Aptean

CALIDUS Transport Systems Cross-Functional Flows

CALIDUS Transport Systems

11th September 2025 - 1.0
Reference: UG PROD-UG

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1 Creating a General Release Note

This is a guide to using the general release note format.

1.1 Overview

Note: This should not be used for WMS and CTMS ERs and Patches, or EPOD Server or Android release notes, or WCS release notes. Each of these have very specific requirements for the release notes and have their own templates.

However, this format can be used for formal release notes for other products such as

- TCM
- Bay Diary
- ToC
- VEhub
- TCM
- Calidus MCS
- Portal (although a more specific version exists solely for Portal, the format is based on this one and therefore may be used as a template.

1.2 Creating a new Release Note

Note: You must be logged in.

Go to the main page and click on *Create New Pages from Templates*

Find the General Release Note section.

Enter your product release note in the box. The standard naming convention is:

- REL Sys Version Client-Optional
  - e.g. REL MCS 2.03.01
  - e.g. REL Portal 11.03.01 CTY

Note: Choose your document titles well - these will be included in the printed/output PDF documents on the top of every page, and therefore should be very descriptive - examples are provided of the standards being followed.

- MCS
- ASSIST
- TCM
- VEhub
- Vision
- PORTAL
- Bay Diary
- TOC

Click **Create New General Release Note**

The system will take you to the page with everything you need for creating a release note, editing in source mode.

You can edit in source mode, or you can flip to visual editing. Either:

- Click *Create* instead of *Create Source* at the top
- Click the pencil icon and select *Visual Editing*.

You will then be editing in Visual Editor.

1.2.1 Source Editing

Change the following at the top of the page

- #vardefine:System - the System e.g. PORTAL, MCS, TCM, TOC, Bay Diary}}

- #vardefine:SystemVers - the major system version
- #vardefine:ERPatch - the minor system version
- #vardefine:ERNumber - the revision number
- #vardefine:Date - the build date DD/MM/YYYY
- #vardefine:Client - optional - the client, if this is a client-specific build. Otherwise leave blank

Note: Choose your product/system well - the Products chosen when creating the new page should be used from the list below. This is because the Assist system automatically categorises all pages into sub-categories by Product based on your entry. Choosing the right one means that this is automatic and will be most useful to those using the system.

- MCS
- ASSIST
- TCM
- VEhub
- Vision
- PORTAL
- Bay Diary
- TOC

This will set the title, system, version, and Build number automatically from what was entered. If you have Preview turned on, it will change a few seconds after you make the changes.

You can then continue editing, adding rows to the different sections, adding or removing unwanted sections, etc.

When complete, enter an editing summary at the bottom of the page and click **Save Changes**.

1.2.2 Visual Editing

Under the header, greyed out, there are 3 variables, used by the page for the titles, version and (importantly) the categorisation of the page. They look like greyed out puzzle pieces.

- #vardefine:System
- #vardefine:SystemVers
- #vardefine:ERPatch
- #vardefine:ERNumber
- #vardefine:Date
- #vardefine:Client

Click on the variable to change and click the **Edit** button - an edit popup will show. Enter the value you want here:

- #vardefine:System - the System e.g. PORTAL, MCS, TCM, TOC, Bay Diary}}
- #vardefine:SystemVers - the major system version
- #vardefine:ERPatch - the minor system version
- #vardefine:ERNumber - the revision number
- #vardefine:Date - the build date DD/MM/YYYY
- #vardefine:Client - optional - the client, if this is a client-specific build. Otherwise leave blank

This will set the title, system, version, and Build number automatically from what was entered. It won't change immediately - it will change when you save the page.

You can then continue editing, adding rows to the different sections, adding or removing unwanted sections, etc.

When complete, you can click **Save Page**. You will be prompted to enter an editing summary - enter one and click **Save Page**.

1.2.3 Sections

Note: If any sections are not required, remove them. There should however always be at least one of the first to sections:

- ***Released Modules.***
- ***Resolved Issues/Changes.***

The programs included in the patch should be added to the *Release Modules* section.

- Enter the following
    - *Module* - if there are multiple modules (e,g, Server, Web Client, Webservices) indicate that here
    - *Program Name* - a unique reference if applicable to the screen/program being released
    - *Internal Ref* - the DevOps case
    - *Client Ref* - the SalesForce case if applicable
    - *Remarks* - a description of the problem and solution.
- If there are database scripts required, add the ID of the script here

Any issues resolved and changes made should be added to the *Resolved Issues/Changes* section.

If there are new screens and they have been added to a default menu, add the details to the *New Screens* section. This section is not required if you are using the *Released Modules* section above.

Note that this is NOT a client specific release note - if the customer has bespoke menus, they are not reflected in this release note.

- *Menu* - the menu/submenu added. Make then italicised.
- *Screen ID* - any ID or name if there is one. Make them italicised.
- *Screen Description* - the screen name or description, or purpose.

Should any new functionality require access control, then this should be entered in the *New Access* section. This section may be omitted if there is no access control on modules or screens mentioned in this release note.

- *Access Type* - where the access is sourced from. This could be functional access, tab access, imports, exports, fields on a screen, user permissions/settings, user types, existing or new system parameters, etc.
- *Name* - the unique name
- *Description* - description of what this does.

Should there be any new or applicable parameter, rule or registry setting or value that directly affects the functionality being released, enter the information in the *New Parameters & Settings* section.

- *Parameter Name* - The parameter name as seen in the screens.
- *Config Level* - The parameter type, level, table on which it is location, screen where it can be found, etc.
- *Description* - A description of the parameter or setting.
- *Setting Values* - the values that may be set for this parameter.

If there is any other system release known to be required for this functionality to work, this next Warning section should be left in. Note that, if the release number of the other systems is known, then reference it directly here. Further, if you have release notes created for this release ER or PATCH, then include them as a link e.g. *[[ER CTMS 047-001]]* in source editing or CTRL-K *ER CTMS 047-001* in visual editing.

1.2.4 Result

Your page will be created. The categories will be set from the variables entered as well.

Assuming we entered the following

- #vardefine:System - MCS
- #vardefine:SystemVers - 2
- #vardefine:ERPatch - 03
- #vardefine:ERNumber -01
- #vardefine:Date - 15/07/2025
- #vardefine:Client - blank - we should not in most of not all cases be building customer-specific release notes.

The title will default to:

- **RELEASE NOTE- MCS**
- Date: 15/07/2025 Ref: REL MCS 2.03.01

The categories will default to:

- MCS RelNote
- REL MCS 2.03

1.2.5 Creating a New Patch Category

At this point, if this is a new product/major/minor version, the specific product/major/minor category will not exist - on the right of the page, the category will be red (in this example REL MCS 2.03).

You should click this link - you will be taken to editing the new category. You need to add this to the product's Release Notes category:

- Source editing
  - ♦ Enter [[Category:MCS RelNote]] into the source editing box, enter a summary comment and save.
- Visual editing
  - ♦ Click the 3-line menu, click *Categories* and start typing MCS RelNote - the category will be shown. Select it then click **Apply Changes**. Enter a summary comment and save.

Note that this is just an example - use your correct product ID, not MCS. See the list above.

Note that if this category already exists, you don't need to do this.

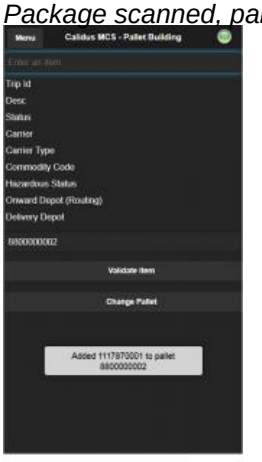
Now, if you go to category "MCS", you will see the sub categories. If you go to category "MCS RelNote", you will see a sub category, in this example "REL MCS 2.03". You can see release notes applied to this product/major/minor version in one place. Example below:

- MCS RelNote
  - ♦ REL MCS 2.03

Pallet Building - start

- 

Package scanned, pallets suggested

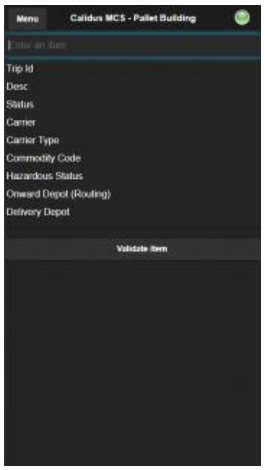
- 

Pallet confirmed, stuck to pallet

Figure 4: *Cherwell 1 Pallet Building process*

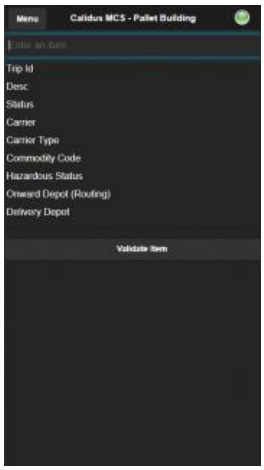
The Cherwell 3 Pallet Building process will be configured to use the new process, as follows:

- The user will select the Pallet Building option.
- The user will scan a package.
- MCS will display the package details and suggest any pallets.
- If an open pallet is suitable, the user can scan the pallet label in the Pallet text box, and MCS will confirm that the package is on this pallet.
- If no open pallets are available and suggested, the user can create a new pallet with the **New Pallet** button.
- When pressed, MCS will prompt them to select a printer. **Note:** This printer selection process is being changed under SCR 369080. When selected and confirmed, MCS will print the pallet label to the printer and will confirm that the package is on this pallet.
- MCS will **not** stick to this pallet - it will be blanked.
- MCS will prompt to scan a package again.
- From this point, the user will work through the same process each time, as from the second step above.

- 

Pallet Building - start
- 

Package scanned, pallets suggested

- 

  *Pallet confirmed, **not** stuck to pallet*

Figure 5: *Cherwell 3 Pallet Building process*

2 TECHNICAL NOTES

2.1 Modules Changed

Module Name	Module Type	Notes
LOCATION.fmb	C-TMS Form	
DP_MCS	C-TMS Package	
V_MCS_SITE	C-TMS View	
(As required)	SQL	Database modification script.
VMcsSiteDAL1.cs	MCS Server code	
VMcsSiteDAL1_Gen.cs	MCS Server code	
VMcsSite1_Gen.cs	MCS Server code	
McsDatabase.js	MCS Device code	
m004a01t_uc_pallets.js	MCS Device code	

2.2 Table Updates

Table GEO_LOCATION will change to add the following field:

Name	Type	Nullable	Default	Storage	Comments
MCS_PALLET_BUILD_PROCESS	VARCHAR2(1)	N	N		

2.3 Developer Notes

To achieve this, we must make the following changes:

- New Location configuration required (i.e. applicable for C3, not C1). "Pallet Building Process", values "Continuous" (default) or "Single" (new process).
  - Modify C-TMS Location form MCS tab.
  - Modify DB table
  - Modify V_MCS_SITE
  - Modify MCS to add the new flag.
- In MCS Pallet Building:
  - After palletising a package, check the new location flag is "Single". If so, blank the package information and selected pallet and return to the package prompt.

2.3.1 C-TMS Database Changes

The existing view V_MCS_SITE will be modified to return new MCS location flag, as follows:

```
CREATE OR REPLACE VIEW V_MCS_SITE AS
SELECT DEPOT SIT_DEPOT, LOCATION_ID SIT_LOCATION_ID, LOCATION_NAME SIT_LOCATION_NAME,
MCS_PRINT_PALLET_LABEL SIT_PALLET_LABEL,
MCS_PALLET_CLOSURE SIT_PALLET_CLOSURE,
MCS_PALLET_SEAL_REQD SIT_PALLET_SEAL_REQD,
MCS_TRANS_SHIP SIT_TRANS_SHIP,
MCS_PALLET_BUILD_PROCESS SIT_PALLET_BUILD_PROCESS,
NVL(UPDATED_DATE,CREATED_DATE) SIT_UPDATED_DATE
FROM GEO_LOCATION
WHERE DEPOT = 'RDC'
AND NVL(MCS_ACTIVE,'N') = 'Y'
ORDER BY LOCATION_ID
```

This change and the database table change will be added to a database modification script, to be used during implementation.

2.3.2 C-TMS Locations Form Changes

The C-TMS Locations Maintenance form will be modified to add a new drop-down list, labelled as "Pallet Building Process". This will default in the database to a value of "C".

The field will be added under the existing "Pallet Building Validation" field.

The drop-down list will be populated with the descriptions of the field values below:

- "C" - Continuous (the default value).
- "S" - Single.

The following existing fields will be moved to the right in a new column:

- Set Trip Status at Receipt.
- Set Trip Status at Despatch.

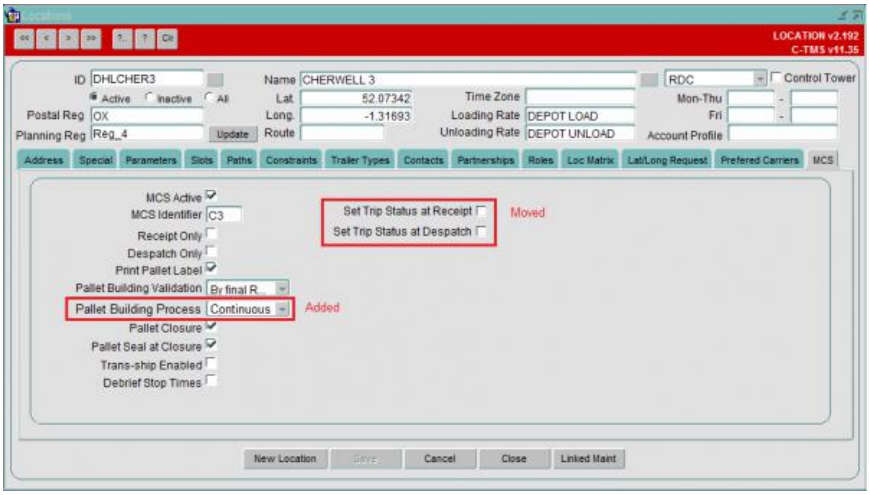


Figure 6: *Locations maintenance - MCS tab changes*

2.3.3 MCS DAL Changes

At login, MCS must receive the location (depot) configuration flags from C-TMS.

- SIT_PALLET_BUILD_PROCESS - this flag controls whether pallets built through C-MCS at this location will stick to a pallet (C), or will require pallet confirmation after each scan (S).

These will be received as part of the logon procedure.

The location configuration flags will be received on the list of depots received when calling V_MCS_SITE and will be stored on the local database in new fields. The new flag will be accessible under the MCS.App object directly i.e. MCS.App.SIT_PALLET_BUILD_PROCESS.

Affected code modules:

- VMcsSiteDAL1.cs - add the new fields as XML tags.
- VMcsSiteDAL1_Gen.cs - add the new flags to the read data.
- VMcsSite1_Gen.cs - add the new fields.
- McsDatabase.js - add the new flag.

2.3.4 MCS Pallet Building Screen

Pallet building package information to be changed to:

- when package palletised, return to initial prompt, only if configured to do so.

The process will check MCS.App.SIT_PALLET_BUILD_PROCESS. If set to "C", it will work as now. If set to "S", it will:

- Reset the selected pallet ID.
- Reset the pallet ID field.
- Clear the package display.
- Return to the package prompt.

This will occur at the end of the following events:

- On entering a valid pallet for a new package scan.
- On creating a new pallet.

Function funAddItemToPalletCallback is usually called in response to adding packages to pallets, and currently resets the displayed items. Modifying this process should cover all eventualities.

Affected code modules:

- m004a01t_uc_pallets.js

3 TEST PLAN

Test Script / Scenario Reference	*Cage Confirmation Scans*	**Call Number(s): 369101 UAT-67**
Test Script / Scenario Description	*Confirm pallet after each package in pallet building.*	**PASS / ISSUES / FAIL**
Menu Access	*Pallet Building*	
Pre-requisites	*A configured C-TMS and MCS.*	**Tested By:**
Test Objective	*Test that; locations can be configured to confirm pallet after each package and; pallet building confirms the pallet after each package at configured locations only.*	**Date:**

Step	Action	Result	Remarks	P/F
1	**C-TMS Location Form**			
1.01	Check existing MCS-enabled locations, that the Pallet Building Process is set to "Continuous".	All existing MCS-enabled locations have the value set to "Continuous" on the screen and "C" in the database.		
1.02	Change a location to Pallet Building Process "Single". Save and re-find.	The location value should be saved as "S" and shown as "Single" in the Locations form.		

Step	Action	Result	Remarks	P/F
2	**MCS Pallet Building**			
	Ensure that there are two locations configured, one with Continuous process and one with Single process. Ensure that there are multiple packages on an order, planned through both locations.			
2.01	On a site configured to Single process, start pallet building and scan a package.	The package details are displayed. Any suitable pallets are shown.		
2.02	Create a new pallet and confirm.	The device shows a message that the package is on the pallet. The package details are blanked, the pallet is removed and the device is prompting for package again.		
2.03	Scan another package.	The package details are displayed. Any suitable pallets are shown, including the new pallet.		
2.04	Enter the new pallet and confirm.			

		The device shows a message that the package is on the pallet. The package details are blanked, the pallet is removed and the device is prompting for package again.		
2.05	On a site configured to Continuous process, start pallet building and scan a package.	The package details are displayed. Any suitable pallets are shown.		
2.06	Create a new pallet and confirm.	The device shows a message that the package is on the pallet. The package details are blanked, but the pallet remains. The device is prompting for package again.		
2.07	Scan another package.	The device shows a message that the package is on the pallet. The package details are blanked, but the pallet remains. The device is prompting for package again.		

4 APPENDIX A: QUOTE & DOCUMENT HISTORY

Cost Details				
Activity	**Estimate No. of Days**	**No. of Days**	**Rate per Day (?)**	**Cost (? Exc. VAT)**
Requirements	0.00	0.00	820	?0.00
Change Request Evaluation	0.25	0.25	0	?0.00
Functional Specification	1.00	1.00	820	?820.00
Technical Specification	0.00	0.00	820	?0.00
Development	4.25	4.25	790	?3,357.50
Testing and Release	2.00	2.00	790	?1,580.00
Implementation	0.50	0.50	820	?410.00
Project Management	0.50	0.50	830	?415.00
TOTAL	8.50	8.50		?6,582.50

Estimate excludes training, release to live and go live support.

References

Ref No	Document Title & ID	Version	Date
1	SCR 369080 MCS Scan Printer	1.0	24/01/2020

Glossary

Term or Acronym	Meaning
AWB	Airway Bill; a receipt of goods required by airline carriers. It also serves as the carriage contract between the carrier and the shipper.
C-MCS	*CALIDUS* MCS, OBS Logistics Mobile Control System. See also MCS.
Carrier	The carrier completing the trip. Can comprise any carrier configured in the system, but normally Home Fleet (usually a carrier per depot), 3rd-party carriers, supplier-/customer-own transport, own collection, etc.
Consolidating Centre	A depot that takes delivery of goods from several origins and consolidates them for trunking to outbases (q.v.) or final delivery to destinations. See also Consolidation.
Consolidation	In execution terms, this is the act of taking several jobs and combining them into a single execution job. This can be by several criteria but is broadly defined as: Same Location consolidation, where the delivery/collection points are identical; Linked Location, where the deliver/collection points have been configured to be seen as the same point within C-TMS and; Manual (Ad Hoc) Consolidation, where the driver decides that two jobs should be delivered/collected at the same time. In general transport terms, this is the act of taking like product from several sources (originating depots, warehouses, orders) going to the same destination or on the same vehicle and placing them on a transportable media. See also containerisation.
Containerisation	The action of taking items and placing them inside another item for tracking purposes. See also Asset.
Cost Centre	A part of an organisation to which costs may be charged for accounting purposes. For C-TMS, this is used for accounting purposes, and also to generally configure the system.
C-TMS	*CALIDUS* TMS, OBS Logistics' Transport Management System.
Cross-Dock	Also a specific location at which product is exchanged.
Customer	In 3PL terms, the customer on behalf of which the transport is being operated.
DDL	Drop-down list - a series of pre-designated answers to a particular question on a device, rather than requiring the user to key the answer in in full.
Debrief	Comprises 2 parts: Stop debrief, where actual arrival and departure times against a trip are entered; Order debrief, where actual product and item quantities are entered; Driver/Trip debrief, where additional information is captured from the driver relating to the trip.
Depot	Any location that schedules and controls transport.
Despatch	In transport terms, the process of loading and despatching items out of a depot. In this implementation, the process of loading and despatching is predominantly controlled by C-MCS

Term or Acronym	Meaning
	(q.v.). See also Loading.
Driver	Comprising drivers and crew assigned to a trip.
DU	Distribution/Deliverable Unit - Pallet, Package, etc.; Also Asset, Asset Type.
Fixed Route	In transport terms, a fixed route is a trip comprised of a series of fixed stops that are typically always visited. A C-TMS fixed route template (q.v.) can be used to create these.
Item	A single item for delivery/collection. A general terms, distinct from the DU of the deliverable item e.g. Pallet, Package, etc.
Loading	In transport terms, the process of loading and despatching items out of a depot. In this implementation, the process of loading and despatching is predominantly controlled by C-MCS (q.v.). See also Despatch.
Location	In C-TMS terms, a trip comprises visits or drops to many locations. A location can be of many different types.
Location Types	Usually one of: Depot, Customer, Delivery/Collection Location, Store, etc.
MCS	Mobile Control System, an application to execute mobile tasks, as opposed to transport management tasks from a console. For OBS Logistics, transport depot mobile tasks are handles by *CALIDUS* MCS.
OMS Ref	A unique transport movement ID, referring to a single transport movement request.
Optimisation	Route building and optimisation of stops on a trip.
Order	Equiv: OMS Ref; a transport movement.
Order Status	The lifecycle of an order.
Outbase	A depot whose purpose is to deliver to final delivery destination within a geographically-restricted subsection of the whole catchment area; also ROC.
Reason Codes	Of many types: Adjustment, Non-conformance, Order.
Receipt	In transport terms, the process of receiving and uploading items into a depot. In this implementation, the process of receipt and unloading is predominantly controlled by C-MCS (q.v.). See also Unloading.
Region; Postal Region	Geographical Region.
Resources	Drivers, Crew, Tractors, Vehicles, Trailers (q.v.).
Route	A route is a fixed route that is repeated. A Trip is a unique trip, which may be created from a route.
ROC	Regional Operating Centre; a depot whose purpose is to deliver to final delivery destination within a geographically-restricted subsection of the whole catchment area; also Outbase.
RPE	Roll-pallet Equivalent - This is used to estimate volume and therefore capacity of vehicles within C-TMS.
Schedule	A day's plan, usually consisting of 24 hours, not necessarily from midnight to midnight.
Shunt	A trunk (q.v.) movement between depots using the trunk network, typically of a much shorter length than a trunk movement.
TLM	Transport Logistics Manager
Tractor	The driver cab, pulling the trailer.
Trailer	The trailer carrying the goods. Can be several types.
Trans-Ship	The process of receiving, cross-docking and despatching items within a depot, usually within a single transaction. In this implementation, this is the process at the ROC (q.v.).
Transport	Transport operations.
Trip	C-TMS: A selection of work to be completed, specifically a workload that lasts for an entire shift for a driver.
Trip Status	The lifecycle of a trip.
Trunk	A route between depots, transporting goods usually to be delivered from the destination depot, but any transfer of goods from the original receiving or originating depot in the network to the final delivery depot (the outbase).
Unloading	The process of receiving and uploading items into a depot. In this implementation, the process of receipt and unloading is predominantly controlled by C-MCS (q.v.). See also Receiving.
Vehicle	A generic term for the resource assigned to a trip. Can be tractor (q.v.), tractor plus trailer (q.v.), fixed vehicle (e.g. van). In C-TMS terms, the tractor ID is considered the vehicle ID, usually the registration.
Warehouse	This is a depot in C-TMS that is seen to be a warehouse, or origin and storage point for product for delivery.

Authorised By

Julie Scott	OBS Project Manager	_____
Paul Kurze	Customer Representative	_____

Pallet closure - existing screen

- 

Pallet closure - new pop-up (prototype)

Figure 2: *Cherwell 3 Pallet Closure process*

5 TECHNICAL NOTES

5.1 Modules Changed

Module Name	Module Type	Notes
DP_MCS_SCANNING	C-TMS Package	
(As required)	SQL	Database modification script.
m004a01t_uc_pallet_closure.js	MCS Device code	
m004a01t_uc_pallet_closure.ascx	MCS Device code	

5.2 Table Updates

None.

5.3 Developer Notes

To achieve this, we must make the following changes:

- Change MCS to check the pallet status and allow the user the choice to open the pallet.
- New message from MCS to C-TMS to open a package.
- New C-TMS procedure to re-open a pallet, deleting any seal information if present.

5.3.1 C-TMS DP_MCS_SCANNING Changes

The existing procedure DP_MCS_SCANNING.FN_UPDATE_PALLET_STATUS will be modified to open a closed pallet. The procedure already achieves much of what is required, but the seal number processing must be modified.

Currently, the process does the following:

- Status requested must be a valid status i.e. OPEN or CLOSED.
- Checks seal.
- Checks status of despatching trip - not EN-ROUTE, COMPLETED, CONFIRMED.
- Create seal.
- Lock pallet record and change status.

The process will be modified as follows:

- Status requested must be a valid status i.e. OPEN or CLOSED.
- Check seal - only required if CLOSING a pallet. This is currently controlled by no seal parameter being present and can continue this way.
- Checks status of despatching trip - not EN-ROUTE, COMPLETED, CONFIRMED.
- Create seal - only required if CLOSING a pallet. This is currently controlled by no seal parameter being present and can continue this way.
- Delete existing seal - only required if OPENING a pallet. The process should check that the required status is "OPEN" and, if so, check whether there is a seal for this pallet (checking on SCH_SHIP_AWB_CON_CONT). If found and type "S", delete the record. If there are no more records on the seal (i.e. SCH_SHIP_AWB_CON), delete the seal.
- Lock pallet record and change status.

Appropriate error messages will be returned if there are failures opening the pallet, through the same method that the package does when closing pallets.

5.3.2 MCS Pallet Closure Screen

The process for pallet closure will change to allow a pallet to be opened. The flow of the process is as follows:

On the device:

- Keying enter on pallet field calls
- MCSUI.PalletClosure.funCheckPalletClick() (in m023a01t_uc_pallet_closure.js) which calls
- MCSWS.Requests.PalletRequest(strSiteId, strPalletId, MCSUI.PalletClosure.funCheckPalletRequestCallback) in webServiceRequests.js

On the server:

- PalletRequest is dealt with by PalletRequest in MCSService.cs.
- This selects the details of the pallet from V_MCS_PALLET, including the status.

On the device:

- MCSUI.PalletClosure.funCheckPalletRequestCallback in m023a01t_uc_pallet_closure.js
- This checks the status - if CLOSED it issues an error.

This should no longer do that.

The process will now:

- display the details as per the following block, then within that block:
    - ♦ if the status is not CLOSED, do as now
    - ♦ if the status is CLOSED,
        - ◊ do not display the seal number and Pallet Close button (i.e. hide them).
        - ◊ do not set the default button or default focus (i.e. do not call this code).
        - ◊ display a dialogue box:
            - · message id, level and description as "This pallet is already closed - do you want to open it?", options "Yes"/"No" (MCSUI.Messages.ButtonTypes.YesNo).
            - · If No is clicked, close the dialogue box - no further actions required.
            - · If Yes is clicked, close the dialogue box and call new function to open pallet and remove seals.

The required MCS development is as follows:

A dialogue will be added to the Pallet Closure process, if the pallet is considered to be status CLOSED.

Dialogue control code can be seen in MCS Damages function, when confirming marking an item as damaged (funConfirmMarkDamaged in m009a01t_uc_damages.js)

Dialogues may be shown with:

- MCSUI.Common.objScreen.MessageDialogue.showQuestion(strMessage)

A new dialogue will be configured - set in m023a01t_uc_pallet_closure.ascx, through common code:

- MCSUI.Common.objScreen.MessageDialogue.yesClicked = MCSUI.PalletClosure.funConfirmReopenPallet

This then links to a new function funConfirmReopenPallet in m023a01t_uc_pallet_closure.js when **Yes** is clicked. The process will:

- Close the dialogue box,
- Calls MCSWS.Requests.PalletUpdate with status set to OPEN and no seal. Set callback as now, to MCSUI.PalletClosure.funPalletUpdateRequestCallback
- On successful result, display a toast message that the pallet is closed. Clear the pallet details

To be clear, when **No** is clicked, the dialogue box will be removed, but the pallet details will remain. The user can only click the **Cancel Entry** button to enter a pallet again.

Function MCSUI.PalletClosure.funPalletUpdateRequestCallback in m023a01t_uc_pallet_closure.js will be modified. It's a minor modification to what it already does, based on the status of the pallet being actioned:

- Check error status.
  - If OK, display message "Pallet X opened" and clear back to normal entry.
  - If not, display error message. Clear back to normal entry.

All pallet details should be removed.

Affected code modules:

- m023a01t_uc_pallet_closure.js
- m023a01t_uc_pallet_closure.ascx

6 TEST PLAN

Test Script / Scenario Reference	*Allow Pallet Opening*	**Call Number(s): 369552**
Test Script / Scenario Description	*Pallet Re-opening*	**PASS / ISSUES / FAIL**
Menu Access	*Pallet Closure*	
Pre-requisites	*A configured C-TMS and MCS.*	**Tested By:**
Test Objective	*Test that pallets that are scanned again can be re-opened.*	**Date:**

Step	Action	Result	Remarks	P/F
1	**MCS Pallet Closure**			
	Ensure that there are two locations configured, both with pallet closure enabled, one with Pallet Seal required and one without.			
1.01	Location configured for seals at pallet closure. Scan pallet	The application displays a text box for seal number, a **Close Pallet** and **Cancel Entry** button.		
1.02	Enter a seal number and click **Close Pallet**.	The pallet is closed and the device informs you so. The seal is created in C-TMS. The device is prompting for pallet again.		
1.03	Scan the pallet again.	All pallet details are shown. No seal number text box nor **Close Pallet** button is displayed, just a **Cancel Entry** button. A dialogue is shown, asking the user to confirm opening the pallet, with Yes and No options.		
1.04	Click **No**	The dialogue box is hidden.		
1.05	Click **Cancel Entry**.	The device is prompting for pallet again. The pallet details are removed.		
1.06	Scan the pallet again. Click **Yes**	The dialogue box is hidden. The pallet is opened and the device informs you so. The seal is deleted in C-TMS. The device is prompting for pallet again. Pallet details are no longer displayed.		
1.07	Location configured for no seals at pallet closure. Scan pallet	The application displays a **Close Pallet** and **Cancel Entry** button.		
1.08	Click **Close Pallet**.	The pallet is closed and the device informs you so. No seal is created in C-TMS. The device is prompting for pallet again.		

1.09	Scan the pallet again.	All pallet details are shown. No seal number text box nor **Close Pallet** button is displayed, just a **Cancel Entry** button. A dialogue is shown, asking the user to confirm opening the pallet, with Yes and No options.		
1.10	Click **No**	The dialogue box is hidden.		
1.11	Click **Cancel Entry**.	The device is prompting for pallet again. The pallet details are removed.		
1.12	Scan the pallet again. Click **Yes**	The dialogue box is hidden. The pallet is opened and the device informs you so. The device is prompting for pallet again. Pallet details are no longer displayed.		

7 APPENDIX A: QUOTE & DOCUMENT HISTORY

Cost Details				
Activity	**Estimate No. of Days**	**No. of Days**	**Rate per Day (?)**	**Cost (? Exc. VAT)**
Requirements	0.00	0.00	820	?0.00
Change Request Evaluation	0.25	0.25	0	?0.00
Functional Specification	1.50	1.50	820	?1,230.00
Technical Specification	0.00	0.00	820	?0.00
Development	6.25	6.25	790	?4,937.50
Testing and Release	2.00	2.00	790	?1,580.00
Implementation	0.50	0.50	820	?410.00
Project Management	0.50	0.50	830	?415.00
TOTAL	11.00	11.00		?8,572.50

Estimate excludes training, release to live and go live support.

References

Ref No	Document Title & ID	Version	Date
1			

Glossary

Term or Acronym	Meaning
AWB	Airway Bill; a receipt of goods required by airline carriers. It also serves as the carriage contract between the carrier and the shipper.
C-MCS	*CALIDUS* MCS, OBS Logistics Mobile Control System. See also MCS.
Carrier	The carrier completing the trip. Can comprise any carrier configured in the system, but normally Home Fleet (usually a carrier per depot), 3rd-party carriers, supplier-/customer-own transport, own collection, etc.
Consolidating Centre	A depot that takes delivery of goods from several origins and consolidates them for trunking to outbases (q.v.) or final delivery to destinations. See also Consolidation.
Consolidation	In execution terms, this is the act of taking several jobs and combining them into a single execution job. This can be by several criteria but is broadly defined as: Same Location consolidation, where the delivery/collection points are identical; Linked Location, where the deliver/collection points have been configured to be seen as the same point within C-TMS and; Manual (Ad Hoc) Consolidation, where the driver decides that two jobs should be delivered/collected at the same time. In general transport terms, this is the act of taking like product from several sources (originating depots, warehouses, orders) going to the same destination or on the same vehicle and placing them on a transportable media. See also containerisation.
Containerisation	The action of taking items and placing them inside another item for tracking purposes. See also Asset.
Cost Centre	A part of an organisation to which costs may be charged for accounting purposes. For C-TMS, this is used for accounting purposes, and also to generally configure the system.
C-TMS	*CALIDUS* TMS, OBS Logistics' Transport Management System.
Cross-Dock	Also a specific location at which product is exchanged.
Customer	In 3PL terms, the customer on behalf of which the transport is being operated.
DDL	Drop-down list - a series of pre-designated answers to a particular question on a device, rather than requiring the user to key the answer in in full.
Debrief	Comprises 2 parts: Stop debrief, where actual arrival and departure times against a trip are entered; Order debrief, where actual product and item quantities are entered; Driver/Trip debrief, where additional information is captured from the driver relating to the trip.
Depot	Any location that schedules and controls transport.
Despatch	In transport terms, the process of loading and despatching items out of a depot. In this implementation, the process of loading and despatching is predominantly controlled by C-MCS

Term or Acronym	Meaning
	(q.v.). See also Loading.
Driver	Comprising drivers and crew assigned to a trip.
DU	Distribution/Deliverable Unit - Pallet, Package, etc.; Also Asset, Asset Type.
Fixed Route	In transport terms, a fixed route is a trip comprised of a series of fixed stops that are typically always visited. A C-TMS fixed route template (q.v.) can be used to create these.
Item	A single item for delivery/collection. A general terms, distinct from the DU of the deliverable item e.g. Pallet, Package, etc.
Loading	In transport terms, the process of loading and despatching items out of a depot. In this implementation, the process of loading and despatching is predominantly controlled by C-MCS (q.v.). See also Despatch.
Location	In C-TMS terms, a trip comprises visits or drops to many locations. A location can be of many different types.
Location Types	Usually one of: Depot, Customer, Delivery/Collection Location, Store, etc.
MCS	Mobile Control System, an application to execute mobile tasks, as opposed to transport management tasks from a console. For OBS Logistics, transport depot mobile tasks are handles by *CALIDUS* MCS.
OMS Ref	A unique transport movement ID, referring to a single transport movement request.
Optimisation	Route building and optimisation of stops on a trip.
Order	Equiv: OMS Ref; a transport movement.
Order Status	The lifecycle of an order.
Outbase	A depot whose purpose is to deliver to final delivery destination within a geographically-restricted subsection of the whole catchment area; also ROC.
Reason Codes	Of many types: Adjustment, Non-conformance, Order.
Receipt	In transport terms, the process of receiving and uploading items into a depot. In this implementation, the process of receipt and unloading is predominantly controlled by C-MCS (q.v.). See also Unloading.
Region; Postal Region	Geographical Region.
Resources	Drivers, Crew, Tractors, Vehicles, Trailers (q.v.).
Route	A route is a fixed route that is repeated. A Trip is a unique trip, which may be created from a route.
ROC	Regional Operating Centre; a depot whose purpose is to deliver to final delivery destination within a geographically-restricted subsection of the whole catchment area; also Outbase.
RPE	Roll-pallet Equivalent - This is used to estimate volume and therefore capacity of vehicles within C-TMS.
Schedule	A day's plan, usually consisting of 24 hours, not necessarily from midnight to midnight.
Shunt	A trunk (q.v.) movement between depots using the trunk network, typically of a much shorter length than a trunk movement.
TLM	Transport Logistics Manager
Tractor	The driver cab, pulling the trailer.
Trailer	The trailer carrying the goods. Can be several types.
Trans-Ship	The process of receiving, cross-docking and despatching items within a depot, usually within a single transaction. In this implementation, this is the process at the ROC (q.v.).
Transport	Transport operations.
Trip	C-TMS: A selection of work to be completed, specifically a workload that lasts for an entire shift for a driver.
Trip Status	The lifecycle of a trip.
Trunk	A route between depots, transporting goods usually to be delivered from the destination depot, but any transfer of goods from the original receiving or originating depot in the network to the final delivery depot (the outbase).
Unloading	The process of receiving and uploading items into a depot. In this implementation, the process of receipt and unloading is predominantly controlled by C-MCS (q.v.). See also Receiving.
Vehicle	A generic term for the resource assigned to a trip. Can be tractor (q.v.), tractor plus trailer (q.v.), fixed vehicle (e.g. van). In C-TMS terms, the tractor ID is considered the vehicle ID, usually the registration.
Warehouse	This is a depot in C-TMS that is seen to be a warehouse, or origin and storage point for product for delivery.

Authorised By

Julie Scott	OBS Project Manager	_____
Paul Kurze	Customer Representative	_____

8 SCR 366598 - MCS Product Changes

Small Change Request (Analysis)	
Project/Log Number: PROD / 366598	Date: 28/01/2020
Requested By: Tony Walker	Prepared By: Tony Walker

Change Category (SCE_WMS, CTMS, EPOD, PORTAL, etc):
MCS

Describe the Change Being Requested:
Add the following functionality:

1. Auto-close pallets on despatch confirm.
2. Debrief all stop types at a location.
3. Allow removal of packages from pallets by scanning the item twice.

~~Auto-remove damaged items from onward trips.~~ Already completed.

Describe the Reason for the Change (new requirement, s/w fix, problem management etc):
As follows:

1. Pallets that remain OPEN are suggested for pallet building. If the pallet is no longer physically at that location, the pallet should not be available for pallet building.
2. Trip stops can either be debriefed if they are start-up (SU) or close (CL) stops, unless further functionality is enabled. This existing functionality *also* changes status, completes other stops, prior trips, etc, so is undesirable when loading/unloading at stops other than the originating depot. For example, shunt trips picking up from multiple depots, external/other depot carrier pickup, etc.
3. There is no way of removing items from a pallet through the device.

~~Damaged items are unlikely to be on-forwarded, and most likely would require re-packaging, re-labelling etc. Therefore the original item should not be suggested for any subsequent receipt or despatch on subsequent trips.~~

Describe all Alternatives Considered:
Alternatives are manual only:

1. Manually close pallets before despatch.
2. Manually debrief stops.
3. Manually remove packages using the CTMS Shipment Pallet screen.

~~Manually remove all damaged items from order before continuing.~~

Given that C-MCS is supposed to help automate the operations that use it, these basic steps should also be automatic.

List Program and Change Summary Required to Implement this Change:
As follows:

8.1 Auto-close pallets on despatch confirm

Add a new cost centre-level system parameter "MCS_AUTO_CLOSE_PALLETS", defaulting to "N".

Modify existing procedure FN_DESP_CONF.

If the new parameter is set, do the following:

- "N" - nothing
- "Y" - close the pallet at the point of despatch.

Existing procedure FN_UPDATE_PALLET_STATUS does this, and includes a number of checks. This may either be used directly (if the checks are appropriate and have not already been completed as part of procedure FN_DESP_CONF) or a parameter added to remove any already-completed redundant checks from the process. If a new procedure is added, the existing version of the procedure (without the parameter) must be preserved (calling the new

version), as this is called from C-MCS directly.

8.2 Debrief all stop types at a location

I.e. without Receipt/Despatch Only flag required to be set.

A location flag already exists to control this functionality - "Debrief Stop" - GEO_LOCATION.MCS_DEBRIEF_STOP_TIMES. This needs to be added to the package code.

In the C-TMS screen, default this flag to "N".

If set to "Y", always debrief all stops found for this location and action (i.e. for Loading, SU/PK, for Despatch, DL/CL).

8.3 Allow removal of packages from pallets by scanning the item twice

Add a new cost centre-level system parameter "MCS_REMOVE_PACKAGE", defaulting to "N"

When a package is scanned onto a pallet on which it already exists, an error is returned from the package to say that the item is already on the pallet.

If the new system parameter MCS_REMOVE_PACKAGE is set to "Y", MCS should offer the user the choice of removing the package from the pallet. If confirmed, MCS should call DP_MCS_SCANNING.FN_REMOVE_FROM_PALLET, and confirm with the user (if sucessful) that the item has been removed from the pallet.

8.4 Auto-remove damaged items from onward trips

No longer required - already completed.

Describe Risks to be Considered for this Change:
Existing operations using C-MCS may be affected by this additional functionality - see Implications section.

Estimate Dev/Test Effort (in days) Needed to Implement this Change:

SCR Analysis:	1.0
DEV:	3.0
TEST:	1.5

Describe the Implications to other Customers:
Existing operations using C-MCS may be affected by this additional functionality (LFS specifically, but also DHLT/HCR/HC-CHER, TDL). Care must be taken to implement these changes so that, if not configured to do as described above, the application still works in the same way.

Requestor Sign off:

☐ Approve ☐ Reject ☐ Defer

Justification of Approval, Rejection, or Deferral:

9 SCR 369080 MCS Scan Printer

Small Change Request (Analysis)	
Project/Log Number: PROD / 369080	Date: 24/01/2020
Requested By: Denis Starodubov	Prepared By: Tony Walker

Change Category (SCE_WMS, CTMS, EPOD, PORTAL, etc):
MCS

Describe the Change Being Requested:
When printing the FMPL labels, the user is only able to print from the zebra printer associated with their CTMS account - they are unable to choose a zebra printer by scanning it.

Describe the Reason for the Change (new requirement, s/w fix, problem management etc):
Time taken to select required printer from drop-down as opposed to simply scanning it.

Describe all Alternatives Considered:
Select from the list - deemed inappropriate by the customer.

List Program and Change Summary Required to Implement this Change:
To achieve this, we must make the following changes:

- *No system configuration required.*
- In MCS Pallet Building:
  - ♦ If printing labels, add a text field above the existing printer select DDL.
    - ◊ Focus on this text box with initial help text set to "Scan a printer barcode".
    - ◊ Add event so that hitting Return on this field selects the printer in the list. If the printer is not found in the list, display an error. If found, move on as if printer selected from list. In all cases, clear text from box.
    - ◊ If Select is clicked and there is text in the text box, fire the event above. If no text, use the printer selected in the DDL. If no printer selected, issue an error.
  - ♦ Note: If not printing labels, this is not to be displayed or focussed.

Describe Risks to be Considered for this Change:
Low - the change is relatively simple and, although it will look cosmetically different to those customers that are not used to scanning barcodes to identify a printer, the screen will still be able to work as per their current process and this text box can be ignored. Worst case scenario, this text box can be disabled and hidden as part of a custom style if the cosmetic difference is confusing.

Describe the Implications to other Customers:
Existing operations using C-MCS may be affected by this additional functionality (LFS specifically). Care must be taken to implement these changes so that, if not configured to do as described above, the application still works in the same way.

Requestor Sign off:

[X] Approve [ ] Reject [ ] Defer

Justification of Approval, Rejection, or Deferral:
Agreed with customer

10 SCR 369093 Part Confirm Despatch

Small Change Request (Analysis)	
Project/Log Number: DHLT / 369093	Date: 05/02/2020
Requested By: Denis Starodubov	Prepared By: Tony Walker

Change Category (SCE_WMS, CTMS, EPOD, PORTAL, etc):
MCS

Describe the Change Being Requested:
Multiple users - Users not able to stop mid-load for another user to continue. Allow a user to stop scanning for despatch, and for some other user to pick up on this later and complete.

Describe the Reason for the Change (new requirement, s/w fix, problem management etc):
The MCS product has been designed specifically to be one user per trip, and for that trip to be completed before moving on, as explicitly described in both the product documentation and the customer's solution design document.

Despite this, the customer does not wish to abide by this stated restriction of the product. They require that a despatch be allowed to be part-completed by one user, then for another user to be able to continue with it later, seeing what has already been completed by the first user. This is to allow the user to go on a break or finish work for the day without completing their current task.

Describe all Alternatives Considered:
The customer does not wish to hand over a terminal that is logged in under one user for another user to complete. Nor do they want to force completion of work before going on a break.

List Program and Change Summary Required to Implement this Change:
Currently, completing a trip, all items must be scanned or marked as damaged on the device.

The process then does the following:

- Send a "DESP_CONF" per each item scanned:
  - ♦ Writes a reason code on SOIRC and STI.
  - ♦ Sets quantities on STI and SOI.
- Send a "DESP_COMP" for the trip:
  - ♦ Update the trip status.

Solution would be to either:

- Allow complete to be clicked on the trip before completion. Possible change label value. Send back "DESP_CONF" messages for only those that are marked as delivered/damaged/added. Do not send back a "DESP_COMP" message.
- Send back the "DESP_CONF" message as the items are scanned, and allow the user to simply back out when required.

In either case, sending the "DESP_CONF" messages before trip confirmation poses issues:

- This actually confirms the data in CTMS. If these items were then subsequently "un-scanned", that would need to be undone on CTMS.
- Particularly, scanning an item as an additional item for a trip may well split an order and plan the item to the despatching trip. If then subsequently removed, the audit trail would remain - it would need to be either undone or another audit record added. Furthermore, this split order would not then revert to the original planned trip, but would instead remain UNSCHEDULED. This is not a problem for DHL, as they are configured for planned items only. However, there is a fundamental issue here that needs to be resolved (see risks and scope later).
- If an item is scanned and confirmed as loaded, then subsequently unloaded by another user, the item would show as loaded on that trip (reason code SL) and there would be no confirmation that it had been unloaded until a subsequent reason code was received when the user says why it is was not loaded (i.e. damaged). It would eventually look OK, but the reports would show this as loaded. To combat this, we will change the damages process package to do the following:
  - ♦ Remove any SL messages for this depot - it is now damaged.
  - ♦ Explicitly set the quantities for this item to 0.

- In any case, should the user NOT confirm the trip, the trip status will not be moved on (as no DESP_COMP message will have been set, which would break the process. This is true in any case without this change, so may be ignored. However, the customer should be aware of the break in the process if one user is not made ultimately responsible for completing the despatch of that trip.
- With changes being entered into under log 369066, any item marked with a reason code will be de-planned from any subsequent trips. Those items could not then be scanned to be reset and then successfully loaded. So, this process MUST NOT allow items that are marked as damaged to be scanned and reset.

To achieve this functionality, we must make the following changes:

- System configuration required:
  - New MCS system parameter "MCS_UPDATE_DESPATCH_IMMEDIATELY", values "Y", "N", assume default "N" if unconfigured.
  - MCS modified to retrieve and store this new system parameter.
- If this functionality is configured, in MCS:
  - Update each item when scanned with CTMS.
  - Completion (despatch) of the trip must only send the completion message, not the "item scanned" messages.
- MCS Refresh function must update and delete items as well as add new ones (generic change) - no configuration necessary for this.

Additionally:

- Adding RC against a pallet already shown as loaded at this depot should remove the SL reason code and explicitly set the quantity to 0.
- If this new functionality is configured, and the functionality is configured to un-plan items from a trip if marked as damaged (log 369066), items marked as damaged will not be allowed to be scanned again and reset within despatch.

The final process will be:

- Start Despatch
- Enter a trip
- All items displayed.
- Scan several, including one as damaged.
- Log off the device.
- Start again on a different device.
- Start Despatch
- Enter a trip
- All remaining items displayed, initially hiding those already scanned.
- Damaged item cannot be re-scanned.
- Loaded item can be scanned again to unload it.
- Complete scanning of all items.
- Mark any missing/damaged with reason codes.
- Complete the trip as despatched.

Describe Risks to be Considered for this Change:
The following risks are identified:

- This functionality SHOULD NOT be enabled for any customer that does not despatch to plan. If they do, they must be aware of the risks that any unplanned item will be loaded and split from the original order. If this is then subsequently unloaded, the split order will remain and will probably remain as UNSCHEDULED until either properly planned by the operation.

Scope:

- Items (packages or pallets) marked as Damaged will be unplanned (under changes in progress). If both this functionality and the functionality specified here are enabled, once an item is marked as damaged, it may not be reset, as the item has been de-planned already.

Describe the Implications to other Customers:
Existing operations using C-MCS may be affected by this additional functionality (LFS and TDL specifically). Care must be taken to implement these changes so that, if not configured to do as described above, the application still works in the

same way.
Requestor Sign off: [X] Approve [ ] Reject [ ] Defer
Justification of Approval, Rejection, or Deferral: Customer agreement of functionality

11 Process Flows

The intention of this guide is to show the types of movements that may be entered into within any transport operation, and how the different CALIDUS systems may be used to interact and execute those transport movements.

Any implementation may use any CALIDUS system (although it is assumed that CTMS is required at a basic level). These guides assume processes using the following systems:

- Depot Scanning - CALIDUS MCS or CALIDUS WCS
- Driver Execution - APOD or CALIDUS ePOD
- Transport Management - CALIDUS TMS

The described transport solution below makes use of the following resources:

- Own Fleet - road transport for all aspects of transport (initial collection, middle mile, final destination).
- Agent - road transport, trusted 3rd party carriers using CALIDUS systems (e.g. APOD/EPOD). Used as Own Fleet.
- 3PC - road transport to final destination, external 3rd party carriers.
- Air/Airlines - Air transport, middle mile.
- Line Haulage - road transport middle mile through 3PC.

The intention is that the individual cross-functional flows may be combined in order to provide a cohesive description of full transport movement execution for any movements within any network.

11.1 Component Trips

When an order is received, it will be planned from its source to its destination through a series of trips:

Direct Deliveries (completed by all carriers and depots):

- Source-Destination
  - Direct delivery, completed in one trip.

Not Pick/Pack via Own Fleet depot (RDC) or agent depot (AD):

- Source-Depot-Destination
  - Collect into network, deliver direct from same depot.
- Source-Depot-RDC-Destination
  - Collect into network, use the network to move between regional depots (road haulage), deliver to destination from regional depot.
- Source-Depot-Airport1-Airport2-RDC-Destination
  - Collect into network, move to airport, use a line haulier to move between airports, collect from airport into regional depot, deliver to customer.
- Source-Depot-Airport1-Airport2-AD-Destination
  - Collect into network, move to airport, use a line haulier to move between airports, collect from airport into agent depot, deliver to customer.
- Source-Depot-Airport1-Airport2-Destination
  - Collect into network, move to airport, use a line haulier to move between airports, collect from airport and deliver to customer in one trip.
- Source-Depot-3rd-party Carrier Depot-Destination
  - Collect into network, label and pass onto 3rd-party carrier.
- Source-Depot-Airport1-Airport2-Depot-3rd-party Carrier Depot-Destination
  - Collect into network, move to airport, use a line haulier to move between airports, collect from airport into regional depot, label and pass onto 3rd-party carrier.
- Source-Depot-Airport1-Airport2-3rd-party Carrier-Destination
  - Collect into network, label and move to airport, use a line haulier to move between airports, 3rd-party carrier collects from airport and delivers.

Pick/Pack at Own Fleet depot (also any ad-hoc orders that turn up at a Depot):

- RDC-Destination
  - ♦ Picked/Packed at depot, delivered to customer.
- RDC-RDC-Destination
  - ♦ Picked/Packed at depot, use the network to move between regional depots (road haulage), deliver to destination from regional depot.
- RDC-Airport1-Airport2-RDC-Destination
  - ♦ Picked/Packed at depot, move to airport, use a line haulier to move between airports, collect from airport into regional depot, deliver to customer.
- RDC-Airport1-Airport2-AD-Destination
  - ♦ Picked/Packed at depot, move to airport, use a line haulier to move between airports, collect from airport into agent depot, deliver to customer.
- RDC-Airport1-Airport2-Destination
  - ♦ Picked/Packed at depot, move to airport, use a line haulier to move between airports, collect from airport and deliver to customer in one trip.
- RDC-3rd-party Carrier Depot-Destination
  - ♦ Picked/Packed at depot, label and pass onto 3rd-party carrier.
- RDC-Airport1-Airport2-Depot-3rd-party Carrier Depot-Destination
  - ♦ Picked/Packed at depot, move to airport, use a line haulier to move between airports, collect from airport into regional depot, label and pass onto 3rd-party carrier.
- RDC-Airport1-Airport2-3rd-party Carrier-Destination
  - ♦ Picked/Packed at depot, label and move to airport, use a line haulier to move between airports, 3rd-party carrier collects from airport and delivers.

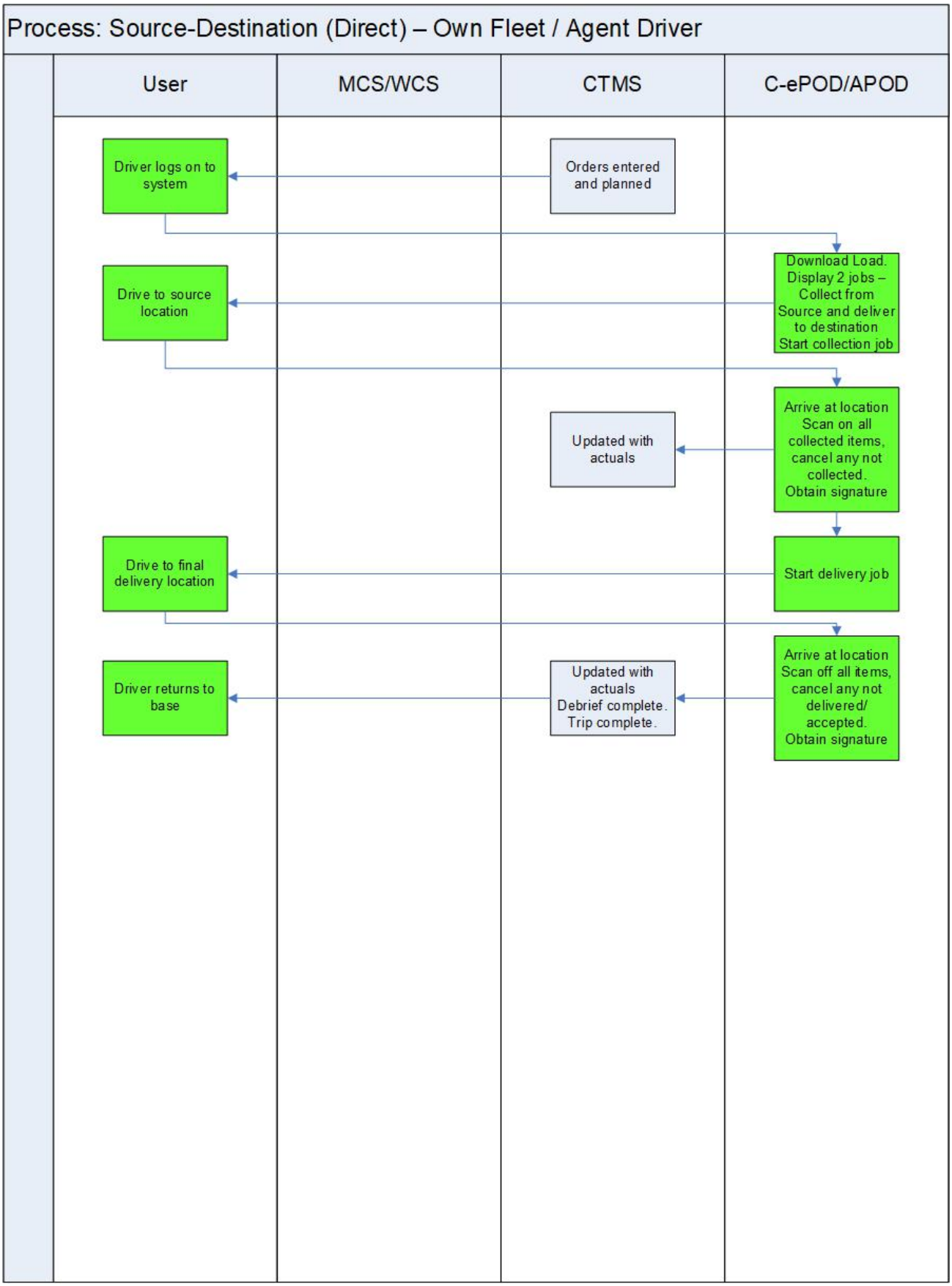
The following is a list of the individual trips required to action the order routing above, showing the potential executing agent:

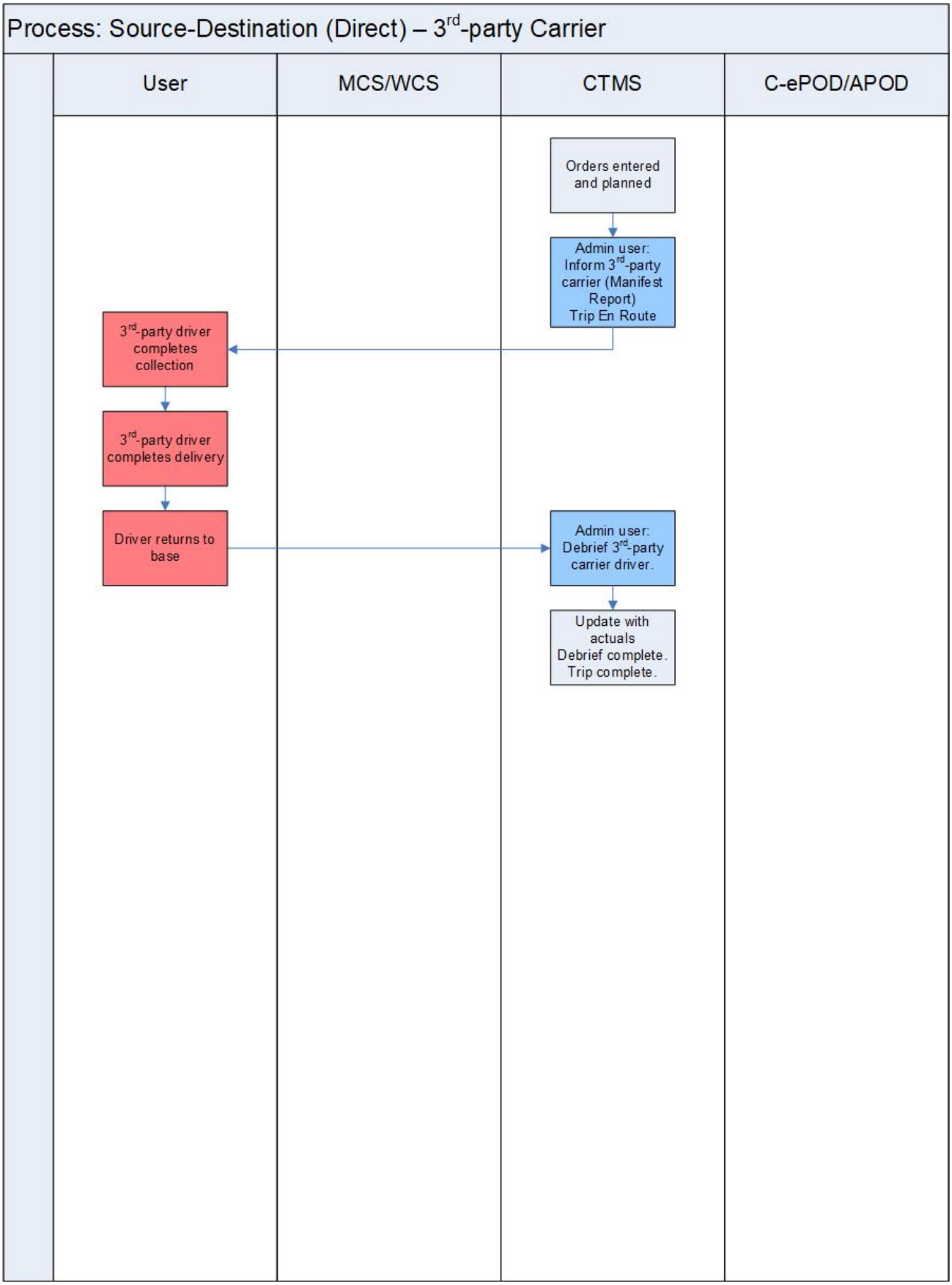
1. Source-Destination
   1. Can be completed by Own Fleet Driver, Agent or 3rd-party Haulier
2. Source-Depot
   1. Can be completed by Supplier, Own Fleet Driver, Agent or 3rd-party Haulier
3. Depot-Destination
   1. Can be completed by Own Fleet Driver, Agent or 3rd-party Carrier
4. Depot-RDC
   1. Can be completed by Own Fleet Driver or Agent.
5. RDC-Destination
   1. Always completed by Own Fleet Driver - this is the same as Depot-Destination.
6. Depot-Airport1
   1. Can be completed by Own Fleet Driver or Agent.
7. Airport1-Airport2
   1. Always completed by Line Hauler (Airline)
8. Airport2-RDC
   1. Always completed by Own Fleet Driver.
9. Airport2-AD
   1. Only if the agent uses a Depot. Completed by Agent.
10. AD-Destination
    1. Only if the agent uses a Depot. Completed by Agent.
11. Airport2-Destination
    1. Only if the agent has no depot. Completed by Agent.
12. Depot-3rd-party Carrier
    1. Can be completed by 3rd-party Carrier, Own Fleet Driver or Agent. If executed by an Own Fleet Driver or Agent, the process is identical to Depot-Destination.
13. RDC-RDC
    1. As Depot-RDC, always completed by Own Fleet Driver. See that process flow for details.
14. RDC-Airport1
    1. As Depot-Airport1, always completed by Own Fleet Driver. See that process flow for details.
15. Airport2-3rd-party Carrier
    1. Always completed by 3rd-party Carrier.
16. 3rd-party Carrier-Destination
    1. Always completed by 3rd-party Carrier.

Each Component Trip is shown in detail below, with proposed processes, responsibilities and notes.

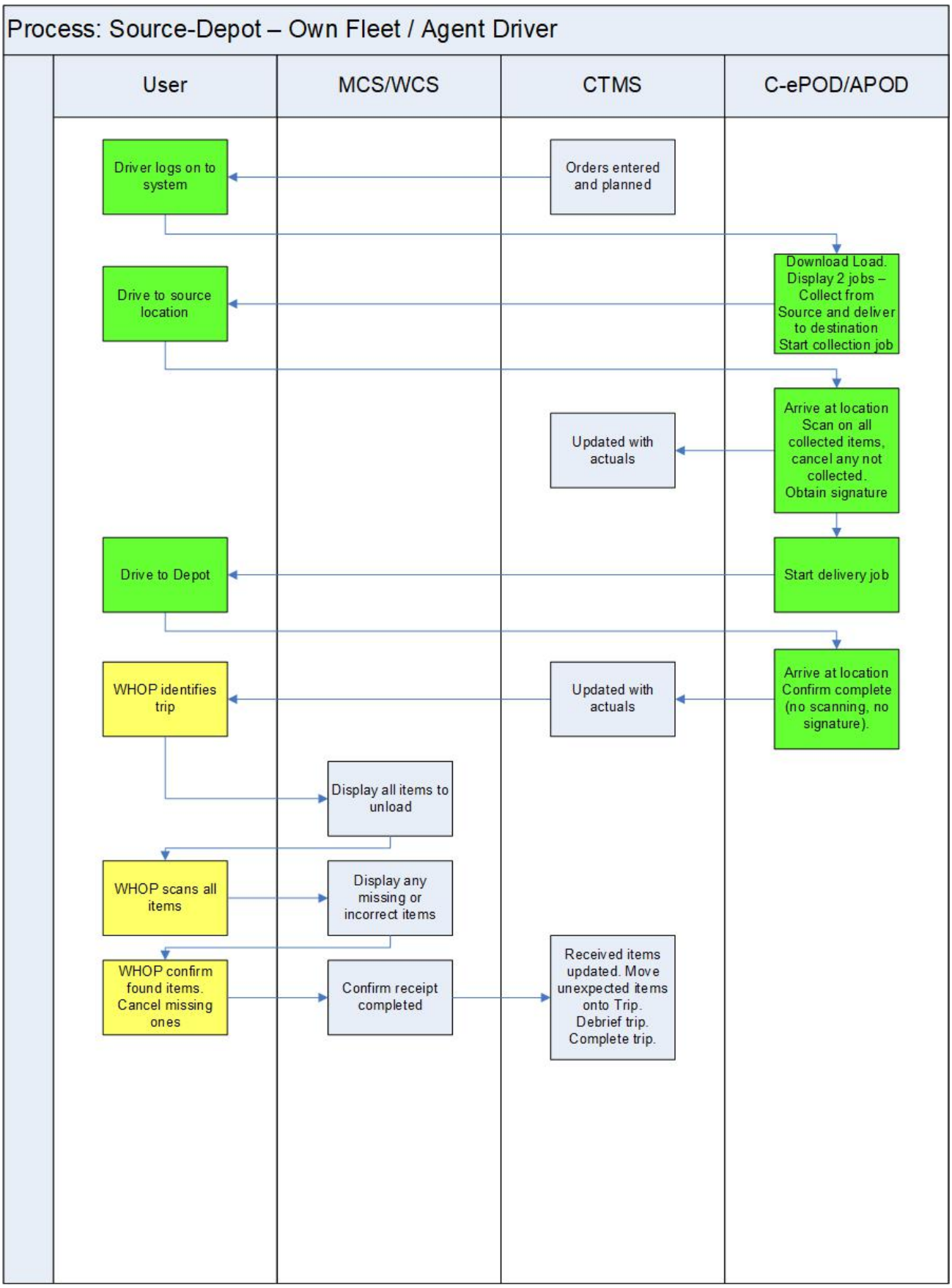
11.1.1 Cross-Functional Flows

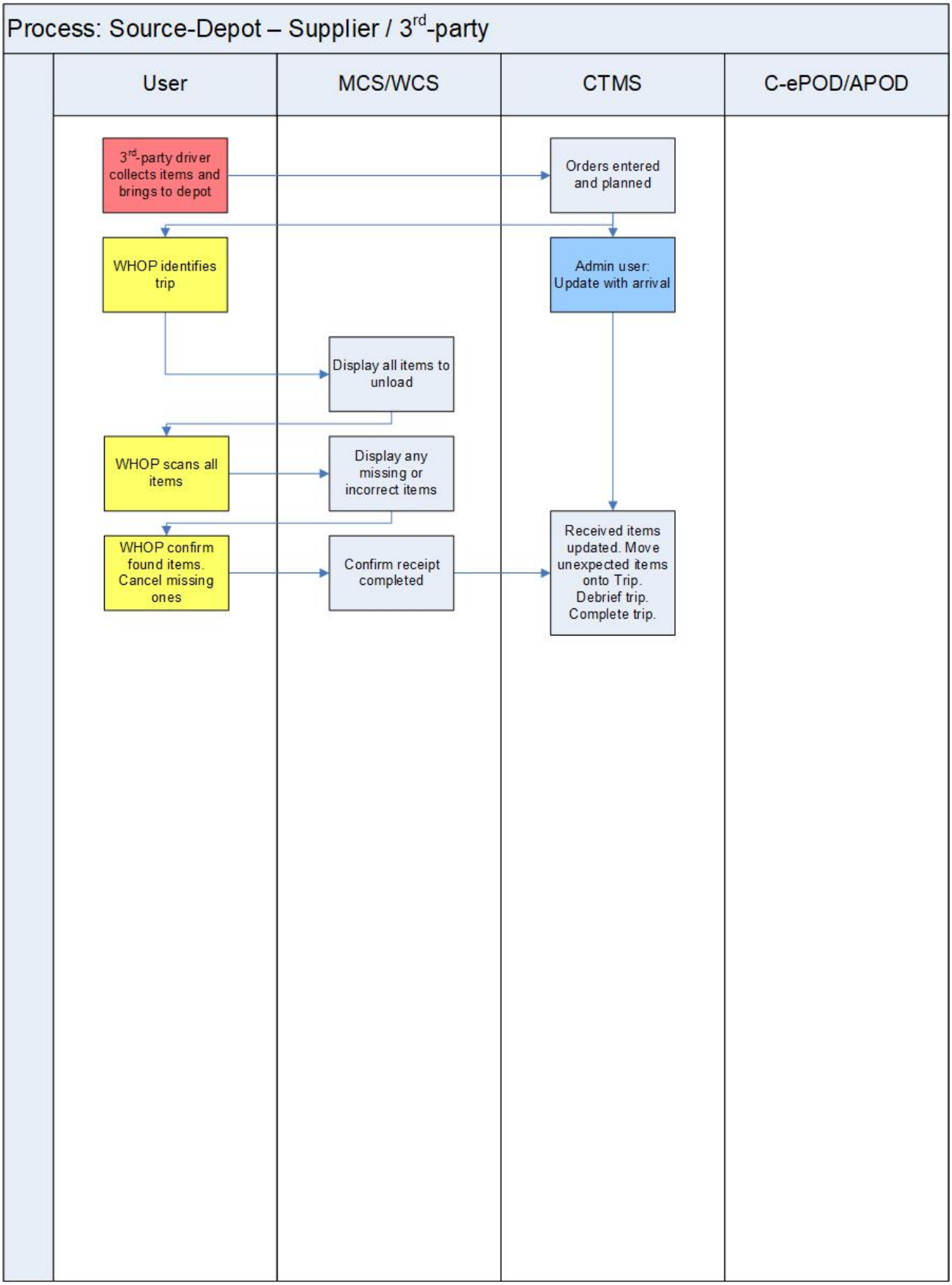
11.1.1.1 Source-Destination



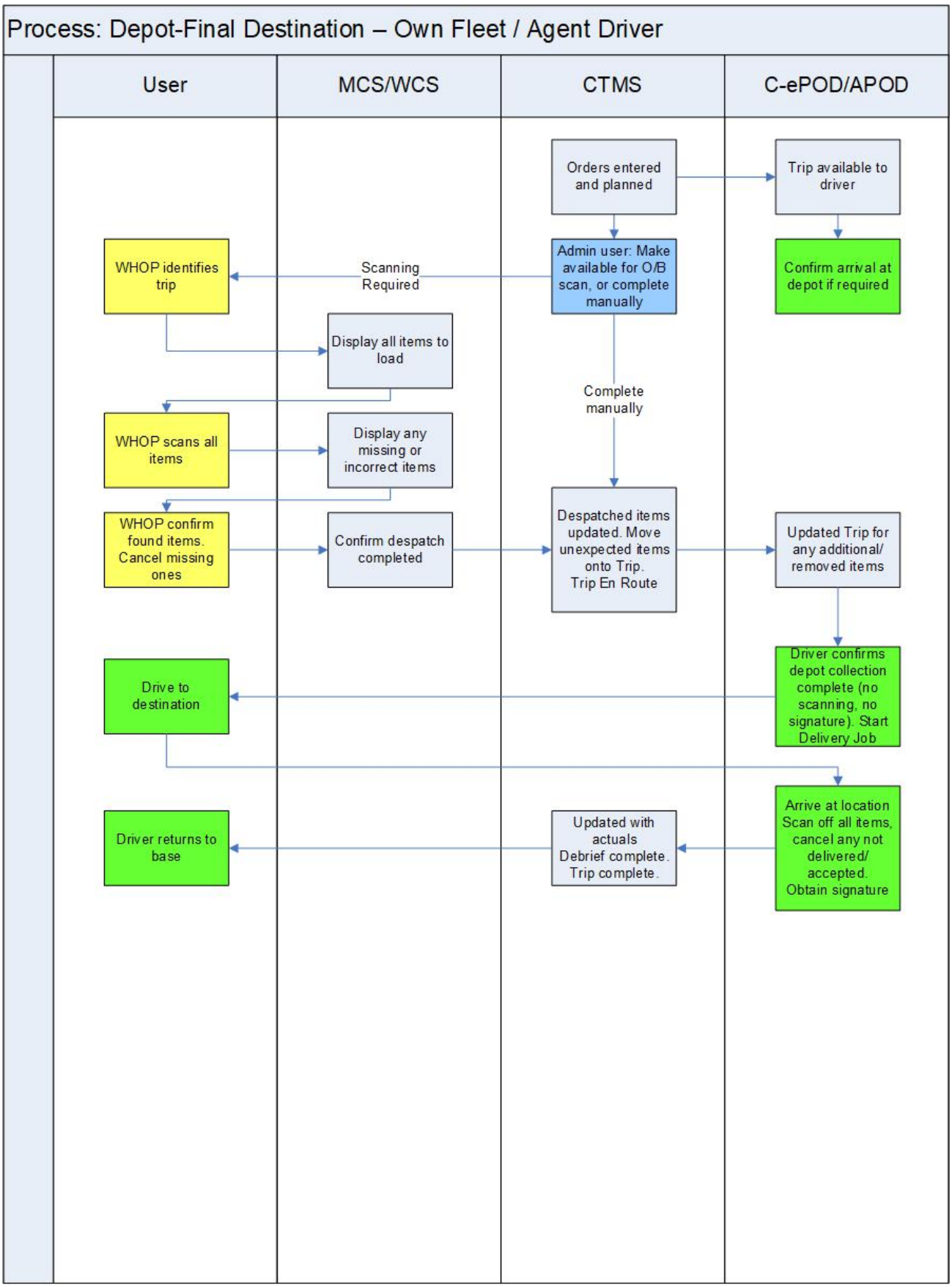


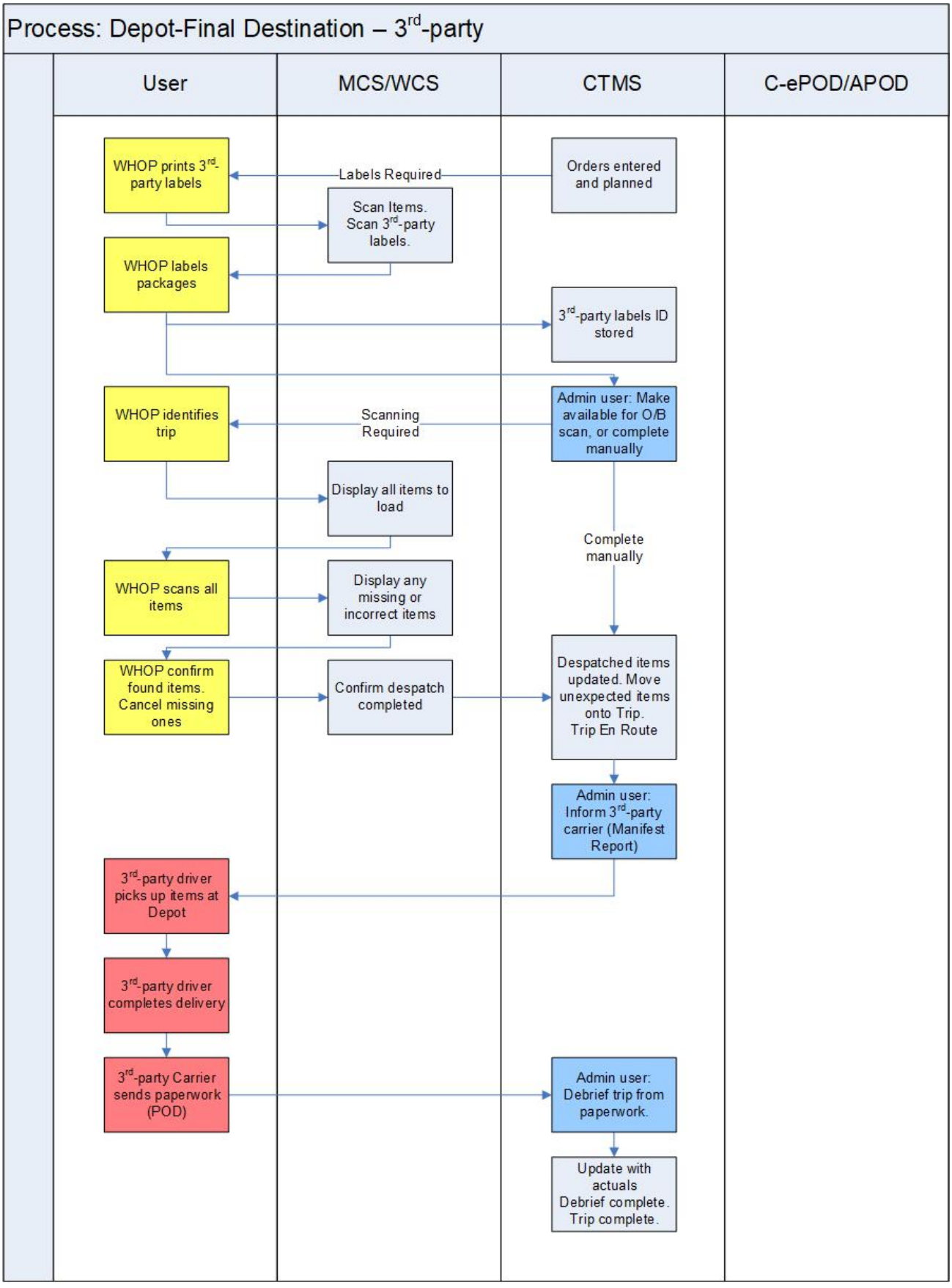
11.1.1.2 Source-Depot





11.1.1.3 Depot-Destination



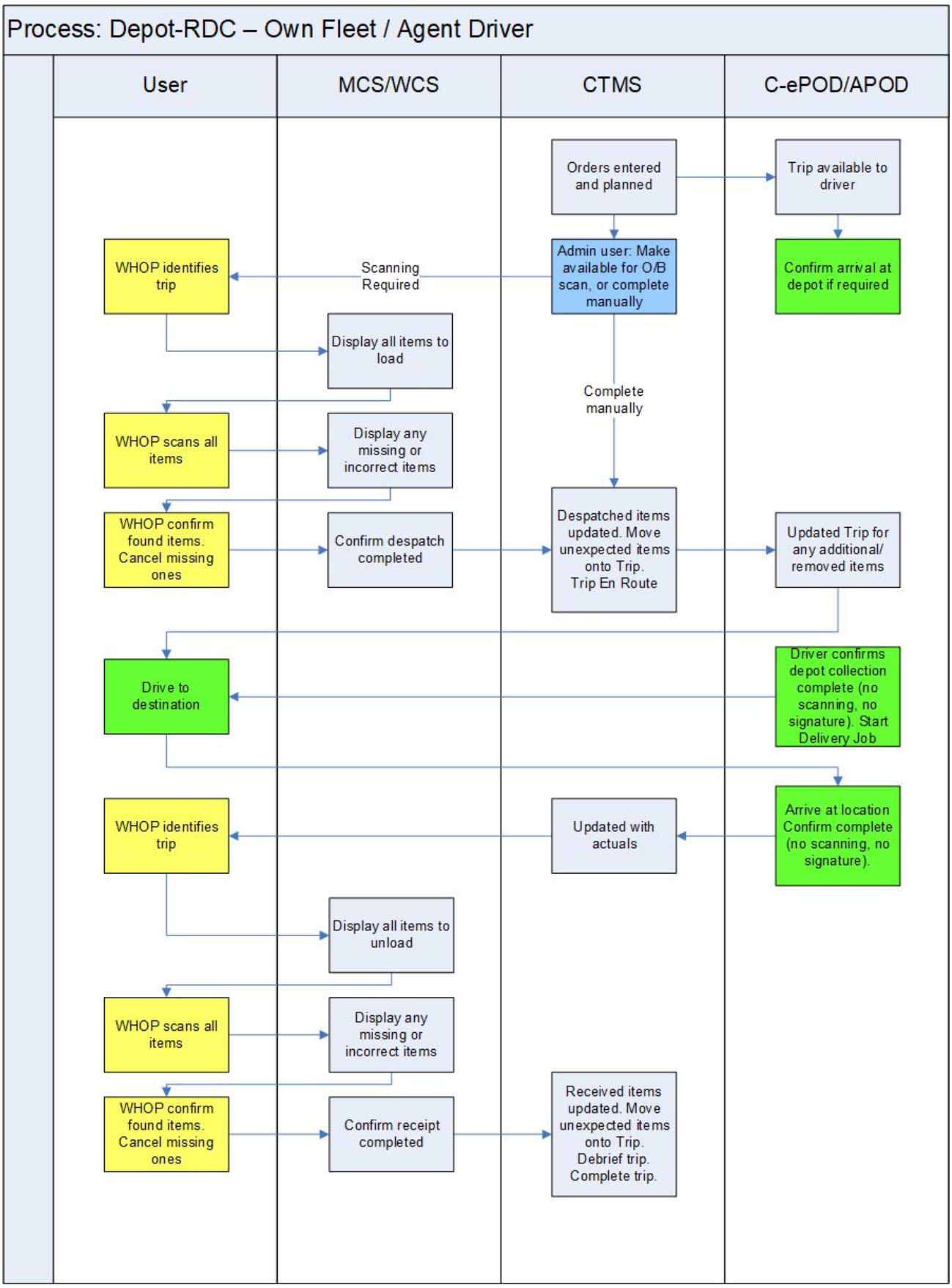


Notes:

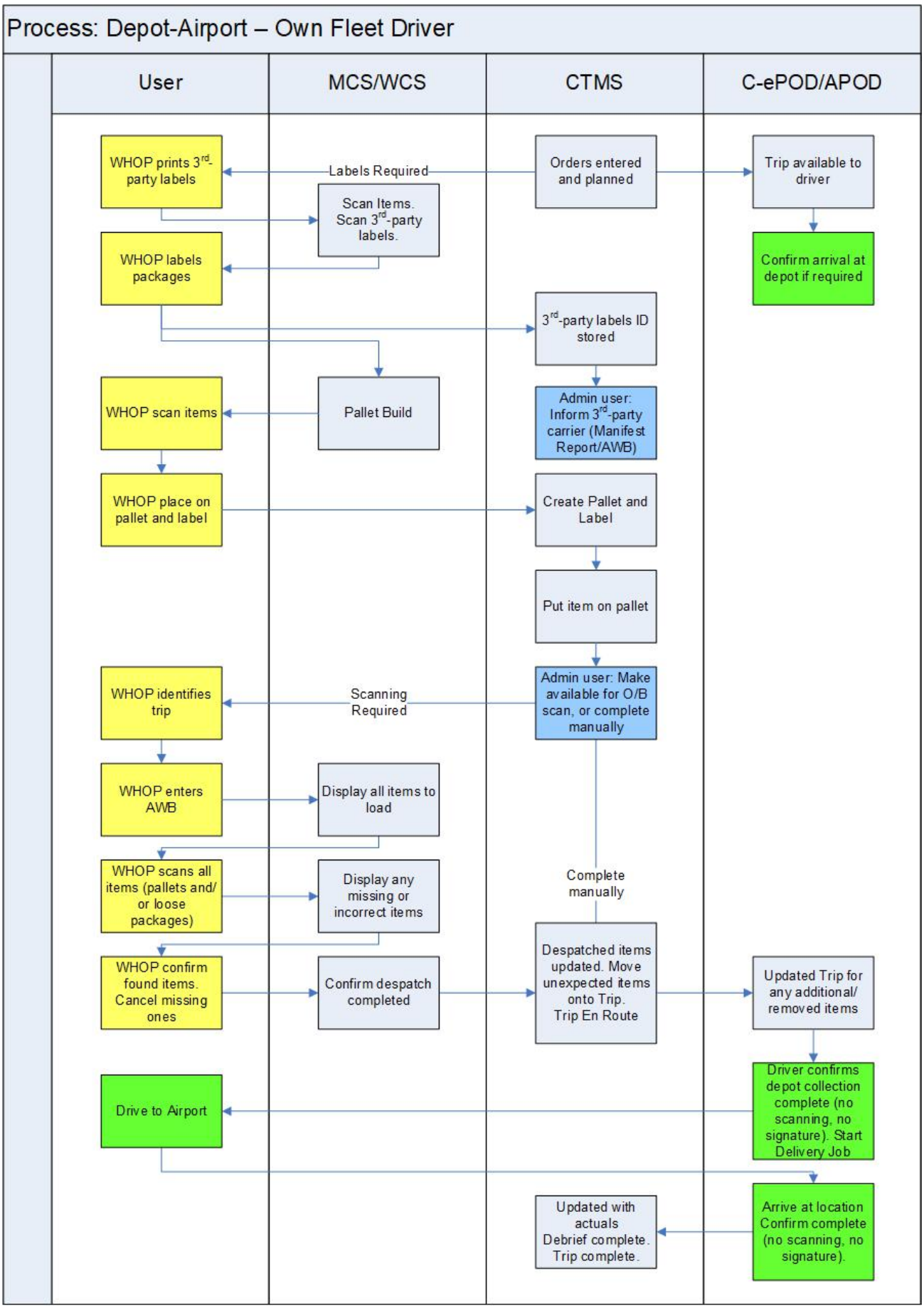
- This process includes a transit job to come to the depot to collect the order, if required.
- The process Agent Depot-Destination is identical to this process.

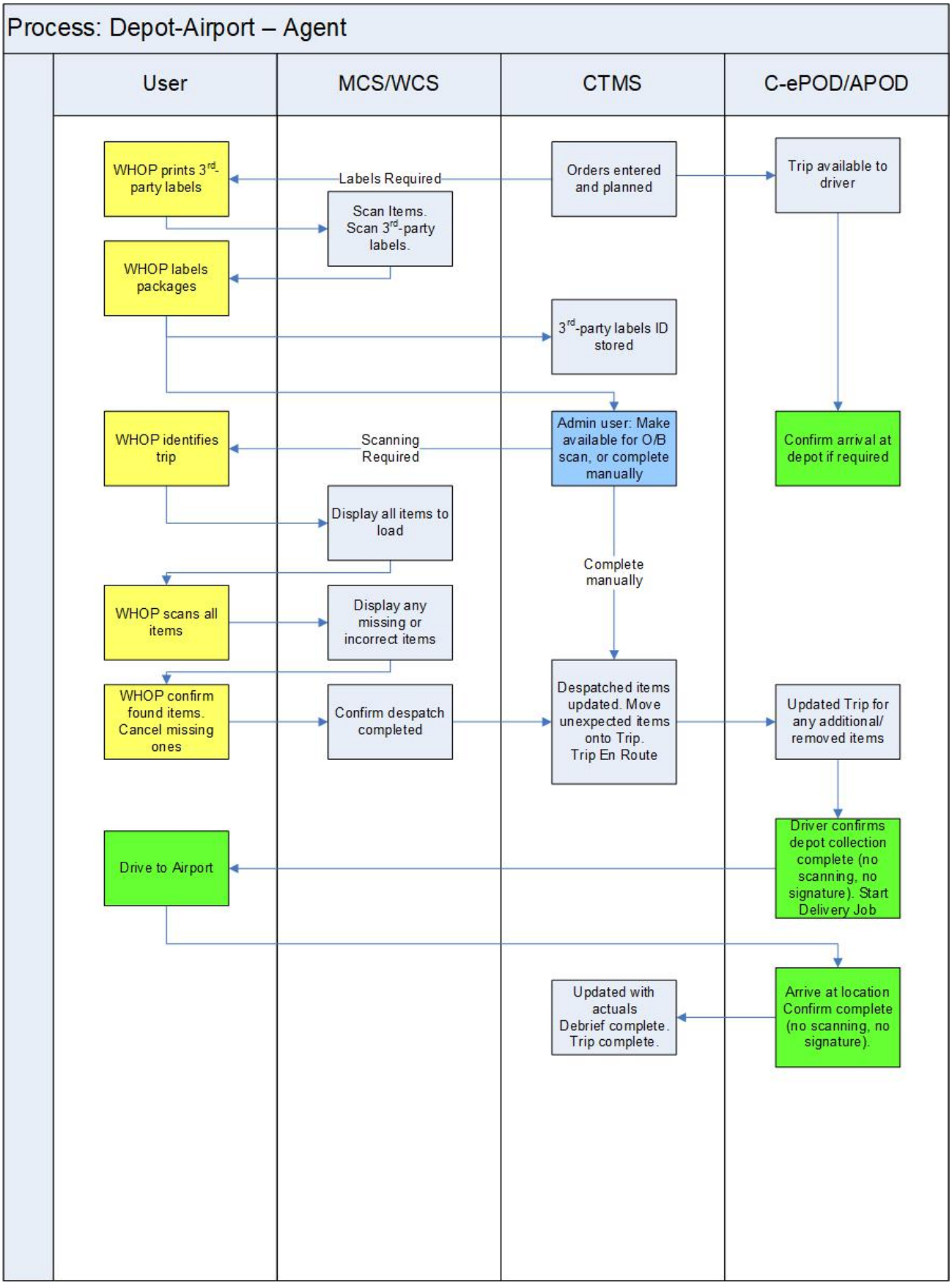
- The process Depot-3rd-party Carrier depot is identical to this process, if executed by an Own Fleet Driver or Agent.

11.1.1.4 Depot-RDC

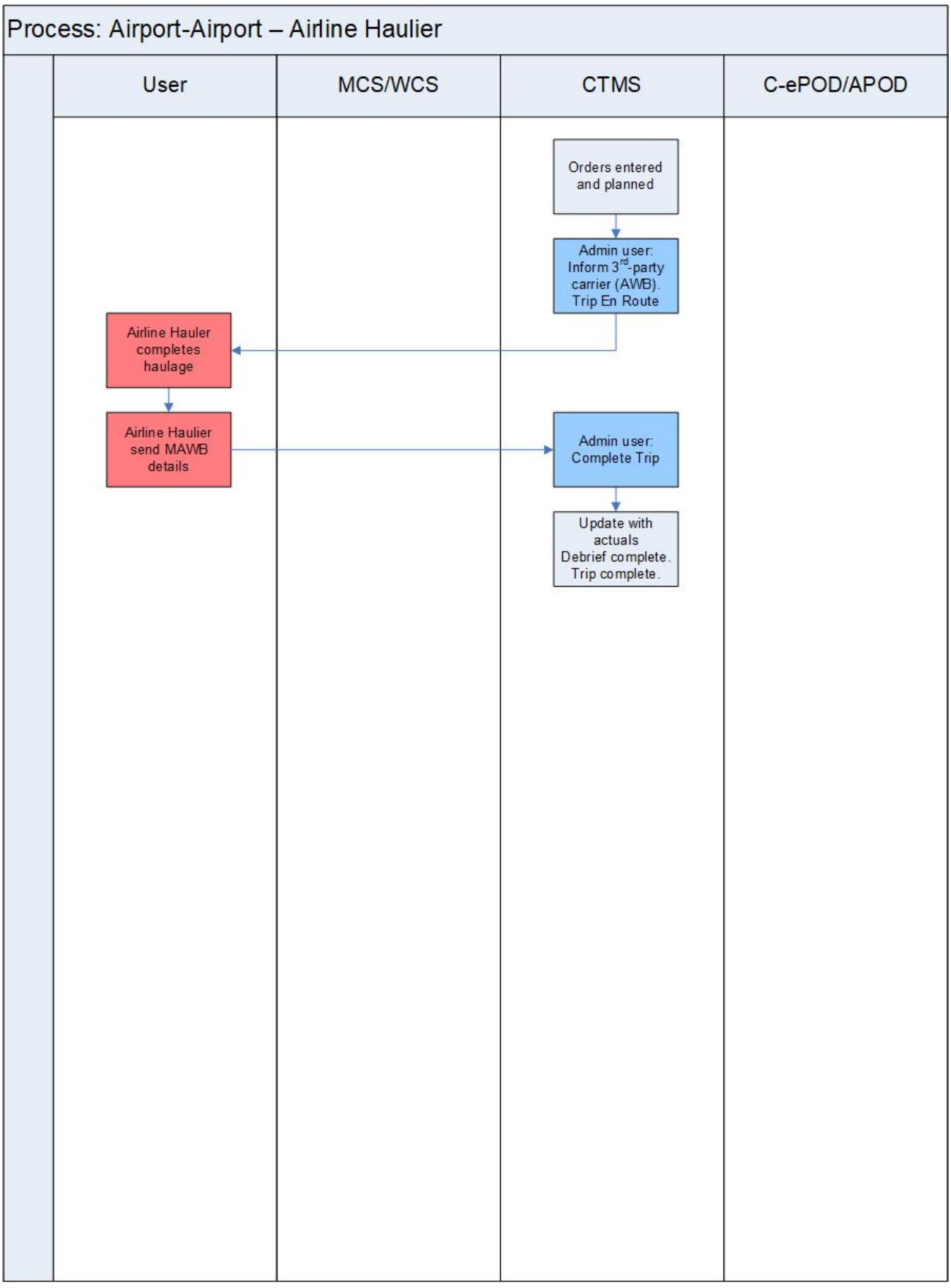


11.1.1.5 Depot-Airport1





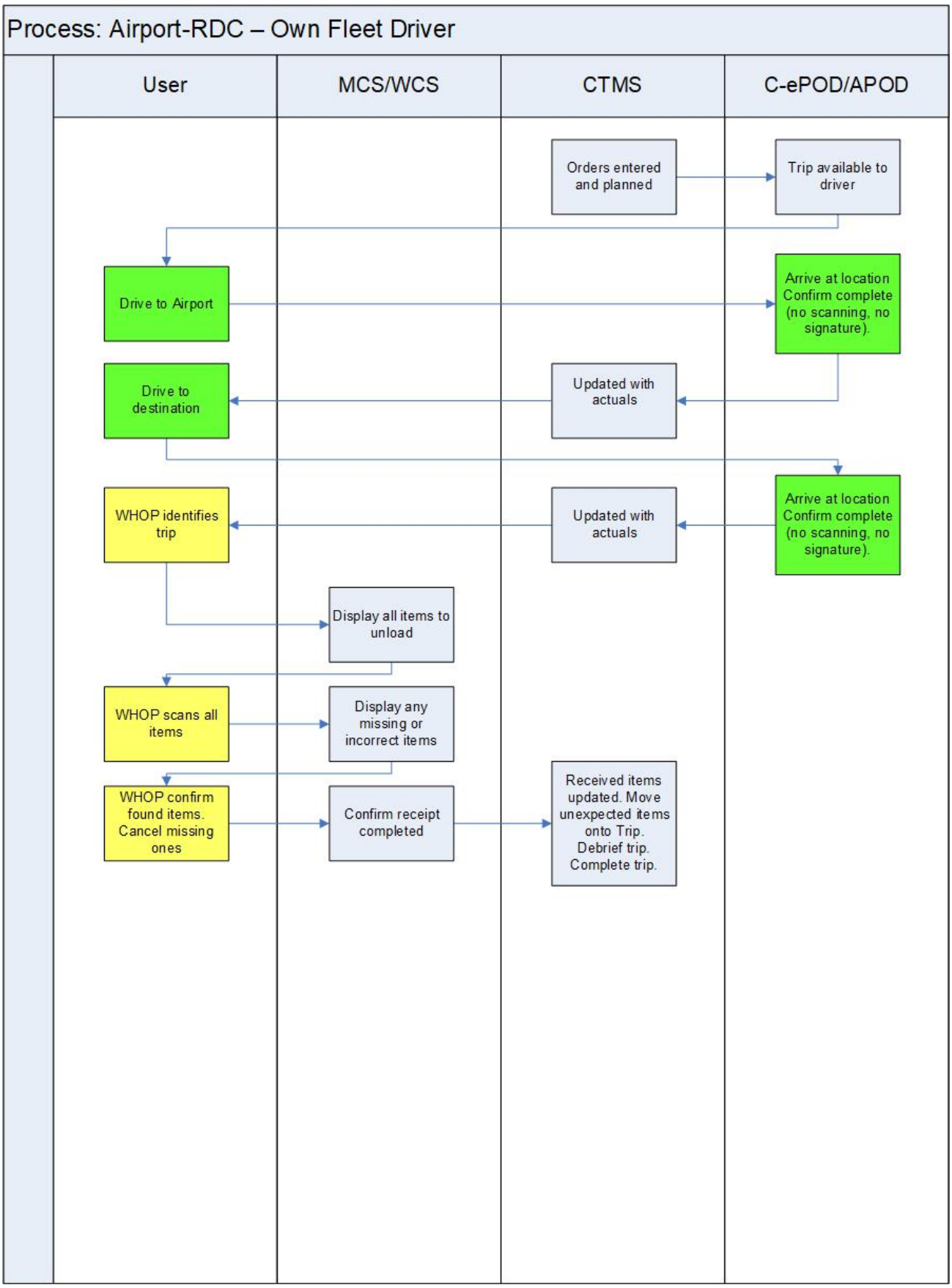
11.1.1.6 Airport1-Airport2



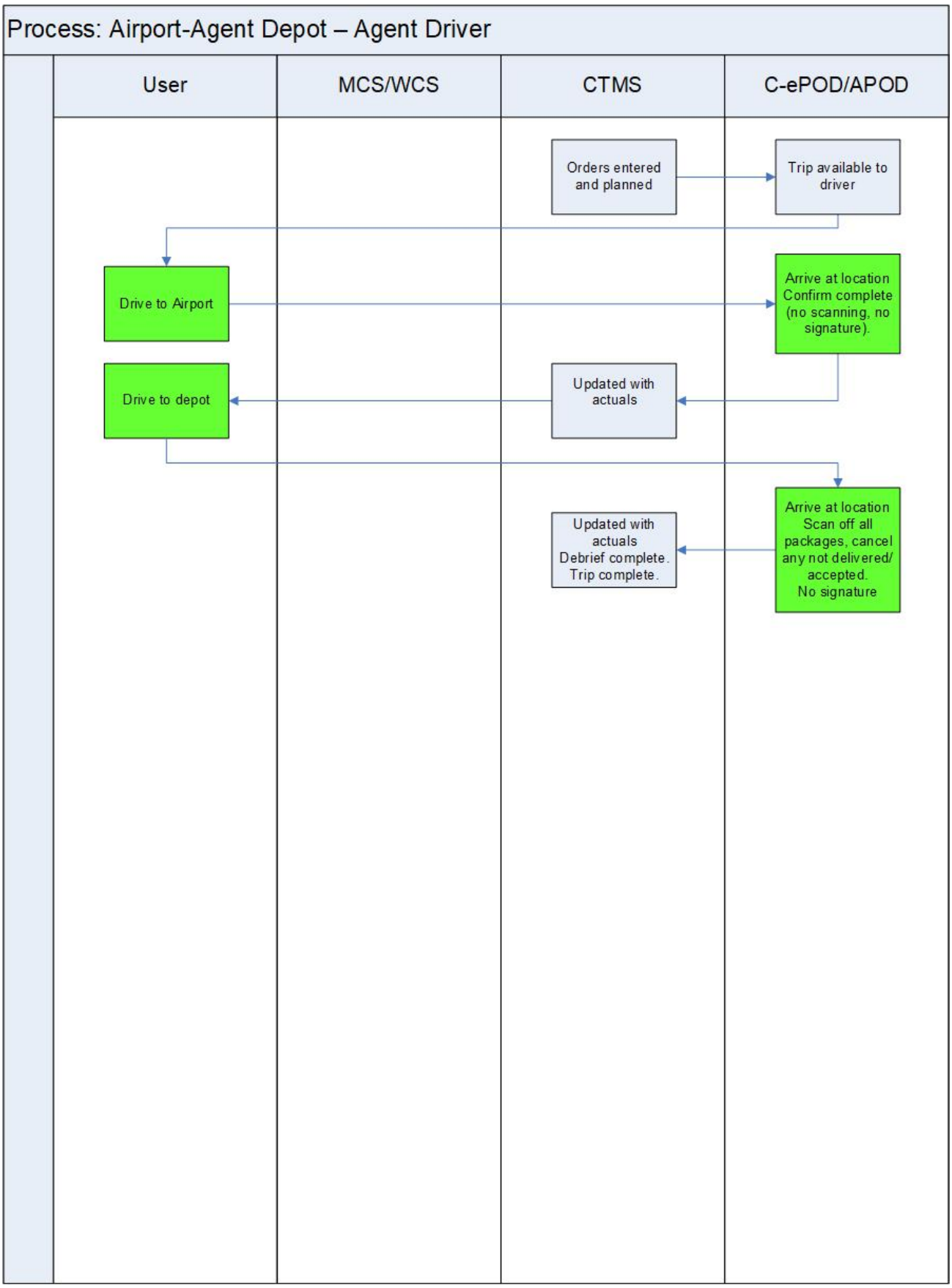
Notes:

- No process is necessary for these tasks, as debrief and en-route is essentially meaningless without accurate data returned by the line haulier. However, this process could be followed if desired.
- Although present in this flow, the AWB will have been presented to the airline in advance to this trip being initiated, during the Depot-Airport process. It is during that process that this trip may be marked as En Route, if required.

11.1.1.7 Airport2-RDC



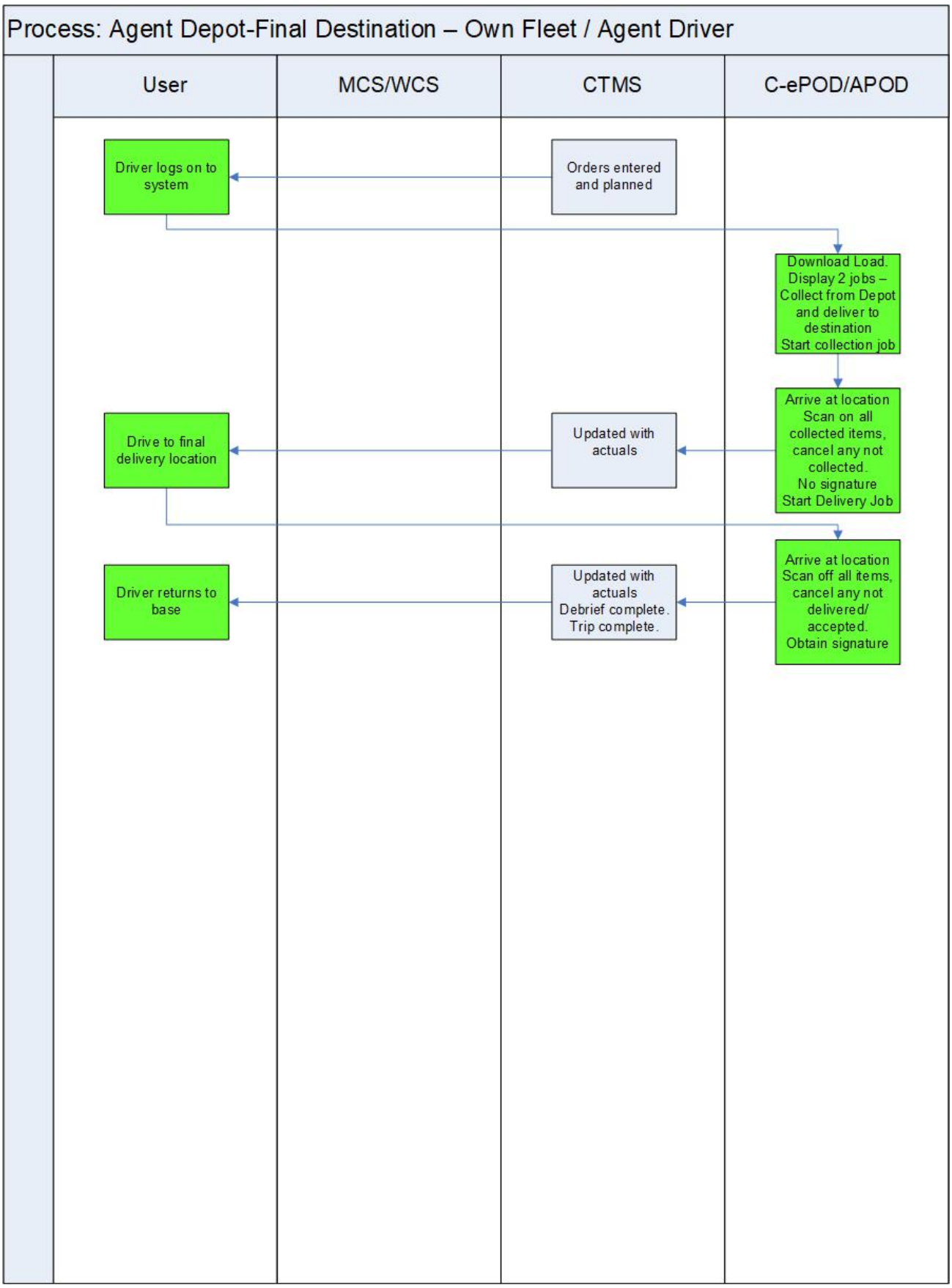
11.1.1.8 Airport2-AD



Notes:

- This process assumes that the Agent is using a depot for inbound movements, and that the agent driver wishes to use EPOD for scanning off the vehicle at an item level. If the agent depot wishes to use WCS scanning, see process Air-RDC.
- If the agent depot requires loading or scanning off pallets rather than packages, this requires further development to EPOD.
- Scanning through EPOD does not allow identifying additional packages, just ones that were planned. If this is required, WCS scanning is required - see process Air-RDC.

11.1.1.9 AD-Destination

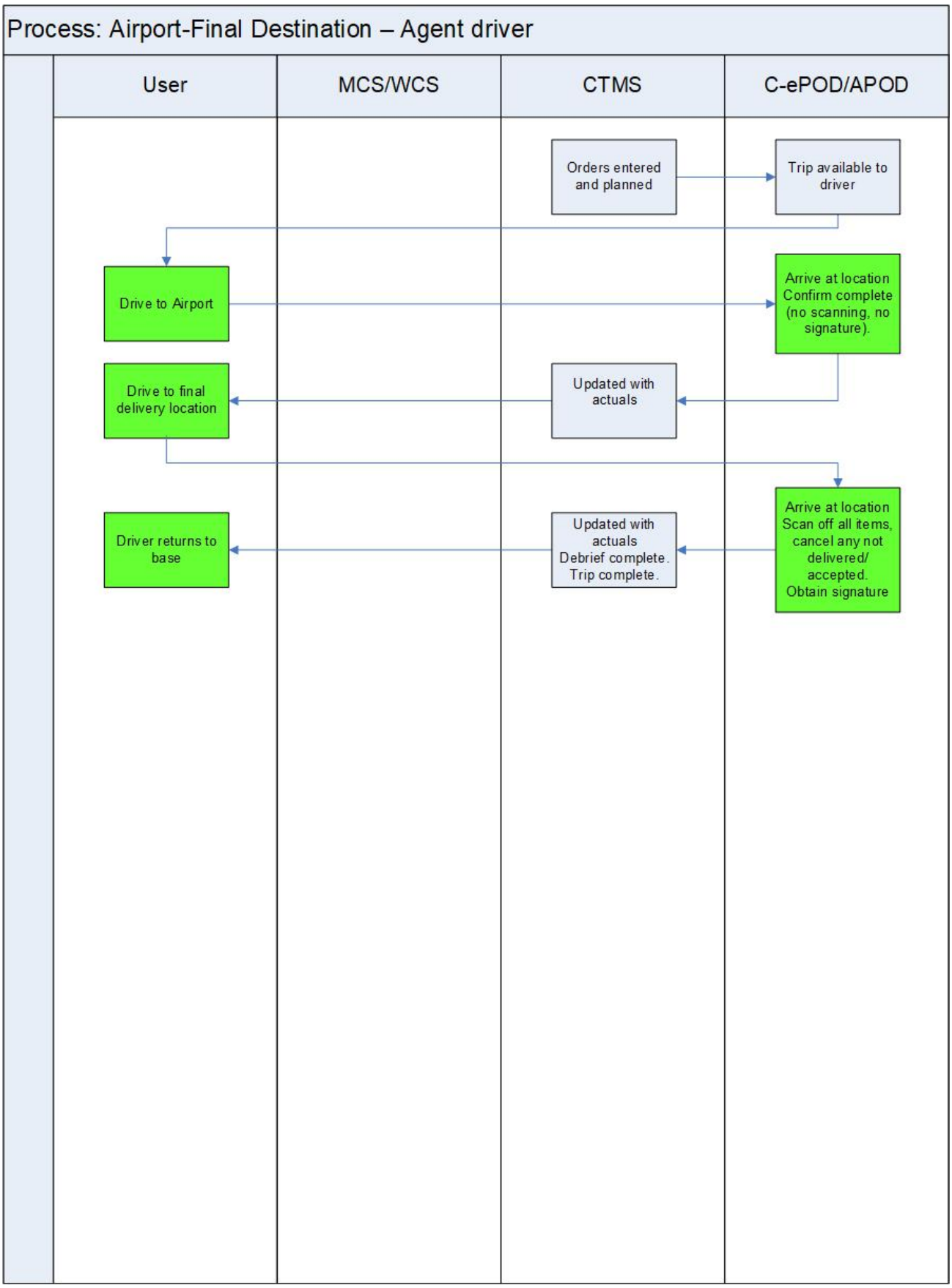


Notes:

- The process that should be used for these moves is as outlined in the Depot-Destination process.

- It should be noted that the agent depots may want to follow a more rigidly-planned process, in which case EPOD may be used to load the items at the depot rather than WCS. The system may be configured in this way and this is the process outlined here.
- If EPOD is used to load, no additional items may be processed, only the planned items.

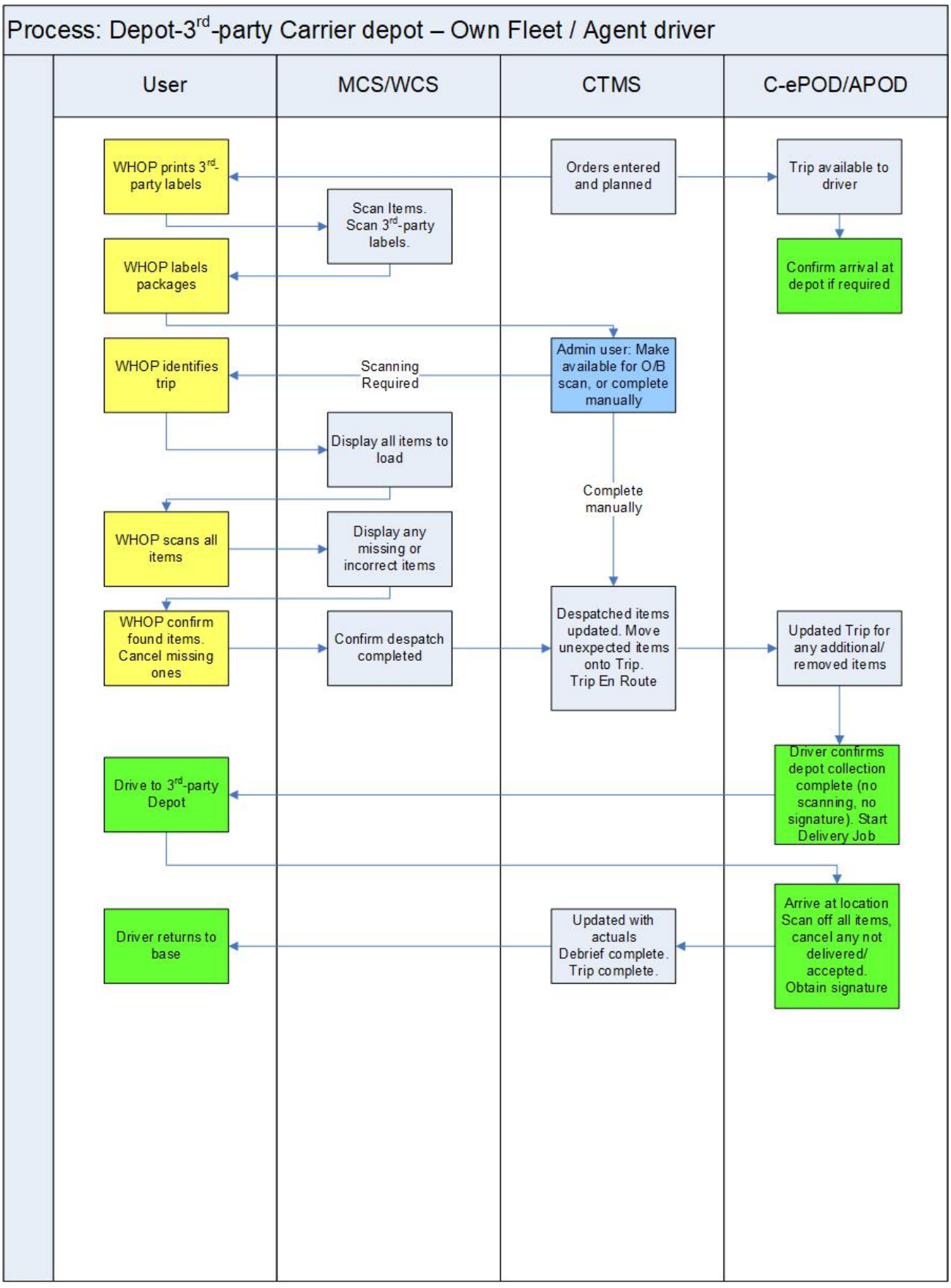
11.1.1.10 Airport2-Destination



Notes:

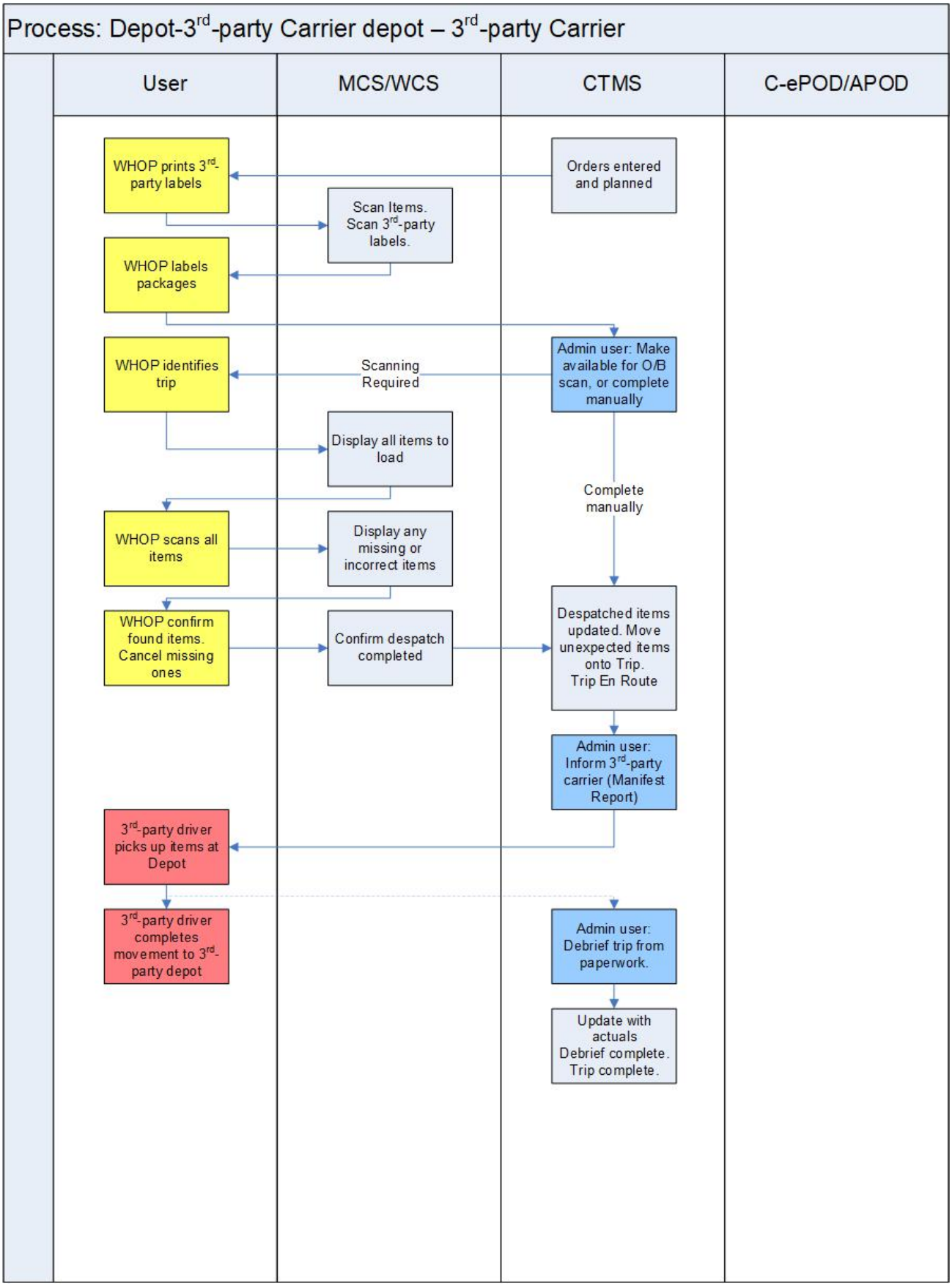
- This process assumes the agent is not using a depot for inbound movements, just routing them straight to final destination.
- In this case, EPOD is used to load the items without scanning, and then used to deliver directly to final destination - this is the process that is documented here.
- If the agent requires loading at the airport using scanning of packages, the EPOD system can be configured for this.
- If the agent requires loading at the airport using scanning of pallets rather than packages, this requires further development to EPOD.
- In this process, there is no way to identify additional items.

11.1.1.11 Depot-3rd-party Carrier



Notes:

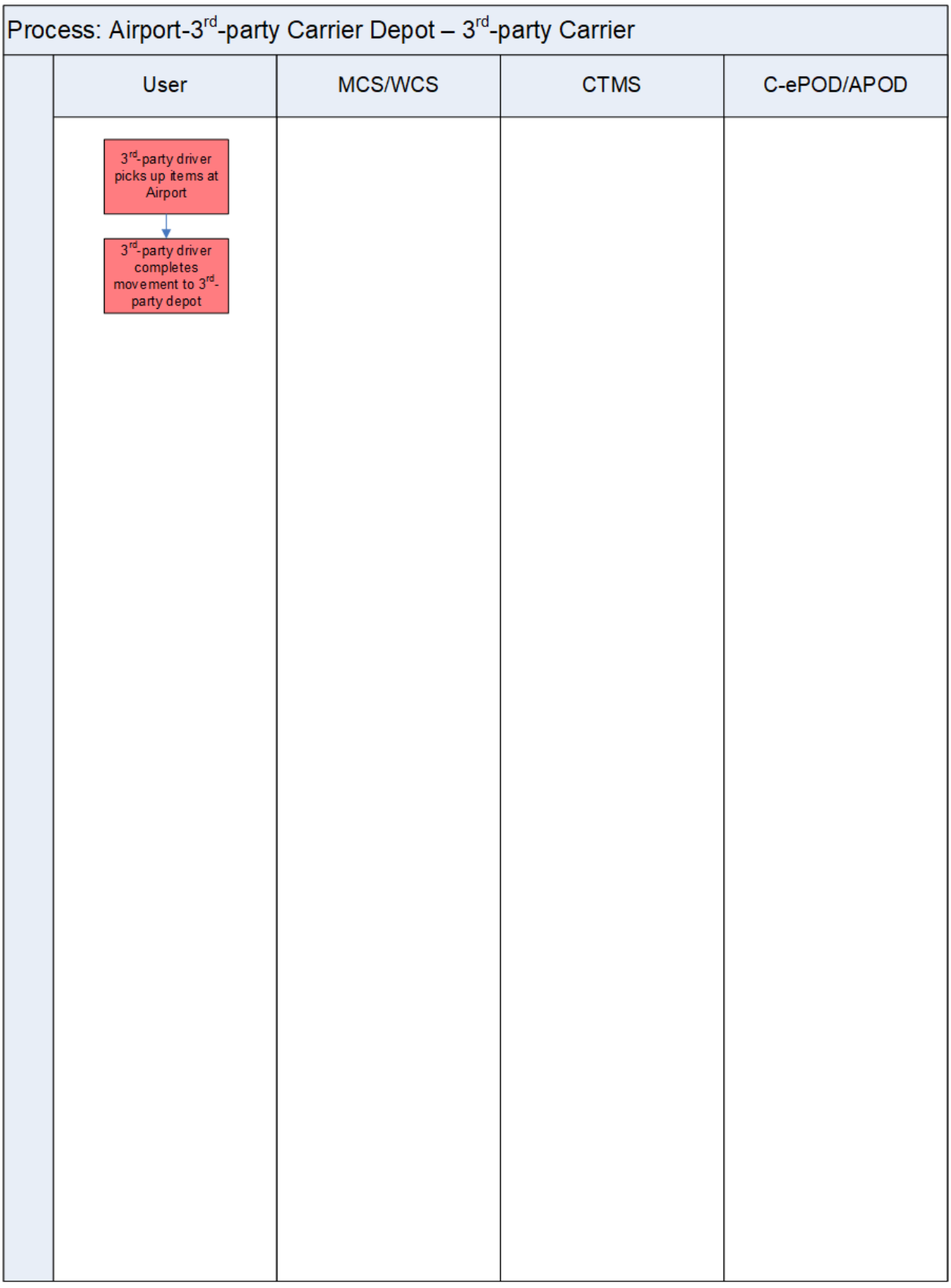
- This is a process covering trips being on-forwarded through a 3rd-party carrier depot, where the items are delivered to the 3rd-party depot by an Own Fleet or Agent driver.



Notes:

- It is considered unlikely that the 3rd-party carrier will confirm to Own Fleet when the move to the depot is complete, so the Admin users may update the trip as complete once departed (as shown here) or update this trip to complete once POD confirmation of the final delivery is received - see the 3rd-party Carrier-Destination process.

11.1.1.12 Airport2-3rd-party Carrier



Notes:

- Packages must have been labelled with 3rd-party labels priori to departure from original depot, during the Depot-Air processes.
- 3rd-party must also be informed before departing depot.
- This process has been documented for the Own Fleet contract as being always completed by the 3rd-party carrier themselves. However, this could also be completed by Own Fleet or Agent drivers - a process will be written for this if required.
- It is considered unlikely that the 3rd-party courier will confirm this trip specifically, just the destination delivery - see process 3rd-party Carrier-Destination for details.

11.1.1.13 3rd-party Carrier-Destination