# Functional Requirements Document- Logistics

Prepared for
**Technica**

Version: **2.0**

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# Introduction

## 1.1 Purpose

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

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

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

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

This document focuses on Production requirements.

## 1.2 Acronyms

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

## 1.1 Business Processes List

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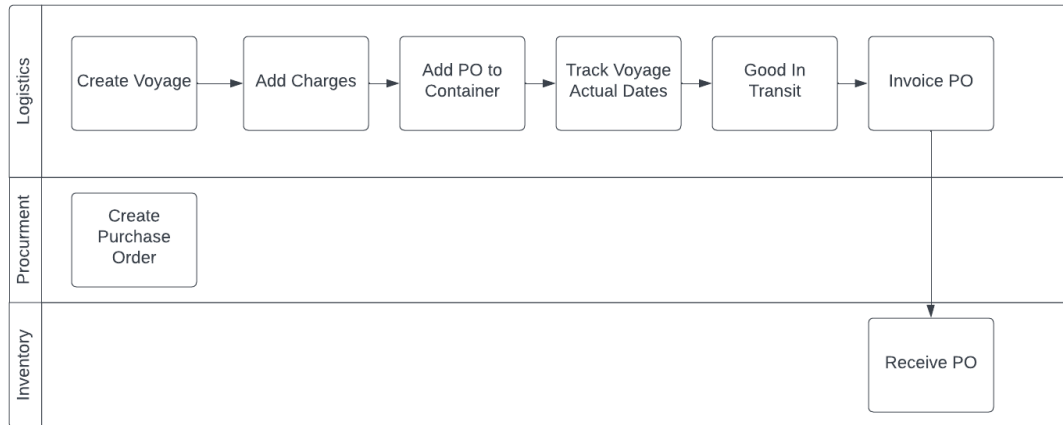
To elaborate and define the functionality, the following processes have been presented in the subsequent sections:

| Process ID | Name |
| --- | --- |
| LOG001 | Inbound Shipments Overview |
| LOG002 | Direct Delivery Overview |
| LOG003 | Outbound Shipments Overview |

## 1.3   Logistics Processes

### 1.3.1   LOG001 – Inbound Shipments Overview

Process Overview



Once the vendor confirms the delivery date, the procurement informs the logistics that the goods will be ready for shipment by email.

1.   The Procurement will then create a voyage to track the shipment(<mark>update process flow</mark>);



2.   The logistics then select the Journey Template on the voyage (discussed in section 0) ,

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3. The logistics then add the expected charges on this particular voyage noting that these will be added on top of the item cost



*The Logistics want to be able to generate a report for each charge code separately for reporting purposes.*

4. The Procurement agent can assign a single or multiple Purchase order and even transfer order to this voyage; *the agent can mix and match lines from multiple purchase order*.

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5. Once the Purchase order(s) is selected on the Voyage the whole load is added to a container or multiple container



If the logistics want to track all their containers they can refer to the **All Shipping Containers** which allows them if needed to track all their containers and their status



6. Once the shipping documents are received the Procurement will need to update the voyage by clicking on "Documents Received" , this will update the voyage status and

will notify the logistics by email that the documents on a specific voyage is received, *then the Documents are provided to the accounting department.*

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7. Once the goods take off from a port, the logistics can set the Voyage to IN TRANSIT; which will transfer the goods to a special GOODS IN-TRANSIT warehouse, since they are in Technica's custody.



8. Once done, the logistics can provide the accounting department with the all documents related to the shipment,
9. From here on the logistics will track the actual dates for each voyage leg



Which automatically updates the **Confirmed delivery date** on the purchase order line



And on a related note, which was previously discussed, whoever has an interest in tracking inbound shipments, they can check the **open purchase order lines**, where they

can track the estimated and confirmed delivery date, which as just demonstrated is updated live while the logistics are tracking their voyage



10. At this stage, the finance can Invoice the Purchase order since the goods are already in Technica's ownership (but still NOT received yet);
11. Once the goods are physically received the voyage can be received by the warehouse department.

## Requirements

| ID | Description | Fit/Gap |
|---|---|---|
| LOG001-01 | Ability to create a Voyage | FIT |
| LOG001-02 | Ability to Add Charges on the Voyage | FIT |
| LOG001-03 | Ability to add single or multiple PO line to Voyage | FIT |
| LOG001-04 | Ability to track goods in Container | FIT |
| LOG001-05 | Ability to split goods across multiple containers | FIT |
| LOG001-06 | Ability to track Expected and Actual Shipment Dates | FIT |
| LOG001-07 | Ability to Invoice Purchase order & Receive PO | FIT |
| LOG001-08 | Email Notification to logistics | GAP |

## 1.3.2 LOG002 – Direct Delivery Overview

### Process Overview
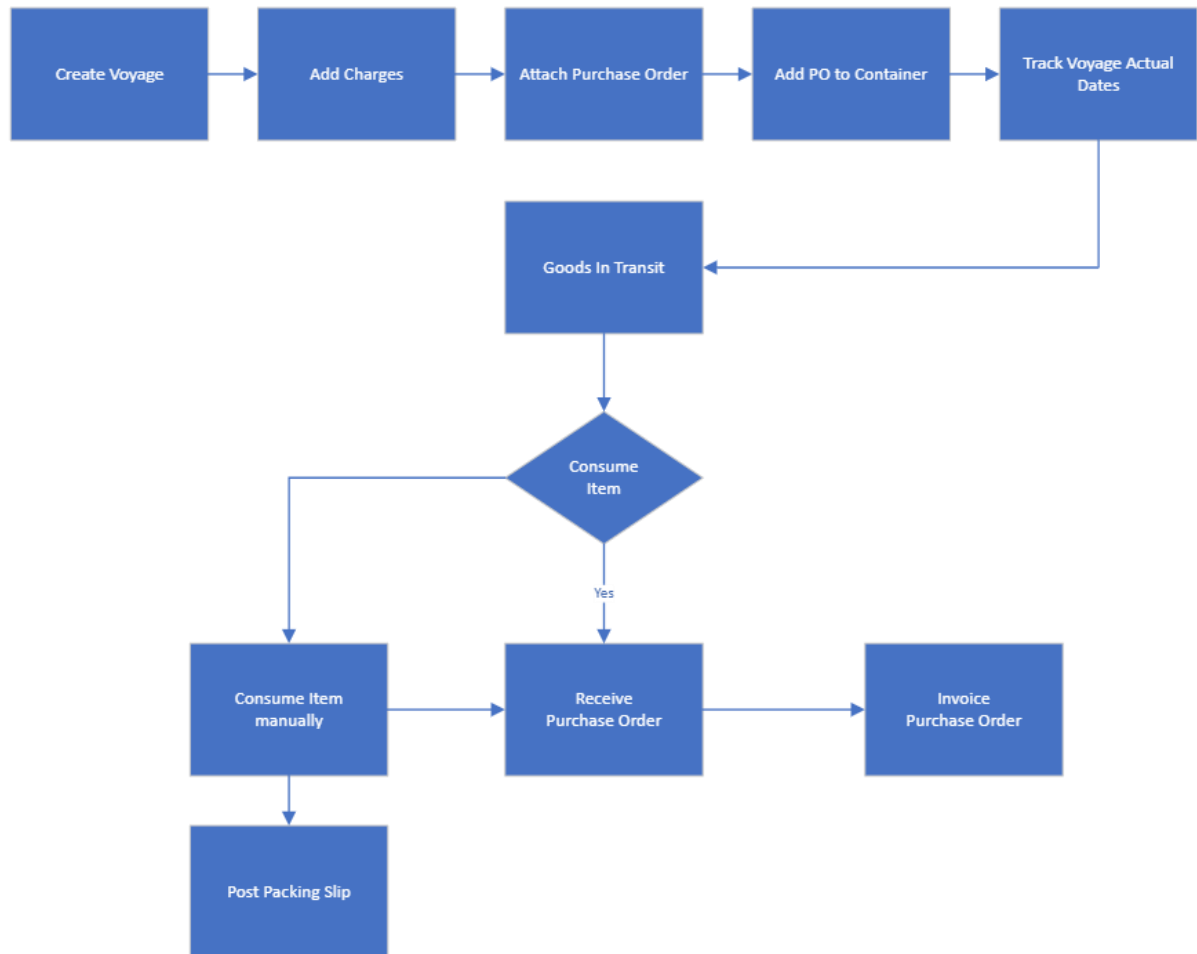


In case of direct delivery, Technica wishes to purchase goods and directly deliver them onsite in this case:

1. a sales order is created of type "Item Requirement", the **Project department** sets the sales order to direct delivery; *the item that needs to be directly delivered to the customer needs to be removed from the BOM lines, so the factory needs to locate this specific production order and remove the item/part that needs to be delivered directly to the customer from the BOM because it is only be used during assembly.*

2. and the purchase order is firmed by the **procurement department** from master planning;



3. Once the Purchase Order is confirmed by the procurement
4. The Procurement can then create a voyage; at which point charges are added,
5. The Commercial Invoice is then printed for the shipment documents.
6. Once the goods are shipped the voyage is set to "**In-Transit**" by the logistics

| Voyage update | Purchase order | Transfer order | Goods in transit | Functions |
|---|---|---|---|---|
| Documents received  Ready for costing | Post receipts list | Ship transfer order | Receive goods in transit | Find auto costs    Aggregate costs |
| In transit    Costed | Post product receipt | Receive transfer order | | Create arrival journal  Change journey template |
| | Post invoice | | | Accrue costs |

Voyages | Standard view ⌄

## 000000021 : Direct Delivery

### Voyage header ⌄

| STATUS | IDENTIFICATION | Customs entry identifier | PORTS | JOURNEY | MEASUREMENTS |
|---|---|---|---|---|---|
| Voyage status | Master air waybill/Bill of lading | | From port | Journey template | Measurement |
| 20-GIT | | Vessel | GER-PORT | GER-LEB-Ocean | 0.0000 |
| Purchase order status | House air waybill/Bill of lading | V665533 | To port | SHIPPER | Measurement unit |
| Received | | Tally in #number | BEY-PORT | Shipping company | |
| Documents received | | | | 1004 | Number of pallets |
| ⬤ No | | | | Name | 0 |
| | | | | DHL | |

### Voyage lines

🗑 Remove   Inventory ⌄   Refresh

| ○ | Shipping container | Folio | Item number | Reference | Number | Status | Quantity | Purchase p... | Net amount | |
|---|---|---|---|---|---|---|---|---|---|---|
| ○ | CONTDR7856 | TECH-000009 | PRNCCRA25-b | Purchase order | PO-000058 | Received | 222.00 | 15.00 | 3,330.00 | |

### Line details ⌄

General   Reference

| IDENTIFICATION | | | | | QUANTITY | |
|---|---|---|---|---|---|---|
| Voyage | Folio | Item number | Company | Measurement unit | Quantity | Position |
| | TECH-000009 | PRNCCRA25-b | tech | | | 0 |

7. Once the goods are received onsite, the purchase order can be received from the voyage by the site leader.



8. Once the Purchase order is received the , Sales order created in the beginning will be automatically Delivered and the purchase order will be updated to Received

9. At this point the system will prompt the user whether the Items received onsite will be consumed or not; *item consumption is when the item is physically deducted from inventory* and it's cost consumed by the project.
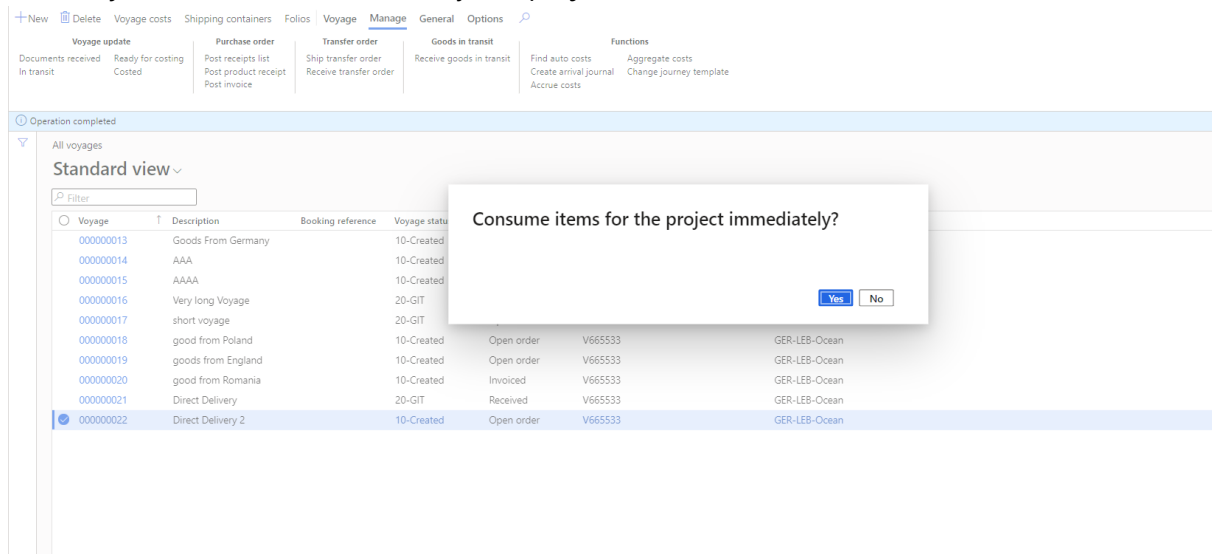


*If there are Goods that remain onsite and need to be returned , any shipping charges need to be allocated on the project itself noting that the item cost will not affect the project since it is not consumed and will be consumed later by another project.*

# Option 2:

The customer site can always be created as a separate warehouse,

1. A purchase order can be created with receiving warehouse "Customer Site"
2. The logistics can then create a voyage to manage this trip, to which charges codes will be added
3. Once the goods are shipped and received on the customer site, the Purchase order can be received to the "Customer Site" warehouse;
4. The finance can then invoice the purchase order

## Requirements

| ID | Description | Fit/Gap |
|---|---|---|
| LOG002-01 | Ability to Ship goods as direct shipment | FIT |

### 1.3.3    LOG003 – Outbound Shipments Overview

#### Process Overview

The Project manager informs the logistics that a shipment is ready to shipped, this shipment is already an item requirement in the project

1.    The Logistics will create a load based on the item requirement, *the Item Requirement will be defined by the project manager on the Project WBS, which is pushed to the Item Requirement automatically.*



2.    The logistics will add a route on the load; Zip code is not mandatory, Country/port or airport can be used instead of zip code; Technica might use the ZIP code in both situation



3.    The logistics department will get be getting multiple request for quotations for this shipment and will record them in the Transportation Tenders

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This will allow the logistics to compare rate



4. Once the best carrier is selected, the logistics can release the load,
5. The finance will then generate the Commercial Invoice & the packing Slip(LOG004) for shipping; *the commercial invoice will have no effect on the accounting, it is just a report used for the shipping process.*
6. Once the goods have reached their destination, the logistics can post the packing slip(otherwise known as Delivery note), The forwarder shipping invoice will be linked to the forwarder account.

## Requirements

| ID | Description | Fit/Gap |
|---|---|---|
| LOG003-01 | Ability to track outbound shipments | FIT |
| LOG003-02 | Ability to track multiple rate for different carriers | FIT |
| LOG003-03 | Ability to create Load for tracking shipments | FIT |
| LOG003-04 | Ability to Print out a Commercial Invoice | FIT |

### 1.3.1  LOG004 –Packing

#### Process Overview

In order to do the packing, all parts need to be packed in boxes to be prepared for shipping. To do this, the logistics will open explode BOM screen and start assigning box names to all the BOM Lines



On each line the box number will assigned as well as the box name,

Once all lines are done the packing slip can be printed showing what each box has in terms of items

#### Requirements

| ID | Description | Fit/Gap |
|---|---|---|
| LOG004-01 | Ability to assign/re-assign Box Numbers to parts being shipped | GAP |

### 1.3.2     LOG000 - Setup

#### Journey Template

The logistics department can create as many Journey's as they need , each leg will define portion of the journey

These will be provided by Technica during the migration phase

## Requirements

| ID | Description | Fit/Gap |
|---|---|---|
| LOG004-01 | Ability to create multiple journey template from origin to destination | FIT |

## Journey Legs

The journey leg defines each portion of the journey ,



the most important part of defining a leg in a journey is defining the lead time required for this particular leg in terms of time, which is done from the tracking control center.



This will affect the estimated delivery date of the voyage ; *The Tracking control center is where you define what each of the journey legs require in terms of lead time, each leg lead time will allow calculating the estimated arrival date*

These will be provided by Technica during the migration phase

Technica requested if it is possible to add multiple lead times and as a result get an average lead time to any voyage leg, this is not available out of the box and would require customization if it is necessary.

## Requirements

| ID | Description | Fit/Gap |
|---|---|---|
| LOG004-02 | Ability to create multiple journey legs | FIT |
| LOG004-03 | Ability to tack lead time for each journey leg | FIT |
| LOG004-04 | Calculate Average lead time per leg | GAP |

## Mode of Delivery

The mode of delivery can Ocean, Air, Land or anything that the logistics might need



These will be provided by Technica during the migration phase

## Requirements

| ID | Description | Fit/Gap |
|---|---|---|
| LOG004-03 | Ability to maintain mode of delivery | FIT |

## DOCUMENT APPROVALS

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

| Name | Department | Date | Signature |
|------|-----------|------|-----------|
|  |  |  |  |
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Comments:

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

Signature: _____     Date: _____