

UNOE TRANSPORTATION MANAGEMENT END TO END PROCESS

Transportation Planning and Management and Track & Trace (TPTM-T&T project)

Elena Carrasco Comes / UCS Training Team, Valencia / Tuesday, October 15th

PROCURE	PLAN		PROCURE FREIGHT	EXECUTE & MONITOR			
UNOE	Goods Vendor	Freight Forwarder	EXW / FCA/ FOB/ DAT	Goods Vendor	Freight Forwarder		
Requisitioner Create Shopping	Stage FOB/FCA/ DAT/ DAP	Stage EXW / FCA/ FOB/ DAT		Stage FCA/ FOB/ DAT/ DAP	Stage EXW /FCA/ FOB/ DAT		
Approver Approve Shopping Cart Buyer Review & Submit PO Approver Proc. Approve PO for Goods							
for Goods SRM							





UNOE – PROCURE PHASE – SHOPPING CART & PURCHASE ORDER



- [Shopping Cart]: Contract Catalog will be used as preferred option. If so, same PID will be offered with different Incoterms (hence, different prices).
- [Shopping Cart]: Incoterm terms from contract catalog are not picked up in the Shopping Cart line. If
 populated, it needs to be inserted manually. Incoterm key shall be selected by using Matchbox. Location is
 free text
- [Shopping Cart]: Purchasing Group (SRM) will default the Planner Group (TM) that will have visibility on the DTR to be planned. Purchasing group and planner group are plant based.
- [Shopping Cart]: For goods, no freight line should be created. Freight Shopping Cart and Purchase Order will be created separately.
- [Shopping Cart]: PO Delivery Address/ Performance Location (SRM) becomes Destination Location in the Freight Unit (TM). Umoja TM will calculate the last leg according to the destination set as PO Delivery Address/ Performance Location
- Selecting the Supplier in SRM will allow the Supplier to submit the related transportation events in the Carrier Collaboration Portal (CCP)

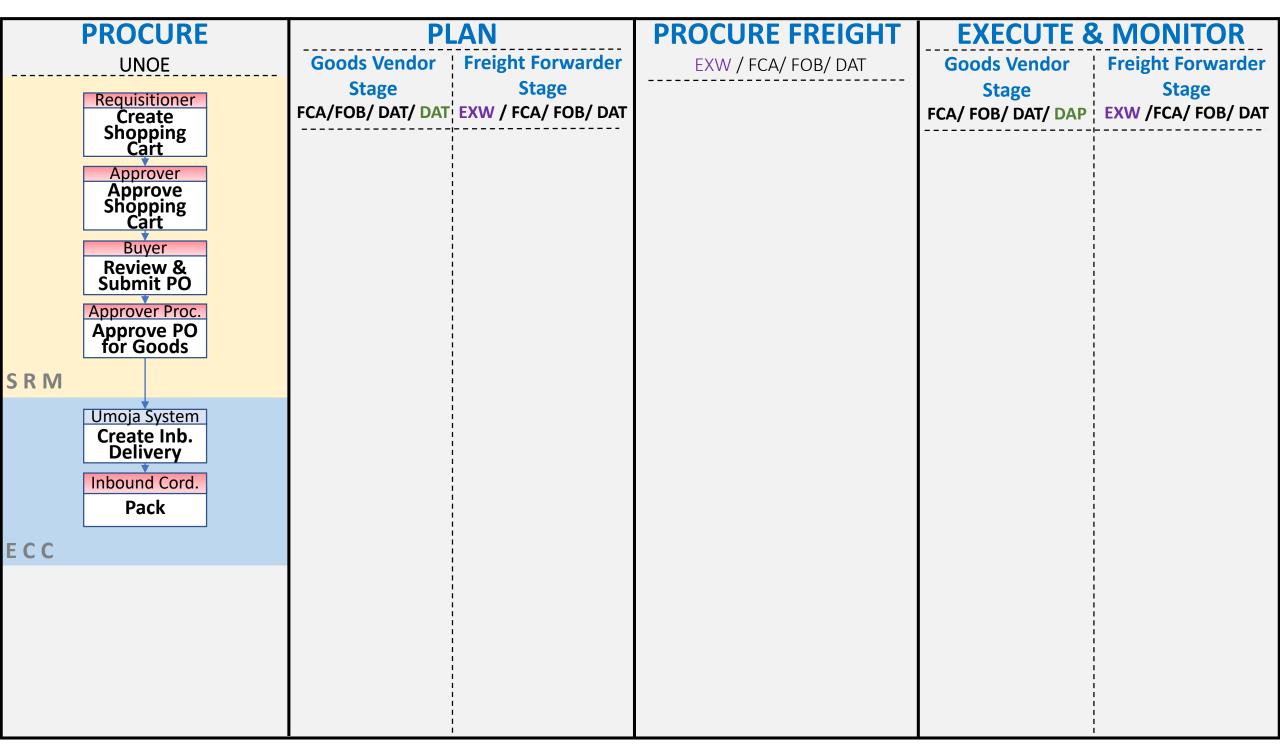




UNOE – PROCURE PHASE – SHOPPING CART & PURCHASE ORDER



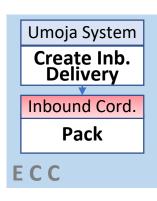
- [Purchase Order]: Buyers shall ensure the correctness of the following fields: Location, Ship- To- Address-, Purchasing Group, delivery date
- [Purchase Order]: Incoterm/ Key Location at header and item level may not be picked correctly; both incoterm key and location shall be selected by using the matchbox.
- [Purchase Order]: Selecting the Supplier in SRM will allow the Supplier to submit the related transportation events in the Carrier Collaboration Portal (CCP)
- Purchase Order} The Delivery Date serves as the baseline date for the new Umoja Transportation Module to estimate all the other related dates (departure date, handover date, arrival at destination date, etc.) based on the UN Transportation Network Master Data
- Certifying Officers and Procurement Officers must review the accuracy of data.



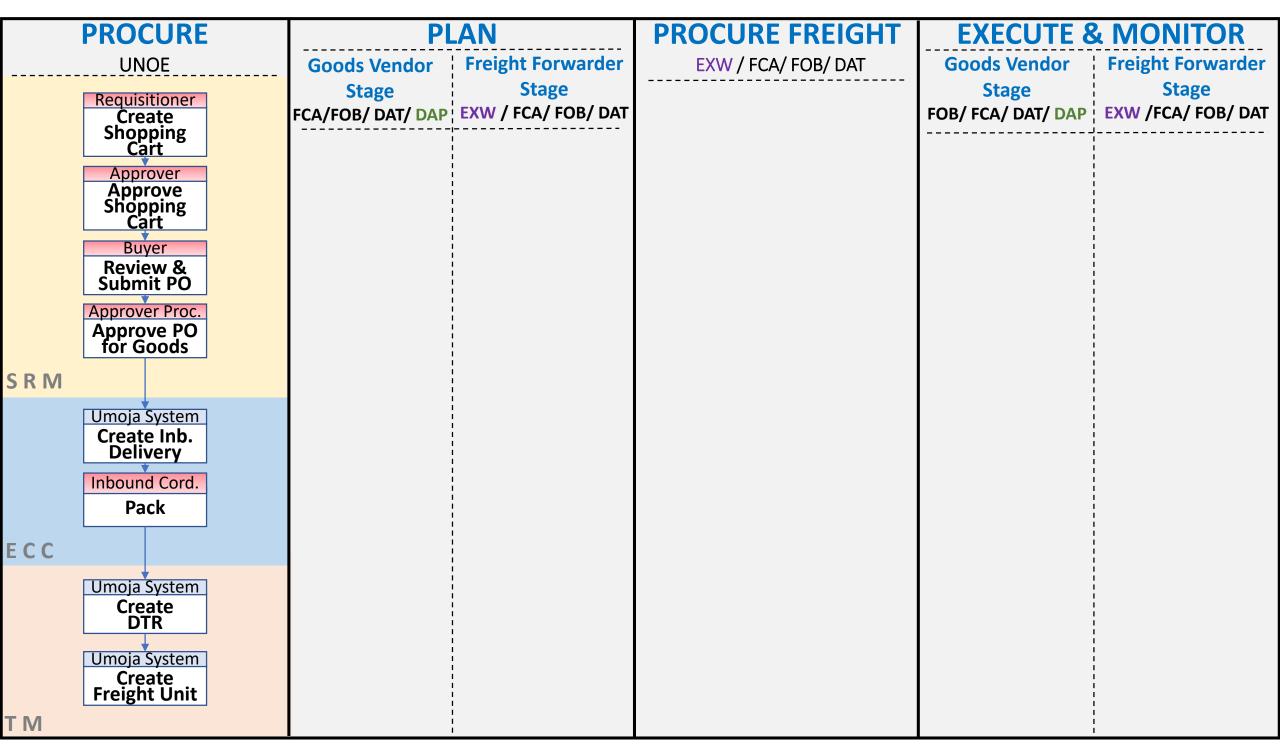




UNOE – PROCURE PHASE – INBOUND DELIVERY



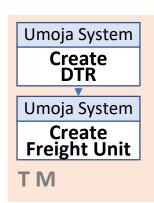
- Inbound Delivery is created via batch job in ECC and can also be manually created.
- Product **weight** & **volume** is not maintained in the material master. Inbound coordinator shall update weight and volume in the inbound delivery document manually, based on supplier's packing list.
- Several Packaging materials (material type "ZPAM") are available in the system
- Packaging materials and packing shall be manually inserted in the inbound delivery document as per vendor packing list.
- Weight, volume and packaging information duly updated in the "Inbound Delivery" will reflect the correct dimensions of the materials being shipped by creating "Handling Units".
- **Batch managed** materials (e.g. vaccines and medical, rations, ammunition) are around 1100PIDs. They need to be assigned in batches by editing the Inbound Delivery document, prior to packing.
- At the moment vendors are onboarded on **EDI**, the packing details will come automatically with the Advanced Shipping Notice (**ASN**).



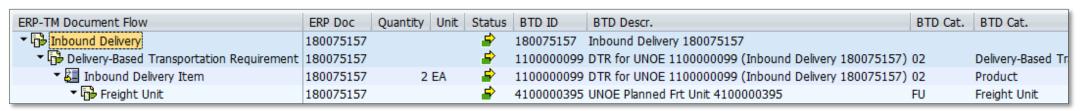




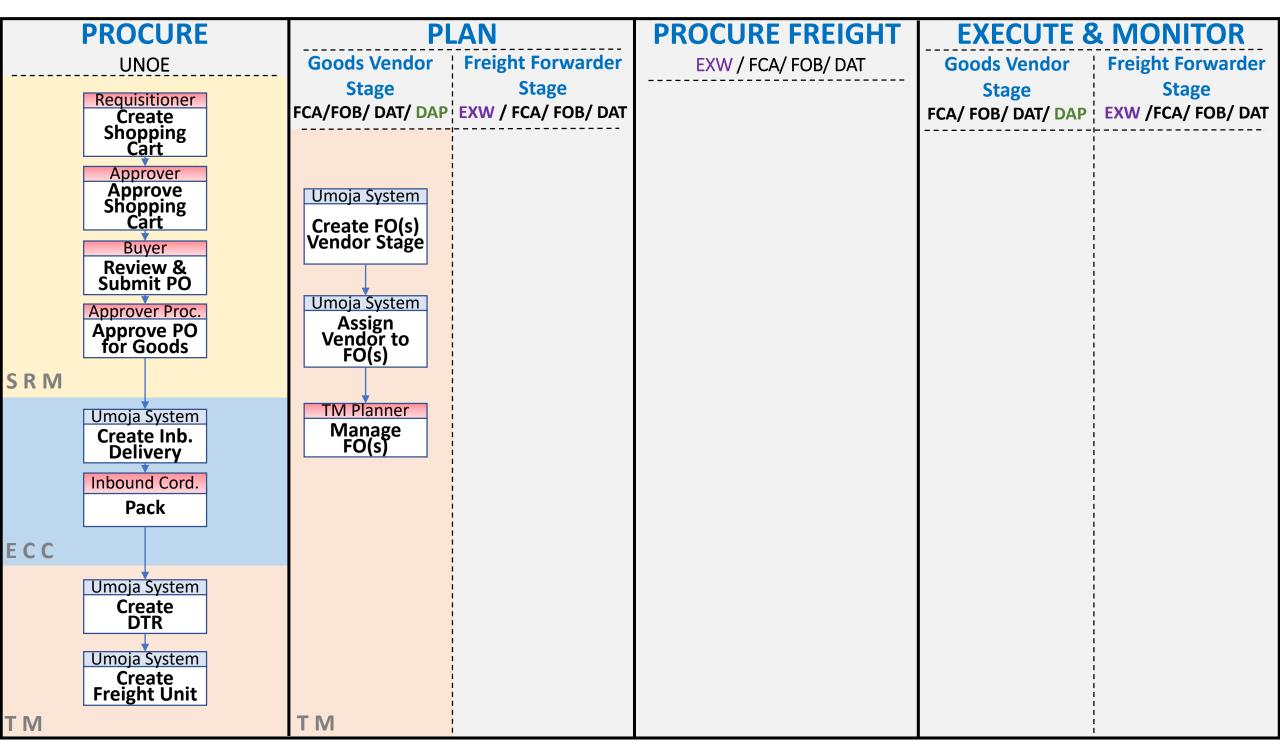
UNOE – PROCURE PHASE – DTR & FREIGHT UNIT



- Once the Inbound Delivery (IBD) is created in ECC, the system automatically creates the following documents in TM: a Delivery-based Transportation Requirement (DTR) and a Freight Unit (FU).
- Both the DTR and the FU are visible in the Inbound Delivery (ECC) by using the "TM Status" tab.



- With the current system configuration, there is a "1 to 1 relationship" between IBD, DTR & FU:
 1 Inbound Delivery 1 Delivery-based Transportation Requirement 1 Freight Unit.
- The **Delivery-based Transportation Requirement** (DTR) document is the representation in TM of the ECC Inbound Delivery document.
- A **Freight Unit** (FU) represent a set of goods that are transported together across the entire transportation chain. The following data is available in the FU document:
 - ItemsDocument flow
 - Transportation stages
 Status information







Umoja System Create DTR Umoja System Create Freight Unit

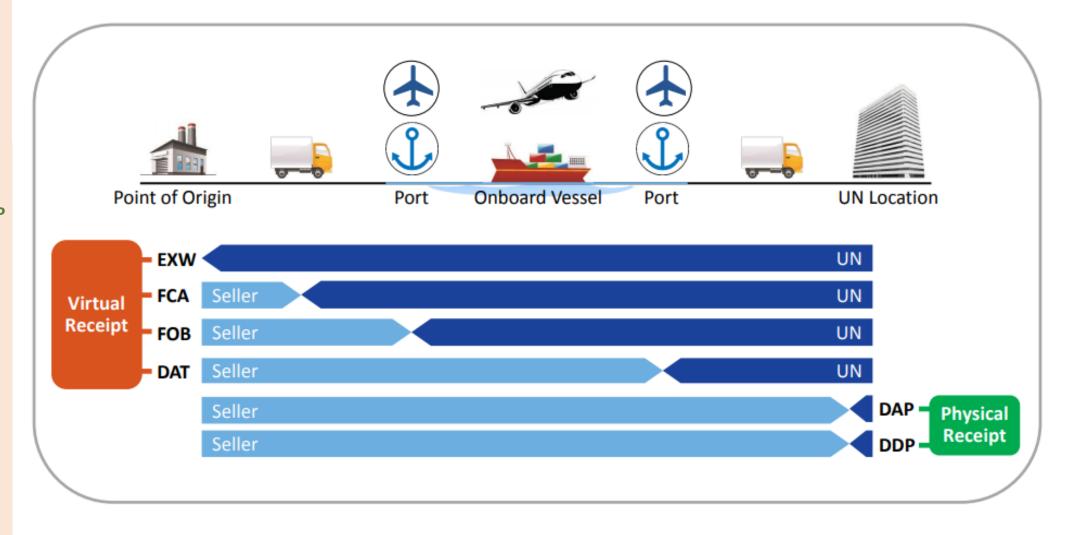
Goods
Vendor
FCA/FOB/ DAT/ DAP

Create FO(s) Vendor Stage

Assign Vendor to FO(s)

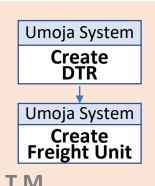
TM Planner
Manage
FO(s)

UNOE – PLAN PHASE – Goods vendor vs Freight Forwarder









Goods Vendor FCA/FOB/ DAT/ DAP

Create FO(s) Vendor Stage

Umoja System Assign Vendor to FO(s)

TM Planner Manage FO(s)

UNOE – PLAN PHASE – Goods vendor vs Freight Forwarder



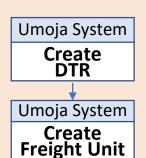
EXW

Who manages the legs?

Pre (HoL -> Port)	Main (Port -> Port)	On (Port -> Destination)
Receiving	Receiving Plant	Receiving Plant
Plant		







Goods Vendor

FCA/FOB/ DAT/ DAP

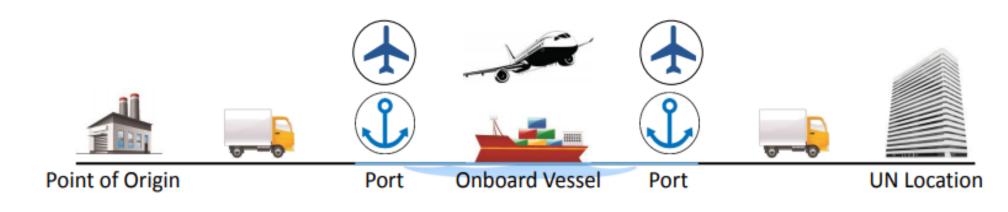
Create FO(s) Vendor Stage

Assign Vendor to

Vendor to FO(s)

Manage FO(s)

UNOE – PLAN PHASE – Goods vendor vs Freight Forwarder



FCA

Seller

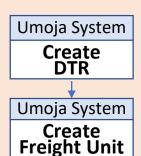
UN

Who manages the legs?

Pre (Source -> HoL)	Main (HoL -> Port)	On (Port -> Destination)		
FCA: Vendor as carrier	FCA: Receiving Plant	FCA: Receiving Plant		







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Goods
Vendor
FCA/FOB/ DAT/ DAP

Create FO(s) Vendor Stage

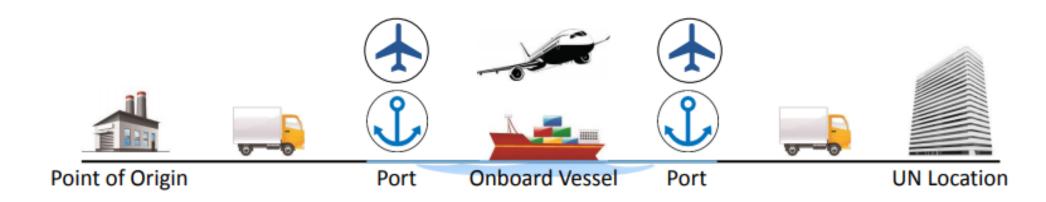
Umoja System

Assign

Assign Vendor to FO(s)

TM Planner
Manage
FO(s)

UNOE – PLAN PHASE – Goods vendor vs Freight Forwarder



FOB

Seller

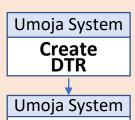
UN

Who manages the legs?

Pre (Source -> HoL)	Main (HoL -> Port)	On (Port -> Destination)		
FOB: Vendor as carrier	FOB: Receiving Plant	FOB: Receiving Plant		







Create Freight Unit

TM

Goods Vendor

FCA/FOB/ DAT/ DAP

Create FO(s) Vendor Stage

Umoja System

Assign Vendor to FO(s)

Manage FO(s)

UNOE – PLAN PHASE – Goods vendor vs Freight Forwarder



DAT Seller

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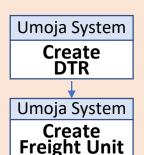
Who manages the legs?

Pre (Source -> Port)	Main (Port -> HoL)	On (HoL -> Destination)			
DAT: Vendor as carrier	DAT: Vendor as carrier	DAT: Receiving Plant			





DAP I



Goods Vendor

TM

FCA/FOB/ DAT/ DAP

Create FO(s) Vendor Stage

Umoja System

Assign Vendor to FO(s)

Manage FO(s)

UNOE – PLAN PHASE – Goods vendor vs Freight Forwarder



Seller

Who manages the legs?

Pre (Source -> Port)		On (Port -> Destination)		
Vendor as carrier	Vendor as carrier	Vendor as carrier		



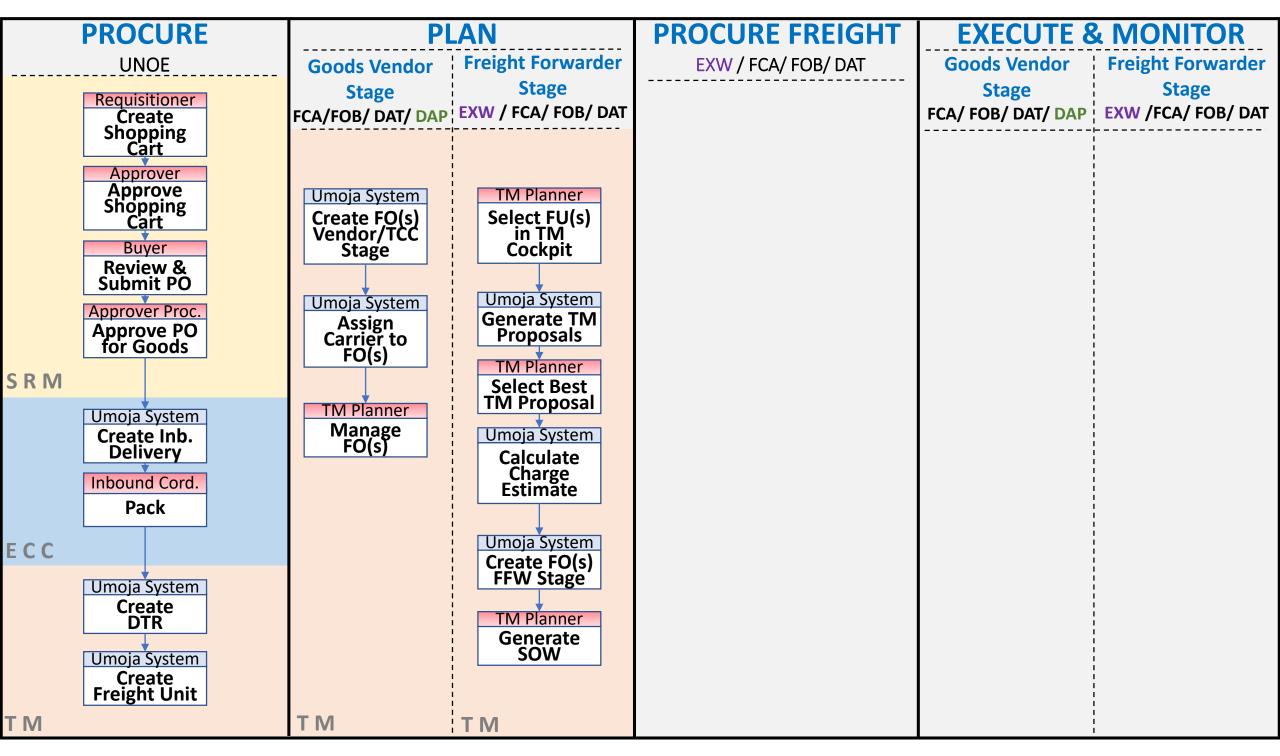


Goods Vendor FCA/FOB/ DAT/ DAP Umoja System Create FO(s) Vendor Stage Umoja System Assign Vendor to FO(s) TM Planner Manage FO(s)

UNOE – PLAN PHASE – GOODS VENDOR STAGE

- In a UNOE scenario, the Goods Vendor stage applies to **FCA/ FOB/ DAT & DAP** Incoterms. In this stage the Goods Vendor is responsible for delivering the items to the agreed location.
- Based on the TM Transportation Network (Master Data), the system selects the default route between the vendor location and the delivery location and creates as many Freight Orders as legs in the route.
- The system automatically assigns the Goods Vendor (e.g. Toyota) as **Carrier** to these newly created Freight Orders.
- These automatically created Freight Orders are in "Ready for Execution" status allowing the Goods Vendor to connect to the Carrier Collaboration Portal (CCP) to submit the events related to each FO (i.e. leg).
- Should the automatically created Freight Orders differ from the **vendor's actual route**, the TM Planner can delete and re-create them to reflect the real route and to facilitate the insertion of events at a later stage.

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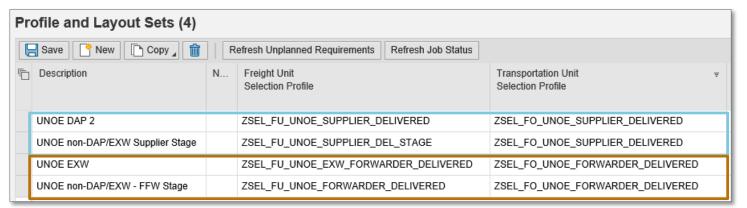


Freight FW Stage EXW / FCA/ FOB/ DAT

TM Planner
Select FU(s)
in TM
Cockpit

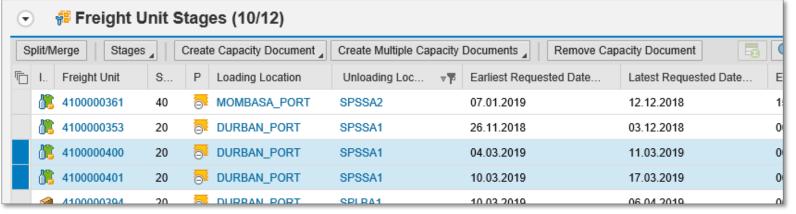
UNOE – PLAN PHASE – FREIGHT FORWARDER STAGE – 1/4

- In a UNOE scenario, the Freight Forwarder stage applies to **EXW** & **FCA/ FOB/ DAT** Incoterms. In this stage the Freight Forwarder is responsible for delivering the items to the final destination.
- Freight Units appear in the Transportation Cockpit filtered by Profile (EXW vs non-DAP/EXW):.





 Several Freight Units (FUs) with the same pick-up and destination locations can be consolidated to be transported together. There is a time window (currently 7 days) that allows multiple FUs to be consolidated.



Several FUs can be consolidated for transportation purposes





Freight FW Stage EXW / FCA/ FOB/ DAT

TM Planner

Select FU(s)
in TM
Cockpit

Umoja System **Generate TM**

Proposals

TM Planner
Select Best
TM Proposal

UNOE - PLAN PHASE - FREIGHT FORWARDER STAGE - 2/4

- The system displays a list of transportation proposals for the set of FUs selected based on the existing Transportation Network Master Data.
- Transportation Proposals are organized in the following way:
 - Transportation Proposal Number
 - Freight Unit Number
 - Legs of Goods Vendor Stage (pre, main, on)
 - Legs of Freight Forwarder Stage (pre, main, on)

* TM Planner will select the best proposal based on distance, duration, etc.

▼ Transportation Proposals												
▶↓ ▶↑ ▼ Define Filter												
Document Hierarchy	Selected	Р	M	Means of Transport	Source Location	Destination Location	Loading St	Unloading	Distance	D	Duration	Carrier
▼ Transportation Proposal 11		5	ä	UNOE_SEA	SU1110001300	SPSSA1	21.11.2018	20.03.2019		KM		111000130
▼ 👭 Freight Unit 4100000401		5	ä	UNOE_SEA	SU1110001300	SPSSA1	21.11.2018	20.03.2019		KM	1,090:55	111000130
₽ Stage 00001				UNOE_TRK	SU1110001300	AMSTERDAM_PORT	21.11.2018	29.11.2018		KM	187:00	111000130
₽ Stage 00002			8	UNOE_SEA	AMSTERDAM_PORT	RICHARDS_PORT	29.11.2018	27.12.2018		KM	686:38	111000130
₽ Stage 00003		-		UNOE_TRK	RICHARDS_PORT	DURBAN_PORT	11.03.2019	11.03.2019		KM	1:55	111000130
- Stage 00004		0	â	UNOE_SEA	DURBAN_PORT	MOMBASA_PORT	11.03.2019	19.03.2019	3,012.552	KM	198:37	
- Stage 00005		5		UNOE_TRK	MOMBASA_PORT	SPSSA1	19.03.2019	20.03.2019	1,336.961	KM	16:42	
▼ #Freight Unit 4100000400		5	8	UNOE_SEA	SU1110001300	SPSSA1	21.11.2018	20.03.2019		KM	1,090:55	111000130
₽ Stage 00001				UNOE_TRK	SU1110001300	AMSTERDAM_PORT	21.11.2018	29.11.2018		KM	187:00	111000130
₽ Stage 00002			8	UNOE_SEA	AMSTERDAM_PORT	RICHARDS_PORT	29.11.2018	27.12.2018		KM	686:38	111000130
- Stage 00003		-		UNOE_TRK	RICHARDS_PORT	DURBAN_PORT	11.03.2019	11.03.2019		KM	1:55	111000130
- Stage 00004		5	â	UNOE_SEA	DURBAN_PORT	MOMBASA_PORT	11.03.2019	19.03.2019	3,012.552	KM	198:37	
- Stage 00005		5		UNOE_TRK	MOMBASA_PORT	SPSSA1	19.03.2019	20.03.2019	1,336.961	KM	16:42	
▼ 1 Transportation Proposal 12		5	â	UNOE_SEA	SU1110001300	SPSSA1	21.11.2018	22.03.2019		KM		111000130
▼ 🏭 Freight Unit 4100000401		5	Ŕ	LINOE SEA	SU1110001300	SPSSA1	21 11 2018	20 03 2019		КM	1 090:55	111000130



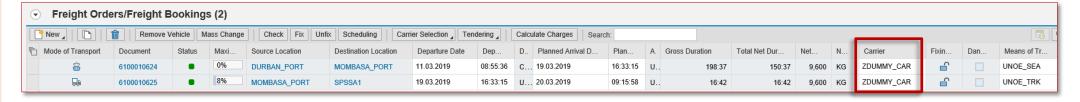


UNOE – PLAN PHASE – FREIGHT FORWARDER STAGE (EXW-FCA) - 3/4

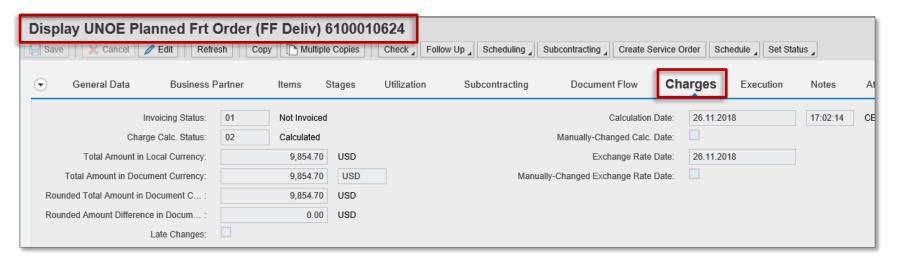
Freight FW Stage EXW / FCA/ FOB/ DAT TM Planner Select FU(s) in TM Cockpit **Umoja System Generate TM Proposals** TM Planner Select Best TM **Proposal Umoja System Calculate** Charge **Estimăte Umoja System** Create FO(s)

FFW Stage

The system creates the new Freight Orders for the FFW stage based on the proposal selected (one for each leg).



- The Carrier is defaulted to ZDUMMY_CAR until the freight is awarded and the real carrier is assigned.
- The system automatically calculates the estimated Charges based on the "Charges Master Data".





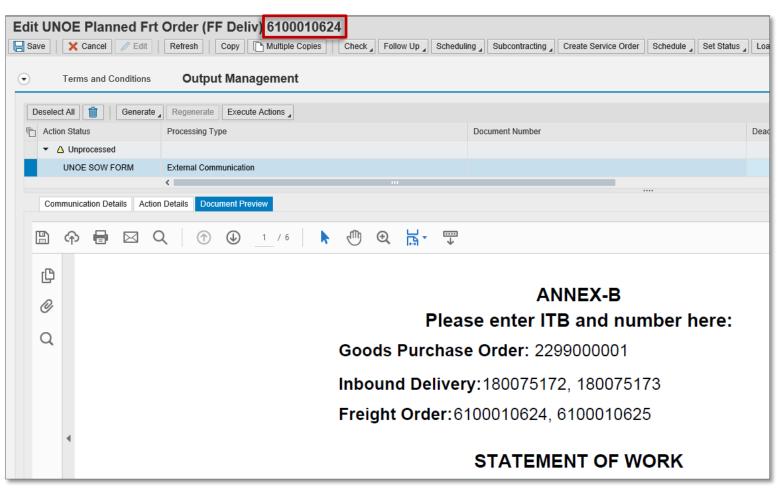


UNOE – PLAN PHASE – FREIGHT FORWARDER STAGE (EXW-FCA) - 4/4

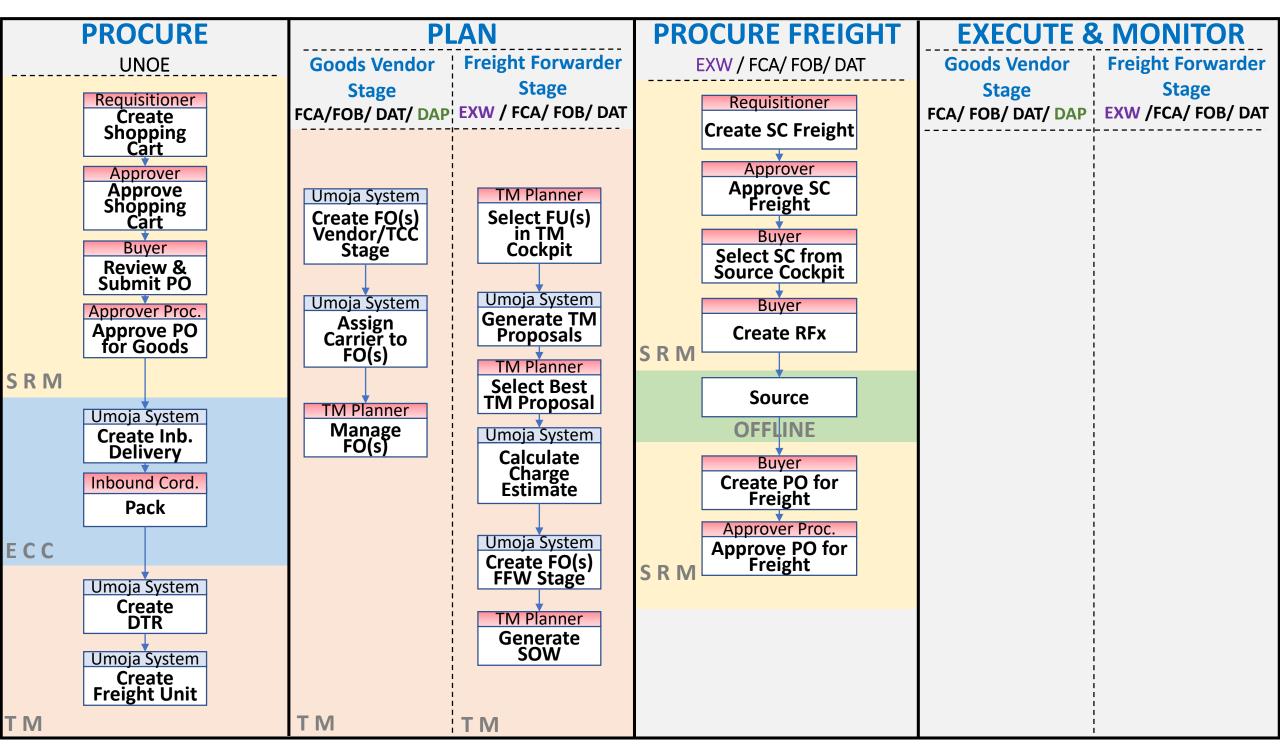
Freight FW Stage EXW / FCA/ FOB/ DAT TM Planner Select FU(s) in TM Cockpit Umoja System **Generate TM Proposals** TM Planner **Select Best** TM Proposal **Umoja System** Calculate Charge Estimate Umoja System **Create FO(s)** FFW Stage TM Planner Generate SOW

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- A "Statement Of Work" document (SOW) can be downloaded from each Freight Order. The SOW can be printed and edited. The SOW serves as an input for the Freight Procurement phase.
- The **SOW** includes all the Freight Orders related to the same Shipment.



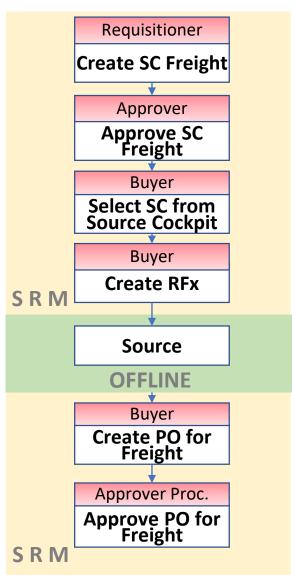
* Specific templates are available for UNOE, COE & Troops.



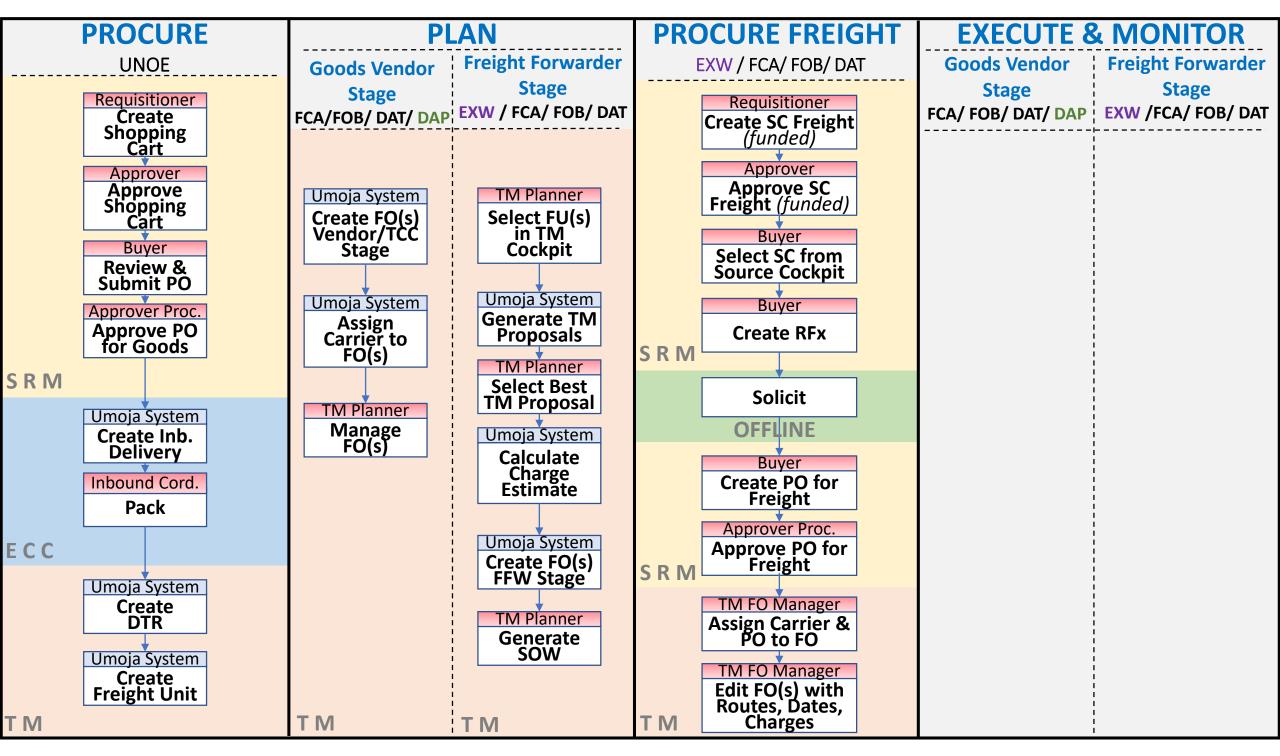




UNOE – PROCURE FREIGHT PHASE – 1/2

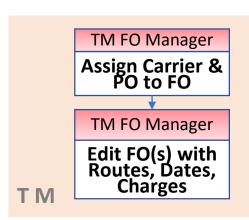


- The Freight Procurement steps in the system remain very similar as they currently are.
- Below some items to be considered with the TM implementation:
 - ✓ Freight Services are requested in a separate Shopping Cart (no more \$1 line for freight in the goods shopping cart).
 - ✓ The SOW to be attached in the Freight Shopping Cart can be downloaded directly from Umoja TM.
 - ✓ TM is now the single source of information for the transportation requirements.



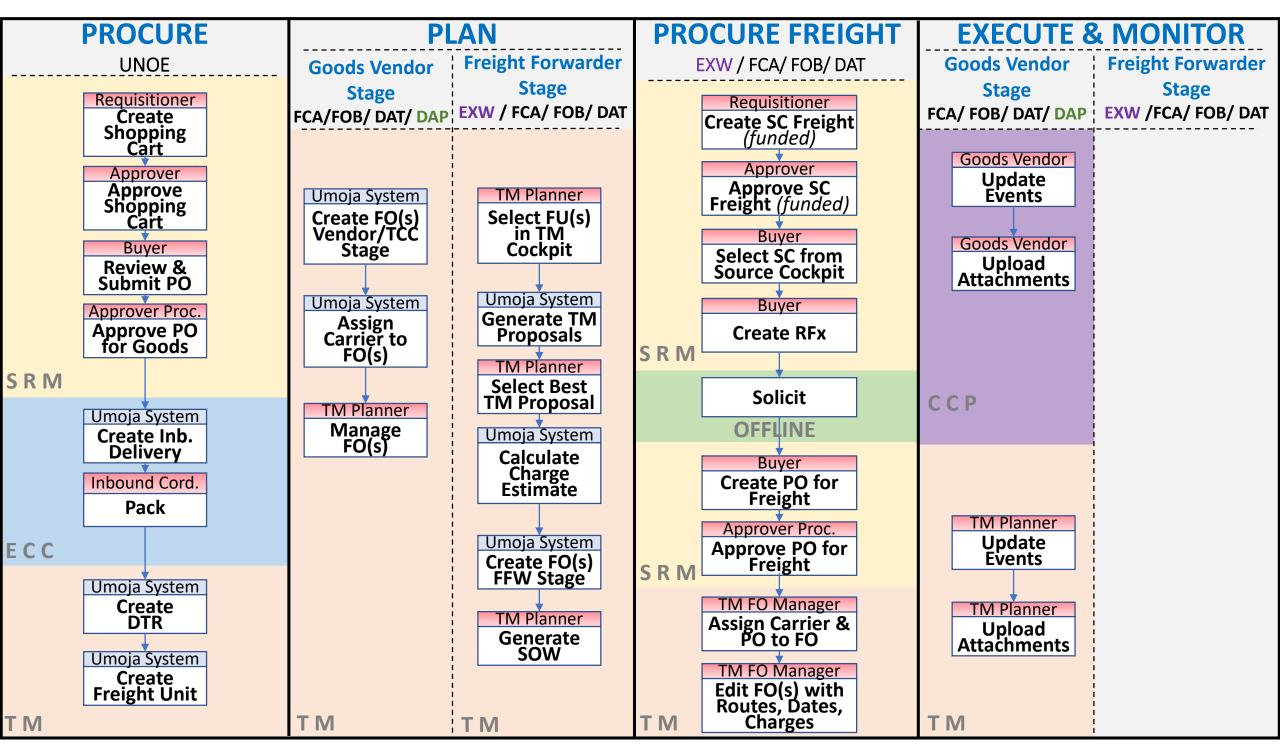






UNOE – PROCURE FREIGHT PHASE – 2/2

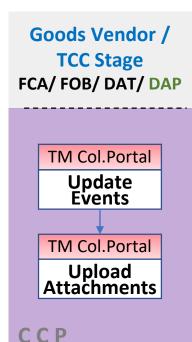
- Once the freight services have been awarded, the Freight Order in TM has to be updated with the selected carrier and the related purchase order number.
- Once the carrier is assigned in the FO, the FO execution status changes to "Ready for Execution" allowing the freight forwarders to submit the related events.
- Moreover the Freight Order needs to be updated with:
 - ✓ Actual **Route**: If the route selected by the carrier is different to the planned route, the FO has to be updated with the new route as it is used to report events.
 - ✓ Actual **Dates**: The planned dates need to be updated in the Freight Order based on the information provided by the Freight Forwarder .
 - ✓ Actual Charges: The Freight Order charges have to be updated with the actual ones appearing in the Freight Purchase Order. The system allows comparing the estimated charges and the actual charges for reporting purposes.

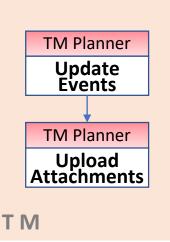




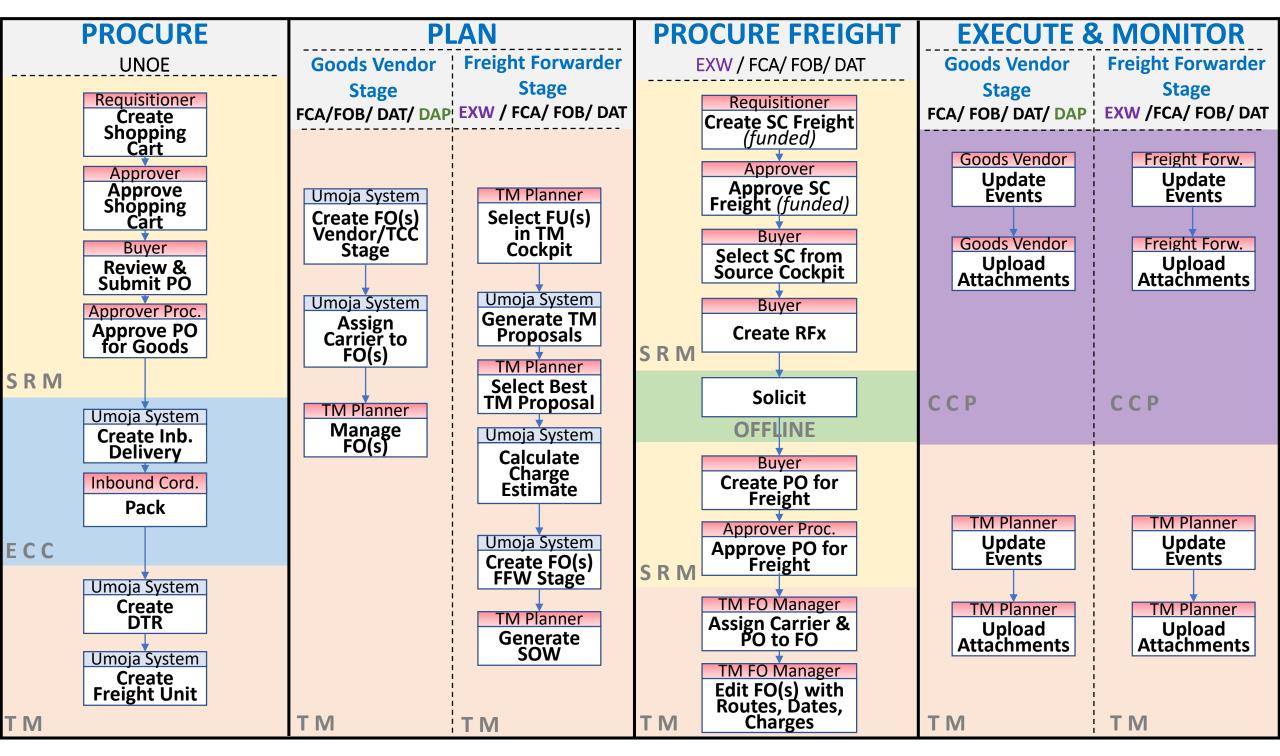


UNOE – EXECUTE & MONITOR PHASE - GOODS VENDOR STAGE





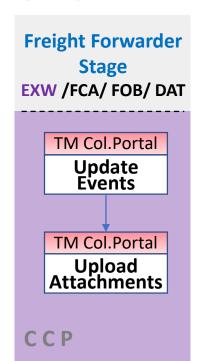
- Goods Vendors will be provided with login credentials for the Umoja Carrier Collaboration Portal (CCP).
- In CCP, Goods Vendors will see the Freight Orders they are responsible for the transportation. They will be able to submit events and upload attachments:
 - Examples of Events:
 - ✓ Planned: Loading Start/End, Departure, Arrival, etc.
 - ✓ Unexpected: Delay, Damage, etc.
 - Examples of Attachments: Packing List, Bill of Lading, Proof of Delivery, etc.
- All Events/Attachments submitted via CCP are displayed in TM.
- In case the vendor cannot connect to CCP, Umoja role "TS.01 TM Planner and TS.02 Manage Freight
 Orders" can update the related events/attachments directly in the TM module. These Events/Attachments
 are also displayed in CCP
- Once the first event is submitted, the FO execution status changes to "In Execution". No changes in the route are further allowed.
- Other Umoja follow on documents:
 - DAP: Physical Goods Receipt
 - FCA: Virtual Goods Receipt & Stock Transport Order







UNOE – EXECUTE & MONITOR PHASE – FREIGHT FORWARDER STAGE



TM Planner
Update
Events

TM Planner
Upload
Attachments

- Freight Forwarders will be provided with login credentials for the Umoja Carrier Collaboration Portal (CCP).
- In CCP, Freight Forwarders will see the Freight Orders they are responsible for the transportation. They will be able to submit events and upload attachments.
- All Events/Attachments submitted via CCP are displayed in TM.
- In case the vendor cannot connect to CCP, Umoja role "TS.01 TM Planner and TS.02 Manage Freight Order" can update the related events/attachments directly in the TM module. These Events/Attachments are also displayed in CCP
- Once the first event is submitted, the FO execution status changes to "In Execution". No changes in the
 route are further allowed.
- Other Umoja related documents:
 - Predecessor documents: Virtual Goods Receipt & Stock Transport Order
 - Follow-on documents : Physical Goods Receipt





TRANSPORTATION MANAGEMENT ENTERPRISE ROLES

TS.01 TRANSPORTATION PLANNER & EXECUTION

Main function is to create Freight Orders to execute a transportation plan. They can also submit events.

This enterprise role has three flavors: UNOE, COE & Troops.

- ✓ Query DTR (UNOE): display transportation requirements
- ✓ Create/ edit FO (UNOE): execute the transportation plan in the cockpit on the FU selected.
- ✓ Submit events for FO: expected and unexpected
- ✓ Generate Statement of Work (SoW) for freight

TS.02 MANAGE FREIGHT ORDER

Main function is to update Freight Order stages, dates, actual charges, carrier and Freight PO. They can also submit events.

TS.03 TM DISPLAY ALL

- ✓ Display access is granted to all TM documents: DTR, FU, and FO and Events against the FO
- ✓ Monitors progress/ status of events of shipments through TM Cockpit

TS.04 TM MASTER DATA MAINTAINER

Main function is to maintain the Transportation Network (Locations, Zones, Lanes, etc.) and Transportation Rates.

- ✓ Create, Change and Display Vendor in ECC
- ✓ Manages Core Interfaces Master data from ECC to TM (Business Partners, Vendors, materials, plants, shipping points, etc)
- ✓ Maintains TM Master Data (Locations, Transshipment Points, Handover Locations, Lanes, Zone, Network, Org. Structure, Default Routes)
- ✓ Maintains SRM shipping addresses





TRANSPORTATION MANAGEMENT ENTERPRISE ROLES

TS.05 COLLABORATION PORTAL

Access the Carrier Collaboration Portal to submit related Events & Attachments.

- ✓ Vendors and Freight Forwarders: View awarded FO and submit events in CCP, including attachments/ notes.
- TS. 06 TMEM Production Support

Assigned to Tier 1, Tier 2A, Tier 2B and Tier 3 (Umoja Support Desk, Umoja Service Center, Umoja Global Support)

TS.07 TM STO Transportation Planner

[similarly to TS.01],

- ✓ Creates Outbound Delivery after the STO is posted in TM by RD. 06: Logistic Users
- ✓ For non DAP and ExW, liaise with receiving plant TM planner to advise which FO to use for planning from handover location to final destination.

TS.08 TM STO Freight Procurement

[similarly to TS.02]

TS. 09 TM STO Display all

[similarly to TS.03]





TRANSPORTATION MANAGEMENT ENTERPRISE ROLES

BI.84_BI: SC_TMEM_Basic User

TM & EM view access to summarized and formatted reports.

- ✓ Run, print, schedule, distribute formatted reports as published by Power Users in public folders or shared by Analytic Users
- BI.85_BI: SC_TMEM_Analytic User

Access to comprehensive analysis areas which can be challenging to use and misinterpreted.

- Create customized reports in Analysis Areas
- Share their prepared reports with others by BI inbox.
- BI.86_BI: SC_TMEM_Power User

Create customized reports in Analysis Areas reports.

✓ Publish reports: save a report in the public folder that is accessible to all BI users of the module.





TM RELATED ACRONYMS

ACRONYM	FULL FORM	ACRONYM	FULL FORM			
SRM	Supplier Relationship Management	DTR	Delivery-based Transportation Requirement			
ECC	ERP Central Component	FWO Forwarding Order				
TM	Transportation Management	LOA	Letter of Assist			
ССР	Carrier Collaboration Portal	FU	Freight Unit			
IBD	Inbound Delivery	РО	Purchase Order			
SC	Shopping Cart	SOW	Statement of Work			



