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
<table>
<thead>
<tr>
<th>PROCURE</th>
<th>PLAN</th>
<th>PROCURE FREIGHT</th>
<th>EXECUTE &amp; MONITOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNOE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Requisitioner</td>
<td>Create Shopping Cart</td>
<td>FOB/ FCA/ DAT/ DAP</td>
<td>EXW/ FCA/ FOB/ DAT</td>
</tr>
<tr>
<td>Approver</td>
<td>Approve Shopping Cart</td>
<td>Freight Forwarder Stage</td>
<td></td>
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<tr>
<td>Buyer</td>
<td>Review &amp; Submit PO</td>
<td>Buyer Approve PO for Goods</td>
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<td>S R M</td>
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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 – PROCUREMENT 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)*.
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:

- **Items**
- **Transportation stages**
- **Document flow**
- **Status information**
UNOE – PLAN PHASE – Goods vendor vs Freight Forwarder

- Umoja System: Create DTR
- Umoja System: Create Freight Unit
- TM: Create FO(s)
- TM Planner: Manage FO(s)

FCA/FOB/DAT/DAP

Virtual Receipt

EXW

FCA

FOB

DAT

UN

DAP

DDP

Physical Receipt

Point of Origin → Port → Onboard Vessel → Port → UN Location

Vendor Stage

Assign Vendor to FO(s)

Goods vendor vs Freight Forwarder
UNOE – PLAN PHASE – Goods vendor vs Freight Forwarder

Who manages the legs?

<table>
<thead>
<tr>
<th>Freight Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used for execution</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pre (HoL -&gt; Port)</th>
<th>Main (Port -&gt; Port)</th>
<th>On (Port -&gt; Destination)</th>
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<tbody>
<tr>
<td>Receiving Plant</td>
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UNOE – PLAN PHASE – Goods vendor vs Freight Forwarder

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<tr>
<td>FCA: Vendor as carrier</td>
<td>FCA: Receiving Plant</td>
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Freight Order

Used for execution
UNOE – PLAN PHASE – Goods vendor vs Freight Forwarder

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Pre (Source -> HoL) | Main (HoL -> Port) | On (Port -> Destination)

- FOB: Vendor as carrier
- FOB: Receiving Plant
- FOB: Receiving Plant
UNOE – PLAN PHASE – Goods vendor vs Freight Forwarder

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<tr>
<td>DAT: Vendor as carrier</td>
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Freight Order
Used for execution
UNOE – PLAN PHASE – Goods vendor vs Freight Forwarder

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Freight Order
Used for execution
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.
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.
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.
UNOE – PLAN PHASE – FREIGHT FORWARDER STAGE (EXW-FCA) - 3/4

- 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”.

**Display UMOJA Planned Frt Order (FF Deliv) 6100010624**

- **Invoicing Status:** 01 Not Invoiced
- **Charge Calc. Status:** 02 Calculated
- **Total Amount in Local Currency:** 9,854.70 USD
- **Total Amount in Document Currency:** 9,854.70 USD
- **Rounded Total Amount in Document Currency:** 9,854.70 USD
- **Rounded Amount Difference in Document Currency:** 0.00 USD
- **Late Changes:**

**Cargo:**
- **ZNARRAY**
- **UNOE_BEA**
- **UNOE_TRK**
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.
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.
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.
PROCURE

UNOE
- Requisitioner: Create Shopping Cart
- Approver: Approve Shopping Cart
- Buyer: Review & Submit PO
- Approver Proc.: Approve PO for Goods
- Umoja System: Create Inb. Delivery
- Inbound Cord.: Pack
- Create DTR
- Create Freight Unit

PLAN

Freight Forwarder
- Stage: FCA/FOB/DAT/DAP
- Umoja System: Create FO(s) Vendor/TCC Stage
- Assign Carrier to FO(s)
- Umoja System: Manage FO(s)
- TM Planner: Select FU(s) in TM Cockpit
- Generate TM Proposals
- Select Best TM Proposal
- Calculate Charge Estimate
- Create FO(s) FFW Stage
- Generate SOW

EXECUTE & MONITOR

Freight Forwarder
- Stage: EXW/FCA/FOB/DAT
- Requisitioner: Create SC Freight (funded)
- Approver: Approve SC Freight (funded)
- Select SC from Source Cockpit
- Buyer: Create RFx
- Select Best TM Proposal
- Create PO for Freight
- Approver Proc.: Approve PO for Freight
- TM FO Manager: Assign Carrier & PO to FO
- Edit FO(s) with Routes, Dates, Charges
- TM Planner: Update Events
- Upload Attachments
- Update Events
- Upload Attachments
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

- 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

<table>
<thead>
<tr>
<th>ACRONYM</th>
<th>FULL FORM</th>
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</tr>
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<tbody>
<tr>
<td>SRM</td>
<td>Supplier Relationship Management</td>
<td>DTR</td>
<td>Delivery-based Transportation Requirement</td>
</tr>
<tr>
<td>ECC</td>
<td>ERP Central Component</td>
<td>FWO</td>
<td>Forwarding Order</td>
</tr>
<tr>
<td>TM</td>
<td>Transportation Management</td>
<td>LOA</td>
<td>Letter of Assist</td>
</tr>
<tr>
<td>CCP</td>
<td>Carrier Collaboration Portal</td>
<td>FU</td>
<td>Freight Unit</td>
</tr>
<tr>
<td>IBD</td>
<td>Inbound Delivery</td>
<td>PO</td>
<td>Purchase Order</td>
</tr>
<tr>
<td>SC</td>
<td>Shopping Cart</td>
<td>SOW</td>
<td>Statement of Work</td>
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THANK YOU!

Questions?