fit/Gap
PRD010-01	Ability to track production orders execution jobs	FIT

PRD010-02	Notification should be sent to the responsible team leader in case the execution time exceeded the estimated one, and the notification shouldn't disappear unless a reason is added	GAP
PRD010-03	Ability to track Estimate v/s actual operation time	GAP

PRD012 – Report As Finished

1.3.1.6 Process Overview

Once all the jobs are completed for a production order, it's status will be *automatically* updated to **Reported as Finished**. At this time the inventory for the item produced would be increased.

Once the Parts are produced, the factory can assign whichever put-away location they need.

1.3.1.7 Requirements

ID	Description	Fit/Gap
PRD011-01	Ability to track quantity reported as finished	FIT

PRD013 – Non-Conformities

1.3.1.8 Process Overview

The production floor detects non-conformities and Reports them as Bad Quantity. Bad quantities will carry the cost of the items already consumed until they are scrapped.

Commented [EA70]: Explanation required of what will happen.
How to produce? What happens to cost already consumed?

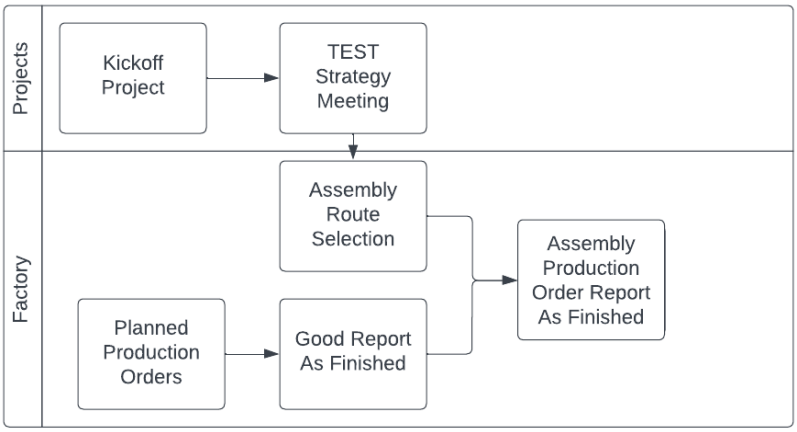
As Rework, the WBS needs to be updated to include a new activity on the existing WBS, and add an activity as Re-work, this activity will be pushed to CAD through the integration, so that when the re-drawing is done, it can be re-integrated to this specific line. *The re-work can be scheduled manually or automatically as the production manager will decide what to do next based on their action plan.*

Commented [GB71]: (How the non-conformities are detected, reported and re-released through the system)
How the revised drawings from engineers will be managed through the system (as sometimes it could be completely new part and sometimes a modification on old one)

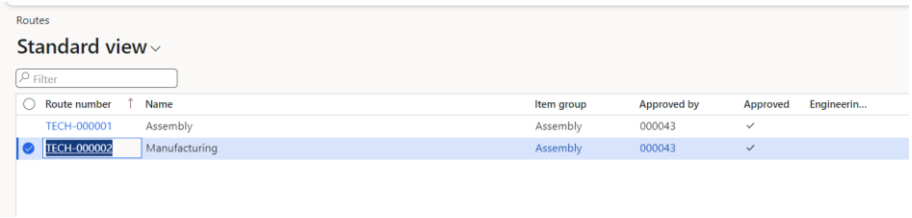
ID	Description	Fit/Gap
PRD012-01	Ability to track bad quantity	FIT

PRD014 – Assembly

1.3.1.9 Process Overview



Once the project is kicked off , the projects department initiate the Test Strategy meeting which will determine the route for the assembly production order; once determined the Assembly Manager can update the Production Order route from the existing routes on F&O on the Production order



on a related note once manufacturing of all components is ready, the Assembly production order can be executed.

The scheduling of the assembly production needs to be done manually by the assembly manager.

In case of any re-work during the assembly process, a new activity in the WBS is added and once the drawing is redone, then the integration is run-again on the re-work activity and the new BOM lines are imported, then the new production order can be either generated manually or through master planning engine,

Commented [EA72]: Re-work must be included in assembling process

Commented [AK73R72]: Rework During Assembly Process???

Commented [AK74R72]: added

Commented [GB75]: The link between the assembly orders and the manufacturing orders is not clear.
Shelf number should be added to the system to identify the location of the finished parts in stock
Assembly can start before completing all the manufacturing parts (point discussed during the process review meeting)

Commented [AK76R75]: Added in PRD012

Currently the test reports of standard assemblies can't be generated automatically by the system and would require customization,

1.3.1.10 Requirements

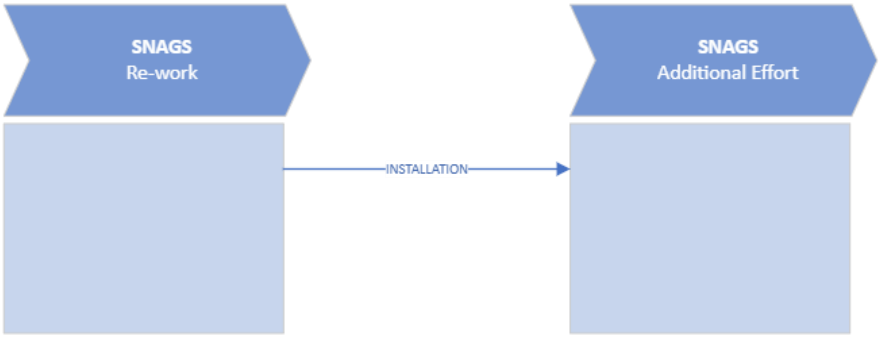
ID	Description	Fit/Gap
PRD013-01	Percentage of Completion on Assembly has to be manual	GAP
PRD013-02	Generate Test Report of Standard assemblies	

Commented [GB77]: Scheduling of assembly activities should be done manually

Commented [AK78R77]: Done

PRD015 – SNAGS

1.3.1.11 Process Overview



Snags happen all the time during the project lifecycle; all snags that occur before installation will be considered as re-work; Snags will be recorded in the case management and they will follow the appropriate workflow. Technica differentiate between two types of re-work; re-work that happens before manufacturing is initiated and after; Before manufacturing any recurring work on drawing is considered a re-work whereas after execution , then this is considered a SNAG.

Before Execution:

- As mentioned all Re-work before execution, means there is extra effort that is placed on the same WBS activity in terms of timesheet and the BOM lines are re-integrated again

After execution

- As for any re-work that is after execution in a SNAG, there is definitely going to be extra effort that will be covered by Timesheet for any extra effort, not to mention that if the line is already invoiced that a new line in the WBS need to be added called SNAG in order to track this task

Technica will provide the workflow steps during the implementation phase.

During the snag case lifecycle, the snag activity will be added on the WBS in order to track whatever cost or effort is assigned on it.

any kind of SNAG needs to be reflected in the WBS, so efforts will be collected in timesheets, under a category called “SNAGS” which allow tracking all efforts and cost that might arise , in addition, the production order will have their own production order group called “SNAG” which allow further tracking in the production cycle.

Commented [GB79]: We have to segregate between manufacturing and design snags (the re-work should be calculated separately for each department.
Snags detected during assembly could be released as revision or new parts (but in both cases the time registered to execute should be considered as re-work)

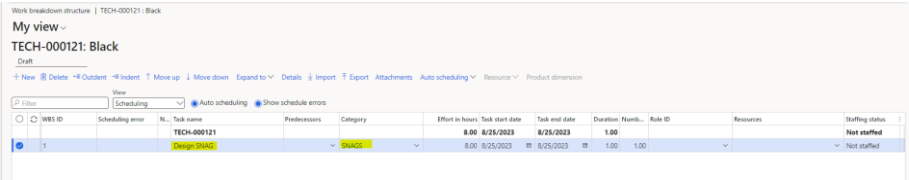
Commented [AK80R79]: Refer SNAG to Engineering Change Request in R&D FRD

Commented [AK81R79]: Differentiate between type of Re-WORK

Commented [AK82R79]: Done

Commented [EA83]: Not enough information. Very weak!! The whole process of revision coming from snags is not mentioned.

The factory need to segregate between manufacturing and design snags; in order to do that whenever there is a snag, a new activity is added on the WBS with a category SNAG Design which allows them to track cost for this and all snags.



Snags detected during assembly could be released as revision or new part if needed; but in both cases, time is registered against the SNAG category to track it's cost in timesheets.

1.3.1.12 Requirements

ID	Description	Fit/Gap
PRD014-01	Ability to track SNAGS	FIT

Setup

1.3.1.13 Production Control Parameters

Reservation of material will done once the production order is scheduled,

Require Full Reservation : Definition

in addition the "Require Full Reservation" parameter will be set to TRUE so as to prevent any partial reservation to any production order. *If this parameter is set, then order lines can only be released when the entire quantity is reserved. If the total quantity is neither physically reserved nor planned for cross-docking, the order lines cannot be released.*

As for the Purchase orders reservation will occur as soon as the Purchase order receiving is done

Commented [EA84]: Must specify reservation of what?

Commented [AK85R84]: This Is a general parameter for reservation, we added this specifically to cater to the requirement that unless all components are ready not to reserve

Commented [AK86R84]: Add definition

Commented [AK87R84]: done

Commented [EA88]: To mention if reservation is done automatically and for what type?
Define full reservation.

Commented [AK89R88]: Production Reservation in General

Commented [GB90]: Not clear

1.3.1.14 Calendar

Technica will use the following calendar for capacity planning for the weekdays and weekend's are off

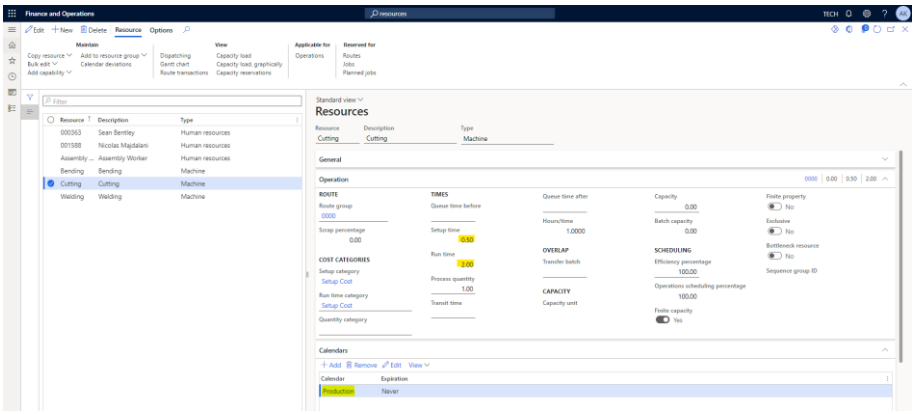
WeekDays	FROM	TO
Working Time	8:00	10:00
Break	10:00	10:10
Working Time	10:10	12:30
Break	12:30	13:00
Working Time	13:00	15:00
Break	15:00	15:10
Working Time	15:10	17:00

1.3.1.15 Requirements

ID	Description	Fit/Gap
PRD016-01	Ability to maintain working hours	FIT

1.3.1.1 Resources

A resource can be a Machine, Human Resource, Vendor, Tool, Location or Facility;



The resources will be provided by Technica during the migration phase;

The team leader will be defined in the resource pool in order to track the team leader capacity any resource including the Team leader can have it's own calendar so managing resource time and capacity can be done per resource per day.

Commented [GB91]: (Capacity of team leaders should be defined as percentage of his daily time, to be provided by Technica)

Commented [AK92R91]: To be checked by Technica

1.3.1.1.1 Requirements

ID	Description	Fit/Gap
PRD016-02	Ability to Maintain Resources	FIT
PRD016-03	Ability to define Team Leader as Resource	FIT

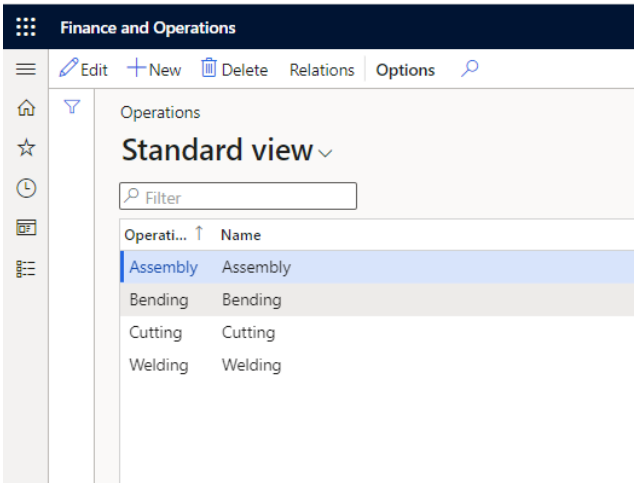
1.3.1.2 Warehouses

Technica will use the below Warehouse Structure

ID	Warehouses	Site
1000	Main Warehouse	Technica International
1001	Manufacturing In	Technica International
1002	Manufacturing Out	Technica International
2001	Assembly In	Technica International
2002	Assembly Out	Technica International

1.3.1.1 Operations

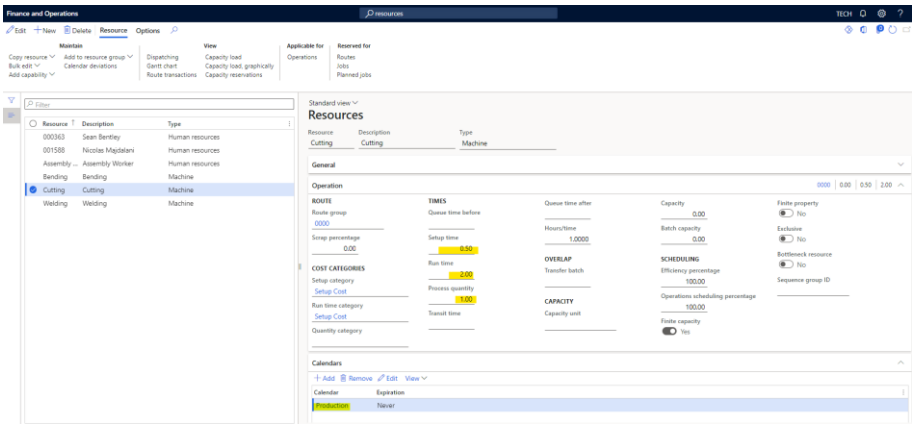
The operations are the activities that will be used in the route, each operation will be assigned a resource; Technica will provide these operations during the migration phase.



1.3.1.2 Capacity

Technica need to be able to track all resource capacity; to do that the Setup and Run Time needs to be setup per resource as well as the production calendar (mentioned in section 1.3.1.14)

- Setup Time will be the time needed for the resource to be setup in order to start producing
- Run Time will be the time needed for the resource to run and produced the desired quantity



Technica will provide the resource list during the migration phase

1.3.1.3 GAP

Capture setup time per resource; same item with different variant could need different setup time; The same goes for the execution time, which could be different; the execution or process time has to be related to the family of production

Commented [GB93]: (Not clear)

Commented [AK94R93]: During analysis with manufacturing

Commented [AK95R93]: Check workaround , check if attribute from CAD can identify the item family

1.3.1.4 Requirements

ID	Description	Fit/Gap
PRD001	Ability to check capacity on resources	FIT
PRD00	Setup time for same item can have different time	GAP

DOCUMENT APPROVALS

I have reviewed the information contained in this document and approved it through by sign off below:

Name	Department	Date	Signature

Comments:

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The specifications and conditions are hereby accepted. Info-Sys is authorized to execute the project as outlined in this document. This document is not valid until signed by the customer representative and returned to Info-Sys.

Signature: _____ Date: _____