

UNOE TRANSPORTATION MANAGEMENT END TO END PROCES

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

4th December 2018



PROCURE

UNOE



S R M

PLAN

Goods Vendor

Stage

DAP / FCA

Freight Forwarder

Stage

EXW / FCA

PROCURE FREIGHT

EXW / FCA

EXECUTE & MONITOR

Goods Vendor

Stage

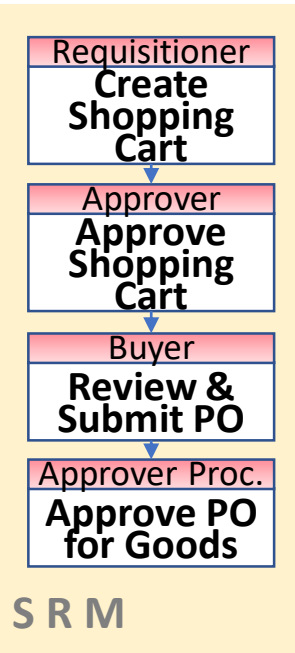
DAP / FCA

Freight Forwarder

Stage

EXW / FCA

UNOE – PROCURE PHASE – SHOPPING CART & PURCHASE ORDER



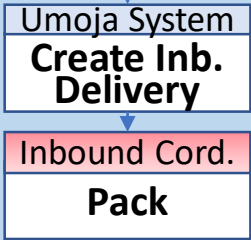
- Contract Catalog will be used as preferred option. If so, same PID will be offered with different Incoterms (hence, different prices).
- Incoterm and Location fields must be populated. Incoterm shall be selected by using Matchbox. Location shall be selected from the drop down list.
- For goods, no freight line should be created. Freight Shopping Cart will be created separately.
- PO Delivery Address/ Performance Location (SRM) becomes Destination Location in the Freight Unit (TM)
- Purchasing Group (SRM) will default the Planner Group (TM) that will have visibility on the DTR to be planned. In phase 1, only purchasing group “S05 – PD Vehicles Team” will integrate with TM.
- Selecting the Supplier in SRM will allow the Supplier to submit the related transportation events in the Carrier Collaboration Portal (CCP)
- 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

PROCURE

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S R M



E C C

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Goods Vendor

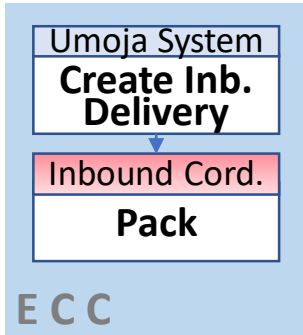
Stage

DAP / FCA

Freight Forwarder

Stage

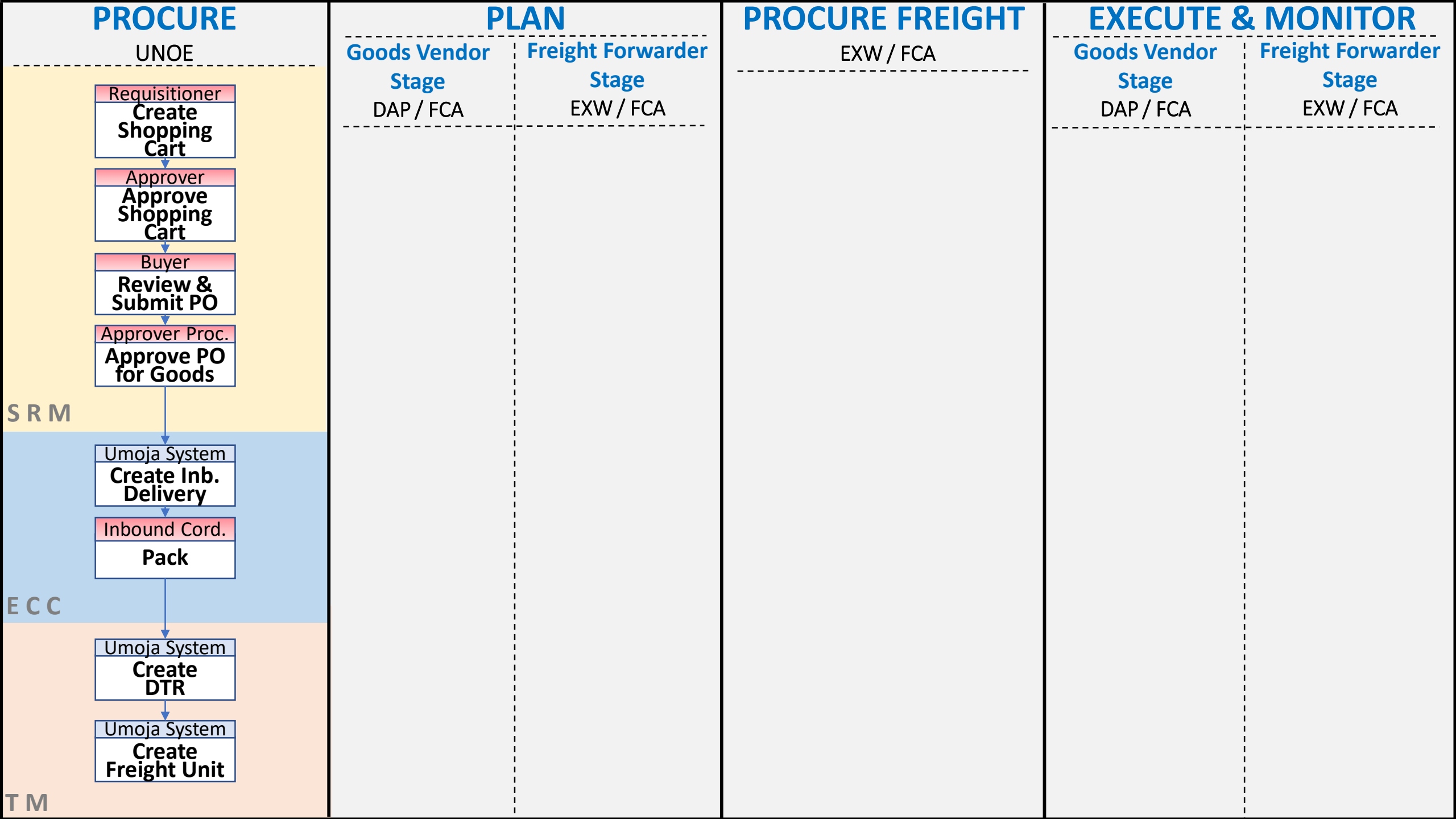
EXW / FCA



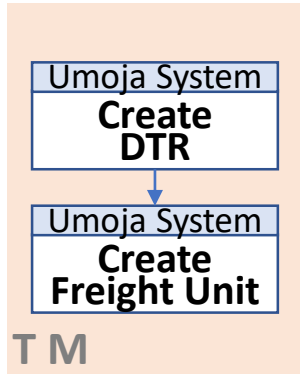
- Inbound Delivery is created via batch job in **ECC** and can also be manually created.
- Currently the product **weight & volume** is not maintained in the material master. In Umoja Production all materials appear with **weight** = 1 and **volume** = 0.

Weight/volume			
Gross Weight	<input type="text" value="1"/>	Weight unit	<input type="text" value="KG"/>
Net Weight	<input type="text" value="1"/>		
Volume	<input type="text" value="0.000"/>	Volume unit	<input type="text"/>
Size/dimensions	<input type="text"/>		

- The “**Pack**” functionality available in the “Inbound Delivery” document can be used to reflect the correct weight & volume of the materials being shipped by creating “**Handling Units**”.
- Several **Packaging materials** (*material type “ZPAM”*) are available in the system. A new “Rolling stock” packaging material is being set up for vehicles.
- At the moment vendors are onboarded on **EDI**, the packing details will come automatically with the Advanced Shipping Notice (**ASN**).



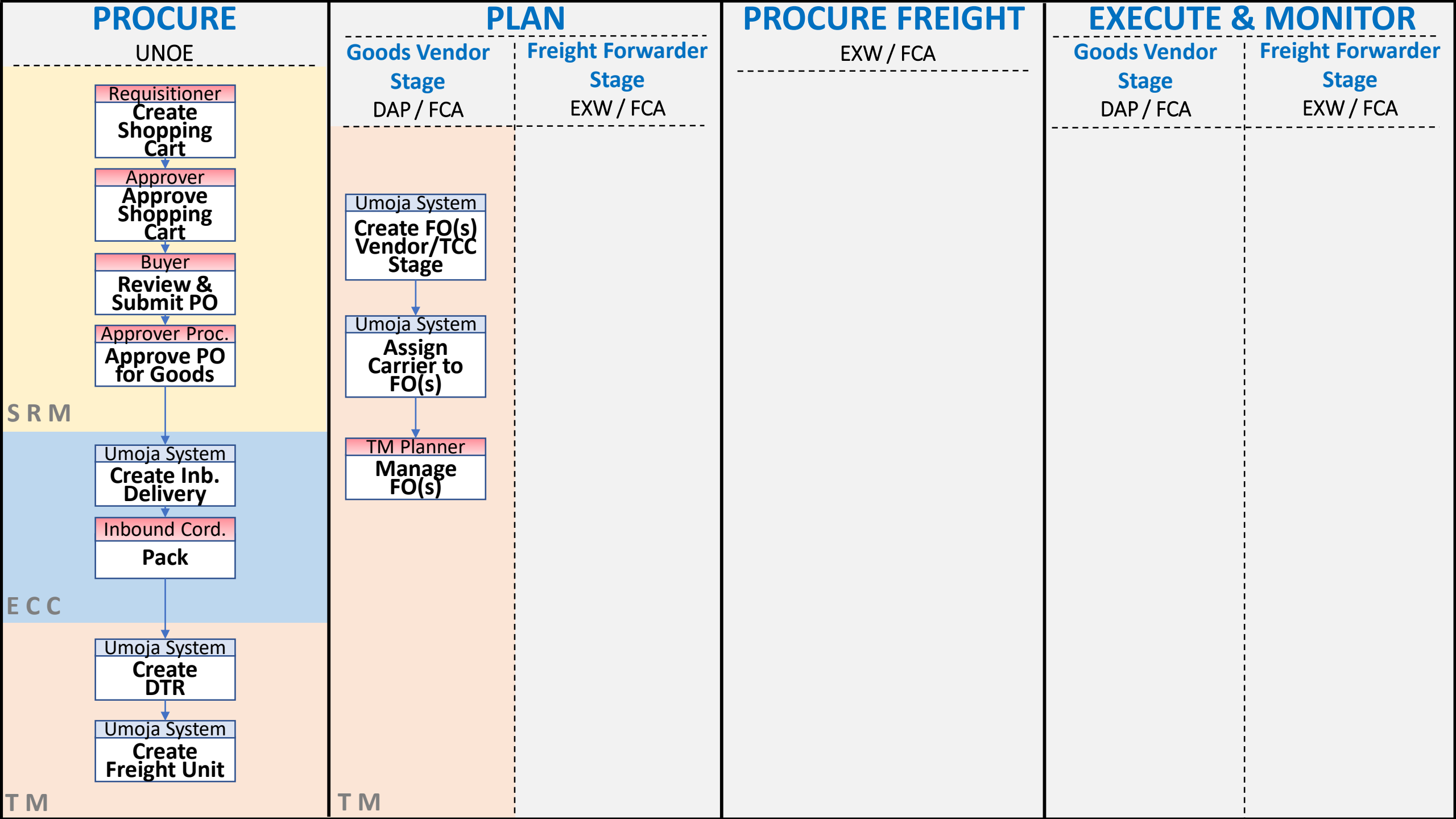
UNOE – PROCURE PHASE – DTR & FREIGHT UNIT



- 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.

ERP-TM Document Flow	ERP Doc	Quantity	Unit	Status	BTD ID	BTD Descr.	BTD Cat.	BTD Cat.
▼ Inbound Delivery	180075157			➡	180075157	Inbound Delivery 180075157		
▼ Delivery-Based Transportation Requirement	180075157			➡	1100000099	DTR for UNOE 1100000099 (Inbound Delivery 180075157) 02		Delivery-Based Tr
▼ Inbound Delivery Item	180075157	2	EA	➡	1100000099	DTR for UNOE 1100000099 (Inbound Delivery 180075157) 02		Product
▼ Freight Unit	180075157			➡	4100000395	UNOE Planned Frt Unit 4100000395	FU	Freight Unit

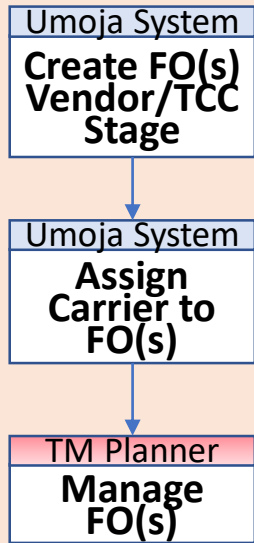
- With the current system configuration, there is a “**1 to 1 relationship**” between IBD, DTR & FU: 1 Inbound Delivery – 1 Delivery-based Transportation Requirement – 1 Freight Unit.
- The **Delivery-based Transportation Requirement** (DTR) document is the representation in TM of the ECC Inbound Delivery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



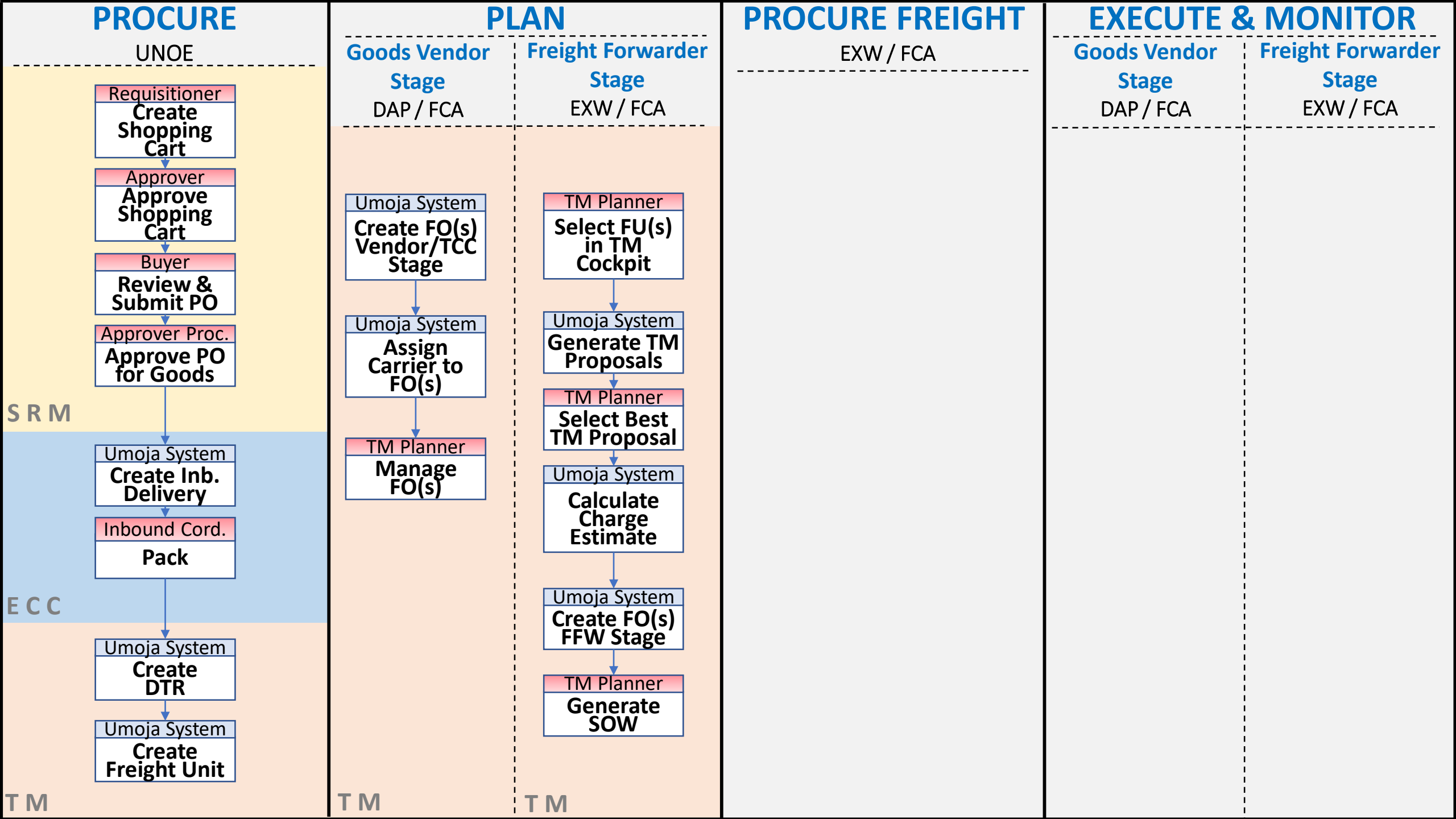
UNOE – PLAN PHASE – GOODS VENDOR STAGE (*DAP & FCA*)



Goods Vendor DAP / FCA



- In a UNOE scenario, the Goods Vendor stage applies to **DAP & FCA** 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.



UNOE – PLAN PHASE – FREIGHT FORWARDER STAGE (EXW & FCA) – 1/4





Freight FW Stage EXW / FCA


TM Planner
Select FU(s)
in TM
Cockpit


- In a UNOE scenario, the Freight Forwarder stage applies to **EXW & FCA** 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*):

Profile and Layout Sets (4)

 Save

 New

 Copy



Refresh Unplanned Requirements

Refresh Job Status

Description	N...	Freight Unit Selection Profile	Transportation Unit Selection Profile
UNOE DAP 2		ZSEL_FU_UNOE_SUPPLIER_DELIVERED	ZSEL_FO_UNOE_SUPPLIER_DELIVERED
UNOE non-DAP/EXW Supplier Stage		ZSEL_FU_UNOE_SUPPLIER_DEL_STAGE	ZSEL_FO_UNOE_SUPPLIER_DELIVERED
UNOE EXW		ZSEL_FU_UNOE_EXW_FORWARDER_DELIVERED	ZSEL_FO_UNOE_FORWARDER_DELIVERED
UNOE non-DAP/EXW - FFW Stage		ZSEL_FU_UNOE_FORWARDER_DELIVERED	ZSEL_FO_UNOE_FORWARDER_DELIVERED

Goods Vendor Stage { • DAP
• FCA
Freight FW Stage { • EXW
• FCA

- 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.

Freight Unit Stages (10/12)











Split/Merge

Stages

Create Capacity Document

Create Multiple Capacity Documents

Remove Capacity Document

	I..	Freight Unit	S...	P	Loading Location	Unloading Loc...	Earliest Requested Date...	Latest Requested Date...
		 4100000361	40	 MOMBASA_PORT	SPSSA2		07.01.2019	12.12.2018
		 4100000353	20	 DURBAN_PORT	SPSSA1		26.11.2018	03.12.2018
		 4100000400	20	 DURBAN_PORT	SPSSA1		04.03.2019	11.03.2019
		 4100000401	20	 DURBAN_PORT	SPSSA1		10.03.2019	17.03.2019
		 4100000304	20	 DURBAN_PORT	SPSSA1		10.03.2019	06.04.2019

Several FUs can be consolidated for transportation purposes

UNOE – PLAN PHASE – FREIGHT FORWARDER STAGE (EXW & FCA) – 2/4



Freight FW Stage EXW / FCA

- 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.*

Document Hierarchy	Selected	P	M	Means of Transport	Source Location	Destination Location	Loading St...	Unloading...	Distance	D...	Duration	Carrier
Transportation Proposal 11	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	UNOE_SEA	SU1110001300	SPSSA1	21.11.2018...	20.03.2019...		KM		1110001300
Freight Unit 4100000401	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	UNOE_SEA	SU1110001300	SPSSA1	21.11.2018...	20.03.2019...		KM	1,090:55	1110001300
Stage 00001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	UNOE_TRK	SU1110001300	AMSTERDAM_PORT	21.11.2018...	29.11.2018...		KM	187:00	1110001300
Stage 00002	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	UNOE_SEA	AMSTERDAM_PORT	RICHARDS_PORT	29.11.2018...	27.12.2018...		KM	686:38	1110001300
Stage 00003	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	UNOE_TRK	RICHARDS_PORT	DURBAN_PORT	11.03.2019...	11.03.2019...		KM	1:55	1110001300
Stage 00004	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	UNOE_SEA	DURBAN_PORT	MOMBASA_PORT	11.03.2019...	19.03.2019...	3,012.552	KM	198:37	
Stage 00005	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	UNOE_TRK	MOMBASA_PORT	SPSSA1	19.03.2019...	20.03.2019...	1,336.961	KM	16:42	
Freight Unit 4100000400	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	UNOE_SEA	SU1110001300	SPSSA1	21.11.2018...	20.03.2019...		KM	1,090:55	1110001300
Stage 00001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	UNOE_TRK	SU1110001300	AMSTERDAM_PORT	21.11.2018...	29.11.2018...		KM	187:00	1110001300
Stage 00002	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	UNOE_SEA	AMSTERDAM_PORT	RICHARDS_PORT	29.11.2018...	27.12.2018...		KM	686:38	1110001300
Stage 00003	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	UNOE_TRK	RICHARDS_PORT	DURBAN_PORT	11.03.2019...	11.03.2019...		KM	1:55	1110001300
Stage 00004	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	UNOE_SEA	DURBAN_PORT	MOMBASA_PORT	11.03.2019...	19.03.2019...	3,012.552	KM	198:37	
Stage 00005	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	UNOE_TRK	MOMBASA_PORT	SPSSA1	19.03.2019...	20.03.2019...	1,336.961	KM	16:42	
Transportation Proposal 12	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	UNOE_SEA	SU1110001300	SPSSA1	21.11.2018...	22.03.2019...		KM		1110001300
Freight Unit 4100000401	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	UNOE_SEA	SU1110001300	SPSSA1	21.11.2018...	20.03.2019...		KM	1,090:55	1110001300

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



Freight FW Stage EXW / FCA

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

Freight Orders/Freight Bookings (2)

Mode of Transport	Document	Status	Maxi...	Source Location	Destination Location	Departure Date	Dep...	D...	Planned Arrival D...	Plan...	A	Gross Duration	Total Net Dur...	Net...	N...	Carrier	Fixin...	Dan...	Means of Tr...
	6100010624	●	0%	DURBAN_PORT	MOMBASA_PORT	11.03.2019	08:55:36	C...	19.03.2019	16:33:15	U...	198:37	150:37	9,600	KG	ZDUMMY_CAR		<input type="checkbox"/>	UNOE_SEA
	6100010625	●	8%	MOMBASA_PORT	SPSSA1	19.03.2019	16:33:15	U...	20.03.2019	09:15:58	U...	16:42	16:42	9,600	KG	ZDUMMY_CAR		<input type="checkbox"/>	UNOE_TRK

- 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”.

Display UNOE Planned Frt Order (FF Deliv) 6100010624

Save Cancel Edit Refresh Copy Multiple Copies Check Follow Up Scheduling Subcontracting Create Service Order Schedule Set Status

General Data Business Partner Items Stages Utilization Subcontracting Document Flow **Charges** Execution Notes At

Invoicing Status:	01	Not Invoiced	Calculation Date:	26.11.2018	17:02:14	CE
Charge Calc. Status:	02	Calculated	Manually-Changed Calc. Date:			
Total Amount in Local Currency:	9,854.70	USD	Exchange Rate Date:	26.11.2018		
Total Amount in Document Currency:	9,854.70	USD	Manually-Changed Exchange Rate Date:			
Rounded Total Amount in Document C...	9,854.70	USD				
Rounded Amount Difference in Docum...	0.00	USD				
Late Changes:	<input type="checkbox"/>					

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



Freight FW Stage EXW / FCA

- 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.

Edit UNOE Planned Frt Order (FF Deliv) 6100010624

Save Cancel Edit Refresh Copy Multiple Copies Check Follow Up Scheduling Subcontracting Create Service Order Schedule Set Status Load

Terms and Conditions Output Management

Deselect All Generate Regenerate Execute Actions

Action Status	Processing Type	Document Number	Dead
Unprocessed			
UNOE SOW FORM	External Communication		

Communication Details Action Details Document Preview

ANNEX-B

Please enter ITB and number here:

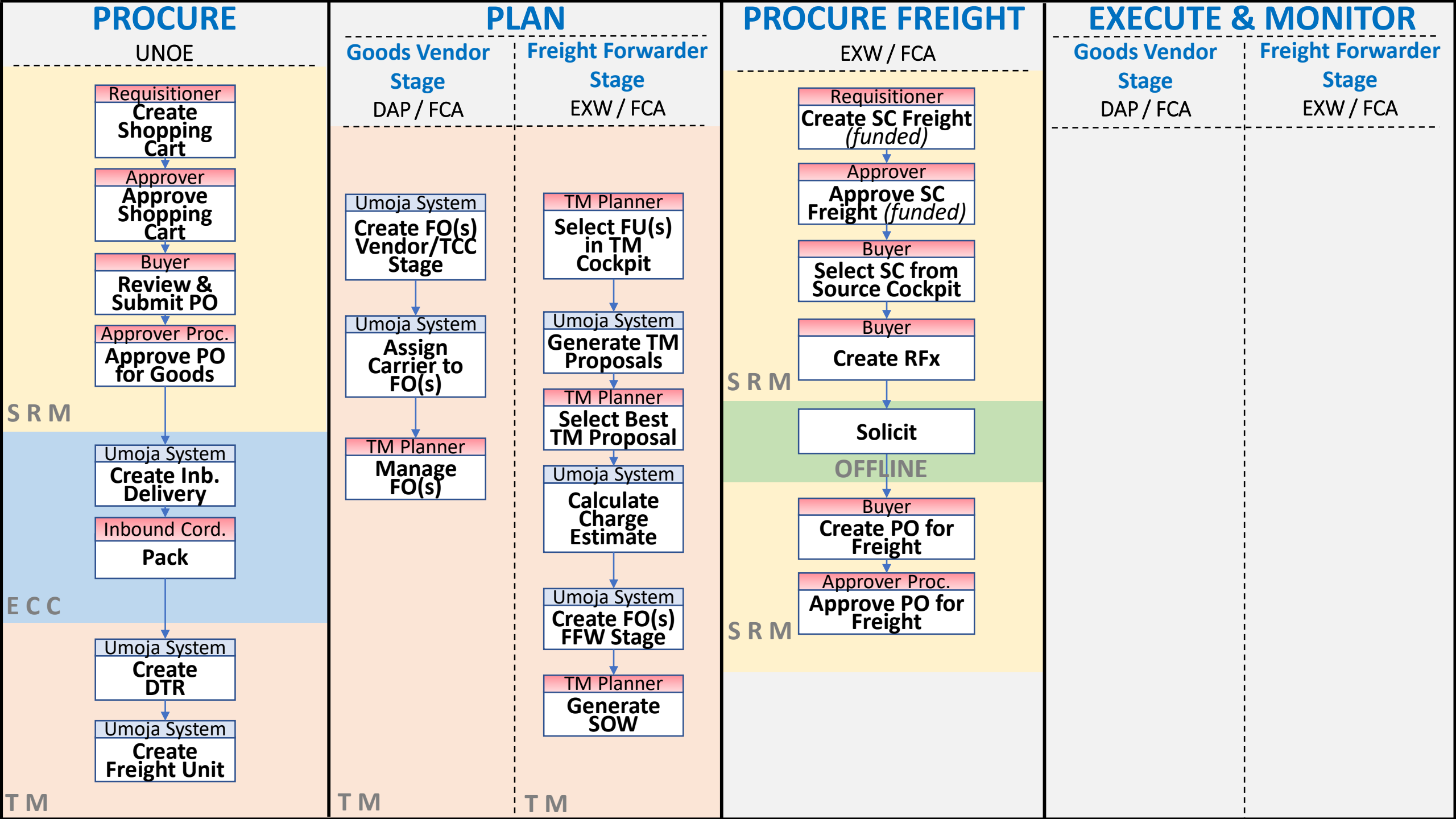
Goods Purchase Order: 2299000001

Inbound Delivery: 180075172, 180075173

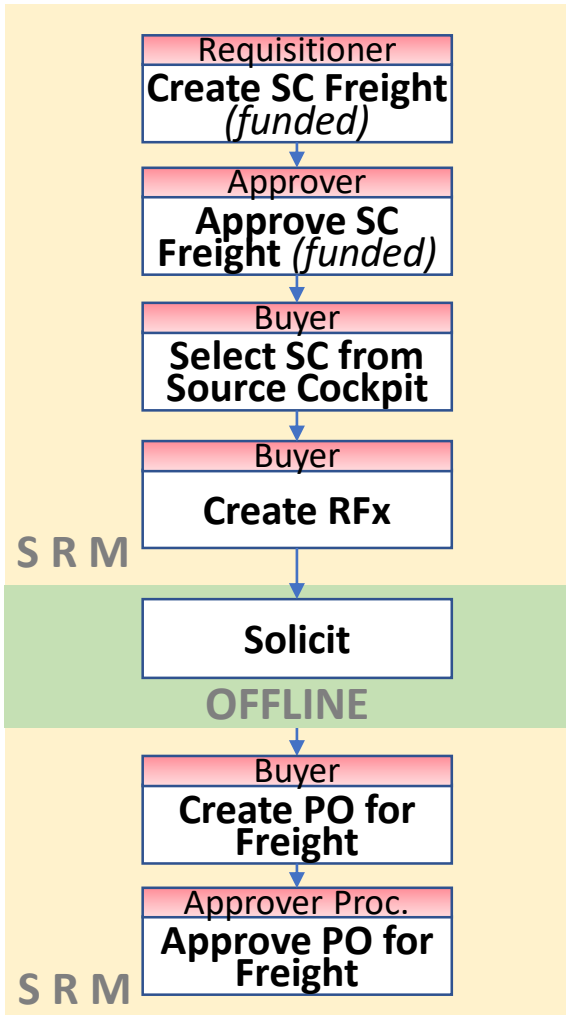
Freight Order: 6100010624, 6100010625

STATEMENT OF WORK

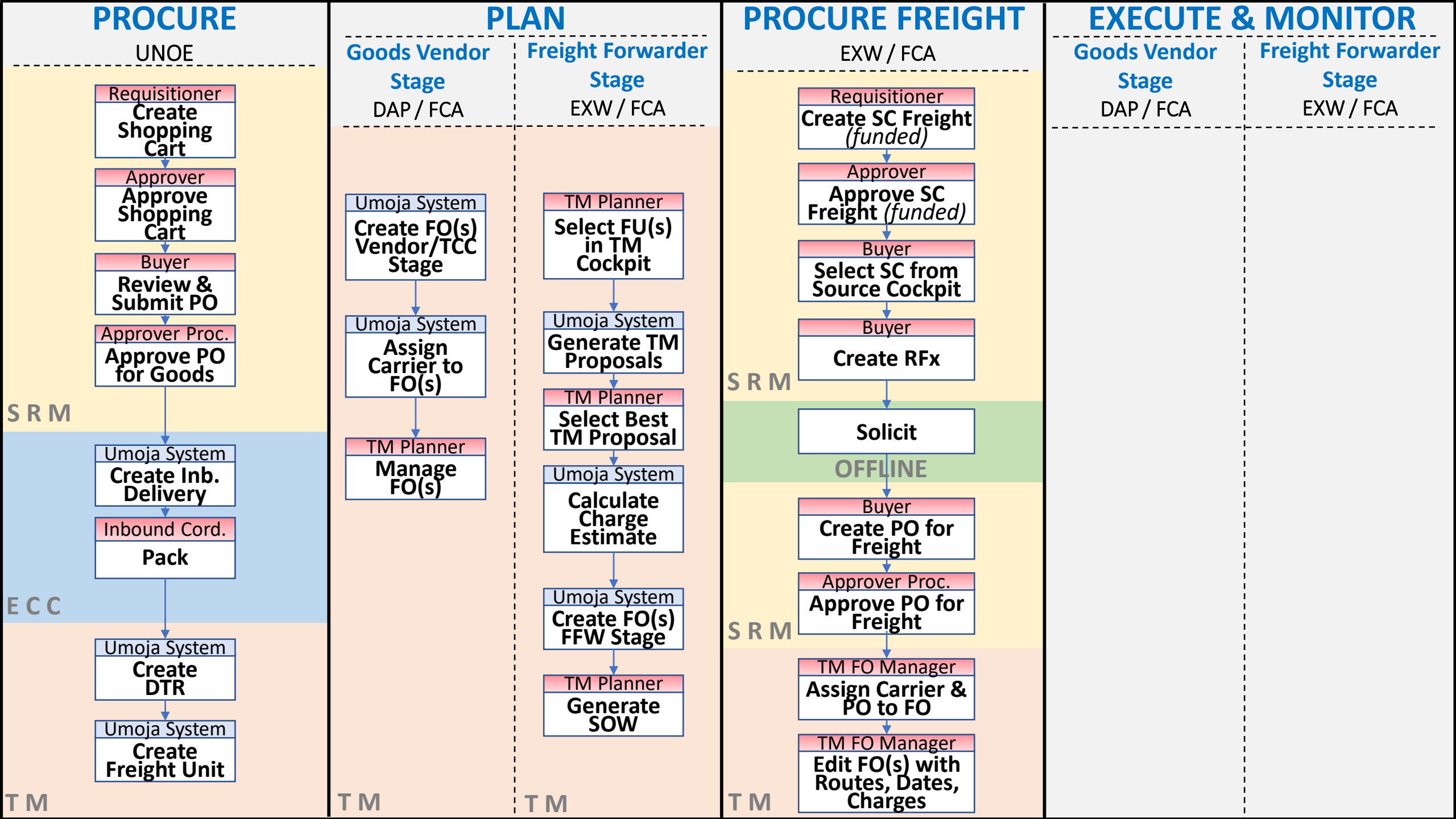
** Specific templates are available for UNOE, COE & Troops.*



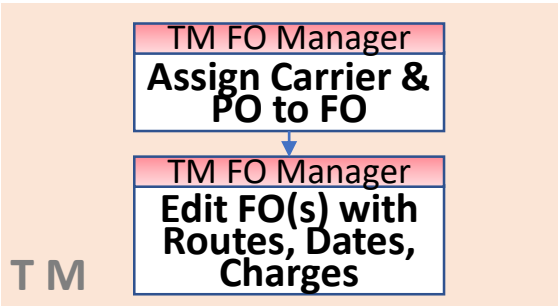
UNOE – PROCURE FREIGHT PHASE (EXW & FCA) – 1/2



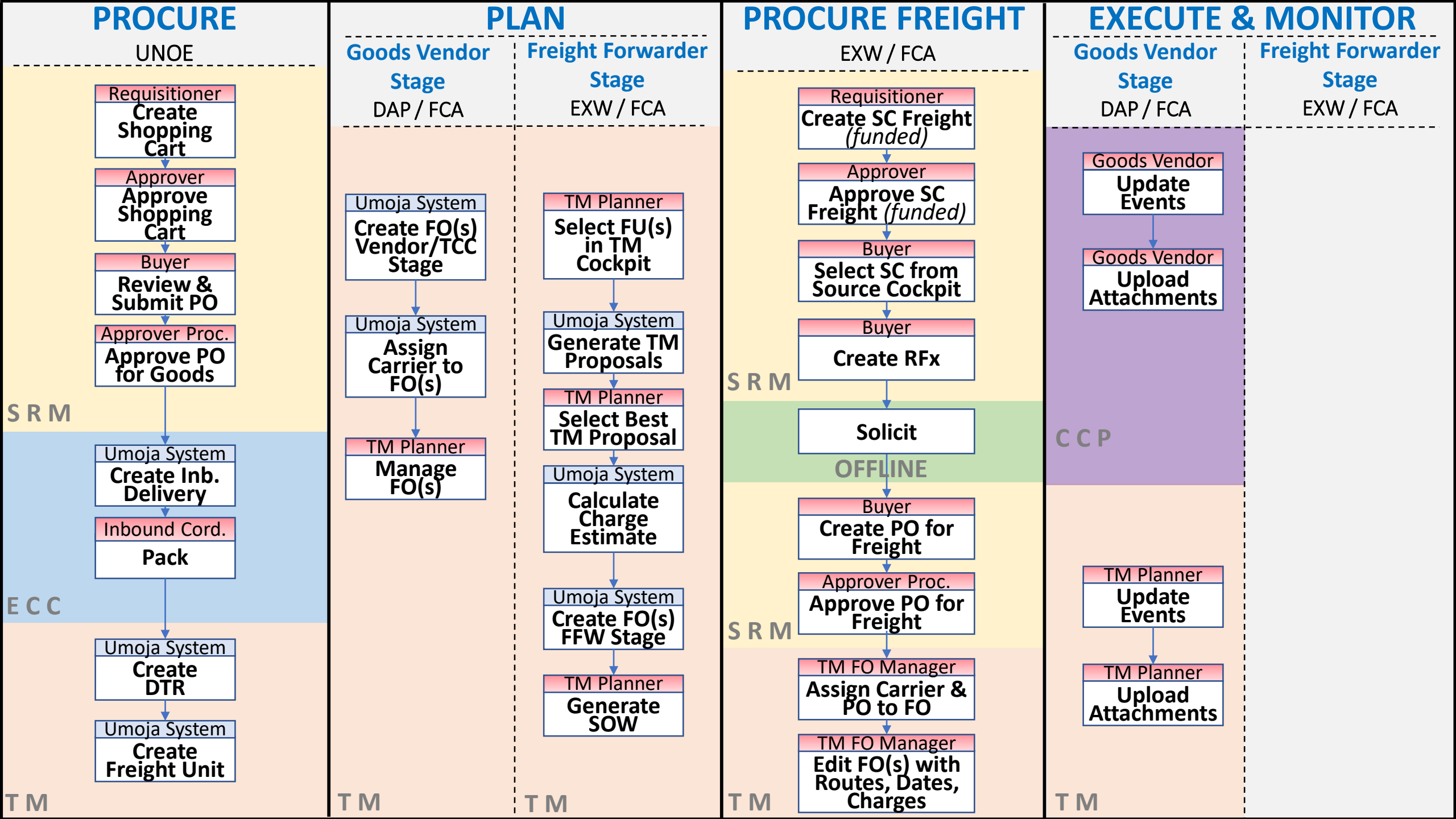
- The Freight Procurement steps in the system remain very similar as they currently are.
- Below some items to be considered with the TM implementation:
 - ✓ Freight Services are requested in a separate Shopping Cart *(no more \$1 line for freight in the goods shopping cart)*.
 - ✓ The SOW to be attached 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 (EXW & FCA) – 2/2



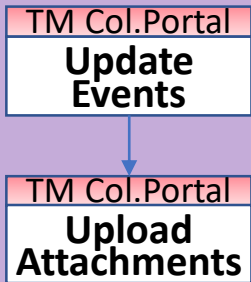
- Once the freight services have been awarded, the Freight Order in TM has to be updated with the **selected carrier** and the related **purchase order number**.
- Once the carrier is assigned in the FO, the FO execution status changes to “**Ready for Execution**” allowing the freight forwarders to submit 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.



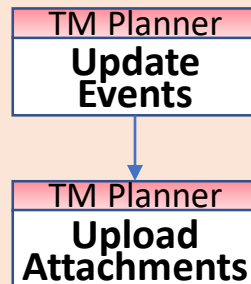
UNOE – EXECUTE & MONITOR PHASE – GOODS VENDOR STAGE (DAP & FCA)



Goods Vendor / TCC Stage DAP / FCA



CCP

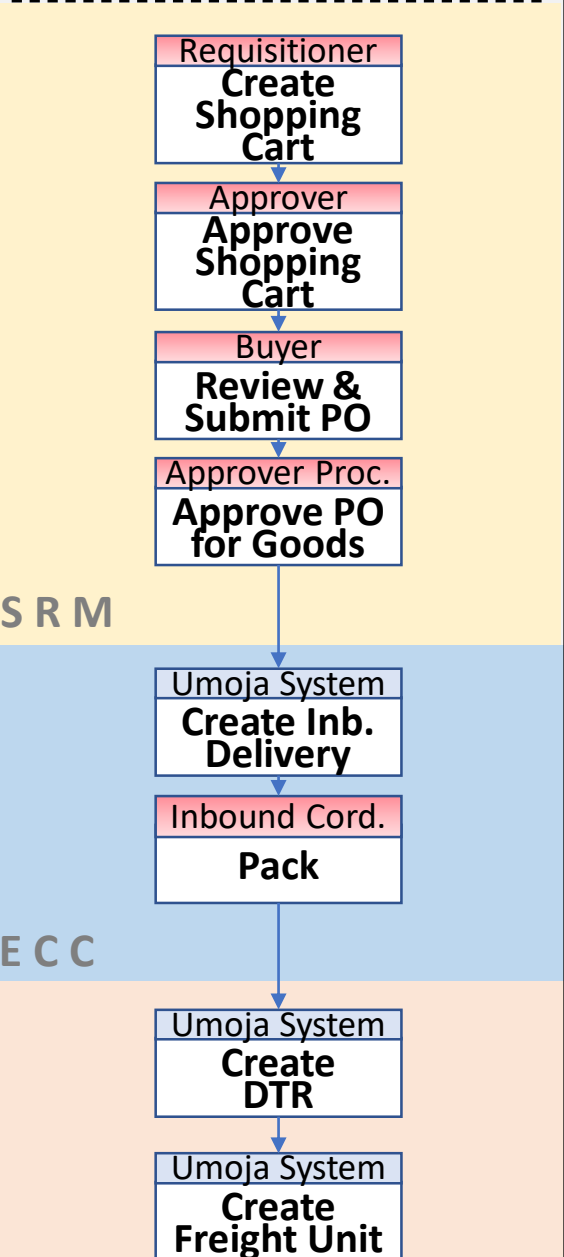


TM

- 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**” 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

PROCURE

UNOE



SRM

ECC

TM

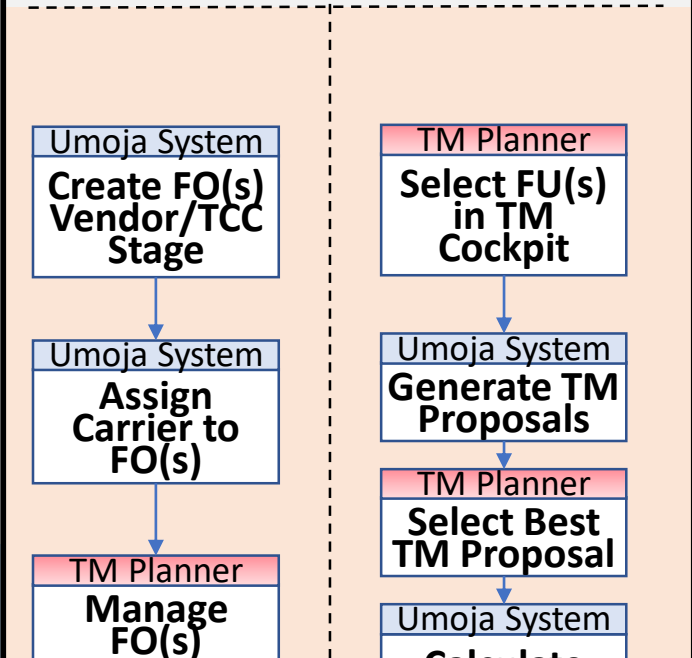
PLAN

Goods Vendor Freight Forwarder

Freight Forwarder

Stage	Stage
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DAP / FCA	EXW / FCA
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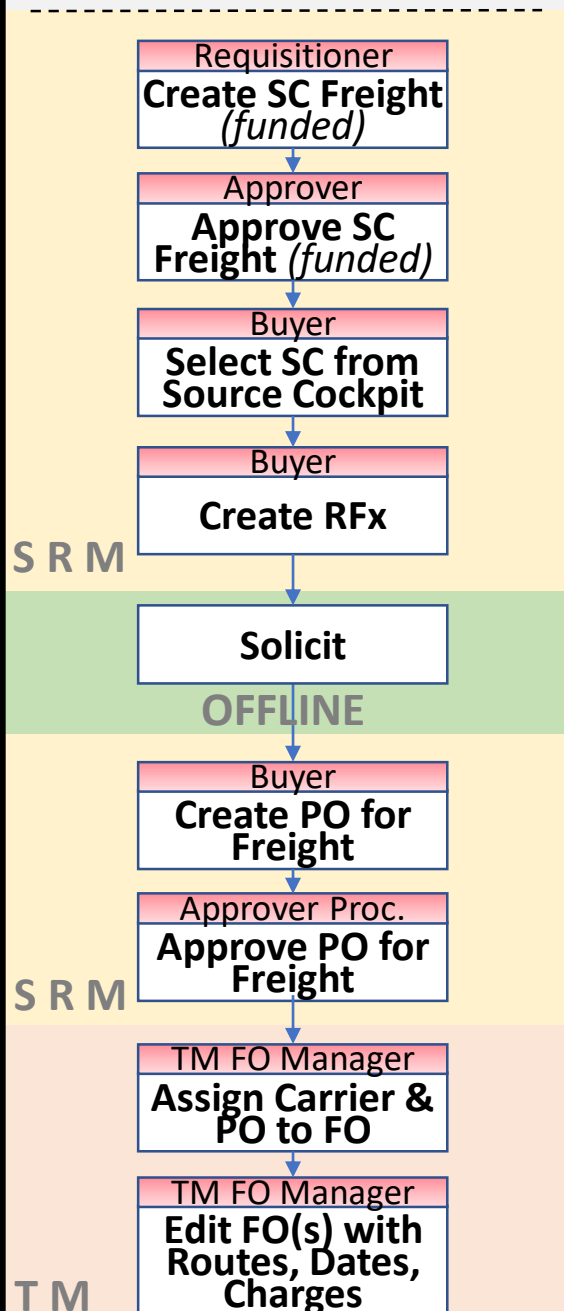


TM

TM

PROCURE FREIGHT

EXW / FCA



SRM

OFFLINE

SRM

TM

EXECUTE & MONITOR

Goods Vendor	Freight Forwarder
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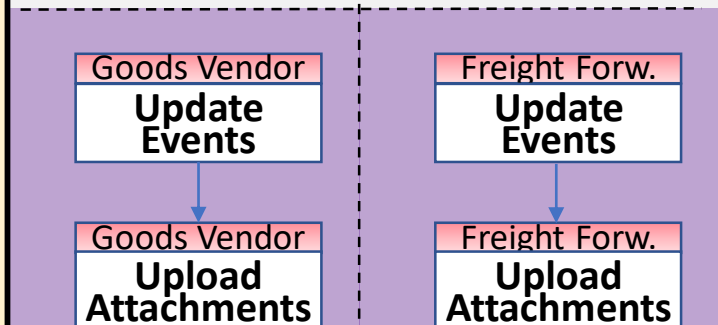
Freight Forwarder

Stage	Stage
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DAP / FCA	EXW / FCA
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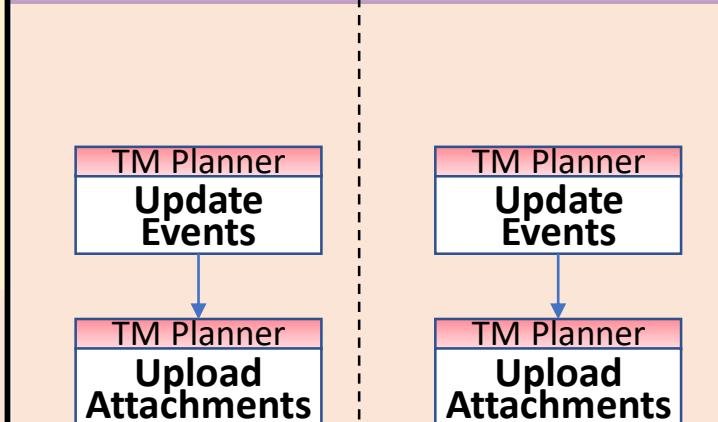
Stage

EXW / FCA



CCP

CCP



TM

TM

UNOE – EXECUTE & MONITOR PHASE – FREIGHT FORWARDER STAGE (*EXW & FCA*)



Freight Forwarder Stage EXW / FCA

TM Col.Portal
**Update
Events**

TM Col.Portal
**Upload
Attachments**

CCP

TM Planner
**Update
Events**

TM Planner
**Upload
Attachments**

TM

- 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**” 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** (*both EXW & FCA*): Virtual Goods Receipt & Stock Transport Order
 - **Follow-on documents** (*both EXW & FCA*): Physical Goods Receipt



- **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.

- **TS.02 FREIGHT ORDER MANAGEMENT**

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, FWO, FU, and FO.

- **TS.04 TM MASTER DATA MAINTAINER**

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

- **TS.05 COLLABORATION PORTAL**

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

- **TS.07 TM & EM Reporting Display and Analysis**

It provides access to the reporting and analysis TM workspace in Umoja BI.

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
CCP	Carrier Collaboration Portal	FU	Freight Unit
IBD	Inbound Delivery	PO	Purchase Order
SC	Shopping Cart	SOW	Statement of Work



THANK YOU!

Questions?