

Functional Requirements Document- Project Accounting

Prepared for
Technica International

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Table of Content

Contents

1. Introduction.....	2
1.1 Purpose.....	2
1.2 Acronyms.....	2
1.3 Project Setup.....	3
Project Group	3
Project Category	4
Project Stages	4
2. Business Processes List	6
2.1. Processes List.....	6
3. Business Processes.....	7
3.1. PJ001 Project Planning.....	8
Process Diagram	8
Process Overview	8
Requirements	28
3.2. PJ002 Project Execution.....	29
Process Diagram	29
Process Overview	29
Requirements	37
3.3. PJ003 Project Milestone Invoice Proposal	38
Process Diagram	38
Process Overview	38
Requirements	43
3.4. PJ004 Project Estimates / Accrued Revenue Calculation.....	44
Process Diagram	44
Process Overview	44
Requirements	46

1. 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.

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 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 focus on Project Management Requirements.

1.2 Acronyms

Abbreviation	Explanation
TI	Technica International
FRD	Functional Requirement Document
System	Dynamics 365
HOD	Head of Department
GM	General Manager
PO	Purchase Order
WBS	Work Breakdown Structure

1.3 Project Setup

Project Group

Project Group defines the posting accounts for cost transactions. Technica will have 1 Project Group "Fixed Price" which will be created, and Costing Accounts will be defined under it **(Accounts details will be taken during migration phase)**.

Groups will be used also to Categorize fixed price Projects type

Standard view ▾
Project groups

Project group Name
FP_CompD Fixed price - Percentage compl...

General

Project type Fixed-price
Ledger posting search priority Category
Line property search priority Category
Default line property Billable
Verify cost against remaining forecast No

Ledgeer

Post costs - hour Balance
Post costs - expense Balance
Post costs - item Balance
Post costs - on-account invoicing Balance
Accrue revenue - hour No
Accrue revenue - expense No
Accrue revenue - item No
Accrue revenue - fee No

Estimate

Cost accounts

Revenue accounts

Invoiced revenue 411200
Invoiced revenue - on-account
Accrued revenue - on-account
WIP - Invoiced - on-account
Accrued revenue - sales value 160600
WIP - sales value
Accrued revenue - production
WIP - production
Accrued revenue - profit
WIP - profit

Figure 0 – Project Group

- A. This is to elaborate why we are using project groups even if the project type is already defined as fixed price and for what purpose:
- For hour, expense, item, and on-account transactions, you can choose to post transactions to either Profit and loss or Balance accounts. In certain cases, you can also choose not to post hour transactions.
 - Every project must belong to a project group. Therefore, you must set up at least one project group when you do the setup.
 - After you set up a project group in the Project groups form and select its project type, you can specify several default settings for it. These settings include transaction line properties, on-account invoice posting, journalizing, and cost and revenue accounts.
 - The primary purpose for assigning projects to groups is to control how posting to general ledger accounts is set up. For Fixed-price projects, the project groups also specify a cost template, which controls estimate costs, and a period code, which determines how frequently estimates are calculated for projects that are associated with the project group.

N.B: During migration phase, we will collect all the above data from Technica.

Project Category

In Microsoft Dynamics 365 for Finance, project categories define the types of costs that will come from projects within an organization. All project transactions must be defined by a specific project category. Setting up project categories is essential to using Microsoft Dynamics 365's project management functionality.

A category group is a mandatory field in the project category setup. Category groups, as the name implies, separate project categories into groups based on what kind of transaction the category will define. You can create category groups for hour, expense, fee, or item transactions. Category groups can also define what accounts costs will post to – or this can be set up on individual project categories.

Technica will use 4 category groups:

- Labour
- Item
- Expenses
- Fee

Info-sys will be waiting from Technica list of the project category (Need to be collected during migration phase). Every activity or sub-activity can have all the expected categories.

The screenshot displays the 'Project categories' configuration page in Microsoft Dynamics 365. The left-hand navigation pane lists various project categories, with 'Electrical' selected. The main content area shows the configuration for the 'Electrical' category. The 'Category ID' is 'Electrical' and the 'Category name' is 'Electrical'. The 'Usage' section has 'Use in Expense' and 'Use in Production' both set to 'No'. The 'Project' section has 'Item sales tax group' set to 'Never', 'Revenue recognition' set to 'No', 'Indirect cost component' set to 'No', and 'Active in journals' set to 'Yes'. The 'Cost accounts' section has 'Cost' set to 'WIP - cost value - Item', 'Payroll allocation' set to 'WIP - cost value - Item', 'WIP - cost value' set to 'WIP - cost value - Item', 'Cost - item' set to 'WIP - cost value - Item', and 'WIP - cost value - item' set to 'WIP - cost value - item'. The 'Default line property' is set to 'Eligible'.

Figure 1 - Project Category

Project Stages

Every stage in this project, allows certain action to be taken. For example, in creation phase, Journals are not allowed to be created. For stage "On-Hold", accounting team will be responsible of this stage as requested by finance manager.

Below are the Project Stages that will be used for Project and are subjected to change anytime:

- Created
- On-Hold
- In Process
- Finished

Below are the stages setup from where you can add or modify existing stage.

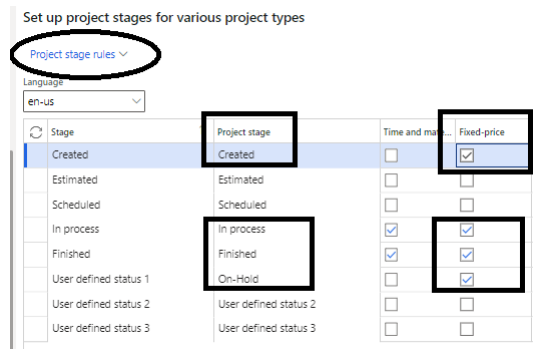


Figure 2 – Project Stage Setup

Once you click on project stage rules you will be able to assign for every selected stage, an action to be taken. See below:

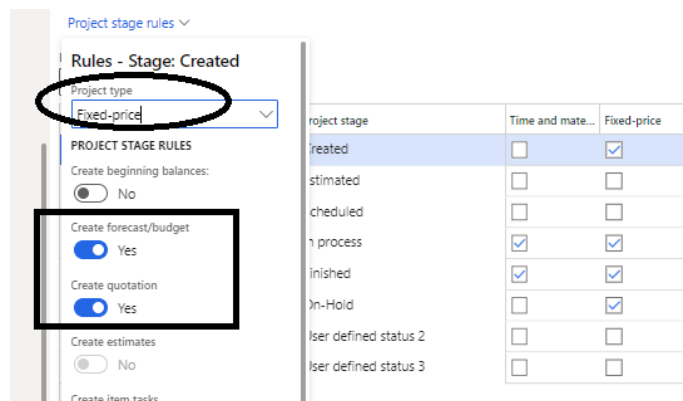


Figure 3 – Project Stage Rules setup

- As illustrated, user can update the action by project type by stage. Example: Stage created, only allow to create forecast/budget, and create quotation.
- For on-hold, all actions will be blocked. Nothing can be passed or created.

2. Business Processes List

2.1. Processes List

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

Process ID	Name	Description
PJ001	Project Planning	Project Preparation (Initial phase)
PJ002	Project Execution	Process for Project Execution
PJ003	Project Milestone Invoice Proposal	Issuance of completed Milestones Invoices
PJ004	Project Estimates / Accrued Revenue Calculation	Project Estimates calculating project percentage of completion and the Accrued Revenue per period

3. Business Processes

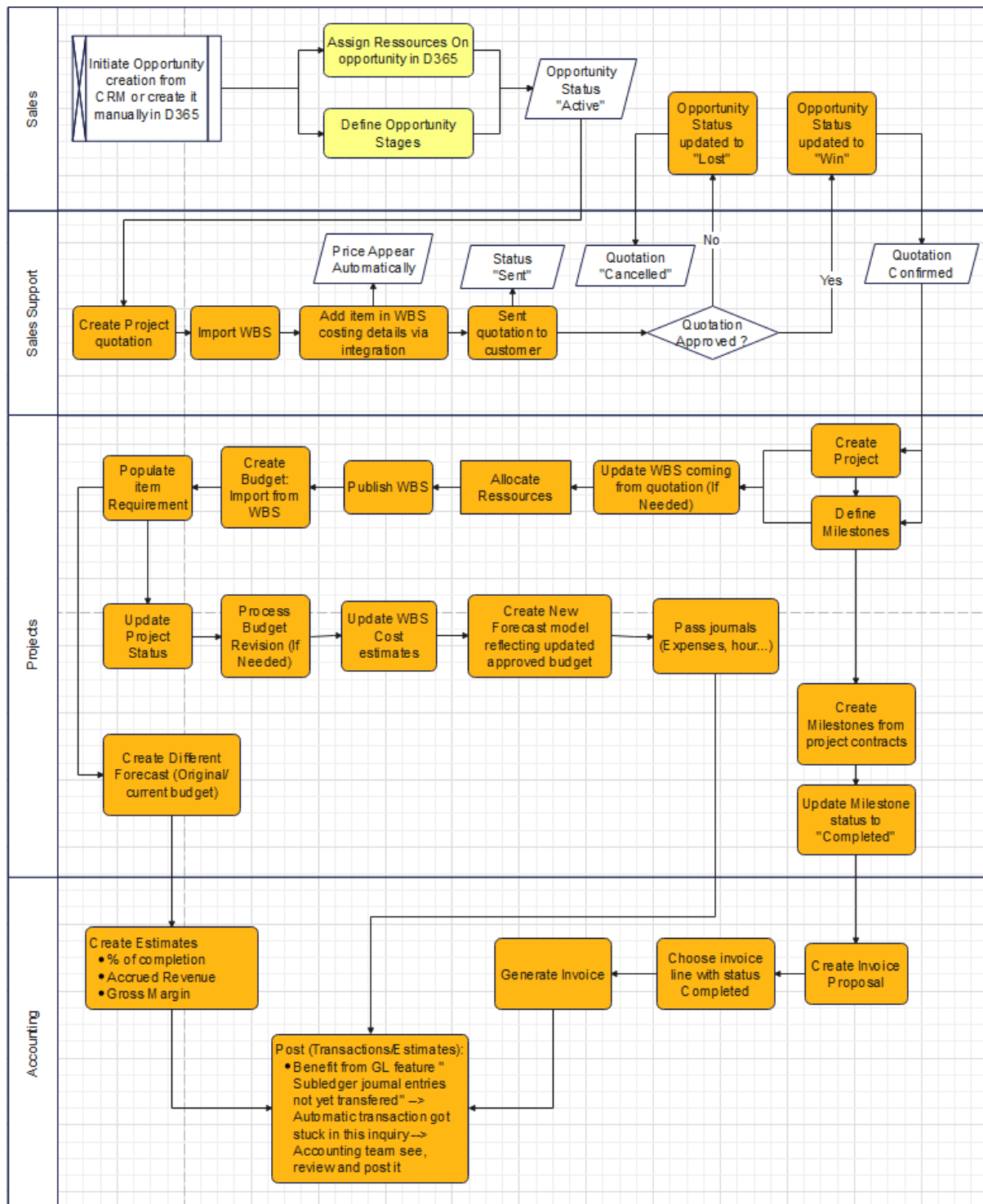


Figure 4 – Business Processes Diagram

3.1. PJ001 Project Planning

Process Diagram

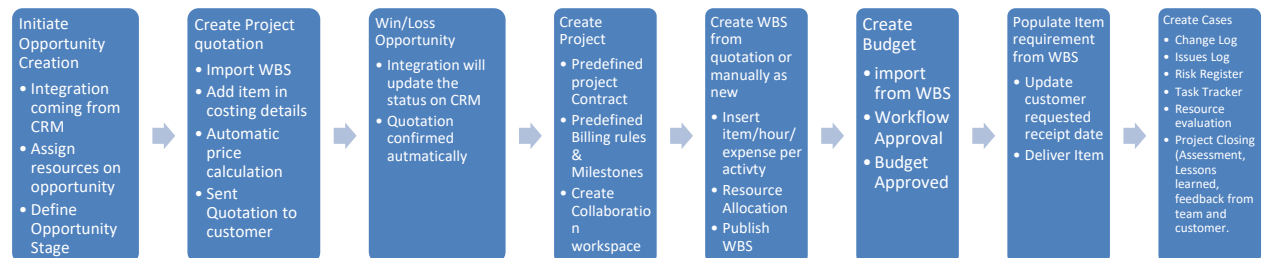


Figure 5 – Project Planning Process

Process Overview

Proposed Process Flow

1. Automatic Opportunity Creation Via Integration

Opportunities are created automatically in D365 coming from CRM via 2 ways integration ("In" for creating opportunity and "out" via updating the status of opportunity in CRM from D365 once the opportunity is won or loss (Also it can be created manually).

- A. Opportunity ID number will be brought from CRM, and we will follow the same sequence on the D365 F&O.
- ~~B. Also, we will keep the automatic next number sequence in D365 active, just in case Technica wanted to create opportunities directly from D365.~~

All opportunities | Standard view

CRM-006 : Empty Bottle Handling Machines

General

OPPORTUNITY

Opportunity ID: CRM-006

Subject: Empty Bottle Handling Machines

Name: Master Chips

Status: Active

Owner: [Dropdown]

ESTIMATE

Estimated revenue: 0.00

SOURCE

Source type: [Dropdown]

Source ID: [Dropdown]

Notes: [Text Area]

Figure 6 – All opportunities form

- C. Assign resources on opportunity:
 - In the Process tab in the header: There is something called "sales process" & "Change stage". Both will be activated if we create the related stages. We will create 1 process for example, and we will name "Sales Support". Within this template there

will be different stages. As follows (Qualify, Feasibility, Capex, Comparison, Negotiation):

The screenshot shows the 'SalesProcess' form for 'Stage 1 - Qualify'. The form includes a sidebar with a list of stages: Stage 1 - Qualify, Stage 2 - Feasibility, Stage 3 - Capex, Stage 4 - Comparison, and Stage 5 - Negotiation. The main form area has a 'General' section with fields for 'Calculated start in (days)', 'Start time', 'End time', 'Responsibility', and 'Notes'. Below this is an 'Exit criteria' section with a 'Where' clause and a 'PRE-DEFINED' section for checking required activities.

Figure 7 – Opportunities Stages template

- As you can see even in every stage there will be a responsible person, estimated revenue, notes,
- Every stage will be created as an activity. So, if you go to screen “All activities” you can add more details:

The screenshot shows the 'All Activities' screen for 'Stage 1 - Qualify'. The form is divided into several sections: 'General' (including 'IDENTIFICATION' and 'RECURRING'), 'PERSONNEL' (including 'Responsibility' and 'Responsible'), 'REMINDER' (including 'Reminder' and 'Reminder minutes'), and 'DESCRIPTION' (including a rich text editor). Below these sections is a 'Details' section with fields for 'Billing information', 'Completed percentage', 'Message', 'Microsoft Outlook categories', 'Rule', 'Sensitivity', 'Team task', and 'Response requested'.

Figure 8 – All Activities screen

- o So, after doing the setup of the stage, which is a onetime setup, we can add it to the related opportunity:

The screenshot shows the 'Change stage' dialog box. The dialog has a title bar with 'Opportunity', 'General', and 'Options' tabs. The 'General' tab is selected, and the 'Change stage' section is active. The dialog contains a table with columns 'Status' and 'Name'. The table lists the following stages: 'Stage 1 - Qualify' (Status: Started), 'Stage 2 - Feasibility' (Status: Not started), 'Stage 3 - Capex' (Status: Not started), 'Stage 4 - Comparison' (Status: Not started), and 'Stage 5 - Negotiation' (Status: Not started). An 'OK' button is located at the bottom of the dialog.

Figure 9 – Opportunity available stages

2. Project Quotation Creation

- A. Sales support meantime prepare a quotation and collaborate with engineers in parallel and drawings are being issued.
- B. Meantime, communication with R&D are done as they need to check which technology to proceed with it or if its available.
- C. At the end, quotation is issued to the customer from D365 F&O as shown in the below steps:
 - From the related opportunity in D365 F&O, create project quotation with the related references, currencies but without project ID as it will not be created in this stage since the quotation are not yet confirmed (Deal not signed yet since sales team are negotiating the offer with the customer so obviously the opportunity still not won.

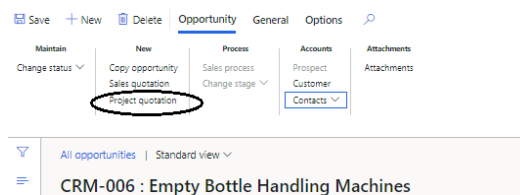


Figure 10 – All opportunities create quotation

- Quotation is created with a status "Created".

A screenshot of the 'Create Quotation' form in Microsoft Dynamics 365 Finance & Operations. The form is titled 'General' and includes a 'TECH-000021 | USD' header. It is divided into several sections: 'SALES QUOTATION' with fields for 'Quotation' (TECH-000021), 'Quotation type' (Project quotation), 'Source code', and 'Invoice account' (1000); 'REFERENCES' with fields for 'Customer requisition', 'Customer reference', 'Opportunity ID' (CRM-006), and 'Project ID'; 'EXPIRATION DATE' with a date field set to 31/12/2023; and 'CURRENCY' with a dropdown set to USD.

Figure 11 – Create Quotation

- D. Within the quotation screen, WBS will be imported from a readymade template (WBS will be created automatically to register different Project Activities (with due dates to follow up later regarding Project Progress). Technica will have many templates that will be migrated later during migration phase:

A screenshot of the 'Project Quotation screen' in Microsoft Dynamics 365 Finance & Operations. The interface shows a top navigation bar with 'Save', '+ New', and 'Delete' buttons. Below this is a 'Maintain' section with a 'Work breakdown structure' button highlighted by a red circle. The 'Copy' section contains 'From all' and 'Totals' buttons. The 'View' section contains 'Estimates' and 'Estimates' buttons. Below the navigation bar, the list shows 'Project quotation' in 'Standard view' and a specific quotation 'TECH-000021 : 1000 - Master Chips'. The main area displays the 'Project quotation header' with fields for 'DELIVERY ADDRESS' (Name: Master Chips, Postal address), 'ESTIMATED DATE' (Calendar: Production, Estimated project start date), and 'DESCRIPTION' (Internal notes).

Figure 12 – Project Quotation screen

- i. Below screen shows how the process of importing an existing template will be:

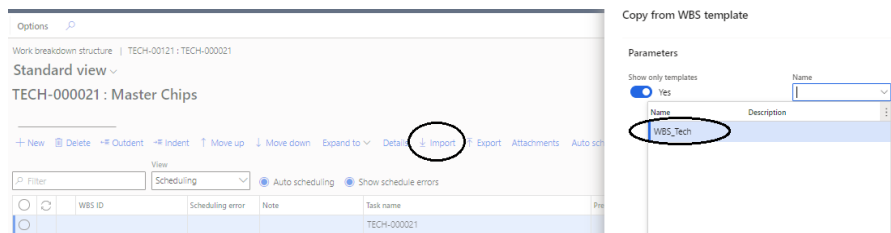


Figure 13 – WBS scheduling view importing WBS Template

- ii. Below is a sample of an existing imported template of Technica's.

WBS ID	Task name	Predecessors	Category	Effort in hours	Task start date	Task end date	Duration
TECH-000021	Initiation			1,399.00	19/06/2023	17/07/2023	21.
2	Execution	1		56.00	19/06/2023	27/06/2023	7.
2.1	Layout Engineering			1,055.00	19/06/2023	17/07/2023	21.
2.2	Design			104.00	28/06/2023	14/07/2023	13.
2.3	Manufacturing			304.00	19/06/2023	07/07/2023	15.
2.4	Material Delivery			96.00	30/06/2023	17/07/2023	12.
2.5	Assembly			64.00	19/06/2023	28/06/2023	8.
2.5.1	EPMC			128.00	19/06/2023	22/06/2023	4.
2.5.2	EPMA			24.00	19/06/2023	21/06/2023	3.
2.5.3	EPMB			32.00	19/06/2023	22/06/2023	4.
2.5.3.1	Mechanical		Efforts	8.00	19/06/2023	19/06/2023	1.
2.5.3.2	Cable Wiring	2.5.3.1	Efforts	8.00	20/06/2023	20/06/2023	1.
2.5.3.3	Electrical Panel	2.5.3.2	Efforts	8.00	21/06/2023	21/06/2023	1.

Figure 14 – WBS with scheduling view

- E. In every activity created, the team can assign items, expenses, hour.
- In WBS Scheduling view, select the activity/task line and click on **"Details"**.

WBS ID	Task name	Predecessors	Category	Effort in hours	Task start date	Task end date	Duration	Number of res...	Role ID
2.5.2.3	Electrical Panel	2.5.2.2	Efforts	8.00	21/06/2023	21/06/2023	1.00	1.00	
2.5.2.4	Packing	2.5.2.3	Efforts	8.00	22/06/2023	22/06/2023	1.00	1.00	
2.5.3	EPMB			32.00	19/06/2023	22/06/2023	4.00	1.00	
2.5.3.1	Mechanical		Efforts	8.00	19/06/2023	19/06/2023	1.00	1.00	
2.5.3.2	Cable Wiring	2.5.3.1	Efforts	8.00	20/06/2023	20/06/2023	1.00	1.00	
2.5.3.3	Electrical Panel	2.5.3.2	Efforts	8.00	21/06/2023	21/06/2023	1.00	1.00	
2.5.3.4	Packing	2.5.3.3	Efforts	8.00	22/06/2023	22/06/2023	1.00	1.00	

Figure 15 – WBS Scheduling Views (Insert Cost Details)

- Technica team will add the below data (Via integration from CAD system → WBS will be sent to CAD with the related activity number then the CAD will fill the related item... and send it back to D365):
 - Transaction Type: Item, Hour, Expense.
 - Project category: Will show related category of item, hour or expenses depends on what you chose in the transaction type.

- Every type created or category created will have a resource assigned to it, Role ID.
- Same transaction type, same project category might be created twice (This is doable), but every line will have different resource assign to it with its unique prices (Price details by resource will be elaborated in detail in the Resource allocation section).
- As for the item cost/price please refer to sales support FRD for price calculation (under section Assembly cost & selling price calculation):
 - Technica get the price of sales support based on a BOM that doesn't exist. They assume that it exists based on history and calculation of a study (best practice). Sales support do the configuration.
 - i. We will not use the product configurator.

Line details for Electrical Panel

Activity number	Notes	TASK SCHEDULING	RESOURCE SCHEDULING	SUMMARY PRICE ESTIMATES	TASK CATEGORY
TECH-000082		Effort in hours: 8.00 Number of resources: 1.00 Task start date: 21/06/2023 Task end date: 21/06/2023 Duration: 1.00	Staffed hours: 8.00 Unstaffed hours: 8.00 Staffing status: Not started	Summary sales estimate: 20,252.00 Summary cost estimate: 5,036.00	Category: Efforts Restrict activity category: No

Estimated costs and revenue

Transaction type	Description	Project category	Role ID	Quantity	Unit cost price	Unit sales price	Total cost price	Total sales price	Item number	Sales category	Line property
Hour	Efforts	Efforts		8.00	100.00	1,800.00	800.00	14,400.00			Billable
Expense	Flights	Flight		1.00	150.00	250.00	150.00	250.00			Billable
Item	Conveyor	Item		1.00	4,386.00	5,602.00	4,086.00	5,602.00	SAL1245...		Billable

Figure 16 – WBS Cost Details

- F. Once WBS is completed, go back to quotation page in the "Lines" section and click on generate "Create quotation lines from WBS".

Project quotation | CRM-006 : EMPTY BOTTLE HANDLING MACHINES | Standard view

TECH-000021 : 1000 - Master Chips

Name: Master Chips
Postal address: [dropdown]
PROJECT: Project ID: [dropdown]
Transferred to forecast: No
Transferred to item requirement: No

Calendar: Production
Estimated project start date: 19/06/2023
Estimated project end date: 17/07/2023
Disregard the resources' calendar: No

Internal notes: [text area]
Notes: [text area]

Lines: [table with columns: Transaction type, Project category, Sales category, Item number, Resource]
+ Add line | Remove | Inventory | Product and supply | Update line | **Generate**

Context menu (circled): COPY, **Create quotation lines from WBS**, Copy from all, CALCULATE, Supplementary items, ATTACHMENTS, Attachments, DISPLAY, Display dimensions

Figure 17 – Project quotation Line

- Lines will be updated by all the items coming from WBS then submit workflow for approval (**Workflow details will be sent by Technica during migration phase**)

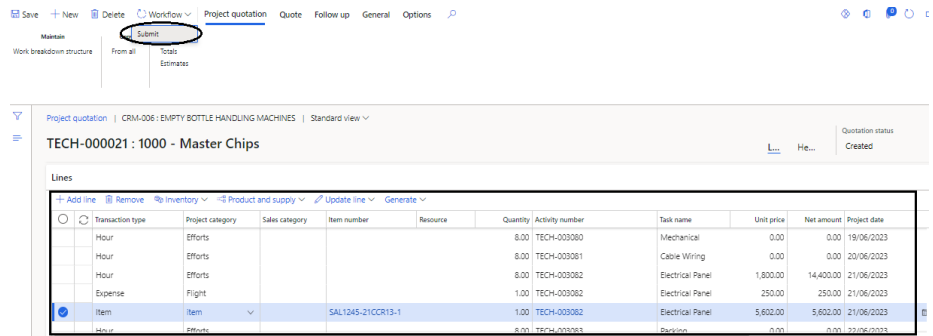


Figure 18 – Project Quotation lines (2)

- Workflow is for internal approval before sending the quotation to the customer. Once approved, the status will be changed to Approved → Then sent the quotation to customer.

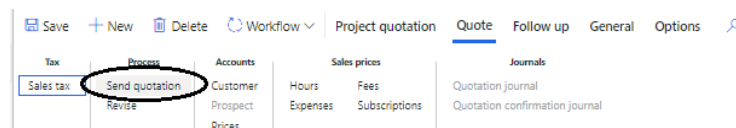


Figure 19 – Send quotation path.

- Once Rejected/Approved by the customer. The sales team will need to update the opportunity status. Or if it was rejected for the purpose of updating the quotation, then the sales team will have access also to update the quotation and send it back.

G. Opportunity Loss/Won

- If an opportunity is lost, the project quotation will be cancelled.
- If the opportunity is won, the project quotation will be confirmed and will be ready to create the related project. See below steps that was adopted by Technica:
 - Go to opportunity created and update status to "Win".
 - Once updated to "Win", Project quotation will be automatically updated to status "Confirmed".
 - But once the opportunity is "Lost" the project quotation will be "Cancelled".

H. Sales support team will create projects via the below wizard:

- In the "Follow up" tab in quotation **Technica** team will use the feature of "transfer to project" for creating the project automatically.

Figure 20 – Create Project Wizard.

- Technica team chose this option to create new project and to transfer quotation WBS to the created project as is. Later, the project team can update it if they want and the process will finish.

Figure 21 – Create Project Wizard (2)

- Project file location will be stored as well either by using the out of the box functionality or by using the functionality of “URL collaboration workspace” that is linked to a share point. So, you create an external share point and add it here:

Figure 22 – URL Collaboration Workspace

- Pre-Requirement: Project contract to be predefined by Sales support team. And later, once the project is created, project team will add the billing rules and milestones in it.
 - Milestone is per activity (**You can add them after budget approval**).
 - Retention (%) also can be one same percentage for all milestones. Or if Technica wants, we can create for every billing rule one milestone for one retention % (**You can add them after budget approval**).
 - Example shown below are only for activity out of all activity. So that for every activity it may be linked with a milestone.

Project contracts | Standard view

TECH-000068 : New Project for technica

General

IDENTIFICATION
 Project contract ID: TECH-000068
 Name: New Project for technica

Sales currency: USD
 Lock sales currency: Yes

Invoice frequency: Weekly
 Sales tax group:

Price group:
 Invoice template: PSARingInvoiceReport

INTEGRATION
 Integration source:

Billing rules
 + Add Remove Details

Billing rule	Billing rule type	Project	Unit	Quantity	Unit sales price	Contract value	Category	Fee percentage
TECH-00061	Milestone			0.00	0.00	22,812.00		0.00

Figure 23 - Project Contract

TECH-00061 : MILESTONES INVOICE BY ACTIVITY | Standard view

Billing rules
 Project contract ID: TECH-000068
 Billing rule: TECH-00061
 Line type: Milestone
 Description: Milestones invoice by activity

Billing rule line details

Quantity: 0.00
 Unit:
 Unit sales price: 0.00

Contract value: 22,812.00
 Change order number:
 Project:

Category:
 Fee percentage: 0.00

Include indirect costs: No
 Sales tax group:

Milestone
 + New Delete View details

Project date	Description	Project ID	Sales currency	Sales price	Activity	Invoice status
30/06/2023	MA1 Due date 30/06/2023	TECH-000110	USD	20,252.00	Electrical Panel	Chargeable
31/07/2023	MA2 Due date 31/07/2023	TECH-000110	USD	2,560.00	Cable Wiring	Chargeable

Total: 22,812.00
 2 rows

Figure 24 – Project Contract / Billing Rules (Milestones) Details

- Now, the project is created successfully, and the project team will be their responsibility to deliver the project starting the kick-off process till reaching the delivery.
- I.** In this phase, what we have mentioned above on adding item to the cost details in the project WBS, it can be updated in the project WBS by the project team which was moved automatically from project quotation (Refer to section e.ii.)
- Project team will make sure that all the WBS are now updated with the correct values, tasks, activity. and to publish it after assigning the needed resources (See next section).
 - Technica team confirmed that during the project life cycle, they might add within the same project another WBS as a 2nd section for freight charges for example and a specific category for them to be created as well.
 - There are additional charges like freight charges that will be brought in later stage to the project, but the project manager doesn't want this cost to be tracked on the original WBS template. So, we suggested to import another WBS template having only 1 line of activity including a tasks name "Freight charges". By this way, we will be able to track the additional cost on this project separately.

J. Resources Allocations & Cost/Prices

One challenge for project managers and resource managers during the project planning stage is resource allocation, where they must determine and reserve the correct resource to work on a project. In D365, resourcing capabilities for projects let you define roles that are treated as temporary resources that can be reserved for a specific engagement or part of an engagement:

1. Create Resources

- Go to the resource list in the project accounting module.
- Every worker in the company can be a resource but you must add it to the project management module otherwise it will not be considered as resource.

Resources list page | Standard view

Sean Bentley : 000363

Resource details

Resource name	Sales price	Calendar	Effective
Sean Bentley	0.00	Production	01/01/2021
Worker name	Cost price	Period types	To date
Sean Bentley	150.00		31/12/2154
Resource ID	Worker type	Title	Is schedulable
000363	Employee	Consultant	<input checked="" type="checkbox"/> Yes
Role ID	Source legal entity		
Electrical Eng		tech	

Figure 25 – Resources List page

- Technica will have same shared calendar across all function with working days except Saturday and Sunday. Unless resources are needed to work on weekends, this can be updated manually by resources (see below).

Working times | STANDARD | STANDARD

Standard view

Working days

Date	Day	Week	Month	Control	Closed for pickup
18/06/2023	Sunday	24	June	Open	<input type="checkbox"/>
19/06/2023	Monday	25	June	Open	<input type="checkbox"/>
20/06/2023	Tuesday	25	June	Open	<input type="checkbox"/>
21/06/2023	Wednesday	25	June	Open	<input type="checkbox"/>
22/06/2023	Thursday	25	June	Open	<input type="checkbox"/>
23/06/2023	Friday	25	June	Open	<input type="checkbox"/>
24/06/2023	Saturday	25	June	Open	<input type="checkbox"/>

Figure 26 – Project Calendar working time.

- Every resource needs to be assigned to a role (as illustrated example: Electrical Eng). 1 resource can have different roles with different expiry date (see below):

Resource default role | SEAN BENTLEY : 000363

Standard view

Filter

Effective	Expiration	Role ID
<input checked="" type="checkbox"/> 30/04/2023	30/04/2023	Engineer
<input type="checkbox"/> 01/05/2023	Never	Electrical Eng

Figure 27 – Project Resource default role by expiry date

e. Every resource as mentioned above can have a different role and every role assigned to him can have unique price and cost. Within the same screen there is setup for cost & price:

i. If there is no condition, resources will take the cost and price mentioned in the resource list.

ii. If there is condition, please find below path for it:

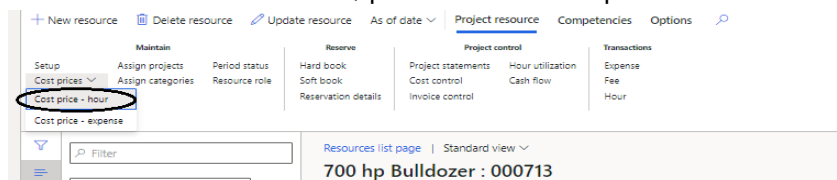


Figure 28 – Direction for Cost price-Hour setup

iii. Choose different combinations that lead to a specific cost for this resource. See below examples:

Cost price - hour | ALICE CIOU : HUMAN RESOURCES

Standard view

Filter

Effective date	Role ID	Effective labor	Customer account	Project contract ID	Category	Project ID	Price group	Cost price
18/06/2023	Project manager					00000778		300.00
17/06/2023								260.00
01/06/2023	Team member							150.00
01/01/2016					PM			200.00

Figure 29 – Cost price – Hour for resource

Sales price - hour | ALICE CIOU : HUMAN RESOURCES

Standard view

Filter

Table

Site	Role ID	Category	Resource	Valid for	Project ID	Project contract ID	Customer account	Price group	Sales currency	Sales price model	Pricing
323	Project manager		Alice C., 000349	USD	All				USD	Chp.	400.01
314		PM	Alice C., 000349	USD	All				USD	Chp.	350.00

Figure 30 – Sales price – Hour for resource

- The above means that we can identify different Labor cost in different activity even if they are the same resource. On resource level, you can do the setup of different combination (by effective date, by project number, by project contract, by project category by customer, by role). You can choose the related combination and apply the cost.

2. Assign Resources:

a. Resources now is ready to start assigning them on different project with different cost/price depends on the different combination that was added into the resource setup (**All these data will be taken from Technica team during migration phase**).

i. Technica Team was asking to notify the worker once an activity is assigned to him. This is doable. In D365, we have a screen called "All activities" that contains all the companies created activities included project based.

- ii. So once the activity is created, we will trigger notification via the "Custom alerts" where if a resource was assigned to a task inform him via email or system notification. See below:

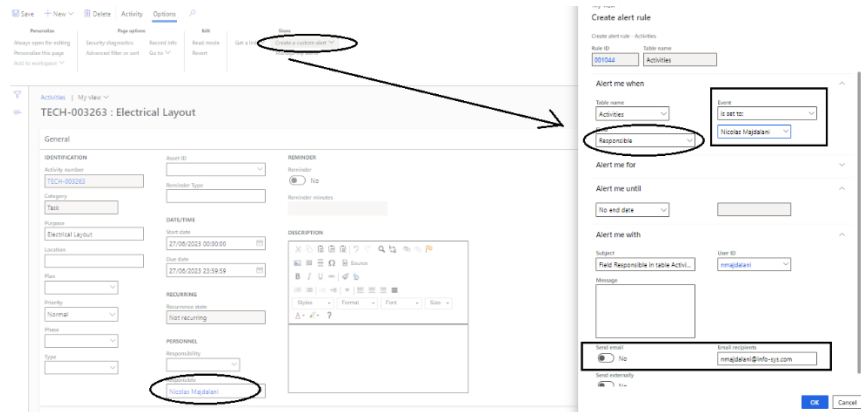


Figure 31 – All activities custom alert notification

- b. 1 resource can be assigned into the same project with different activity.
c. Multiple resources can be assigned into same Task/activity.

Task name	Predecessors	Category	Effort in hours	Task start date	Task end date	Duration	Number of res...	Role ID	Resources
EPMB			32.00	19/06/2023	22/06/2023	4.00	1.00		
Mechanical		Efforts	8.00	19/06/2023	19/06/2023	1.00	1.00		
Cable Wiring	2.5.3.1	Efforts	8.00	20/06/2023	20/06/2023	1.00	1.00		
Electrical Panel	2.5.3.2	Efforts	8.00	21/06/2023	21/06/2023	1.00	1.00		Nicolas Majdalan, Sean Bentley
Packing	2.5.3.3	Efforts	8.00	22/06/2023	22/06/2023	1.00	1.00		

Figure 32 – WBS Scheduling view assigning resources.

- d. To reach the level of point c., a resource 1st must be assigned to a project. Go to project details in "the project and team scheduling" section and add them as follow:
- So, you choose the resource manually.
 - Or to click on book from calendar, the system will show the resource having roles "Team member" based on their availability from & To date.

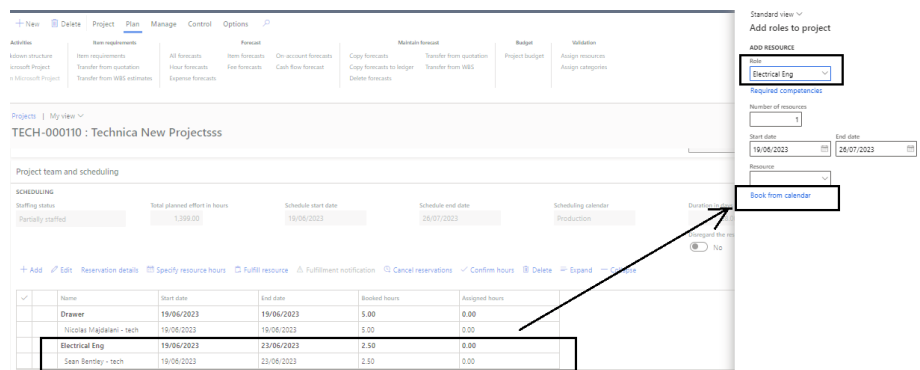


Figure 33 – Add resources in project & team scheduling section.

- e. Below screen will appear based on the criteria that I have chosen from and to date with project manager role:

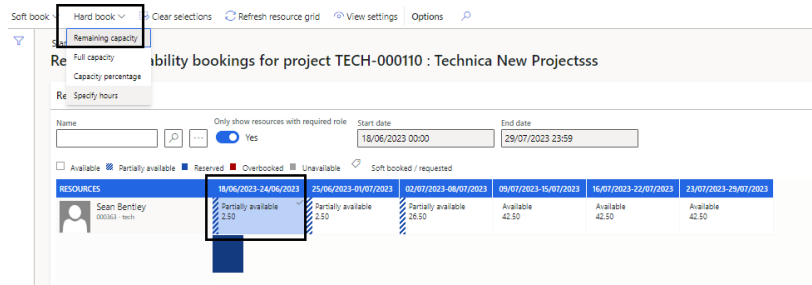


Figure 34 – Resource availability booking.

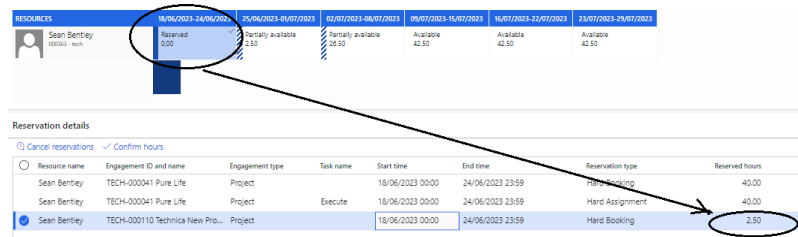


Figure 35 – Resource Hard booking of remaining capacity

- f. You may book the resource from within this project and place several hours needed. Then go to the WBS and choose it for the related task as shown in section c.
- g. Or you can simply directly go to the resource list and assign this resource on a project directly. Both options are available (Resource availability screen):

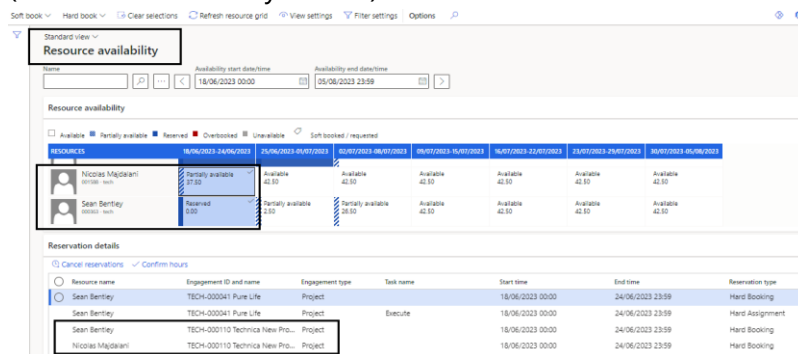


Figure 36 – Resource Availability Inquiry

K. Publish WBS

N.B:

In case of a change request in future, WBS will be subject to be updated.

L. Create Project Budget

- Project Team will register a Forecast Model **"Initial Forecast"** which refers to the Estimated Budget for this New Project. This Budget will be reflected in the Whole Technica Budget as **Original Budget**
- Project Budget can be created based on Project Category/Activity.

- Original budget will be brought from the published WBS templates having the Current estimate with all the listed activities and project categories and the related items, hour, expenses per task.

Figure 37 - Project Budget Import from WBS

- The system will bring all the created activities in the WBS cost estimates view.

Work breakdown structure | TECH-000110: TECHNICA NEW PROJECTSSS

Standard view

TECH-000110: Technica New Projectsss

Currently published

+ New -> Delete -> Outdent -> Indent -> Move up -> Move down -> Expand to -> Details -> Import -> Export -> Attachments -> Auto scheduling -> Resource -> Product dimension

Filter

View: Cost estimates

Auto scheduling Show schedule errors

WBS ID	Task name	Transaction type	Description	Project category	Role ID	Quantity	Unit cost price	Unit sales price	Total cost price	Total sales price	Item number
2.5.2.4	Packing	Hour	Efforts	Efforts		8.00					
2.5.3	EPMB								5,036.00	20,252.00	
2.5.3.1	Mechanical	Hour	Efforts	Efforts		8.00					
2.5.3.2	Cable Wiring	Hour	Efforts	Efforts		8.00					
2.5.3.3	Electrical Panel	Hour	Efforts	Efforts		8.00	100.00	1,800.00	800.00	14,400.00	
		Expense	Flights	Flight		1.00	150.00	250.00	150.00	250.00	
		Item	Conveyor	Item		1.00	4,086.00	5,602.00	4,086.00	5,602.00	541245-21CCR13-1
2.5.3.4	Packing	Hour	Efforts	Efforts		8.00					

Figure 38 – WBS having for 1 activity different tasks controlled in budget module.

Project	Activity	Transaction type	Category	Original budget	Approved revisions	Unapproved revisions	Total budget
TECH-000110	TECH-003291	Hour	Efforts	800.00	0.00	0.00	0.00
TECH-000110	TECH-003291	Expense	Flight	150.00	0.00	0.00	0.00
TECH-000110	TECH-003291	Item	Item	4,086.00	0.00	0.00	0.00

Figure 39 - Project Budget After import from WBS

- Now, all journals that will be passed on this level activity/category will be controlled not to over budget the

mentioned amounts → Will see the transactions part and validation in the execution phase.

- Data budgeted will be taken from Technica during the migration phase.

M. Populate Item requirement from WBS:

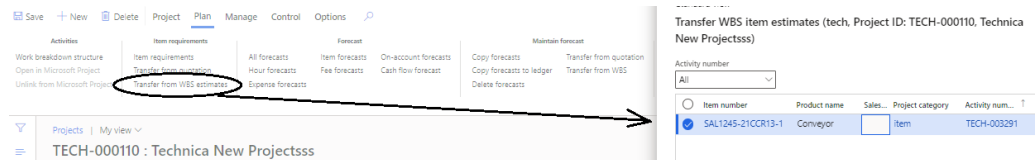


Figure 40 – Transfer Item requirement from WBS estimates

- System will not allow you to do any action if the project stage is not updated to a stage that allows such action (like in progress but not created or on-hold). See below error:

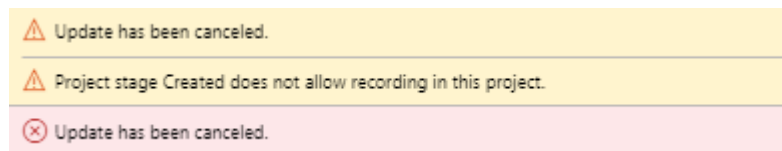


Figure 41 – Error checking item requirement Vs project stages

- Update the stage to "In Process" so that we pass the item requirement.
- Within the project, in the "Item requirement" in the header click on "Item requirements", below screen will show the selected items coming from the approved/published WBS:

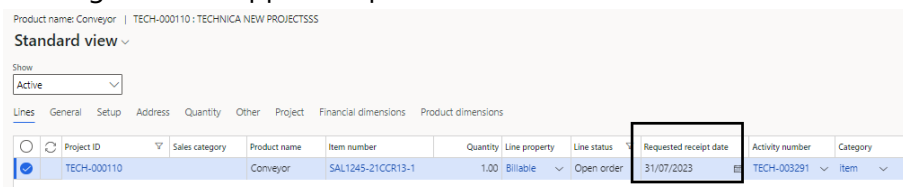


Figure 42 – Item requirement form

- Requested receipt date is the field that will trigger an automatic creation of a **planned** purchase orders, **planned** production orders and **planned** transfer orders.
- Technica team requested to have a customization on this screen: Add column name "Confirmed received day" based on a PO or Voyage.
- Now, within the same screen, the stock is available. Manage → Inventory → On Hand

Standard view ▾
On-hand

Historical data of this item

Overview Ordered items Items on order Net requirements Intercompany on-hand Quantity adjustment Counting history Display dimensions

Product name
Conveyor

INVENTORY DIMENSIONS

Site
Technica

UNIT

Show
Inventory unit ▾

Unit
ea

CW unit

ON-HAND

	QUANTITY	CW QUANTITY
PHYSICAL INVENTORY	1.00	
PHYSICAL RESERVED	1.00	
AVAILABLE PHYSICAL		
AVAILABLE FOR RESERVATION	8.00	
ORDERED IN TOTAL	16.00	
ORDERED RESERVED	8.00	
ON ORDER IN TOTAL	5.00	
TOTAL AVAILABLE	3.00	

PHYSICAL INVENTORY

Figure 43 – Item requirement Inventory on hand availability

- Pass packing slip so that the item gets consumed. See below steps:

Posting ▾ Inquiries ▾ Simulate delivery dates ▾ Release to warehouse ▾
Picking List ▾ Transfer quotation lines ▾ Load planning workbench ▾
Picking list registration ▾ Transfer WBS item estimates ▾

Packing slip

Lines General Setup Address Quantity Other Project Financial dimensions Product dimensions

Project ID	Sales category	Product name	Item number	Quantity	Line property	Line status	Requested receipt date	Activity number	Category
TECH-000110		Conveyor	SAL1245-21CCR13-1	1.00	Billable	Open order	31/07/2023	TECH-003291	Item

Figure 44 – Packing slip steps.

- Select the quantity, dates, posting criteria and click ok. Item requirement will update its status to "Delivered".
 - Packing slip means this item is ready for shipping/delivery.
 - This step is done after picking the materials related to this item from inventory.

N. In the section of WBS in the "Tracking Views", see below:

Planning Views Options

Personalize Page options Share
Personalize this page Security diagnostics Create a custom alert ▾
Go to ▾ Manage my alerts

Tracking Views

00000778: Tower Construction Project XYZ

Cost tracking view

Effort tracking Save Refresh Expand to ▾ Mark as complete View transactions ▾ Details

WBS ID	Task	Cost percent	Actual cost	Remaining cost	Cost at complete	Planned cost	Cost variance	Clos...

Figure 45 – WBS Tracking view (Effort tracking view)

- Once you click on effort tracking, system will show you fields in **bold** that are allowed to be updated (see below 2 screens, 1st before the updates and the 2nd after the updates):
 - As "Effort" it is an hour spent per activity. So, the above screen it's a view to show the time (Hours) spent on the project, expected original time, and the remaining not yet spent.
 - Update to be done on the lowest level (by activity) from this screen.
 - As for automatically updating the effort from the activity cost detail, will be illustrated in next point as requested by Technica.

Tracking Views
00000778: Tower Construction Project XYZ

Effort tracking view

Filter

Cost tracking Save Refresh Expand to Mark as complete View transactions Details

WBS ID	Task	Progress percent	Actual effort	Remaining effort	Effort at complete	Planned effort	Effort variance	Close
>	00000778	10.77	7.00	58.00	65.00	65.00	0.00	
>	1	Indirect	12.73	7.00	48.00	55.00	0.00	
>	1.1	General Requirements	28.00	7.00	18.00	25.00	0.00	
	1.1.1	Insurance	0.00	0.00	8.00	8.00	0.00	
	1.1.2	Car	43.75	7.00	9.00	16.00	0.00	
	1.1.3	Fuel	0.00	0.00	1.00	1.00	0.00	
	1.1.4	Concrete Pump	0.00	0.00	0.00	0.00	0.00	
	1.1.5	Labor	0.00	0.00	0.00	0.00	0.00	
	1.1.6	Running costs	0.00	0.00	0.00	0.00	0.00	
	1.1.7	Consumables	0.00	0.00	0.00	0.00	0.00	

Figure 46 – WBS Effort tracking before the Manual updates

Tracking Views
00000778: Tower Construction Project XYZ

Effort tracking view

Filter

Cost tracking Save Refresh Expand to Mark as complete View transactions Details

WBS ID	Task	Progress percent	Actual effort	Remaining effort	Effort at complete	Planned effort	Effort variance	Close
>	00000778	11.54	7.00	53.67	60.67	65.00	4.33	
>	1	Indirect	13.81	7.00	43.67	50.67	4.33	
>	1.1	General Requirements	33.87	7.00	13.67	20.67	4.33	
	1.1.1	Insurance	0.00	0.00	8.00	8.00	0.00	
	1.1.2	Car	60.00	7.00	4.67	11.67	4.33	
	1.1.3	Fuel	0.00	0.00	1.00	1.00	0.00	
	1.1.4	Concrete Pump	0.00	0.00	0.00	0.00	0.00	
	1.1.5	Labor	0.00	0.00	0.00	0.00	0.00	
	1.1.6	Running costs	0.00	0.00	0.00	0.00	0.00	
	1.1.7	Consumables	0.00	0.00	0.00	0.00	0.00	

Figure 47 – WBS Effort tracking After the Manual updates

- As illustrated, once the progress percent is updated, the remaining effort is updated automatically as well. **Remaining effort** = (Actual effort/POC)-Actual effort)
 - Effort to complete will be updated.
 - Effort variances will be captured.
 - The “Progress percent” that system is showing by default are calculated based on actual cost out of budgeted cost.

O. WBS forms (Scheduling form and cost estimates form)

Save Tracking Views Edit Fulfillment notification Options

Work breakdown structure | 00000778: TOWER CONSTRUCTION PROJECT XYZ

My view (1) - 00000778: Tower Construction Project XYZ

Currently published

+ New - Delete -4 Outdent -4 Indent - Move up - Move down - Expand to - Details - Import - Export - Attachments - Auto scheduling - Resource - Product dimension

Filter Scheduling Auto scheduling Show schedule errors

WBS ID	Scheduling error	Task name	Percent	Activity number	Predecessors	Category	Effort in hours	Task start date	Task end date	Duration	Number of res.	Role ID
>		00000778	0.00				40.00	01/05/2023	03/05/2023	3.00		
>		1	0.00				30.00	01/05/2023	03/05/2023	3.00		
>		1.1	0.00				10.00	01/05/2023	02/05/2023	2.00		
		1.1.1	0.00			Add-on	0.00	01/05/2023	01/05/2023		1.00	
		1.1.2	0.00			Equipment	10.00	01/05/2023	02/05/2023	2.00	1.00	
		1.1.3	0.00			Equipment	0.00	01/05/2023	01/05/2023	1.00	1.00	
		1.1.4	0.00			Equipment	0.00	01/05/2023	01/05/2023	1.00	1.00	
		1.1.5	0.00			Labor	0.00	01/05/2023	01/05/2023	1.00	1.00	
		1.1.6	0.00			Running costs	0.00	01/05/2023	01/05/2023	1.00	1.00	
		1.1.7	0.00			Running costs	0.00	01/05/2023	01/05/2023	1.00	1.00	
>		1.2	0.00				20.00	01/05/2023	03/05/2023	3.00		
		1.2.1	0.00			Running Cost	20.00	01/05/2023	03/05/2023	3.00	1.00	
>		1.3	0.00				0.00	01/05/2023	01/05/2023	1.00		
		1.3.1	0.00			Warrenty	0.00	01/05/2023	01/05/2023	1.00	1.00	
>		2	0.00				10.00	01/05/2023	02/05/2023	2.00		
>		2.1	0.00				0.00	01/05/2023	01/05/2023	1.00		
		2.1.1	0.00			Civil	0.00	01/05/2023	01/05/2023	1.00	1.00	
		2.1.2	0.00			Civil	0.00	01/05/2023	01/05/2023	1.00	1.00	

Figure 48 - WBS Scheduling Form

- i. At the Same Time, we can follow on the Cost Estimates from the same screen.

WBS ID	Item	Percent	Activity number	Transaction type	Description	Project category	Rule ID	Quantity	Unit cost price	Unit sales price	Total cost price	Total sales price	Item n
00000778	Indirect	0.00									35,000.00	45,500.00	
1	General Requirements	0.00									31,950.00	40,000.00	
1.1	Insurance	0.00									27,950.00	34,000.00	
1.1.1	Car	0.00	W00005657	Expense	Insurance accident M...	Add-on		1.00	26,400.00	30,000.00	26,400.00	30,000.00	
1.1.2	Fuel	0.00	W00005658	Expense	Car Rental	Car Rental		2.00	200.00	500.00	500.00	1,000.00	
1.1.3	Labor	0.00	W00005658	Hour	Car Client Training	Training		10.00	200.00	300.00	2,000.00	3,000.00	
1.1.4	Concrete Pump	0.00											
1.1.5	Running costs	0.00											
1.1.6	Consumables	0.00											
1.1.7	Training	0.00									4,000.00	6,000.00	
1.2	Warranty Services	0.00	W00005664	Hour	Provide comprehensi...	Running Cost2		20.00	200.00	300.00	4,000.00	6,000.00	
1.2.1	Warranty	0.00											

Figure 49 - WBS Cost Estimates

- o The actual cost values and the variances are showing in the "Tracking view" screen. While this screen is the "planning view"
- P. Create Cases:** Represents all the below requests → Case are created on project level as illustrated in figure# 50:
- o Change Log
 - o Issue Log
 - o Risk Register
 - o Task Tracker
 - o Resource Evaluation
 - o Project closing:
 - Assessment
 - Lessons Learned (This information accessible for all departments)
 - Feedbacks from team and customer

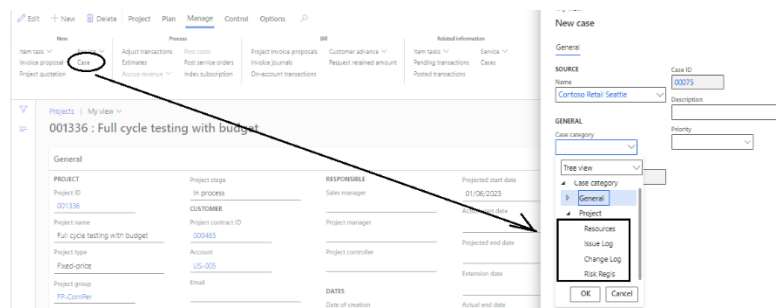


Figure 50 – All Cases screen

- From within the project screen, create a case. Every case created has a case category that will be unique for change log, issue log, risk register and all the rest.

- In addition to the above, every case category will be linked to workflow approval in case someone or worker manager needs to approve it before submitting the request as final.
- Once you log in to the cases, the screen below will appear to add further details (Priority, Notes, date and time, time registered on off, description, knowledge, Questionnaire with predefined template). And will be stored on the project itself and accessible by all the users depending on the security roles given.

Figure 51 – All Cases screen header & details

Q. Sub-projects

You may create many sub-projects for 1 project and create sub-projects for a sub-project as much as you want depending on the business needs. Then, the user can add and repeat the same scenarios mentioned above in the project creation section.

- In addition to the above, Technica will create a subproject for a quotation that is not yet confirmed by the customer and for an opportunity that has not yet won (exceptional case).
- They will be able to pass timesheet (refer to timesheet section and how to pass it) even if the opportunity is not yet won.
- Once the opportunity is won, the project quotation will be confirmed and attached to it the subproject and proceed with the same cycle mentioned above and in the process diagram of figure#4.
- If the opportunity is lost, the quotation will be cancelled, and the cost of the timesheet will be borne by Technica.

For all the subprojects created all of them are tied to the same project contract. See below project hierarchy:

The screenshot shows a web interface for project management. At the top, it says 'Projects | My view'. Below that is the title '001386-02 : Sub-project test 2'. The 'Project hierarchy' section shows a tree structure with three levels: '001386 : Sunflower Wholesales', '001386-01 : Sub-project test', and '001386-02 : Sub-project test 2' (which is highlighted). Below the hierarchy is a 'General' section with various fields. The 'PROJECT' section includes 'Project ID' (001386-02) and 'Project name' (Sub-project test 2). The 'CUSTOMER' section includes 'Project contract ID' (000508, which is circled in red). The 'RESPONSIBLE' section includes 'Sales manager' and 'Project manager' dropdowns. The 'DATES' section includes 'Projected start' (14/07/20) and 'Actual start'.

Figure 51 – Project Screen (Project Hierarchy)

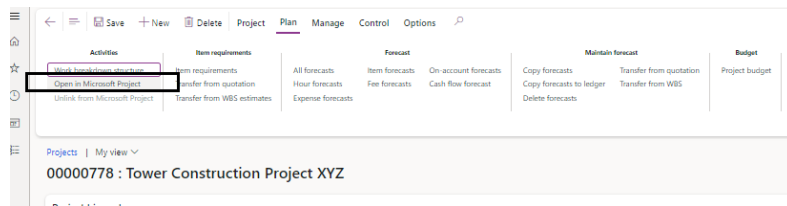
- So, having sub-project for the purpose of breaking down project into different ways or different groups. For example: we can create a subproject having type “Time & material” that will not be billed to the customer or some other types like “Investment” project for the purpose of tracking an asset capitalization.
- Every sub-project can have a separate activity/task and at the end of every project closure, the initial project will be accomplished.
- For every sub-project it can have a separate breakdown structure to see exactly what is happening in that sub-project.

3. **Open in MS Project Feature:**

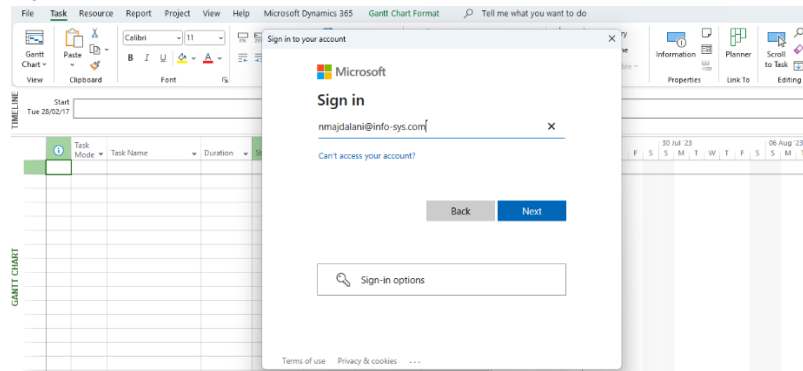
This is a new feature introduced by Microsoft and adopted by Technica.

Planning and maintaining a project schedule can be complex, so project managers will need to use this tool to help them manage a certain task. So, Integration with Microsoft Project Client provides support to open and manage a project work breakdown structure. The project manager can publish any changes back to the Dynamics 365 Finance project work breakdown structure.

- We just need to configure project Add-in from project management workspace and run it.
- Later, the MS project will be integrated automatically through project module automatically as per the below:
 - Project WBS must be in edit mode so that this button can show and to open in Ms project.



- The second you click on it; the user must put his credentials (system user and password):



- So, once it's logged in, the system will show a copy of the project WBS listed and having the below data brought up as is:

- Task name
- Start date.
- Finish date
- Predecessors
- Resource names
- Category
- Resource category
- Work hours
- Notes
- Priority

Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names	Category	Resource category	Work
0	00000778	4 days?	Mon 01/05/23	Thu 04/05/23					168 hrs
1	Indirect	4 days?	Mon 01/05/23	Thu 04/05/23					78 hrs
2	General Requirements	2 days?	Mon 01/05/23	Wed 03/05/23					40 hrs
3	Insurance	1 day?	Mon 01/05/23	Mon 01/05/23		Michael Patten	Running Cost2	Project manager	8 hrs
4	Car	0 days?	Wed 03/05/23	Wed 03/05/23		Michael Patten	Running Cost2		0 hrs
5	Fuel	0 days?	Mon 01/05/23	Mon 01/05/23			Running Cost2		0 hrs
6	Concrete Pump	1 day?	Mon 01/05/23	Mon 01/05/23			Running Cost2		8 hrs
7	Labor	1 day?	Mon 01/05/23	Mon 01/05/23			Running Cost2		8 hrs
8	Running costs	1 day?	Mon 01/05/23	Mon 01/05/23			Running Cost2		8 hrs
9	Consumables	1 day?	Mon 01/05/23	Mon 01/05/23			Running Cost2		8 hrs
10	Training	4 days?	Mon 01/05/23	Thu 04/05/23					30 hrs
11	Training	4 days?	Mon 01/05/23	Thu 04/05/23			Running Cost2		30 hrs
12	Warranty Services	1 day?	Mon 01/05/23	Mon 01/05/23					8 hrs
13	Warranty	1 day?	Mon 01/05/23	Mon 01/05/23			Running Cost2		8 hrs
14	Direct	2 days?	Mon 01/05/23	Tue 02/05/23					90 hrs
15	Civil Works and Metal Mounting Structures	1 day?	Mon 01/05/23	Mon 01/05/23					72 hrs
16	Trenches	1 day?	Mon 01/05/23	Mon 01/05/23			Running Cost2		8 hrs
17	Excavation	1 day?	Mon 01/05/23	Mon 01/05/23			Running Cost2		8 hrs
18	Backfill	1 day?	Mon 01/05/23	Mon 01/05/23			Running Cost2		8 hrs
19	Road works	1 day?	Mon 01/05/23	Mon 01/05/23			Running Cost2		8 hrs

- Anything you adjust here will be reflected in the system and vis versa by clicking on Check out to sent update. And check in to get updates from D365.

4. Installation Management

During the planning phase, there is a section in the WBS template created for installation management, where it included all the different cost and categories and materials. As for the process it has the same process mentioned in elaborated above in project planning section and in the process diagram.

Requirements

ID	Desc	Fit/GAP
PJ001-001	Project stages creation including On-Hold stage for accounting department control	Fit
PJ001-002	Opportunity integration from CRM with the related reference number	GAP
PJ001-003	Assign resources on opportunity via sales process template linked to different stages (from qualify to Negotiation)	Fit
PJ001-004	Project quotation creation	Fit
PJ001-005	Import WBS template and add item, Hour, expense into costing detail's view	Fit
PJ001-006	Import WBS line into quotation line and sent to customer for internal approval	Fit
PJ001-007	Quotation set to customer	Fit
PJ001-008	Opportunity status updated to "win" manually. Then project quotation status will be updated to "confirmed" automatically. Then integration will update the opportunity in CRM to "Win".	Fit
PJ001-009	Create project automatically attached to project quotation from a wizard	Fit
PJ001-010	"URL collaboration workspace" will be used which is linked to a share point that will be defined external by Technica	Fit
PJ001-011	Create Forecast model representing the approved WBS approved cost estimates.	Fit
PJ001-012	Create Billing Rules in project contract linked to WBS activities (Milestone created)	Fit
PJ001-013	Create another WBS during the project life cycle and add to it manually the freight charges and create related freight category	Fit
PJ001-014	Create Resources, adding cost/price, calendar and Role for each resource and assign to project	Fit
PJ001-015	Send email notification to the resources assigned to an activity within a project Life cycle	Fit
PJ001-016	Projects Head to register actual Project Budget by importing budget from the published WBS	Fit
PJ001-017	Actual Budget Workflow to be Submitted to collect required approvals.	Fit – Workflow to be shared by Technica
PJ001-018	Add financial dimensions to every project created so that you can issue financials by project by cost center by department...	Fit
PJ001-019	Populate item requirement from WBS & Deliver item	Fit

PJ001-020	In Item requirement form: Add column name "Confirmed received day" based on a PO or Voyage	GAP
PJ001-021	Create cases (Change log, Issues log, Risk register, task tracker, resource evaluation, Projects Closing: assessment, lessons learned, feedbacks from team and customer)	Fit
PJ001-022	Sub-projects	Fit
PJ001-023	Open in MS Project integration with D365 FO	Fit
PJ001-024	Installation management	Fit

3.2. PJ002 Project Execution

Process Diagram

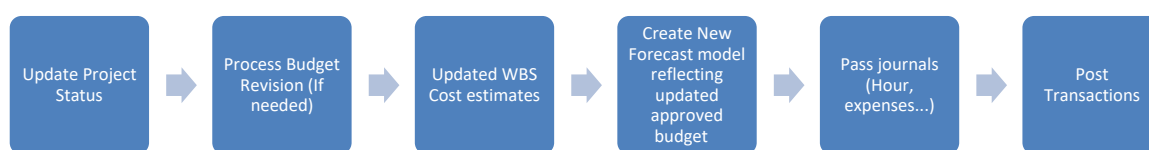


Figure 52 – Project Execution Process

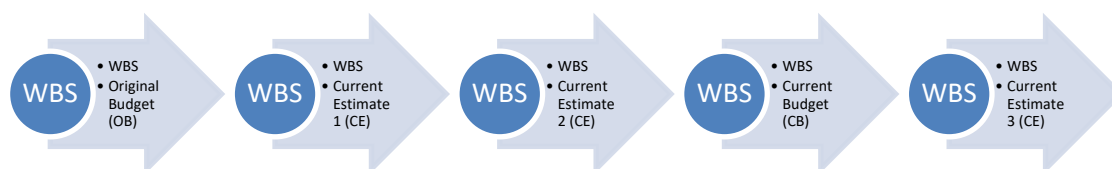


Figure 53 – Project Estimate/Budget Life cycle

Process Overview

Proposed Process Flow

1. Upon Execution, **Head of Projects Department** will change Project Status from Initiation to "In Process" and process a Budget Revision Workflow Approval to reflect the actual Budget of the Project which Technica call it "**Current Budget**" (This is not mandatory. Only in case there is a revision). If it is Rejected, then it will be returned to be adjusted and resubmitted again.
It will be registered under different Forecast Model "**Actual**" which will be reflected later the Whole Budget of Technica.

Save Workflow Budget revision Options

Submitted

Project budget revision

00000778 : Tower Con...

General

IDENTIFICATION
Revision ID: PBR_000155

External reference: Actual

INFORMATION
Description: Current Budget (1)

Requested date: 28/05/2023 08:42:25

Revision workflow status: Created

REQUESTER
Type: Customer

Requested by:

Costs

+ New Delete Reallocate amounts Details

Project	Activity	Transaction type	Category	Previous appr...	Revision amount	New budget
00000778	W00005657	Expense	Add-on	25,000.00	450.00	25,450.00
00000778	W00005658	Expense	Car Rental	500.00	0.00	0.00
00000778	W00005675	Item	Electrical	250.00	0.00	0.00
00000778	W00005675	Hour	IntTrain	1,800.00	0.00	0.00
00000778	W00005675	Expense	Labor	1,000.00	0.00	0.00
00000778	W00005664	Hour	Running Cost2	4,000.00	0.00	0.00
00000778	W00005658	Hour	Training	2,000.00	0.00	0.00

Total previous approved budget: 34,550.00

Total budget revision: 450.00

New total budget: 35,000.00

Figure 54 - Project Budget Revision

Project budget balances

Group by: Transaction type Cost template: Filter: None

Costs Revenues

Type	Original budget	Approved budget	Consumed budget	Remaining budget	Commitment	Approved revisions	Unapproved revisions	Carry-forward
Total cost	34,550.00	35,000.00	0.00	35,000.00	0.00	450.00	0.00	0.00
Hour	7,800.00	7,800.00	0.00	7,800.00	0.00	0.00	0.00	0.00
IntTrain	1,800.00	1,800.00	0.00	1,800.00	0.00	0.00	0.00	0.00
Running Cost2	4,000.00	4,000.00	0.00	4,000.00	0.00	0.00	0.00	0.00
Training	2,000.00	2,000.00	0.00	2,000.00	0.00	0.00	0.00	0.00
Expense	26,500.00	26,950.00	0.00	26,950.00	0.00	450.00	0.00	0.00
Add-on	25,000.00	25,450.00	0.00	25,450.00	0.00	450.00	0.00	0.00
Car Rental	500.00	500.00	0.00	500.00	0.00	0.00	0.00	0.00
Labor	1,000.00	1,000.00	0.00	1,000.00	0.00	0.00	0.00	0.00
Item	250.00	250.00	0.00	250.00	0.00	0.00	0.00	0.00
Electrical	250.00	250.00	0.00	250.00	0.00	0.00	0.00	0.00

Figure 55 - Project Budget Balance

2. Once Project Budget is Approved, then Head of Projects Department will follow up on Actual vs Budget of the Project:
 - a. After revised budget being approved, the project manager will update the WBS current estimate to be equal to the approved budget (Current budget)
 - b. New Forecast name will be created under "NT_Forecast" to show updated cost estimates which is equal to current estimates.

All project forecasts | 00000778 : TOWER CONSTRUCTION PROJECT XYZ

Standard view

Filter

Group by	WBS ID	Task name	Forecast model	Transaction type	Project date	Project ID	Activity number	Category	Re... Description	Quantity	Cost price	Total cost am...	Sales price
Car (4) [Task name]													
	1.1.2	Car	NT_Forecast	Hour	01/05/2023	00000778	W00005658	Training	Car Client Training	10.00	200.00	2,000.00	300.00
	1.1.2	Car	T_Forecast	Hour	01/05/2023	00000778	W00005658	Training	Car Client Training	10.00	200.00	2,000.00	300.00
	1.1.2	Car	T_Forecast	Expense	01/05/2023	00000778	W00005658	Car Rental	Car Rental	2.00	250.00	500.00	500.00
	1.1.2	Car	NT_Forecast	Expense	01/05/2023	00000778	W00005658	Car Rental	Car Rental	2.00	250.00	500.00	500.00
DC Cable (6) [Task name]													
	2.2.1	DC Cable	NT_Forecast	Expense	01/05/2023	00000778	W00005675	Labor	Labor Cost	20.00	50.00	1,000.00	100.00
	2.2.1	DC Cable	NT_Forecast	Item	01/05/2023	00000778	W00005675	Electrical	DC Cables (2)	5.00	50.00	250.00	100.00
	2.2.1	DC Cable	T_Forecast	Item	01/05/2023	00000778	W00005675	Electrical	DC Cables (2)	5.00	50.00	250.00	100.00
	2.2.1	DC Cable	T_Forecast	Expense	01/05/2023	00000778	W00005675	Labor	Labor Cost	20.00	50.00	1,000.00	100.00
	2.2.1	DC Cable	T_Forecast	Hour	01/05/2023	00000778	W00005675	IntTrain	Internal Training	10.00	180.00	1,800.00	300.00
	2.2.1	DC Cable	NT_Forecast	Hour	01/05/2023	00000778	W00005675	IntTrain	Internal Training	10.00	180.00	1,800.00	300.00
Insurance (2) [Task name]													
	1.1.1	Insurance	NT_Forecast	Expense	01/05/2023	00000778	W00005657	Add-on	Insurance accident May2023	1.00	25,450.00	25,450.00	30,000.00
	1.1.1	Insurance	T_Forecast	Expense	01/05/2023	00000778	W00005657	Add-on	Insurance accident May2023	1.00	25,000.00	25,000.00	30,000.00
Training (2) [Task name]													

Figure 56 - Project Forecast comparison Balances

00000778 : TOWER CONSTRUCTION PROJECT XYZ | Standard view

Project statements

General Profit and loss WIP Consumption Invoice Hour rate

	ACTUAL	BUDGET	DEVIATION
	Invoice revenue	Invoice revenue	Invoice revenue
INVOICED REVENUE	0.00	0.00	0.00
INVOICED REVENUE - ON-ACCOUNT	0.00	0.00	0.00
TOTAL INVOICED REVENUE	0.00	0.00	0.00
	Accrued revenue	Accrued revenue	Accrued revenue
ACCRUED REVENUE - SALES VALUE	0.00	0.00	0.00
ACCRUED REVENUE - PRODUCTION	0.00	0.00	0.00
ACCRUED REVENUE - PROFIT	0.00	0.00	0.00
ACCRUED REVENUE - SUBSCRIPTION	0.00	0.00	0.00
ACCRUED REVENUE - ON-ACCOUNT	0.00	0.00	0.00
TOTAL ACCRUED REVENUE	0.00	0.00	0.00
	Cost	Cost	Cost
COST - HOUR	0.00	7,800.00	7,800.00
COST - EXPENSE	0.00	26,950.00	26,950.00
COST - ITEM	0.00	250.00	250.00
ACCRUED LOSS	0.00	0.00	0.00
TOTAL COST	0.00	35,000.00	35,000.00

Figure 57 - Project Statement comparison by new forecasted budget

3. Now, the team can process Journals (Like hour, expenses.)
 - a. After Posting the journals, the accounting entry will be as follows:

Voucher transactions | 00000778 : 28/05/2023

My view

Overview General

Journal number	Voucher	Date	Yes...	Ledger account	Account name	Description	Currency	Amount in transaction currency	Amount	Posting type
002973	RIHV_00000743	28/05/2023		602100-003-028--	Salaries - Wages Expense	Client Training 7 hours	USD	-1,280.00	1,280.00	Project - payroll allocation
002973	RIHV_00000743	28/05/2023		180100-003-028-	WIP - Labor	Client Training 7 hours	USD	1,280.00	1,280.00	Project - WIP cost

Figure 58 – Hour Journal Voucher transaction

- b. Also, you pass an expense journal from the same menu as follows:

Journal voucher | 00002588 : PROJRN

Standard view

Overview General Project History

Voucher date	Voucher	Project date	Project	Activity number	Category	Resource	Description	Quantity	Currency	Cost price	Sales price	Line property	Offset account type	Offset account
28/05/2023	PROJ00000909	28/05/2023	00000778	W00005657	Add-on		Travel Expense Accident May...	1.00	USD	25,450.00	30,000.00	Billable	Ledger	601500----

Figure 59 – Expense Journal

- c. After posting the journals, the accounting will be as follows:

Voucher transactions | 00000778 : 28/05/2023

My view

Overview General

Journal number	Voucher	Date	Yes...	Ledger account	Account name	Description	Currency	Amount in transaction currency	Amount	Posting type
002975	PROJ00000960	28/05/2023		180300----	WIP - Expense	Travel Expense Accident May 23	USD	25,450.00	25,450.00	Project - WIP cost
002975	PROJ00000960	28/05/2023		601500----	Travel Expense	Travel Expense Accident May 23	USD	-25,450.00	25,450.00	Ledger journal

Figure 60 – Expense Journal Voucher transaction

4. The team can also pass a **Timesheet** and post the transaction after submitting a workflow for approval. The transaction will write the same accounting entry as point# 3.a see below:
 - a. Also, the team can pass a timesheet before winning an opportunity. And if the opportunity was lost, the company will bear the cost.

- b. Time sheet can also be filled from CRM and pushed and reflected into the project cost.

Project ID	Project name	Activity number	Activity	Category	Max 17/07	Tue 18/07	Wed 19/07	Thu 20/07	Fri 21/07	Sat 22/07	Sun 23/07
001389	Building 1 investment	07610	Perform QC	Test					3.00		

Figure 58.1 – Timesheet process & Post

Journal number	Voucher	Date	T	Ye.	Ledger account	Account name	Description	Currency	Amount in transaction currency	Amount	Posting type
675193	PU-00875	21/07/2023			600300-001-True	Payroll Allocation	Timesheet	USD	-750.00	750.00	Project - payroll allocation
675193	PU-00875	21/07/2023			500130-001-True	COGS - Services	Timesheet	USD	750.00	750.00	Project - cost

Figure 58.2 – Timesheet journal voucher transactions

WBS ID	Task	Cost percent	Actual cost	Remaining cost	Cost at complete	Planned cost	Cost variance	Clos...
>	001389	19.50	958.42	3,957.78	4,916.20	4,262.20	-654.00	
1	Cabinet Installation	9.62	208.42	1,957.78	2,166.20	2,166.20	0.00	
2	Perform Installation	0.00	0.00	2,000.00	2,000.00	2,000.00	0.00	
3	Perform QC	100.00	750.00	0.00	750.00	96.00	-654.00	

Figure 58.3 – Tracking view (cost view) / Actual timesheet cost

5. POs will be Processed against the Projects (Item will be committed) then Items will be consumed directly into Projects upon PO Receiving:
 - a. User will pass Item requirement.
 - b. Due to non-stock availability, he will ask to create PO from the same item requirement screen.:
 - i. Usually, once the user passes the item requirement, the system will trigger the master planning process (Planned Purchase order, planned production..) that will automatically create, the PO, production order.....
 - ii. In the case mentioned here, it is just for exceptional cases where if this item requirement is not ready in your stock and you don't want to run master planning, you can buy it ready from a vendor directly without passing via production orders. So, project team initiate the PO, but the procurement team will process it. Until it reaches packing slip (See Figure# 44).
 - iii. In addition to the above, Technica will also have the option to create the purchase requisition from the purchase requisition screen (Not only from the project module) and attached the related project to it. By that, when we open the project module we will be able to see also related PR and PO's attached to the project.

- c. PO is created automatically having all the below data coming automatically (See figure 61):

The screenshot shows a purchase order form for '00001004 : US_SI_000008 - Distant Inn'. The 'Purchase order lines' table has one line with 'Line number' 1, 'Item number' CAB-00002, and 'Product name' DC Cables (2). The 'Line details' section shows 'Project ID' 00000778, 'Activity number' W00005675, 'Project category' Electrical, 'Item number' CAB-00002, 'Line property' Billable, 'Sales currency' USD, 'Sales unit' ea, 'Sales price' 100.00, 'Project - Sales tax group' WA, and 'Unit price' 50.00. The 'Net amount' is 250.00.

Figure 61 - PO Linked to Project

- d. Once the PO is received, the system will Pop-up a message shown below (Figure 62) → Click Yes and the value will be transferred from commitment to Consumed (See also figure#64):

Consume items for the project immediately?

The dialog box has a red border and contains two buttons: 'Yes' (highlighted with a red box) and 'No'.

Figure 62 – Item requirement auto consumption

- e. And in case you click on “No” Then the user will have to go back to the item requirement and pass “packing slip” manually so that the item gets consumed.
- f. Below accounting entry related to the item requirement consumed:

Voucher transactions | 00000778 - 03/05/2023

My view

Journal number	Voucher	Date	Yes...	Ledger account	Account name	Description	Currency	Amount in transaction currency	Amount	Posting type
002976	1000016	03/05/2023		140200-003-024-Systems Integration	Finished Goods Inventory		USD	-250.00	250.00	Cost of units, Invoiced
002976	1000016	03/05/2023		540110-003-024-000005678-Systems Integration	Cost of Project - Products		USD	-250.00	250.00	Project - cost - Item
002976	1000016	03/05/2023		540110-003-024-000005678-Systems Integration	Cost of Project - Products		USD	250.00	250.00	Project - cost
002976	1000016	03/05/2023		160200-003-024-Systems Integration	WIP - Products		USD	250.00	250.00	Project - WIP cost - Item

Figure 63 – Item consumed Voucher transaction

Gap (Re-Allocation of common activity cost to assemblies):

The common expenses of some activities on a project, like paint works, cleaning, others... are put it at the project level and not at assembly (or part) level from the beginning and during the execution phase.

At the end of the project, they will reallocate this cost to multiple assemblies that were involved in this activity. And the formula is based on the percentage of the Assembly cost value within the project.

Example:

Project cost is 120000 \$

Assembly 1: 50000 (42% of Project)

Assembly 2: 40000 (33% of project)

Assembly 3: 30000 (25% of Project)

Activity cost is 24000.

Reallocation of cost will be:

Assembly 1: 10,080\$ (42% of 24000)

Assembly 2: 7,920\$ (33% of 24000)

Assembly 3: 6,000\$ (25% of 24000)

Reports shows output of the voucher transactions in WBS/Budget

1. Project Budget Balance Updates:

Project budget balances

Group by: Transaction type Cost template: Filter: None

Costs Revenues

✓	Type	Original budget	Approved budget	Consumed budget	Remaining budget	Commitment	Approved revisions	Unapproved revisions	Carry-forward
>	Total cost	34,550.00	35,000.00	26,960.00	8,040.00	0.00	450.00	0.00	0.00
	Hour	7,800.00	7,800.00	1,260.00	6,540.00	0.00	0.00	0.00	0.00
	IntTrain	1,800.00	1,800.00	0.00	1,800.00	0.00	0.00	0.00	0.00
	Running Cost2	4,000.00	4,000.00	0.00	4,000.00	0.00	0.00	0.00	0.00
	Training	2,000.00	2,000.00	1,260.00	740.00	0.00	0.00	0.00	0.00
>	Expense	26,500.00	26,950.00	25,450.00	1,500.00	0.00	450.00	0.00	0.00
	Add-on	25,000.00	25,450.00	25,450.00	0.00	0.00	450.00	0.00	0.00
	Car Rental	500.00	500.00	0.00	500.00	0.00	0.00	0.00	0.00
	Labor	1,000.00	1,000.00	0.00	1,000.00	0.00	0.00	0.00	0.00
>	Item	250.00	250.00	250.00	0.00	0.00	0.00	0.00	0.00
	Electrical	250.00	250.00	250.00	0.00	0.00	0.00	0.00	0.00

Figure 64 – Project budget balance

2. Tracking View screen in WBS (Cost Tracking View):

Tracking Views

00000778: Tower Construction Project XYZ

Cost tracking view

Filter

Effort tracking Save Refresh Expand to Mark as complete View transactions Details

WBS ID	Task	Cost percent	Actual cost	Remaining cost	Cost at complete	Planned cost	Cost variance	Class
>	00000778	77.03	26,960.00	8,040.00	35,000.00	35,000.00	0.00	
>	1	Indirect	83.60	26,710.00	5,240.00	31,950.00	31,950.00	0.00
>	1.1	General Requirements	95.56	26,710.00	1,240.00	27,950.00	27,950.00	0.00
	1.1.1	Insurance	100.00	25,450.00	0.00	25,450.00	25,450.00	0.00
	1.1.2	Car	50.40	1,260.00	1,240.00	2,500.00	2,500.00	0.00
	1.1.3	Fuel	0.00	0.00	0.00	0.00	0.00	0.00
	1.1.4	Concrete Pump	0.00	0.00	0.00	0.00	0.00	0.00
	1.1.5	Labor	0.00	0.00	0.00	0.00	0.00	0.00
	1.1.6	Running costs	0.00	0.00	0.00	0.00	0.00	0.00
	1.1.7	Consumables	0.00	0.00	0.00	0.00	0.00	0.00
	1.2	Training	0.00	0.00	4,000.00	4,000.00	4,000.00	0.00
	1.3	Warranty Services	0.00	0.00	0.00	0.00	0.00	0.00
>	2	Direct	8.20	250.00	2,800.00	3,050.00	3,050.00	0.00
>	2.1	Civil Works and Metal Mounting Structures	0.00	0.00	0.00	0.00	0.00	0.00
	2.1.1	Trenches	0.00	0.00	0.00	0.00	0.00	0.00
	2.1.2	Excavation	0.00	0.00	0.00	0.00	0.00	0.00
	2.1.3	Backfill	0.00	0.00	0.00	0.00	0.00	0.00
	2.1.4	Road works	0.00	0.00	0.00	0.00	0.00	0.00
	2.1.5	Disposal	0.00	0.00	0.00	0.00	0.00	0.00
	2.1.6	Side walks	0.00	0.00	0.00	0.00	0.00	0.00
	2.1.7	Concrete Works	0.00	0.00	0.00	0.00	0.00	0.00
	2.1.8	Metal Structures	0.00	0.00	0.00	0.00	0.00	0.00
	2.1.9	Site Works	0.00	0.00	0.00	0.00	0.00	0.00
>	2.2	Cable Ducts, Cable Trays and Cables	8.20	250.00	2,800.00	3,050.00	3,050.00	0.00
	2.2.1	DC Cable	8.20	250.00	2,800.00	3,050.00	3,050.00	0.00

Figure 65 – Project WBS / Cost tracking view updated.

- In this view, Technica requested to have 2 additional fields to track budget:
 - Original budget
 - Current Budget
- Technica team can always track their transactions by clicking on the line shown in the above screen then "View transactions", system will redirect you the related voucher that was shared in previous figures above.
- Also, for item consumption, the system can also redirect you to different information like packing slip, sales order number, references, accounting entries:
 - Select the line and click on "Item transactions."

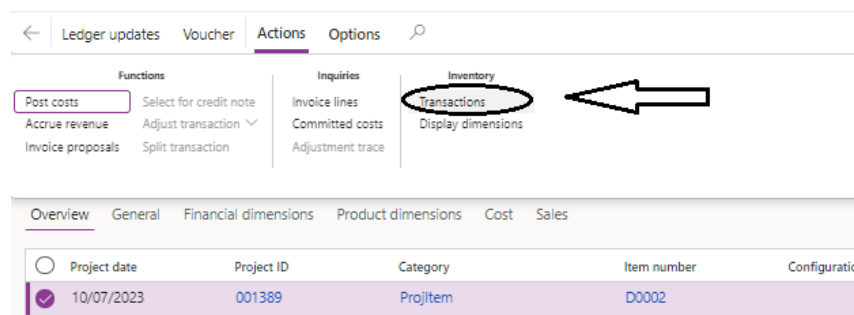


Figure 65.1 – Item transactions from cost tracking view.

- Once we log in to the inventory transactions, another screen will show (Below). All the available requested data by Technica are within the "Transactions details" button.

Transaction details						
Inventory transactions						
My view						
Filter						
Transaction filter						
Display all						
Item number	Search Name	Brand	Physical date	Financial date	Reference	Number
D0002	Sunflower Wholesales		10/07/2023	10/07/2023	Sales order	003113

Figure 65.2 – Inventory transactions view from item transactions.

- iii. Transactions details will show the below data requested in addition to the ledger posting that contains all different accounting entry:

Transaction details						
General						
IDENTIFICATION	REFERENCE	INVENTORY	POSTING	Quantity	Expected date	
Item number	Inventory reference	Lot ID	Receipt status	-1.00	24/07/2023	
D0002		2973923			Inventory date	
ORIGIN REFERENCE	Inventory number	Reference list	Issue status	02		
Type	Project ID	Dimension number	Sold	CM quantity		
Sales order	2973923	000072	Value open	CM unit		
Number			Yes			
003113						
Party						
Sunflower Wholesales						
Updates						
PHYSICAL	Physical cost amount	Financially posted	FINANCIAL	Adjustment	Covered CM quantity	
Physical date	-148.42	Yes	Financial date		Settled quantity	
10/07/2023			10/07/2023			
Physical voucher	Physical revenue	Physical turnover posted	Financial voucher	Profit and loss, posted amount	Amount settled	
SPS-01002094	-100.00	Yes	SPS-01002094	148.42		
Route	Lead ID	Physical charge posted	Invoice	Unsettled invoice		
		No	SPC-00020095			
Packing rate	LEDGER	Financial charge posted	Cost amount	SETTLEMENT		
SPC-00020095	Physically posted	No	-148.42	Financially closed		
	Yes					
Ledger postings						

Figure 65.3 – Item consumption transaction details.

3. Reports:

a. Technica's Report and dashboard:

i. Report name: Project Planning

Resource Name		Unscheduled Tasks		April 2023																																
		19 Mar '23							26 Mar '23							02 Apr '23							09 Apr '23							16 Apr '23						
		W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S			
TEAM PLANNER	Group: Functional Departments																																			
	Mechanical R&D																																			
	Electrical R&D																																			
	Factory																																			
	Unassigned Tasks: 280																																			

Figure 66 – Technica Project Planning report

ii. Report name: Project list – ongoing.

ProjectID	Customer	Project name	Country	Status	Remarks	Payment terms and Incoterms	Project Amount	PO Date
23	20P171	Christakis	cyprus	Partially Commissioned	Technica: Soft Backup	10% Desnaging	€ 660,000	
46	199623/20S080	Arla	Bahrain	Partially Commissioned	ACI: Drier Mod Gernep: Payment Issue		€ 4,907,718	
52	20S222	Arla	Bahrain	N/A			€ 8,500	
53	19T390	P&G	Russia	On Hold			€ 1,311,813	
54	SAL266-21	Mars	Egypt	Fully Shipped			€ 242,397	
57	SAL203-21	M.C.G.I	Syria	Fully Shipped			€ 220,000	
58	SAL191-21	Henkel Liquid	Egypt	Partially Commissioned			€ 89,722	
59	SAL077-21	Yabon	France	Partially Commissioned			€ 113,813	
60	SAL258-21	Amazon	Egypt	Cancelled			€ 2,679,000	
61	SAL053-21	Mars	Egypt	Fully Shipped			€ 173,000	
63	SAL062-21	Henkel Liquid	Egypt	Fully Shipped		40% Advance 35% FAT 5% Shipping Docs	€ 116,278	

Incoterms	Contractual Exworks	Phases Amount	Planned Exworks	Project Manager	Lead Engineer	Installation Time (days)	Planned Commissioning	Installation Start Date	Site Leader	Software Engineers	Pre-Schedule Meeting	Pre-Installation Meeting	Produced in	SPP	SPP Amount
			Not Yet	Elias Sidor		5	March 16, 2023	March 16, 2023						Yes	
				Michel Halabi										Yes	€ 15,873
				Bassam Abdullah										Yes	
				Michel Halabi										Yes	
				Wael Baakini										Yes	€ 7,631
				Wael Baakini										Yes	
				Joseph Helou										Yes	€ 2,848
				Elie Safwan										Yes	€ 4,129
				Wael Baakini										Yes	€ 111
				Michel Halabi										Yes	
				Theodore Khaleel										Yes	€ 13,680
				Michel Halabi										Yes	€ 8,968
				Joseph Helou										Yes	€ 3,509

Figure 67 – Technica Project List ongoing report

- iii. GAP: Master planning projects is needed for Technica (Requesting to have the same on D365): project department check master plan vs project plan of all existing project in Technica.
- So, they start to integrate this plan within the current master plan which contains on in progress projects.
 - Within the master plan they can see all the project details or milestone. If they want to know details on every milestone, they see it from the source of the project itself.
 - The master plan must contain all major milestone without the details.
 - Notification is needed as well once the project manager updates it.

Requirements

ID	Desc	Fit/GAP
PJ002-001	Update project status depends on the need of the phase (Example update status from created to in process)	Fit
PJ002-002	Budget Revision Workflow after Execution to be processed	Fit – Workflow to be shared by Technica
PJ002-003	Update WBS Cost estimate and publish it again	Fit
PJ002-004	Create New forecast model reflecting update approved budget	Fit
PJ002-005	Process PO against Projects and Consume Received Projects into Projects Directly	Fit
PJ002-006	Labour Costs are registered Via hour journal by Project by activity	Fit
PJ002-007	Different Transactions Journals can be created under a Project such as Hours, Items, Expenses	Fit
PJ002-008	Post Transactions	Fit

PJ002-009	Cost Tracking view available on WBS Level	Fit
PJ002-010	Effort Tracking View available on WBS Level	Fit
PJ002-011	Project Planning Report	GAP
PJ002-012	Project list – ongoing	GAP
PJ002-013	Master Planning Report & Notification to concerned people once project manager update data	GAP

3.3. PJ003 Project Milestone Invoice Proposal

Process Diagram

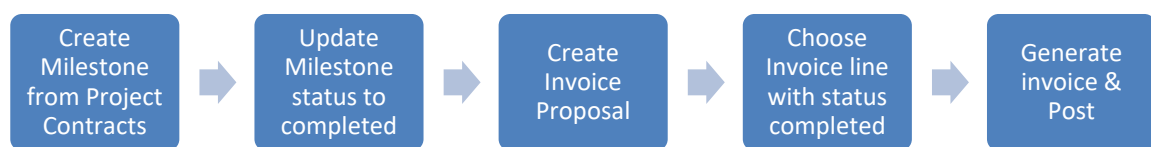


Figure 68 – Project Milestone/Invoicing Lifecycle

Process Overview

Proposed Process Flow

1. Now, Milestones are already created from project contracts (as illustrated in PJ001 Section)
2. Once the actual cost is generated and the related activity is fully consumed, project team will go to project contract → Manage contract status → Updated Milestone status → select the line completed and click on Mark as complete (see below screen):
 - i. Project HOD will mark it as complete.
 - ii. This will notify Technica Finance Manager to issue the project invoice (Real).

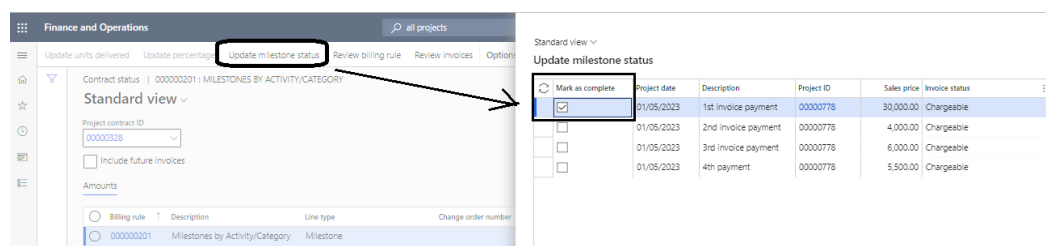


Figure 69 – Update Milestone Status

3. Create invoice proposal and select the line available (this line is available because we already update its status to complete):
 - i. If the term of issuing the invoice values have changes or the % split have changed, as agreed with Technica team previously, they should review the milestone update the split according to the actual values.

Figure 70 – Create Milestone invoice.

4. Click ok and the invoice will be generated, and finance team will posted it.

Figure 71 – Milestone Invoice generated.

- a) Later, the commercial invoice (for shipment that doesn't affect customer statement) will be issued having different milestones invoices from the same project (Please refer for further details about the commercial invoices from logistics FRD).
- b) Here as illustrated there is a retention percentage. This percentage brought initially from the project contract milestone as 10% and you may change it manually if you want as we did now.
- c) Post the invoice.
- d) Once posted, go back to "On account transactions" from the "Bill" Tab, you will notice that the invoice is now under status "Fully invoiced". See below:

On-account | 00000778 : TOWER CONSTRUCTION PROJECT XYZ

Standard view

Filter Column display Invoice status ☐ Show deductions

Overview General Financial dimensions Sales

Project date	Project ID	Transaction origin	Description	Sales currency	Sales price	Activity	Invoice status
01/05/2023	00000778	Milestone	1st invoice payment	USD	30,000.00	Insurance	Fully invoiced
01/05/2023	00000778	Milestone	2nd invoice payment	USD	4,000.00	Car	Chargeable
01/05/2023	00000778	Milestone	3rd invoice payment	USD	6,000.00	Training	Chargeable
01/05/2023	00000778	Milestone	4th payment	USD	5,500.00	DC Cable	Chargeable

Figure 72 – Invoice status updated.

Voucher transactions | 00000386 : 00000328

My view

Overview General

Journal number	Voucher	Date	Yea...	Ledger account	Account name	Description	Currency	Amount in transaction currency	Amount	Posting type
002978	PIIV_00000386	28/05/2023		130100----	Accounts Receivable - Domestic	1st invoice payment	USD	30,000.00	30,000.00	Customer balance
002978	PIIV_00000386	28/05/2023		160600----	WIP - Invoiced On Account	1st invoice payment	USD	-30,000.00	30,000.00	Project - WIP Invoiced - on account

Figure 73 – Generated Invoice Voucher.

❖ Reports requested by Technica:

1. Projects lists with key milestones, Overview on statuses of all projects:

- a. Report name "On-account invoice schedule":

On-account invoice plan

Technica International

Page 1 of 5
19/06/2023
18:32

Project	00000778				
Name	Tower Construction Project XYZ				
Project manager					

Project date	Description	Invoice proposal	Invoice	Sales currency	Amount
01/05/2023	1st invoice payment	PIIP_00000412	00000386	USD	30,000.00
01/05/2023	2nd invoice payment			USD	4,000.00
01/05/2023	3rd invoice payment			USD	6,000.00
01/05/2023	4th payment			USD	5,500.00
Total					45,500.00
Invoice date	01/05/2023				45,500.00

Figure 74 – On account invoice schedule Report

- b. We will modify this report to reflect the below figures:
- Status per invoice per milestone: based on the value paid, the report will recognize the status if it is paid fully, partially, or not paid yet.
 - Commercial report will not show in this report. Instead, it will be customized (see logistics FRD). However, we will add a commercial invoice number. How we will be able to capture it in this report? knowing that the real invoice is already linked to a packing slip and the related packing slip is linked to item requirement then we can get the related info and place in this report as commercial invoice number.

2. Technica team requested to have Cashflow forecast for all projects:

- a. Report name "Project cash flow": This report shows by project the cash inflow (invoiced milestone/WBS current estimate) and outflow (actual cost) and the net cash flow (difference)

Project - Cash flow

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Page 2 of 2

19/06/2023

18:42

Project	Name	Cash inflows	Cash outflows	Net cash flows
00000456		0.00	0.00	0.00
00000457	active transport march project	0.00	0.00	0.00
00000578	JBC	0.00	0.00	0.00
00000604	Testing Estimate on FP	6,000.00	5,000.00	1,000.00
00000628	Zahle Governmental Hospital	0.00	3,200.00	(3,200.00)
00000678	Hopsital Room 2021	0.00	0.00	0.00
00000704	Geatawi Hospital 2021	0.00	2,700.00	(2,700.00)
00000728	Testing projects dates entries	13,800.00	10,850.00	2,950.00
00000753	Project Butech (2)	28,750.00	(56,350.00)	85,100.00
00000778	Tower Construction Project XYZ	30,000.00	(8,290.00)	38,290.00
Grand total		78,550.00	(42,890.00)	121,440.00

Figure 75 – Project Cash flow Report

- b. Report name "Cash flow statement": Based on the filter criteria mentioned below you can extract exactly by transaction type, date ranges, payment date, project data what are the related cash flow values:

TECH 000011 - master ships project 2 | Standard view

Cash flow

Parameters

INCLUDED PROJECT TYPES: Investment ☐ No, Internal and cost ☐ No, Fixed price ☐ No, Time ☐ No

PROJECT DATE: From date , To date

DATA: Actual vs. budget Actual, Include paid payment ☐ No, Include expected payment ☐ No

INCLUDED TRANSACTION TYPES: Hour ☐ No, Item ☐ No, Fee ☐ No, Expenses ☐ No, On account ☐ No

PAYMENT DATE: From date , To date

EXPECTED SALES PAYMENT DATE: Add days to due payment 0, Minimum payment date

EXPECTED COST PAYMENT DATE: Add days to due payment 0, Minimum payment date

Cash flow

ACTUAL:

CASH INFLOWS	1,658,750.00
CASH OUTFLOWS	0.00
NET CASH FLOWS	1,658,750.00

Cash provided from operating activities

INVOICED REVENUE	0.00
INVOICED - ON ACCOUNT	1,658,750.00

Cash disbursed for operating activities

CASH PAID FOR - HOUR	0.00
CASH PAID FOR - EXPENSE	0.00
CASH PAID FOR - ITEM	0.00

Figure 76 – Cash flow Statement.

- Within this report, there is a tab in the header for "Transactions", if you click on it you can see the transactions details for milestones, hours, expenses, item, fee).
- c. Report name: "Project forecast transaction": This report is by forecast model by date, project group (Fixed price):

Project forecast transactions - Profit and loss

Contoso Consulting USA

Budget NT_Forecas

Project date from 01/05/2023 to 31/07/2023

Project	Name	Hour - quantity	Currency	Total cost	Revenue	Gross margin
00000753	Project B	150.00	USD	67,150.00	0.00	-67,150.0
00000778	Tower Construction Project XYZ	40.00	USD	35,250.00	0.00	-35,250.0
Grand total		190.00		102,400.00	0.00	-102,400.0

Figure 77 – Project Forecast transactions – profit and loss

3. Technica team requested also to have a cash flow forecast for all the expenses, item, hour including milestones:

- a. There is an inquiry within project form in the forecast section "Cash flow forecast":

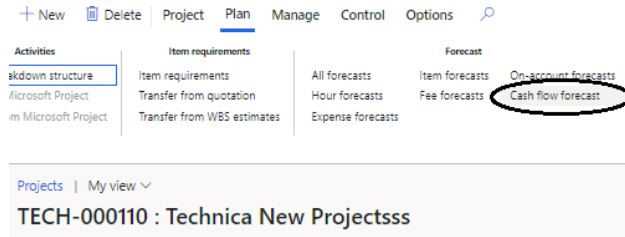


Figure 78 – Cash flow forecast

- b. To enable this feature, we should go to "Cash flow forecast setup" and do the below setup:

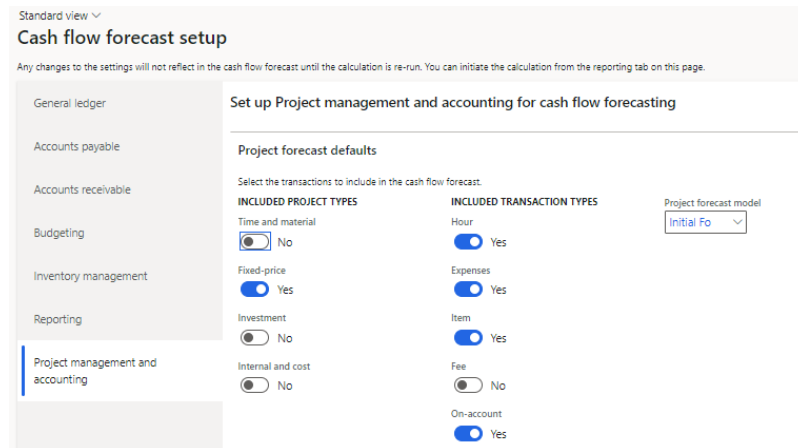


Figure 79 – Cash flow forecast setup/Parameter.

- Choosing project group fixed price is a must to bring related project.
- On-account = Milestones
- See below projection from the related mentioned view:

Cash flow forecasts | TECH-000110 : TECHNICA NEW PROJECTSSS

Standard view

Filter

Main account	Date	Posting	Currency	Amount in transaction currency	Amount	Crediting
	19/06/2023	Project - WIP Invoiced - on account	LBP	2,025,200,000.00	2,025,200,000.00	
	25/06/2023	Customer balance	LBP	-2,025,200,000.00	-2,025,200,000.00	✓
112120	21/06/2023	Project - cost	LBP	-8,172.00	-8,172.00	✓
112120	21/06/2023	Customer balance	LBP	8,172.00	8,172.00	✓
160600	19/06/2023	Project - WIP Invoiced - on account	LBP	256,000,000.00	256,000,000.00	
160600	25/06/2023	Customer balance	LBP	-256,000,000.00	-256,000,000.00	✓
600150	21/06/2023	Project - cost	LBP	-150.00	-150.00	✓
600150	21/06/2023	Customer balance	LBP	150.00	150.00	✓
600250	20/06/2023	Project - cost	LBP	-2,000.00	-2,000.00	✓
600250	20/06/2023	Customer balance	LBP	2,000.00	2,000.00	✓
600250	21/06/2023	Project - cost	LBP	-800.00	-800.00	✓
600250	21/06/2023	Customer balance	LBP	800.00	800.00	✓
110711	20/06/2023	Customer balance	LBP	-2,000.00	-2,000.00	✓
110711	21/06/2023	Customer balance	LBP	-9,122.00	-9,122.00	✓
110711	25/06/2023	Customer balance	LBP	2,281,200,000.00	2,281,200,000.00	

Figure 80 – Cash flow forecast display values

4. Cash flow aging report: Sent by Technica team and they need like it.

Customer: Pepsi																				
Project ID: PR0001																				
Project Desc.: Conveyor Production																				
Project In Values: \$100,000																				
Project Manager: S1																				
Inflow	Phases		% Due	% Partial	At Days	Date Event	Payment Due	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
	Advance		30%	100%	30	14-Jan-2023	\$30,000		\$30,000											
	FAT		10%	100%	60	31-Mar-2023	\$10,000					\$10,000								
	Shipment 1		40%	40%	90	1-May-2023	\$16,000							\$16,000						
	Shipment 2		40%	60%	120	2-Jun-2023	\$24,000									\$24,000				
	Commissioning		20%	100%	180	4-Jul-2023	\$20,000												\$20,000	
Total							\$100,000	\$30,000				\$10,000		\$16,000		\$24,000			\$20,000	
Outflow Partner 1	PO Value																			
	Advance	\$15,000	40%	100%	60	1-Feb-2023	-\$6,000				-\$6,000									
	Shipment 1	\$15,000	20%	100%	90	1-Apr-2023	-\$5,000					-\$3,000								
	Shipment 2	\$15,000	30%	100%	120	2-May-2023	-\$4,500						-\$3,000							
	Commissioning	\$15,000	10%	100%	180	4-Aug-2023	-\$1,500									-\$4,500				-\$1,500
Outflow Partner 2	Advance	\$20,000	40%	100%	60	1-Feb-2023	-\$8,000				-\$8,000									
	Shipment 1	\$20,000	20%	100%	90	5-May-2023	-\$4,000								-\$4,000					
	Shipment 2	\$20,000	30%	100%	120	2-Jul-2023	-\$6,000									-\$6,000				
	Commissioning	\$20,000	10%	100%	180	4-Nov-2023	-\$2,000													
	Total						-\$15,000				-\$14,000		-\$3,000		-\$8,500		-\$6,000			-\$1,500
Project: PR0001	Netflow							\$30,000			-\$14,000	\$10,000	-\$3,000	\$16,000	-\$8,500	\$24,000	-\$6,000		\$20,000	-\$1,500
PR0001	Cumulative Flow							\$30,000	\$30,000			\$16,000	\$23,000	\$39,000	\$30,500	\$54,500	\$48,500	\$48,500	\$68,500	\$67,000

Figure 81 – Cash flow agent report by Technica

Requirements

ID	Desc	Fit/GAP
PJ003-001	Project HOD Create Milestone and update status to complete	Fit
PJ003-002	Finance Manager will be notified via a custom alert to Create Invoice proposal (Real invoice)	Fit
PJ003-003	Generate Invoice of completed milestone	Fit
PJ003-004	Post invoice	Fit
PJ003-005	On-account invoice schedule Report will be modified to read commercial invoice number and status (paid, not paid, partial paid).	Fit/GAP
PJ003-006	Project Cash flow	Fit
PJ003-007	Project forecast transaction	Fit
PJ003-008	Cash flow Forecast	Fit
PJ003-009	Cash Flow aging Report (Technica Excel file)	GAP

3.4. PJ004 Project Estimates / Accrued Revenue Calculation

Process Diagram

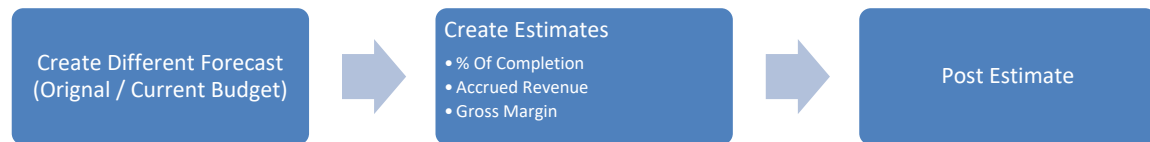


Figure 82 – Project Estimates Lifecycle

Process Overview

Proposed Process Flow

1. Once the WBS is published → Forecast name "**T_Forecast**" was issued automatically from WBS Having "**Original Budget**" (Previously mentioned in project planning point#4).
2. We updated the WBS costs of some activity/category, and it reflected **current estimate** values. Then once we got approved on the revised budget, we created "**NT_Forecast**" from this current estimate and publish it which is now falling under "**Current Budget**". You can convert some of the elements to current budget and not necessarily to move it all (Optional). See below:
 - a. Go to "All forecasts"
 - b. Click "Transfer from WBS"

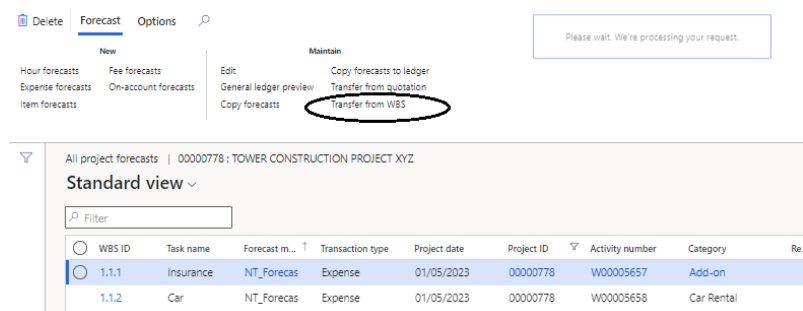


Figure 83 – Project Estimates Lifecycle

- c. Simply, you can select manually the line that you want or via some filter within the same screen and choose either the same forecast or create new model then click ok and it will be published.

My view ▾

Transfer WBS estimates to project forecasts

The list below displays WBS estimates from WBS setup linked to this project that have not been transferred to project forecasts. Select the transfer and a target forecast model.

Transaction type
All ▾

Activity number	Project ID	Transaction type	Resource
W00005657	00000778	Expense	
W00005657	00000778	Hour	
W00005658	00000778	Expense	
W00005658	00000778	Hour	
W00005658	00000778	Item	
W00005658	00000778	Hour	
W00005658	00000778	Hour	
W00005659	00000778	Hour	
W00005659	00000778	Expense	
W00005664	00000778	Hour	
W00005675	00000778	Item	
W00005675	00000778	Expense	
W00005675	00000778	Hour	
W00005658	00000778	Hour	

Forecast model
TNT_Forecast ▾

Batch processing
☐ No

Figure 84 – Transfer WBS estimate to project forecast by selected lines.

- From the Estimates screen, enter the physical POC% for the system to calculate the accrued revenue (Financial part) based on the proposed percentage.
- Estimate will be created by period. So, every month, you create a new estimate based on the new actual figures.

Standard view ▾

Create estimate

General Run in the background

ESTIMATE SELECTION

Period code
EstMonth

Estimate date
31/05/2023

Forecast model
T_Forecast

Copy from model
▾

Continuous
☒ Yes

Cost to complete method
From cost template

Calculation method
From cost template

Automatic
Manual

From cost template

OUTPUT

Print estimate list
Nothing to print

Show Infolog
☐ No

Figure 85 – Project Estimates Creation.

- Below are the calculated Variables:
 - Percentage Of Completion = **Manual Input given to accounting team or Automatic based on actual cost over total forecasted values.**
 - Accrued revenue = Contract value (Milestone values) x POC%
 - Gross margin = Accrued Revenue – Total Cost (Actual)
 - Knowing that the contract values are getting data from Milestones and knowing that contract values does not update its values automatically, project team should be aware to update its contract values manually (if needed) so he can get the correct expected earned values and gross margin.
 - Results will be as follows:

Estimate | 00000778 : TOWER CONSTRUCTION PROJECT XYZ

Standard view

Filter ☐ Include reversed Period code Estimate date Column

Overview General Profit and loss WIP Consumption Hour rate Totals

	Estimate date	Estimate status	Percentage complete	Recalculation	Estimate project	Description	Total milestone	invoiced milestone	Earned Values	Actual cost	
	31/05/2023	Created	76.48	✓	00000778	Tower Construction Project XYZ	Contract value 45,500.00	Invoiced revenue 30,000.00	Accrued revenue 34,799.43	Total cost 26,960.00	Gross margin 22.53

Figure 86 – Project Estimates based manual POC% input.

- In the above screen, Technica team requested to add a new column showing as display method the 30,000\$ (which is equal to Real invoices) split by commercial invoice → Means, if out of these 30,000\$ there was 20,000\$ issued in a commercial invoice, we need to show these 20,000\$ in a separate column name “Commercial invoices” and the other 10,000\$ under “Real invoices”.
- Post the estimates.
 - Estimates status will change to “Posted” and the accounting results will be as follows:

Voucher transactions | 00000778 : 31/05/2023

My view

Overview General

Journal number	Voucher	Date	Ye...	Ledger account	Account name	Description	Currency	Amount in transaction currency	Amount	Posting type
002979	PIPV_00000330	31/05/2023		540210----	Cost of Project - Expenses	Travel Expense Accident May 23	USD	25,450.00	25,450.00	Project - cost
002979	PIPV_00000330	31/05/2023		540100-003-028--	Cost of Project - Labor	Client Training 7 hours	USD	1,260.00	1,260.00	Project - cost
002979	PIPV_00000330	31/05/2023		540110-003-024-0...	Cost of Project - Products	DC Cables (2)	USD	250.00	250.00	Project - cost - item
002979	PIPV_00000330	31/05/2023		160100-003-026-	WIP - Labor	Client Training 7 hours	USD	-1,260.00	1,260.00	Project - WIP cost
002979	PIPV_00000330	31/05/2023		420200----	Accrued Revenue		USD	-34,799.43	34,799.43	Project - accrued revenue - sales
002979	PIPV_00000330	31/05/2023		160200-003-024-S...	WIP - Products	DC Cables (2)	USD	-250.00	250.00	Project - WIP cost - item
002979	PIPV_00000330	31/05/2023		160300----	WIP - Expense	Travel Expense Accident May 23	USD	-25,450.00	25,450.00	Project - WIP cost
002979	PIPV_00000330	31/05/2023		160600----	WIP - Invoiced On Account		USD	34,799.43	34,799.43	Project - WIP - sales value

Figure 87 – Project Estimates final voucher entry.

Requirements

ID	Desc	Fit/GAP
PJ004-001	Create Forecast with Original budget / current budget	Fit
PJ004-002	Create estimates Journal	Fit
PJ004-003	Modify Estimate form to have a column for commercial invoices values and another for real invoice values.	GAP
PJ004-004	Input Manually the POC% and get earned value	Fit
PJ004-005	Post estimates transaction	Fit

DOCUMENT APPROVALS

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

Name	Department	Date	Signature

Comments:

Link between Project CRM and F&O not mentioned or if we should use it based on our last conversation and workshop session.

Info-sys: It is mentioned in section PJ001 Project planning, point 1. Sales team on opportunity time sheet. Sales support on project in FO timesheet (state it in the related section).

Shipping Process based on Project Milestones is missing

Info-sys: taken into consideration in 1 of the above section (invoicing and shipping).

Nothing was mentioned on how to solve resource planning at the level of project management. How to manage project task schedules? Start/End Date?

Info-sys: mention in the planning section the open in Ms Project and mention in details how the integration is working. check in check out. Elaborate in detail .

(We have added it to pj001 project planning section under open in Ms project feature section section#3)

Nothing mentioned in the document related to Sub-Projects.

Info-sys: We have added a section for Sub-project in PJ001 Project planning point Q. please check and add your remark in case anything missing.

How to manage project documents? How to manage Project versions?

Info-sys: Documentation is already mentioned in the section PJ001 Project planning (Point H in figure 22 URL collaboration workspace). As for project versions, as talked with Elissa, to forget about it.

Part related to Customer Service is not mentioned here (installation management)

Info-sys: Please refer back to Customer service FRD → mention here a section for installation management. Where it is part of the WBS created in a separate section (having different team that Project team). that have all the related cost and the

same steps of the project planning (added in section 4 in PJ001 Project planning.

Also find below case:

Gap (Re-Allocation of common activity cost to assemblies):

The common expenses of some activities on a project, like paint works, cleaning, others... are put it at the project level and not at assembly (or part) level from the beginning and during the execution phase.

At the end of the project, they will reallocate this cost to multiple assemblies that were involved in this activity. And the formula is based on the percentage of the Assembly cost value within the project.

Example:

Project cost is 120000 \$

Assembly 1: 50000 (42% of Project)

Assembly 2: 40000 (33% of project)

Assembly 3: 30000 (25% of Project)

Activity cost is 24000

Reallocation of cost will be

Assembly 1: 10,080\$ (42% of 24000)

Assembly 2: 7,920\$ (33% of 24000)

Assembly 3: 6,000\$(25% of 24000)

Info-sys comments: this case was added in the pj002 project execution section

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: _____