Aptean

CALIDUS Transport Systems Cross-Functional Flows

CALIDUS Transport Systems

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

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1 Introduction

This document is intended to show every message sent from *CALIDUS* ePOD to *CALIDUS* Portal for the Track and Trace module (TTM) to function as expected. The details of all messages, their contents and how they are populated and produced from *CALIDUS* ePOD is shown in this document.

1.1 Scope

This document and all message formats conform to the *CALIDUS* Portal LOTS-tripOrder XSD version 1.17, as seen in the references of this document. If this is changed, or if *CALIDUS* Portal functionality changes based on tags that already exist, both this document and the *CALIDUS* ePOD export processes will require modification.

All functionality described here is gathered from version 3.0.1.4 of the *CALIDUS* ePOD Server module, the current latest version, including the changes to this interface specified under 328407, referenced in Appendix A.

During the production of this guide document, several other bugs and changes were noted, but are not part of this specification, namely:

- When uploading data through the manual upload screen, the flag controlling the sending of ORD and TRP messages to *CALIDUS* Portal should be reset, to force a resend.
- When manually changing data in the Admin system, the flag controlling the sending of ORD and TRP messages to *CALIDUS* Portal should be reset, to force a resend.
- Do not send Timezone information if it is not available in the system.
- Clausing by Reason code only stores the comment for a clause reason code, not the reason code itself when sending the detail to *CALIDUS* Portal.
- Trailer ID should be used in preference to Vehicle ID if present, when populating TRAILER_ID.

2 Details

2.1 General Message Format

Each message type sent is encapsulated in standard envelope, as described below:

```
<OBS_XML>
    <EVENT>
        <EVENT_HEADER>
            <EVENT_PROCESSED>N</EVENT_PROCESSED>
            <EVENT_SOURCE_TYPE>EPOD</EVENT_SOURCE_TYPE>
            <EVENT_SOURCE_NAME></EVENT_SOURCE_NAME>
            <EVENT_DATE></EVENT_DATE>
            <EVENT_TYPE></EVENT_TYPE>
            <EVENT_ACTION></EVENT_ACTION>
            <EVENT_TIMEZONE></EVENT_TIMEZONE>
        </EVENT_HEADER>
        <EVENT_DETAIL>
            ...
        </EVENT_DETAIL>
    </EVENT>
</OBS_XML>
```

Variable data:

Tag	Notes
EVENT_SOURCE_NAME	EPL_SITE_ID
EVENT_DATE	Dependent on message type - see notes below
EVENT_TIME	Dependent on message type - see notes below
EVENT_ACTION	Dependent on type. For ORD and TRP, "R", for other types "C"
EVENT_DETAIL	The defined message content per message type, detailed in the specific Message Type sections in this document.
EVENT_TIMEZONE	The local Timezone Olsen ID for TRP messages, omitted for others. If omitted or blank, *CALIDUS* Portal assumes GMT.

Notes:

Type	EVENT_DATE	EVENT_TIME
DEL	EPL_END_ACTUAL_DATE	EPL_END_ACTUAL_TIME
CAN	EPL_END_ACTUAL_DATE	EPL_END_ACTUAL_TIME
COL	EPL_END_ACTUAL_DATE	EPL_END_ACTUAL_TIME
ARR	EPL_ARRIVAL_DATE if populated else EPL_START_ACTUAL_DATE	EPL_ARRIVAL_TIME if populated else EPL_START_ACTUAL_TIME
OIT	Date when sending message	Time when sending message
ORD	Date when sending message	Time when sending message
TRP	EPL_LOAD_START_ACTUAL_DATE if populated, else Date when sending message	EPL_LOAD_START_ACTUAL_TIME if populated, else Time when sending message
GPS	Date when sending message	Time when sending message

2.2 ORD messages

An ORD message informs *CALIDUS* Portal that an order is created. It contains all the details of the order, but no Trip information.

An ORD message is sent when an order is created. It is also sent when an order is updated through the Flat-file Auto-Import process. It is also sent when an order is updated through the Job and Load Import Webservices

The data in the message sections is predominantly based on the following tables:

Tag	Notes
ORDER_HEADER	EPOD_JOB
ORDER_HEADER_ADDRESSES	EPOD_JOB_ADDRESS, EPOD_CUSTOMER
ORDER_DETAILS	EPOD_CONTAINER, EPOD_PRODUCT

The basic XML Layout is as follows:

```
<TRIP_HEADER>
    <TRIP_IDENTIFIER>0</TRIP_IDENTIFIER>
</TRIP_HEADER>
<STOPS>
    <STOP>
        <STOP_HEADER>
            <STOP_IDENTIFIER>0</STOP_IDENTIFIER>
            <STOP_SEQ>0</STOP_SEQ>
        </STOP_HEADER>
        <ORDERS>
            <ORDER>
                <ORDER_HEADER>
                    <ORDER_TRANSACTION_DATE>2012-12-20T00:00:00</ORDER_TRANSACTION_DATE>
                    <WMS_WAREHOUSE>EPL_SITE_REF</WMS_WAREHOUSE>
                    <WMS_OWNER>EPL_JOB_GROUP_REF</WMS_OWNER>
                    <SO_REF>EPL_CUST_REF</SO_REF>
                    <TMS_REF>EPL_JOB_CODE</TMS_REF>
                    <PO_REF>EPL_SO_REF</PO_REF>
                    <BOOK_REF>EPL_EXT_REF</BOOK_REF>
                    <BOOK_DATE>2012-12-24T10:00:00</BOOK_DATE>
                    <ORDER_HEADER_ADDRESSES>
                        <ORDER_HEADER_ADDRESS>
                            <ADDRESS_TYPE>DEP</ADDRESS_TYPE>
                            <ADDRESS_ID>EPL_CUSTOMER_CODE</ADDRESS_ID>
                            <ADDRESS_NAME>EPL_NAME</ADDRESS_NAME>
                            <ADDRESS_LINE1>EPL_ADDR_LINE_1</ADDRESS_LINE1>
                            <ADDRESS_LINE2>EPL_ADDR_LINE_2</ADDRESS_LINE2>
                            <ADDRESS_TOWN>EPL_ADDR_LINE_3</ADDRESS_TOWN>
                            <ADDRESS_POSTCODE>EPL_POSTCODE</ADDRESS_POSTCODE>
                            <LOC_TIMEZONE>EPL_TIMEZONE</LOC_TIMEZONE>
                        </ORDER_HEADER_ADDRESS>
                        <ORDER_HEADER_ADDRESS>
                            <ADDRESS_TYPE>DEL</ADDRESS_TYPE>
                            <ADDRESS_ID>EPL_CUSTOMER_CODE</ADDRESS_ID>
                            <ADDRESS_NAME>EPL_NAME</ADDRESS_NAME>
                            <ADDRESS_LINE1>EPL_ADDR_LINE_1</ADDRESS_LINE1>
                            <ADDRESS_LINE2>EPL_ADDR_LINE_2</ADDRESS_LINE2>
                            <ADDRESS_TOWN>EPL_ADDR_LINE_3</ADDRESS_TOWN>
                            <ADDRESS_POSTCODE>EPL_POSTCODE</ADDRESS_POSTCODE>
                            <LOC_TIMEZONE>EPL_TIMEZONE</LOC_TIMEZONE>
                        </ORDER_HEADER_ADDRESS>
                    </ORDER_HEADER_ADDRESSES>
                    <ORDER_TYPE></ORDER_TYPE>
                    <TRACK_TO></TRACK_TO>
                    <CUSTOMER_ID>EPL_ACCOUNT</CUSTOMER_ID>
                    <ORDER_REF_1>EPL_SITE_ID</ORDER_REF_1>
                </ORDER_HEADER>
                <ORDER_DETAILS>
                    <ORDER_DETAIL>
                        <DETAIL_TYPE>D</DETAIL_TYPE>
                        <ITEM_IDENTIFIER>EPL_CONTAINER_ID</ITEM_IDENTIFIER>
                        <ITEM_DESCRIPTION>EPL_DESCRIPTION</ITEM_DESCRIPTION>
                        <ORDERED>1</ORDERED>
                        <TO_DELIVER>1</TO_DELIVER>
                    </ORDER_DETAIL>
                    <ORDER_DETAIL>
```

```
                        <DETAIL_TYPE>S</DETAIL_TYPE>
                        <ITEM_IDENTIFIER>EPL_PRODUCT_ID</ITEM_IDENTIFIER>
                        <ITEM_DESCRIPTION>EPL_DESCRIPTION</ITEM_DESCRIPTION>
                        <ORDERED>EPL_PRODUCT_QTY_ORDERED</ORDERED>
                        <TO_DELIVER>EPL_PRODUCT_QTY_PLANNED</TO_DELIVER>
                    </ORDER_DETAIL>
                </ORDER_DETAILS>
            </ORDER>
        </ORDERS>
    </STOP>
</STOPS>
```

Variable data for ORDER_HEADER:

Tag	Notes
ORDER_TRANSACTION_DATE	EPL_LAST_CHANGED_DATE/EPL_LAST_CHANGED_TIME in XSD format
WMS_WAREHOUSE	EPODSITE.EPL_TTM_XREF
WMS_OWNER	EPL_OWNER_NAME if present, else EPODSITE.EPL_TTM_XREF
SO_REF	EPL_CUST_REF
TMS_REF	EPL_JOB_CODE
PO_REF	EPL_SO_REF
BOOK_REF	EPL_EXT_REF
BOOK_DATE	EPL_START_PLANNED_DATE/EPL_START_PLANNED_TIME in XSD format
ORDER_TYPE	"C" if there is not a "DEL" address for the order (see below) else "O"
TRACK_TO	"COL" if there is not a "DEL" address for the order (see below) else "DEL"
CUSTOMER_ID	EPL_ACCOUNT if populated
ORDER_REF_1	EPL_SITE_ID

Two order header addresses should be built, one for DEP (the original collection location) and one for DEL (the ultimate delivery location).

For DEP addresses, the addresses against the jobs are used in this sequence:

- Use the Origin Job Address (type O) if this exists for any job for this Site, Job Code and Cust Ref .
- Use the Job Address of the first Collection Job for this Site, Job Code and Cust Ref if this exists.
- Use the Customer Address of the customer of the first Collection Job for this Site, Job Code and Cust Ref if this exists.
- If there is no collection job or no origin address, do not write this address.

For DEL addresses:

- Use the Final Destination Job Address (type F) if this exists on any job for this Site, Job Code and Cust Ref .
- Use the Job Address of the last Delivery Job if this exists for this Site, Job Code and Cust Ref .
- Use the Customer Address of the customer of the last Delivery Job if this exists for this Site, Job Code and Cust Ref .
- If there is no delivery job or no destination address, do not write this address.

Variable data for ORDER_ADDRESS:

Tag	EPOD_JOB_ADDRESS	EPOD_CUSTOMER
ADDRESS_TYPE	DEP if EPL_JOB_TYPE = "O" or DEL if EPL_JOB_TYPE = "F"	DEP if this is from the first Collection, DEL if this is from the last Delivery.
ADDRESS_ID	EPL_ADDRESS_ID	EPL_CUSTOMER_CODE
ADDRESS_NAME	EPL_NAME	EPL_CUSTOMER_NAME
ADDRESS_LINE_1	EPL_ADDRESS_1	EPL_ADDRESS_1
ADDRESS_LINE_2	EPL_ADDRESS_2	EPL_ADDRESS_2
ADDRESS_TOWN	EPL_ADDRESS_3	EPL_ADDRESS_3
ADDRESS_POSTCODE	EPL_POSTCODE	EPL_POSTCODE
LOC_TIMEZONE	EPOD_JOB.EPL_TIMEZONE	EPOD_JOB.EPL_TIMEZONE

Note: If Timezone is omitted or blank, *CALIDUS* Portal assumes GMT.

Variable data for ORDER_DETAIL:

Tag	EPOD_CONTAINER	EPOD_PRODUCT
DETAIL_TYPE	"D"	"S"
ITEM_IDENTIFIER	EPL_CONTAINER_ID	EPL_PRODUCT_CODE
ITEM_DESCRIPTION	EPL_DESCRIPTION	EPL_DESCRIPTION
ORDERED	1	EPL_PRODUCT_QTY_ORDERED
TO_DELIVER	1	EPL_PRODUCT_QTY_PLANNED

2.3 TRP messages

A TRP message informs *CALIDUS* Portal that a Trip is created, showing all the stops on the trip and the basic information on the orders on the stops.

A TRP message is sent when an order is created. It is also sent when an order is updated through the Flat-file Auto-Import process. It is also sent when an order is updated through the Job and Load Import Webservices

The data in the message sections is predominantly based on the following tables:

Tag	Notes
TRIP_HEADER	EPOD_LOAD
TRIP_DETAIL	EPOD_LOAD, EPOD_VEHICLE, EPOD_USER
STOP_HEADER	EPOD_JOB
STOP_DETAIL	EPOD_JOB, EPOD_JOB_ADDRESS, EPOD_CUSTOMER
ORDER_HEADER	EPOD_JOB

The basic XML Layout is as follows:

```
<TRIP_HEADER>
    <TRIP_IDENTIFIER>T</TRIP_IDENTIFIER>
    <TRIP_TRANSACTION_DATE>2012-12-20T00:00:00</TRIP_TRANSACTION_DATE>
    <TRIP_ID>EPL_LOAD_ID<TRIP_ID>
</TRIP_HEADER>
<TRIP_DETAIL>
    <HAULIER>EPODSITE.EPL_TTM_XREF</HAULIER>
    <TRACKING>N</TRACKING>
    <DRIVER>EPL_USER_ID</DRIVER>
    <DRIVER_NAME>EPODUSER.EPL_USER_NAME</DRIVER_NAME>
    <TRACTOR>EPODVEHICLE.EPL_VEHICLE_REG</TRACTOR>
    <COST_CENTRE>EPL_SITE_ID<COST_CENTRE>
    <TRIP_STATUS>PLANNED<TRIP_STATUS>
    <TRIP_REF></TRIP_REF>
    <TRIP_TRAILER_ID>EPL_VEHICLE_ID</TRIP_TRAILER_ID>
    <TRIP_TRAILER_TYPE></TRIP_TRAILER_TYPE>
    <TRIP_DISTANCE>EPL_LOAD_DISTANCE_PLANNED</TRIP_DISTANCE>
</TRIP_DETAIL>
<STOPS>
    <STOP>
        <STOP_HEADER>
            <STOP_IDENTIFIER>S</STOP_IDENTIFIER>
            <STOP_SEQ>EPL_SEQUENCE</STOP_SEQ>
        </STOP_HEADER>
        <STOP_DETAIL>
            <STOP_REF>EPL_JOB_TYPE</STOP_REF>
            <STOP_TYPE>PK/DL</STOP_TYPE>
            <STOP_LOCATION_TYPE>2</STOP_LOCATION_TYPE>
            <STOP_LOCATION_ID></STOP_LOCATION_ID>
            <STOP_LOCATION_NAME></STOP_LOCATION_NAME>
            <STOP_ADDR_LINE1></STOP_ADDR_LINE1>
            <STOP_ADDR_LINE2><STOP_ADDR_LINE2>
            <STOP_TOWN><STOP_TOWN>
            <STOP_POSTCODE><STOP_POSTCODE>
            <STOP_CONTACT_NAME><STOP_CONTACT_NAME>
            <STOP_CONTACT_PHONE><STOP_CONTACT_PHONE>
            <STOP_PLANNED_ARRIVAL_DATE>2012-12-20T00:00:00<STOP_PLANNED_ARRIVAL_DATE>
            <STOP_PLANNED_DEPARTURE_DATE>2012-12-20T00:00:00<STOP_PLANNED_DEPARTURE_DATE>
            <LOC_TIMEZONE>EPL_TIMEZONE</LOC_TIMEZONE>
        </STOP_DETAIL>
        <ORDERS>
            <ORDER>
                <ORDER_HEADER>
                    <ORDER_TRANSACTION_DATE>2012-12-20T00:00:00</ORDER_TRANSACTION_DATE>
                    <WMS_WAREHOUSE>EPL_SITE_REF</WMS_WAREHOUSE>
                    <WMS_OWNER>EPL_JOB_GROUP_REF</WMS_OWNER>
                    <SO_REF>EPL_CUST_REF</SO_REF>
                    <TMS_REF>EPL_JOB_CODE</TMS_REF>
                    <PO_REF>EPL_SO_REF</PO_REF>
                    <BOOK_REF>EPL_EXT_REF</BOOK_REF>
                    <BOOK_DATE>2012-12-24T10:00:00</BOOK_DATE>
                </ORDER_HEADER>
            </ORDER>
        <ORDERS>
```

```
            <STOP>
        <STOPS>
```

Variable data for TRIP_HEADER:

Tag	Notes
TRIP_TRANSACTION_DATE	EPL_LOAD_START_ACTUAL_DATE if populated, else Date when sending message
TRIP_ID	EPL_LOAD_ID

Variable data for TRIP_DETAIL:

Tag	Notes
HAULIER	EPODSITE.EPL_TTM_XREF
DRIVER	EPL_USER_ID
DRIVER_NAME	EPODUSER.EPL_USER_NAME
TRACTOR	EPODVEHICLE.EPL_VEHICLE_REG
COST_CENTRE	EPL_SITE_ID
TRIP_TRAILER_ID	EPL_VEHICLE_ID
TRIP_DISTANCE	EPL_LOAD_DISTANCE_PLANNED

Variable data for STOP_HEADER:

Tag	Notes
STOP_SEQUENCE	EPL_SEQUENCE if populated, otherwise a counter incremented for each job on the trip.

Variable data for STOP_DETAIL:

Tag	Notes
STOP_REF	EPL_JOB_TYPE
STOP_TYPE	"PK" if STOP_TYPE = "C" else "DL"
STOP_PLANNED_ARRIVAL_DATE	EPL_START_PLANNED_DATE/EPL_START_PLANNED_TIME in XML date format
STOP_PLANNED_DEPARTURE_DATE	EPL_END_PLANNED_DATE/EPL_END_PLANNED_TIME in XML date format. Only populated if there is an End Planned Date for the job
LOC_TIMEZONE	EPL_TIMEZONE

Note: If Timezone is omitted or blank, *CALIDUS* Portal assumes GMT.

Stop Location and Address fields in the STOP_DETAIL section are populated based on Job Address or Customer Address, depending on which exist, as follows:

Tag	EPOD_JOB_ADDRESS	EPOD_CUSTOMER
STOP_LOCATION_ID	EPL_ADDRESS_ID if populated, else EPOD_JOB.EPL_CUSTOMER_CODE	EPL_ADDRESS_ID_PREFIXED if populated, else EPOD_JOB.EPL_CUSTOMER_CODE
STOP_LOCATION_NAME	EPL_NAME if populated, else EPOD_CUSTOMER.EPL_CUSTOMER_NAME	EPL_CUSTOMER_NAME
STOP_ADDR_LINE1	EPL_ADDRESS_1	EPL_ADDRESS_1
STOP_ADDR_LINE2	EPL_ADDRESS_2	EPL_ADDRESS_2
STOP_TOWN	EPL_ADDRESS_3	EPL_ADDRESS_3
STOP_POSTCODE	EPL_POSTCODE	EPL_POSTCODE
STOP_CONTACT_NAME	EPOD_JOB.EPL_CUST_SIGNATORY if populated else EPL_CONTACT	EPOD_JOB.EPL_CUST_SIGNATORY if populated else EPL_CONTACT
STOP_CONTACT_PHONE	EPL_TELEPHONE	EPL_TELEPHONE

Variable data for ORDER_HEADER:

Tag	Notes
ORDER_TRANSACTION_DATE	EPL_LAST_CHANGED_DATE/EPL_LAST_CHANGED_TIME in XSD format
WMS_WAREHOUSE	EPODSITE.EPL_TTM_XREF

Tag	Notes
WMS_OWNER	EPL_OWNER_NAME if present, else EPODSITE.EPL_TTM_XREF
SO_REF	EPL_CUST_REF
TMS_REF	EPL_JOB_CODE
PO_REF	EPL_SO_REF
BOOK_REF	EPL_EXT_REF
BOOK_DATE	EPL_START_PLANNED_DATE/EPL_START_PLANNED_TIME in XSD format

2.4 OIT messages

OIT messages signify that an order is in transit i.e. has been started on the mobile device. These messages are sent only when the user starts a job on the device.

The data in the message sections is predominantly based on the following tables:

Tag	Notes
TRIP_HEADER	EPOD_JOB, EPOD_AUDIT
TRIP_DETAIL	EPOD_AUDIT
STOP_HEADER	EPOD_JOB
STOP_DETAIL	EPOD_JOB, EPOD_JOB_ADDRESS, EPOD_CUSTOMER
ORDER_HEADER	EPOD_JOB
ORDER_HEADER_ADDRESSES	EPOD_JOB_ADDRESS, EPOD_CUSTOMER
ORDER_DETAILS	EPOD_CONTAINER, EPOD_PRODUCT

The basic XML Layout is as follows:

```
<TRIP_HEADER>
    <TRIP_IDENTIFIER>T</TRIP_IDENTIFIER>
    <TRIP_TRANSACTION_DATE>2012-12-24T10:00:00</TRIP_TRANSACTION_DATE>
    <TRIP_ID>EPL_LOAD_ID</TRIP_ID>
</TRIP_HEADER>
<TRIP_DETAIL>
    <TRACTOR_LAT></TRACTOR_LAT>
    <TRACTOR_LON></TRACTOR_LON>
</TRIP_DETAIL>
<STOPS>
    <STOP>
        <STOP_HEADER>
        <STOP_HEADER>
            <STOP_IDENTIFIER>S</STOP_IDENTIFIER>
            <STOP_SEQ>EPL_SEQUENCE</STOP_SEQ>
        </STOP_HEADER>
        <STOP_DETAIL>
            <STOP_REF>EPL_JOB_TYPE</STOP_REF>
            <STOP_TYPE>PK/DL</STOP_TYPE>
            <STOP_LOCATION_TYPE>2</STOP_LOCATION_TYPE>
            <STOP_LOCATION_ID></STOP_LOCATION_ID>
            <STOP_LOCATION_NAME></STOP_LOCATION_NAME>
            <STOP_ADDR_LINE1></STOP_ADDR_LINE1>
            <STOP_ADDR_LINE2><STOP_ADDR_LINE2>
            <STOP_TOWN><STOP_TOWN>
            <STOP_POSTCODE><STOP_POSTCODE>
            <STOP_CONTACT_NAME><STOP_CONTACT_NAME>
            <STOP_CONTACT_PHONE><STOP_CONTACT_PHONE>
            <STOP_PLANNED_ARRIVAL_DATE>2012-12-20T00:00:00<STOP_PLANNED_ARRIVAL_DATE>
            <STOP_PLANNED_DEPARTURE_DATE>2012-12-20T00:00:00<STOP_PLANNED_DEPARTURE_DATE>
            <STOP_ACTUAL_ARRIVAL_DATE>2012-12-20T00:00:00<STOP_ACTUAL_ARRIVAL_DATE>
            <LOC_TIMEZONE>EPL_TIMEZONE</LOC_TIMEZONE>
        </STOP_DETAIL>
        <ORDERS>
            <ORDER>
                <ORDER_HEADER>
                    <ORDER_TRANSACTION_DATE>2012-12-20T00:00:00</ORDER_TRANSACTION_DATE>
                    <WMS_WAREHOUSE>EPL_SITE_REF</WMS_WAREHOUSE>
                    <WMS_OWNER>EPL_JOB_GROUP_REF</WMS_OWNER>
                    <SO_REF>EPL_CUST_REF</SO_REF>
                    <TMS_REF>EPL_JOB_CODE</TMS_REF>
                    <PO_REF>EPL_SO_REF</PO_REF>
                    <BOOK_REF>EPL_EXT_REF</BOOK_REF>
                    <BOOK_DATE>2012-12-24T10:00:00</BOOK_DATE>
                    ORDER_TRANSACTION_DATE", Audit Date and Time),
                <ORDER_HEADER>
                <ORDER_DETAILS>
                    <ORDER_DETAIL>
                        <DETAIL_TYPE>D</DETAIL_TYPE>
                        <ITEM_IDENTIFIER>EPL_CONTAINER_ID</ITEM_IDENTIFIER>
                        <ITEM_DESCRIPTION>EPL_DESCRIPTION</ITEM_DESCRIPTION>
                        <ORDERED>1</ORDERED>
                        <TO_DELIVER>1</TO_DELIVER>
                    </ORDER_DETAIL>
                    <ORDER_DETAIL>
                        <DETAIL_TYPE>S</DETAIL_TYPE>
                        <ITEM_IDENTIFIER>EPL_PRODUCT_ID</ITEM_IDENTIFIER>
                        <ITEM_DESCRIPTION>EPL_DESCRIPTION</ITEM_DESCRIPTION>
                        <ORDERED>EPL_PRODUCT_QTY_ORDERED</ORDERED>
                        <TO_DELIVER>EPL_PRODUCT_QTY_PLANNED</TO_DELIVER>
                    </ORDER_DETAIL>
                </ORDER_DETAILS>
            </ORDER>
        </ORDERS>
    </STOP>
</STOPS>
```

Variable data for TRIP_HEADER:

Tag	Notes
TRIP_TRANSACTION_DATE	The date/time the Job Start was actioned, from EPOD_AUDIT.EPL_AUDIT_DATE/EPL_AUDIT_TIME
TRIP_ID	EPL_LOAD_ID

Variable data for TRIP_DETAIL:

Tag	Notes
TRACTOR_LAT	The latitude of where the job was started, extracted from EPOD_AUDIT.EPL_GPS_COORD.
TRACTOR_LON	The longitude of where the job was started, extracted from EPOD_AUDIT.EPL_GPS_COORD.

Variable data for STOP_HEADER:

Tag	Notes
STOP_SEQUENCE	EPL_SEQUENCE if populated, otherwise a counter incremented for each job on the trip.

Variable data for STOP_DETAIL:

Tag	Notes
STOP_REF	EPL_JOB_TYPE
STOP_TYPE	"PK" if STOP_TYPE = "C" else "DL"
STOP_PLANNED_ARRIVAL_DATE	EPL_START_PLANNED_DATE/EPL_START_PLANNED_TIME in XML date format
STOP_PLANNED_DEPARTURE_DATE	EPL_END_PLANNED_DATE/EPL_END_PLANNED_TIME in XML date format. Only populated if there is an End Planned Date for the job
STOP_ACTUAL_ARRIVAL_DATE	EPL_ARRIVAL_DATE/EPL_ARRIVAL_TIME if populated, else EPL_START_ACTUAL_DATE/EPL_START_ACTUAL_TIME, in XML date format
LOC_TIMEZONE	EPL_TIMEZONE

Note: If Timezone is omitted or blank, *CALIDUS* Portal assumes GMT.

Stop Location and Address fields in the STOP_DETAIL section are populated based on Job Address or Customer Address, depending on which exist, as follows:

Tag	EPOD_JOB_ADDRESS	EPOD_CUSTOMER
STOP_LOCATION_ID	EPL_ADDRESS_ID if populated, else EPOD_JOB.EPL_CUSTOMER_CODE	EPL_ADDRESS_ID_PREFIXED if populated, else EPOD_JOB.EPL_CUSTOMER_CODE
STOP_LOCATION_NAME	EPL_NAME if populated, else EPOD_CUSTOMER.EPL_CUSTOMER_NAME	EPL_CUSTOMER_NAME
STOP_ADDR_LINE1	EPL_ADDRESS_1	EPL_ADDRESS_1
STOP_ADDR_LINE2	EPL_ADDRESS_2	EPL_ADDRESS_2
STOP_TOWN	EPL_ADDRESS_3	EPL_ADDRESS_3
STOP_POSTCODE	EPL_POSTCODE	EPL_POSTCODE
STOP_CONTACT_NAME	EPOD_JOB.EPL_CUST_SIGNATORY if populated else EPL_CONTACT	EPOD_JOB.EPL_CUST_SIGNATORY if populated else EPL_CONTACT

Tag	EPOD_JOB_ADDRESS	EPOD_CUSTOMER
STOP_CONTACT_PHONE	EPL_TELEPHONE	EPL_TELEPHONE

Variable data for ORDER_HEADER:

Tag	Notes
ORDER_TRANSACTION_DATE	EPOD_AUDIT.EPL_AUDIT_DATE/EPL_AUDIT_TIME in XSD date format
WMS_WAREHOUSE	EPODSITE.EPL_TTM_XREF
WMS_OWNER	EPL_OWNER_NAME if present, else EPODSITE.EPL_TTM_XREF
SO_REF	EPL_CUST_REF
TMS_REF	EPL_JOB_CODE
PO_REF	EPL_SO_REF
BOOK_REF	EPL_EXT_REF
BOOK_DATE	EPL_START_PLANNED_DATE/EPL_START_PLANNED_TIME in XSD format

Variable data for ORDER_DETAIL:

Tag	EPOD_CONTAINER	EPOD_PRODUCT
DETAIL_TYPE	"D"	"S"
ITEM_IDENTIFIER	EPL_CONTAINER_ID	EPL_PRODUCT_CODE
ITEM_DESCRIPTION	EPL_DESCRIPTION	EPL_DESCRIPTION
ORDERED	1	EPL_PRODUCT_QTY_ORDERED
TO_DELIVER	1	EPL_PRODUCT_QTY_PLANNED

2.5 ARR messages

ARR messages signify that the driver has arrived at the destination and is starting processing the job i.e. has been marked arrived on the mobile device. These messages are sent only when the user arrives a job on the device. For configurations where no Arrival functionality is specified, the OIT message serves to start the job.

The data in the message sections is predominantly based on the following tables:

Tag	Notes
TRIP_HEADER	EPOD_JOB, EPOD_AUDIT
TRIP_DETAIL	EPOD_AUDIT
STOP_HEADER	EPOD_JOB
STOP_DETAIL	EPOD_JOB, EPOD_JOB_ADDRESS, EPOD_CUSTOMER
ORDER_HEADER	EPOD_JOB
ORDER_HEADER_ADDRESSES	EPOD_JOB_ADDRESS, EPOD_CUSTOMER
ORDER_DETAILS	EPOD_CONTAINER, EPOD_PRODUCT

The basic XML Layout is as follows:

```
<TRIP_HEADER>
    <TRIP_IDENTIFIER>T</TRIP_IDENTIFIER>
    <TRIP_TRANSACTION_DATE>2012-12-24T10:00:00</TRIP_TRANSACTION_DATE>
    <TRIP_ID>EPL_LOAD_ID</TRIP_ID>
</TRIP_HEADER>
<STOPS>
    <STOP>
        <STOP_HEADER>
        <STOP_HEADER>
            <STOP_IDENTIFIER>S</STOP_IDENTIFIER>
            <STOP_SEQ>EPL_SEQUENCE</STOP_SEQ>
        </STOP_HEADER>
        <STOP_DETAIL>
            <STOP_REF>EPL_JOB_TYPE</STOP_REF>
            <STOP_TYPE>PK/DL</STOP_TYPE>
            <STOP_LOCATION_TYPE>2</STOP_LOCATION_TYPE>
            <STOP_LOCATION_ID></STOP_LOCATION_ID>
            <STOP_LOCATION_NAME></STOP_LOCATION_NAME>
            <STOP_ADDR_LINE1></STOP_ADDR_LINE1>
            <STOP_ADDR_LINE2><STOP_ADDR_LINE2>
            <STOP_TOWN><STOP_TOWN>
            <STOP_POSTCODE><STOP_POSTCODE>
            <STOP_CONTACT_NAME><STOP_CONTACT_NAME>
            <STOP_CONTACT_PHONE><STOP_CONTACT_PHONE>
            <STOP_PLANNED_ARRIVAL_DATE>2012-12-20T00:00:00<STOP_PLANNED_ARRIVAL_DATE>
            <STOP_PLANNED_DEPARTURE_DATE>2012-12-20T00:00:00<STOP_PLANNED_DEPARTURE_DATE>
            <STOP_ACTUAL_ARRIVAL_DATE>2012-12-20T00:00:00<STOP_ACTUAL_ARRIVAL_DATE>
            <LOC_TIMEZONE>EPL_TIMEZONE</LOC_TIMEZONE>
        </STOP_DETAIL>
    </STOP>
</STOPS>
```

Variable data for TRIP_HEADER:

Tag	Notes
TRIP_TRANSACTION_DATE	The date/time the Job Arrive was actioned, from EPOD_JOB.EPL_ARRIVAL_DATE/EPOD_JOB.EPL_ARRIVAL_TIME
TRIP_ID	EPL_LOAD_ID

Variable data for STOP_HEADER:

Tag	Notes
STOP_SEQUENCE	EPL_SEQUENCE if populated, otherwise a counter incremented for each job on the trip.

Variable data for STOP_DETAIL:

Tag	Notes

Tag	Notes
STOP_REF	EPL_JOB_TYPE
STOP_TYPE	"PK" if STOP_TYPE = "C" else "DL"
STOP_PLANNED_ARRIVAL_DATE	EPL_START_PLANNED_DATE/EPL_START_PLANNED_TIME in XML date format
STOP_PLANNED_DEPARTURE_DATE	EPL_END_PLANNED_DATE/EPL_END_PLANNED_TIME in XML date format. Only populated if there is an End Planned Date for the job
STOP_ACTUAL_ARRIVAL_DATE	EPL_ARRIVAL_DATE/EPL_ARRIVAL_TIME if populated, else EPL_START_ACTUAL_DATE/EPL_START_ACTUAL_TIME, in XML date format
LOC_TIMEZONE	EPL_TIMEZONE

Note: If Timezone is omitted or blank, *CALIDUS* Portal assumes GMT.

Stop Location and Address fields in the STOP_DETAIL section are populated based on Job Address or Customer Address, depending on which exist, as follows:

Tag	EPOD_JOB_ADDRESS	EPOD_CUSTOMER
STOP_LOCATION_ID	EPL_ADDRESS_ID if populated, else EPOD_JOB.EPL_CUSTOMER_CODE	EPL_ADDRESS_ID_PREFIXED if populated, else EPOD_JOB.EPL_CUSTOMER_CODE
STOP_LOCATION_NAME	EPL_NAME if populated, else EPOD_CUSTOMER.EPL_CUSTOMER_NAME	EPL_CUSTOMER_NAME
STOP_ADDR_LINE1	EPL_ADDRESS_1	EPL_ADDRESS_1
STOP_ADDR_LINE2	EPL_ADDRESS_2	EPL_ADDRESS_2
STOP_TOWN	EPL_ADDRESS_3	EPL_ADDRESS_3
STOP_POSTCODE	EPL_POSTCODE	EPL_POSTCODE
STOP_CONTACT_NAME	EPOD_JOB.EPL_CUST_SIGNATORY if populated else EPL_CONTACT	EPOD_JOB.EPL_CUST_SIGNATORY if populated else EPL_CONTACT
STOP_CONTACT_PHONE	EPL_TELEPHONE	EPL_TELEPHONE

2.6 COL messages

COL messages signify that an collection order has been completed. These messages are sent only when the job is marked as completed, normally through the Mobile Device completing the job.

The data in the message sections is predominantly based on the following tables:

Tag	Notes
TRIP_HEADER	EPOD_JOB
TRIP_DETAIL	EPOD_AUDIT
STOP_HEADER	EPOD_JOB
STOP_DETAIL	EPOD_JOB, EPOD_JOB_ADDRESS, EPOD_CUSTOMER
ORDER_HEADER	EPOD_JOB
ORDER_HEADER_ADDRESSES	EPOD_JOB_ADDRESS, EPOD_CUSTOMER
ORDER_DETAILS	EPOD_CONTAINER, EPOD_PRODUCT

The basic XML Layout is as follows:

```
<TRIP_HEADER>
    <TRIP_IDENTIFIER>T</TRIP_IDENTIFIER>
    <TRIP_TRANSACTION_DATE>2012-12-24T10:00:00</TRIP_TRANSACTION_DATE>
    <TRIP_ID>EPL_LOAD_ID</TRIP_ID>
</TRIP_HEADER>
<TRIP_DETAIL>
    <TRACTOR_LAT></TRACTOR_LAT>
    <TRACTOR_LON></TRACTOR_LON>
</TRIP_DETAIL>
<STOPS>
    <STOP>
        <STOP_HEADER>
        <STOP_HEADER>
            <STOP_IDENTIFIER>S</STOP_IDENTIFIER>
            <STOP_SEQ>EPL_SEQUENCE</STOP_SEQ>
        </STOP_HEADER>
        <STOP_DETAIL>
            <STOP_REF>EPL_JOB_TYPE</STOP_REF>
            <STOP_TYPE>PK/DL</STOP_TYPE>
            <STOP_LOCATION_TYPE>2</STOP_LOCATION_TYPE>
            <STOP_LOCATION_ID></STOP_LOCATION_ID>
            <STOP_LOCATION_NAME></STOP_LOCATION_NAME>
            <STOP_ADDR_LINE1></STOP_ADDR_LINE1>
            <STOP_ADDR_LINE2><STOP_ADDR_LINE2>
            <STOP_TOWN><STOP_TOWN>
            <STOP_POSTCODE><STOP_POSTCODE>
            <STOP_CONTACT_NAME><STOP_CONTACT_NAME>
            <STOP_CONTACT_PHONE><STOP_CONTACT_PHONE>
            <STOP_PLANNED_ARRIVAL_DATE>2012-12-20T00:00:00<STOP_PLANNED_ARRIVAL_DATE>
            <STOP_PLANNED_DEPARTURE_DATE>2012-12-20T00:00:00<STOP_PLANNED_DEPARTURE_DATE>
            <STOP_ACTUAL_ARRIVAL_DATE>2012-12-20T00:00:00<STOP_ACTUAL_ARRIVAL_DATE>
            <LOC_TIMEZONE>EPL_TIMEZONE</LOC_TIMEZONE>
        </STOP_DETAIL>
        <STOP_SIGNATURE>
            <SIGNATURE>EPL_JOB_SIGNATURE</SIGNATURE>
            <SIGNATORY>EPL_CUST_SIGNATORY</SIGNATORY>
        </STOP_SIGNATURE>
        <ORDERS>
            <ORDER>
                <ORDER_HEADER>
                    <ORDER_TRANSACTION_DATE>2012-12-20T00:00:00</ORDER_TRANSACTION_DATE>
                    <WMS_WAREHOUSE>EPL_SITE_REF</WMS_WAREHOUSE>
                    <WMS_OWNER>EPL_JOB_GROUP_REF</WMS_OWNER>
                    <SO_REF>EPL_CUST_REF</SO_REF>
                    <TMS_REF>EPL_JOB_CODE</TMS_REF>
                    <PO_REF>EPL_SO_REF</PO_REF>
                    <BOOK_REF>EPL_EXT_REF</BOOK_REF>
                    <BOOK_DATE>2012-12-24T10:00:00</BOOK_DATE>
                    ORDER_TRANSACTION_DATE", Audit Date and Time),
                <ORDER_HEADER>
                <ORDER_DETAILS>
                    <ORDER_DETAIL>
                        <DETAIL_TYPE>D</DETAIL_TYPE>
                        <ITEM_IDENTIFIER>EPL_CONTAINER_ID</ITEM_IDENTIFIER>
```

```
                                <ITEM_DESCRIPTION>EPL_DESCRIPTION</ITEM_DESCRIPTION>
                                <ORDERED>1</ORDERED>
                                <TO_DELIVER>1</TO_DELIVER>
                                <DELIVERED></DELIVERED>
                                <REASON_CODES>
                                    <REASON_CODE>
                                        <RC_CODE>EPL_REASON_CODE</RC_CODE>
                                        <RC_DESCRIPTION>EPOD_REASON_CODE.EPL_DESCRIPTION</RC_DESCRIPTION>
                                        <RC_COMMENT>EPL_CUST_COMMENTS</RC_COMMENT>
                                        <RC_TYPE>DEL</RC_TYPE>
                                    </REASON_CODE>
                                </REASON_CODES>
                            </ORDER_DETAIL>
                            <ORDER_DETAIL>
                                <DETAIL_TYPE>S</DETAIL_TYPE>
                                <ITEM_IDENTIFIER>EPL_PRODUCT_ID</ITEM_IDENTIFIER>
                                <ITEM_DESCRIPTION>EPL_DESCRIPTION</ITEM_DESCRIPTION>
                                <ORDERED>EPL_PRODUCT_QTY_ORDERED</ORDERED>
                                <TO_DELIVER>EPL_PRODUCT_QTY_PLANNED</TO_DELIVER>
                                <DELIVERED>EPL_PRODUCT_QTY_ACTUAL</DELIVERED>
                                <REASON_CODES>
                                    <REASON_CODE>
                                        <RC_CODE>EPL_REASON_CODE</RC_CODE>
                                        <RC_DESCRIPTION>EPOD_REASON_CODE.EPL_DESCRIPTION</RC_DESCRIPTION>
                                        <RC_TYPE>DEL</RC_TYPE>
                                    </REASON_CODE>
                                </REASON_CODES>
                            </ORDER_DETAIL>
                        </ORDER_DETAILS>
                    </ORDER>
                </ORDERS>
            </STOP>
        </STOPS>
```

Variable data for TRIP_HEADER:

Tag	Notes
TRIP_TRANSACTION_DATE	The date/time the Job was completed, from EPOD_JOB.EPL_ACTUAL_END_DATE/EPL_ACTUAL_END_TIME, if populated, else the time the message is sent, in XSD Date format.
TRIP_ID	EPL_LOAD_ID

Variable data for TRIP_DETAIL:

Tag	Notes
TRACTOR_LAT	The latitude of where the job was started, extracted from EPOD_AUDIT.EPL_GPS_COORD, if populated, else 0.
TRACTOR_LON	The longitude of where the job was started, extracted from EPOD_AUDIT.EPL_GPS_COORD, if populated, else 0.

Variable data for STOP_HEADER:

Tag	Notes
STOP_SEQUENCE	EPL_SEQUENCE if populated, otherwise a counter incremented for each job on the trip.

Variable data for STOP_DETAIL:

Tag	Notes
STOP_REF	EPL_JOB_TYPE
STOP_TYPE	"PK" if STOP_TYPE = "C" else "DL"
STOP_PLANNED_ARRIVAL_DATE	EPL_START_PLANNED_DATE/EPL_START_PLANNED_TIME in XML date format
STOP_PLANNED_DEPARTURE_DATE	EPL_END_PLANNED_DATE/EPL_END_PLANNED_TIME in XML date format. Only populated if there is an End Planned Date for the job
STOP_ACTUAL_ARRIVAL_DATE	EPL_ARRIVAL_DATE/EPL_ARRIVAL_TIME if populated, else EPL_START_ACTUAL_DATE/EPL_START_ACTUAL_TIME, in XML date format

Tag	Notes
LOC_TIMEZONE	EPL_TIMEZONE

Note: If Timezone is omitted or blank, *CALIDUS* Portal assumes GMT.

Stop Location and Address fields in the STOP_DETAIL section are populated based on Job Address or Customer Address, depending on which exist, as follows:

Tag	EPOD_JOB_ADDRESS	EPOD_CUSTOMER
STOP_LOCATION_ID	EPL_ADDRESS_ID if populated, else EPOD_JOB.EPL_CUSTOMER_CODE	EPL_ADDRESS_ID_PREFIXED if populated, else EPOD_JOB.EPL_CUSTOMER_CODE
STOP_LOCATION_NAME	EPL_NAME if populated, else EPOD_CUSTOMER.EPL_CUSTOMER_NAME	EPL_CUSTOMER_NAME
STOP_ADDR_LINE1	EPL_ADDRESS_1	EPL_ADDRESS_1
STOP_ADDR_LINE2	EPL_ADDRESS_2	EPL_ADDRESS_2
STOP_TOWN	EPL_ADDRESS_3	EPL_ADDRESS_3
STOP_POSTCODE	EPL_POSTCODE	EPL_POSTCODE
STOP_CONTACT_NAME	EPOD_JOB.EPL_CUST_SIGNATORY if populated else EPL_CONTACT	EPOD_JOB.EPL_CUST_SIGNATORY if populated else EPL_CONTACT
STOP_CONTACT_PHONE	EPL_TELEPHONE	EPL_TELEPHONE

Variable data for ORDER_HEADER:

Tag	Notes
ORDER_TRANSACTION_DATE	EPL_ACTUAL_END_DATE/EPL_ACTUAL_END_TIME, if populated, else the time the message is sent, in XSD Date format.
WMS_WAREHOUSE	EPODSITE.EPL_TTM_XREF
WMS_OWNER	EPL_OWNER_NAME if present, else EPODSITE.EPL_TTM_XREF
SO_REF	EPL_CUST_REF
TMS_REF	EPL_JOB_CODE
PO_REF	EPL_SO_REF
BOOK_REF	EPL_EXT_REF
BOOK_DATE	EPL_START_PLANNED_DATE/EPL_START_PLANNED_TIME in XSD format

Variable data for ORDER_DETAIL:

Tag	EPOD_CONTAINER	EPOD_PRODUCT
DETAIL_TYPE	"D"	"S"
ITEM_IDENTIFIER	EPL_CONTAINER_ID	EPL_PRODUCT_CODE
ITEM_DESCRIPTION	EPL_DESCRIPTION	EPL_DESCRIPTION
ORDERED	1	EPL_PRODUCT_QTY_ORDERED
TO_DELIVER	1	EPL_PRODUCT_QTY_PLANNED
DELIVERED	1 if delivered (EPL_STATUS = "C") or 0 if not delivered (EPL_STATUS = "X")	EPL_PRODUCT_QTY_ACTUAL

A REASON_CODES section will only be created if the detail line in question (EPOD_CONTAINER or EPOD_PRODUCT) has a reason code or clause comment against it.

Variable data for REASON_CODE:

Tag	Reason Code	Clause Comment (For Containers only)
RC_CODE	EPL_REASON_CODE	"_CLAUSED_"
RC_DESCRIPTION	EPOD_REASON.EPL_DESCRIPTION	"Claused Delivery"
RC_COMMMENT	Tag not produced	EPOD_CONTAINER.EPL_CUST_COMMENT

2.7 CAN messages

CAN messages signify that a job has been cancelled. These messages are sent only when the job is marked as cancelled, through the Mobile Device completing the job or through the Admin console.

The data in the message sections is predominantly based on the following tables:

Tag	Notes
TRIP_HEADER	EPOD_JOB
STOP_HEADER	EPOD_JOB
STOP_DETAIL	EPOD_JOB, EPOD_JOB_ADDRESS, EPOD_CUSTOMER
ORDER_HEADER	EPOD_JOB
ORDER_HEADER_ADDRESSES	EPOD_JOB_ADDRESS, EPOD_CUSTOMER
ORDER_DETAILS	EPOD_CONTAINER, EPOD_PRODUCT
ORDER_REASON_CODES	EPOD_JOB, EPOD_REASON_CODE

The basic XML Layout is as follows:

```
<TRIP_HEADER>
    <TRIP_IDENTIFIER>T</TRIP_IDENTIFIER>
    <TRIP_TRANSACTION_DATE>2012-12-24T10:00:00</TRIP_TRANSACTION_DATE>
    <TRIP_ID>EPL_LOAD_ID</TRIP_ID>
</TRIP_HEADER>
<STOPS>
    <STOP>
        <STOP_HEADER>
        <STOP_HEADER>
            <STOP_IDENTIFIER>O</STOP_IDENTIFIER>
            <STOP_SEQ>EPL_SEQUENCE</STOP_SEQ>
        </STOP_HEADER>
        <STOP_DETAIL>
            <STOP_REF>EPL_JOB_TYPE</STOP_REF>
            <STOP_TYPE>PK/DL</STOP_TYPE>
            <STOP_LOCATION_TYPE>2</STOP_LOCATION_TYPE>
            <STOP_LOCATION_ID></STOP_LOCATION_ID>
            <STOP_LOCATION_NAME></STOP_LOCATION_NAME>
            <STOP_ADDR_LINE1></STOP_ADDR_LINE1>
            <STOP_ADDR_LINE2><STOP_ADDR_LINE2>
            <STOP_TOWN><STOP_TOWN>
            <STOP_POSTCODE><STOP_POSTCODE>
            <STOP_CONTACT_NAME><STOP_CONTACT_NAME>
            <STOP_CONTACT_PHONE><STOP_CONTACT_PHONE>
            <STOP_PLANNED_ARRIVAL_DATE>2012-12-20T00:00:00<STOP_PLANNED_ARRIVAL_DATE>
            <STOP_PLANNED_DEPARTURE_DATE>2012-12-20T00:00:00<STOP_PLANNED_DEPARTURE_DATE>
            <LOC_TIMEZONE>EPL_TIMEZONE</LOC_TIMEZONE>
        </STOP_DETAIL>
        <ORDERS>
            <ORDER>
                <ORDER_HEADER>
                    <ORDER_TRANSACTION_DATE>2012-12-20T00:00:00</ORDER_TRANSACTION_DATE>
                    <WMS_WAREHOUSE>EPL_SITE_REF</WMS_WAREHOUSE>
                    <WMS_OWNER>EPL_JOB_GROUP_REF</WMS_OWNER>
                    <SO_REF>EPL_CUST_REF</SO_REF>
                    <TMS_REF>EPL_JOB_CODE</TMS_REF>
                    <PO_REF>EPL_SO_REF</PO_REF>
                    <BOOK_REF>EPL_EXT_REF</BOOK_REF>
                    <BOOK_DATE>2012-12-24T10:00:00</BOOK_DATE>
                    ORDER_TRANSACTION_DATE", Audit Date and Time),
                <ORDER_HEADER>
                <ORDER_DETAILS>
                    <ORDER_DETAIL>
                        <DETAIL_TYPE>D</DETAIL_TYPE>
                        <ITEM_IDENTIFIER>EPL_CONTAINER_ID</ITEM_IDENTIFIER>
                        <ITEM_DESCRIPTION>EPL_DESCRIPTION</ITEM_DESCRIPTION>
                        <ORDERED>1</ORDERED>
                        <TO_DELIVER>1</TO_DELIVER>
                        <DELIVERED></DELIVERED>
                        <REASON_CODES>
                            <REASON_CODE>
                                <RC_CODE>EPL_REASON_CODE</RC_CODE>
                                <RC_DESCRIPTION>EPOD_REASON_CODE.EPL_DESCRIPTION</RC_DESCRIPTION>
                                <RC_COMMENT>EPL_CUST_COMMENTS</RC_COMMENT>
                                <RC_TYPE>DEL</RC_TYPE>
                            </REASON_CODE>
                        </REASON_CODES>
                    </ORDER_DETAIL>
                    <ORDER_DETAIL>
                        <DETAIL_TYPE>S</DETAIL_TYPE>
                        <ITEM_IDENTIFIER>EPL_PRODUCT_ID</ITEM_IDENTIFIER>
                        <ITEM_DESCRIPTION>EPL_DESCRIPTION</ITEM_DESCRIPTION>
                        <ORDERED>EPL_PRODUCT_QTY_ORDERED</ORDERED>
                        <TO_DELIVER>EPL_PRODUCT_QTY_PLANNED</TO_DELIVER>
                        <DELIVERED>EPL_PRODUCT_QTY_ACTUAL</DELIVERED>
                        <REASON_CODES>
                            <REASON_CODE>
                                <RC_CODE>EPL_REASON_CODE</RC_CODE>
                                <RC_DESCRIPTION>EPOD_REASON_CODE.EPL_DESCRIPTION</RC_DESCRIPTION>
                                <RC_TYPE>DEL</RC_TYPE>
                            </REASON_CODE>
                        </REASON_CODES>
                    </ORDER_DETAIL>
                </ORDER_DETAILS>
                <ORDER_REASON_CODES>
                    <ORDER_REASON_CODE>
                        <RC_TYPE>DEL</RC_TYPE>
                        <RC_CODE>EPL_REASON_CODE</RC_CODE>
                        <RC_DESCRIPTION>EPOD_REASON_CODE.EPL_DESCRIPTION</RC_DESCRIPTION>
                    </ORDER_REASON_CODE>
                </ORDER_REASON_CODES>
            </ORDER>
        </ORDERS>
    </STOP>
</STOPS>
```

Variable data for TRIP_HEADER:

Tag	Notes
TRIP_TRANSACTION_DATE	The date/time the Job was cancelled, from EPOD_JOB.EPL_ACTUAL_END_DATE/EPL_ACTUAL_END_TIME, if populated, else the time the message is sent, in XSD Date format.
TRIP_ID	EPL_LOAD_ID

Variable data for STOP_HEADER:

Tag	Notes
STOP_SEQUENCE	EPL_SEQUENCE if populated, otherwise a counter incremented for each job on the trip.

Variable data for STOP_DETAIL:

Tag	Notes
STOP_REF	EPL_JOB_TYPE
STOP_TYPE	"PK" if STOP_TYPE = "C" else "DL"
STOP_PLANNED_ARRIVAL_DATE	EPL_START_PLANNED_DATE/EPL_START_PLANNED_TIME in XML date format
STOP_PLANNED_DEPARTURE_DATE	EPL_END_PLANNED_DATE/EPL_END_PLANNED_TIME in XML date format. Only populated if there is an End Planned Date for the job
STOP_ACTUAL_ARRIVAL_DATE	EPL_ARRIVAL_DATE/EPL_ARRIVAL_TIME if populated, else EPL_START_ACTUAL_DATE/EPL_START_ACTUAL_TIME, in XML date format
LOC_TIMEZONE	EPL_TIMEZONE

Note: If Timezone is omitted or blank, *CALIDUS* Portal assumes GMT.

Stop Location and Address fields in the STOP_DETAIL section are populated based on Job Address or Customer Address, depending on which exist, as follows:

Tag	EPOD_JOB_ADDRESS	EPOD_CUSTOMER
STOP_LOCATION_ID	EPL_ADDRESS_ID if populated, else EPOD_JOB.EPL_CUSTOMER_CODE	EPL_ADDRESS_ID_PREFIXED if populated, else

Tag	EPOD_JOB_ADDRESS	EPOD_CUSTOMER
		EPOD_JOB.EPL_CUSTOMER_CODE
STOP_LOCATION_NAME	EPL_NAME if populated, else EPOD_CUSTOMER.EPL_CUSTOMER_NAME	EPL_CUSTOMER_NAME
STOP_ADDR_LINE1	EPL_ADDRESS_1	EPL_ADDRESS_1
STOP_ADDR_LINE2	EPL_ADDRESS_2	EPL_ADDRESS_2
STOP_TOWN	EPL_ADDRESS_3	EPL_ADDRESS_3
STOP_POSTCODE	EPL_POSTCODE	EPL_POSTCODE
STOP_CONTACT_NAME	EPOD_JOB.EPL_CUST_SIGNATORY if populated else EPL_CONTACT	EPOD_JOB.EPL_CUST_SIGNATORY if populated else EPL_CONTACT
STOP_CONTACT_PHONE	EPL_TELEPHONE	EPL_TELEPHONE

Variable data for ORDER_HEADER:

Tag	Notes
ORDER_TRANSACTION_DATE	EPL_ACTUAL_END_DATE/EPL_ACTUAL_END_TIME, if populated, else the time the message is sent, in XSD Date format.
WMS_WAREHOUSE	EPODSITE.EPL_TTM_XREF
WMS_OWNER	EPL_OWNER_NAME if present, else EPODSITE.EPL_TTM_XREF
SO_REF	EPL_CUST_REF
TMS_REF	EPL_JOB_CODE
PO_REF	EPL_SO_REF
BOOK_REF	EPL_EXT_REF
BOOK_DATE	EPL_START_PLANNED_DATE/EPL_START_PLANNED_TIME in XSD format

Variable data for ORDER_DETAIL:

Tag	EPOD_CONTAINER	EPOD_PRODUCT
DETAIL_TYPE	"D"	"S"
ITEM_IDENTIFIER	EPL_CONTAINER_ID	EPL_PRODUCT_CODE
ITEM_DESCRIPTION	EPL_DESCRIPTION	EPL_DESCRIPTION
ORDERED	1	EPL_PRODUCT_QTY_ORDERED
TO_DELIVER	1	EPL_PRODUCT_QTY_PLANNED
DELIVERED	1 if delivered (EPL_STATUS = "C") or 0 if not delivered (EPL_STATUS = "X")	EPL_PRODUCT_QTY_ACTUAL

A REASON_CODES section will only be created if the detail line in question (EPOD_CONTAINER or EPOD_PRODUCT) has a reason code or clause comment against it.

Variable data for REASON_CODE:

Tag	Reason Code	Clause Comment (For Containers only)
RC_CODE	EPL_REASON_CODE	"_CLAUSED_"
RC_DESCRIPTION	EPOD_REASON.EPL_DESCRIPTION	"Claused Delivery"
RC_COMMMENT	Tag not produced	EPOD_CONTAINER.EPL_CUST_COMMENT

Variable data for ORDER_REASON_CODE:

Tag	Reason Code
RC_CODE	EPL_REASON_CODE
RC_DESCRIPTION	EPOD_REASON_CODE.EPL_DESCRIPTION

2.8 DEL messages

DEL messages signify that a delivery order has been completed. These messages are sent only when the job is marked as completed, normally through the Mobile Device completing the job.

The data in the message sections is predominantly based on the following tables:

Tag	Notes
TRIP_HEADER	EPOD_JOB
TRIP_DETAIL	EPOD_AUDIT
STOP_HEADER	EPOD_JOB
STOP_DETAIL	EPOD_JOB, EPOD_JOB_ADDRESS, EPOD_CUSTOMER
ORDER_HEADER	EPOD_JOB
ORDER_HEADER_ADDRESSES	EPOD_JOB_ADDRESS, EPOD_CUSTOMER
ORDER_DETAILS	EPOD_CONTAINER, EPOD_PRODUCT, EPOD_REASON_CODE

The basic XML Layout is as follows:

```
<TRIP_HEADER>
    <TRIP_IDENTIFIER>T</TRIP_IDENTIFIER>
    <TRIP_TRANSACTION_DATE>2012-12-24T10:00:00</TRIP_TRANSACTION_DATE>
    <TRIP_ID>EPL_LOAD_ID</TRIP_ID>
</TRIP_HEADER>
<TRIP_DETAIL>
    <TRACTOR_LAT></TRACTOR_LAT>
    <TRACTOR_LON></TRACTOR_LON>
</TRIP_DETAIL>
<STOPS>
    <STOP>
        <STOP_HEADER>
        <STOP_HEADER>
            <STOP_IDENTIFIER>S</STOP_IDENTIFIER>
            <STOP_SEQ>EPL_SEQUENCE</STOP_SEQ>
        </STOP_HEADER>
        <STOP_DETAIL>
            <STOP_REF>EPL_JOB_TYPE</STOP_REF>
            <STOP_TYPE>PK/DL</STOP_TYPE>
            <STOP_LOCATION_TYPE>2</STOP_LOCATION_TYPE>
            <STOP_LOCATION_ID></STOP_LOCATION_ID>
            <STOP_LOCATION_NAME></STOP_LOCATION_NAME>
            <STOP_ADDR_LINE1></STOP_ADDR_LINE1>
            <STOP_ADDR_LINE2><STOP_ADDR_LINE2>
            <STOP_TOWN><STOP_TOWN>
            <STOP_POSTCODE><STOP_POSTCODE>
            <STOP_CONTACT_NAME><STOP_CONTACT_NAME>
            <STOP_CONTACT_PHONE><STOP_CONTACT_PHONE>
            <STOP_PLANNED_ARRIVAL_DATE>2012-12-20T00:00:00<STOP_PLANNED_ARRIVAL_DATE>
            <STOP_PLANNED_DEPARTURE_DATE>2012-12-20T00:00:00<STOP_PLANNED_DEPARTURE_DATE>
            <STOP_ACTUAL_ARRIVAL_DATE>2012-12-20T00:00:00<STOP_ACTUAL_ARRIVAL_DATE>
            <LOC_TIMEZONE>EPL_TIMEZONE</LOC_TIMEZONE>
        </STOP_DETAIL>
        <STOP_SIGNATURE>
            <SIGNATURE>EPL_JOB_SIGNATURE</SIGNATURE>
            <SIGNATORY>EPL_CUST_SIGNATORY</SIGNATORY>
        </STOP_SIGNATURE>
        <ORDERS>
            <ORDER>
                <ORDER_HEADER>
                    <ORDER_TRANSACTION_DATE>2012-12-20T00:00:00</ORDER_TRANSACTION_DATE>
                    <WMS_WAREHOUSE>EPL_SITE_REF</WMS_WAREHOUSE>
                    <WMS_OWNER>EPL_JOB_GROUP_REF</WMS_OWNER>
                    <SO_REF>EPL_CUST_REF</SO_REF>
                    <TMS_REF>EPL_JOB_CODE</TMS_REF>
                    <PO_REF>EPL_SO_REF</PO_REF>
                    <BOOK_REF>EPL_EXT_REF</BOOK_REF>
                    <BOOK_DATE>2012-12-24T10:00:00</BOOK_DATE>
                    ORDER_TRANSACTION_DATE", Audit Date and Time),
                <ORDER_HEADER>
                <ORDER_DETAILS>
                    <ORDER_DETAIL>
                        <DETAIL_TYPE>D</DETAIL_TYPE>
                        <ITEM_IDENTIFIER>EPL_CONTAINER_ID</ITEM_IDENTIFIER>
```

```
                                <ITEM_DESCRIPTION>EPL_DESCRIPTION</ITEM_DESCRIPTION>
                                <ORDERED>1</ORDERED>
                                <TO_DELIVER>1</TO_DELIVER>
                                <DELIVERED></DELIVERED>
                                <REASON_CODES>
                                    <REASON_CODE>
                                        <RC_CODE>EPL_REASON_CODE</RC_CODE>
                                        <RC_DESCRIPTION>EPOD_REASON_CODE.EPL_DESCRIPTION</RC_DESCRIPTION>
                                        <RC_COMMMENT>EPL_CUST_COMMENT</RC_COMMMENT>
                                        <RC_TYPE>DEL</RC_TYPE>
                                    </REASON_CODE>
                                </REASON_CODES>
                            </ORDER_DETAIL>
                            <ORDER_DETAIL>
                                <DETAIL_TYPE>S</DETAIL_TYPE>
                                <ITEM_IDENTIFIER>EPL_PRODUCT_ID</ITEM_IDENTIFIER>
                                <ITEM_DESCRIPTION>EPL_DESCRIPTION</ITEM_DESCRIPTION>
                                <ORDERED>EPL_PRODUCT_QTY_ORDERED</ORDERED>
                                <TO_DELIVER>EPL_PRODUCT_QTY_PLANNED</TO_DELIVER>
                                <DELIVERED>EPL_PRODUCT_QTY_ACTUAL</DELIVERED>
                                <REASON_CODES>
                                    <REASON_CODE>
                                        <RC_CODE>EPL_REASON_CODE</RC_CODE>
                                        <RC_DESCRIPTION>EPOD_REASON_CODE.EPL_DESCRIPTION</RC_DESCRIPTION>
                                        <RC_TYPE>DEL</RC_TYPE>
                                    </REASON_CODE>
                                </REASON_CODES>
                            </ORDER_DETAIL>
                        </ORDER_DETAILS>
                    </ORDER>
                </ORDERS>
            </STOP>
        </STOPS>
```

Variable data for TRIP_HEADER:

Tag	Notes
TRIP_TRANSACTION_DATE	The date/time the Job was completed, from EPOD_JOB.EPL_ACTUAL_END_DATE/EPL_ACTUAL_END_TIME, if populated, else the time the message is sent, in XSD Date format.
TRIP_ID	EPL_LOAD_ID

Variable data for TRIP_DETAIL:

Tag	Notes
TRACTOR_LAT	The latitude of where the job was started, extracted from EPOD_AUDIT.EPL_GPS_COORD, if populated, else 0.
TRACTOR_LON	The longitude of where the job was started, extracted from EPOD_AUDIT.EPL_GPS_COORD, if populated, else 0.

Variable data for STOP_HEADER:

Tag	Notes
STOP_SEQUENCE	EPL_SEQUENCE if populated, otherwise a counter incremented for each job on the trip.

Variable data for STOP_DETAIL:

Tag	Notes
STOP_REF	EPL_JOB_TYPE
STOP_TYPE	"PK" if STOP_TYPE = "C" else "DL"
STOP_PLANNED_ARRIVAL_DATE	EPL_START_PLANNED_DATE/EPL_START_PLANNED_TIME in XML date format
STOP_PLANNED_DEPARTURE_DATE	EPL_END_PLANNED_DATE/EPL_END_PLANNED_TIME in XML date format. Only populated if there is an End Planned Date for the job
STOP_ACTUAL_ARRIVAL_DATE	EPL_ARRIVAL_DATE/EPL_ARRIVAL_TIME if populated, else EPL_START_ACTUAL_DATE/EPL_START_ACTUAL_TIME, in XML date format

Tag	Notes
LOC_TIMEZONE	EPL_TIMEZONE

Note: If Timezone is omitted or blank, *CALIDUS* Portal assumes GMT.

Stop Location and Address fields in the STOP_DETAIL section are populated based on Job Address or Customer Address, depending on which exist, as follows:

Tag	EPOD_JOB_ADDRESS	EPOD_CUSTOMER
STOP_LOCATION_ID	EPL_ADDRESS_ID if populated, else EPOD_JOB.EPL_CUSTOMER_CODE	EPL_ADDRESS_ID_PREFIXED if populated, else EPOD_JOB.EPL_CUSTOMER_CODE
STOP_LOCATION_NAME	EPL_NAME if populated, else EPOD_CUSTOMER.EPL_CUSTOMER_NAME	EPL_CUSTOMER_NAME
STOP_ADDR_LINE1	EPL_ADDRESS_1	EPL_ADDRESS_1
STOP_ADDR_LINE2	EPL_ADDRESS_2	EPL_ADDRESS_2
STOP_TOWN	EPL_ADDRESS_3	EPL_ADDRESS_3
STOP_POSTCODE	EPL_POSTCODE	EPL_POSTCODE
STOP_CONTACT_NAME	EPOD_JOB.EPL_CUST_SIGNATORY if populated else EPL_CONTACT	EPOD_JOB.EPL_CUST_SIGNATORY if populated else EPL_CONTACT
STOP_CONTACT_PHONE	EPL_TELEPHONE	EPL_TELEPHONE

Variable data for ORDER_HEADER:

Tag	Notes
ORDER_TRANSACTION_DATE	EPL_ACTUAL_END_DATE/EPL_ACTUAL_END_TIME, if populated, else the time the message is sent, in XSD Date format.
WMS_WAREHOUSE	EPODSITE.EPL_TTM_XREF
WMS_OWNER	EPL_OWNER_NAME if present, else EPODSITE.EPL_TTM_XREF
SO_REF	EPL_CUST_REF
TMS_REF	EPL_JOB_CODE
PO_REF	EPL_SO_REF
BOOK_REF	EPL_EXT_REF
BOOK_DATE	EPL_START_PLANNED_DATE/EPL_START_PLANNED_TIME in XSD format

Variable data for ORDER_DETAIL:

Tag	EPOD_CONTAINER	EPOD_PRODUCT
DETAIL_TYPE	"D"	"S"
ITEM_IDENTIFIER	EPL_CONTAINER_ID	EPL_PRODUCT_CODE
ITEM_DESCRIPTION	EPL_DESCRIPTION	EPL_DESCRIPTION
ORDERED	1	EPL_PRODUCT_QTY_ORDERED
TO_DELIVER	1	EPL_PRODUCT_QTY_PLANNED
DELIVERED	1 if delivered (EPL_STATUS = "C") or 0 if not delivered (EPL_STATUS = "X")	EPL_PRODUCT_QTY_ACTUAL

A REASON_CODES section will only be created if the detail line in question (EPOD_CONTAINER or EPOD_PRODUCT) has a reason code or clause comment against it.

Variable data for REASON_CODE:

Tag	Reason Code	Clause Comment (For Containers only)
RC_CODE	EPL_REASON_CODE	"_CLAUSED_"
RC_DESCRIPTION	EPOD_REASON.EPL_DESCRIPTION	"Claused Delivery"
RC_COMMMENT	Tag not produced	EPOD_CONTAINER.EPL_CUST_COMMENT

2.9 GPS messages

GPS messages inform *CALIDUS* Portal of Lat/Long information gathered from mobile devices during operation, for last known location tracking and ETA purposes. These messages are sent every time the Mobil Device sends a GPS Tracking message to the server.

The data in the message sections is predominantly based on the following tables:

Tag	Notes
GPS_TRACKS	EPOD_AUDIT
GPS_POINTS	EPOD_AUDIT

The basic XML Layout is as follows:

```
<GPS_TRACKS>
    <GPS_TRACK>
        <HAULIER>EPL_SITE_ID</HAULIER>
        <HAULIER_NAME>EPOD_SITE.EPL_DESCRIPTION</HAULIER_NAME>
        <DRIVER>EPL_USER_ID</DRIVER>
        <DRIVER_NAME>EPOD_USER.EPL_USER_NAME</DRIVER_NAME>
        <TRACTOR>EPL_VEHICLE_ID</TRACTOR>
        <GPS_POINTS>
            <GPS_POINT>
                <GPS_POINT_DATE>2012-12-20T00:00:00</GPS_POINT_DATE>
                <TRACTOR_LAT></TRACTOR_LAT>
                <TRACTOR_LON></TRACTOR_LON>
                <TRIP_ID>EPL_LOAD_ID</TRIP_ID>
                <LOC_TIMEZONE>EPL_DEVICE_TIMEZONE</LOC_TIMEZONE>
            </GPS_POINT>
        </GPS_POINTS>
    </GPS_TRACK>
</GPS_TRACKS>
```

Variable data for GPS_TRACK:

Tag	Reason Code
HAULIER	EPL_SITE_ID
HAULIER_NAME	EPOD_SITE.EPL_DESCRIPTION
DRIVER	EPL_USER_ID
DRIVER_NAME	EPOD_USER.EPL_USER_NAME
TRACTOR	EPL_VEHICLE_ID

Variable data for GPS_POINT:

Tag	Reason Code
GPS_POINT_DATE	EPL_DEVICE_DATE/EPL_DEVICE_TIME in XSD date format.
TRACTOR_LAT	The latitude of where the job was started, extracted from EPOD_AUDIT.EPL_GPS_COORD.
TRACTOR_LON	The longitude of where the job was started, extracted from EPOD_AUDIT.EPL_GPS_COORD
TRIP_ID	EPL_LOAD_ID
LOC_TIMEZONE	EPL_DEVICE_TIMEZONE

Note: If Timezone is omitted or blank, *CALIDUS* Portal assumes GMT.

2.10 Sending Messages to *CALIDUS* Portal

The Auto-Export process that generates and sends these files is a stand-alone application, that must be initiated through a system scheduler. The expected interval for this process is 3-5 minutes.

All messages generated by these processes are exported through flat-file transfer, either through a local file folder or through FTP.

The default file naming convention is:

```
EPOD_LOTS_<EPL_SITE_ID>_FTP_<currentDate>_<currentTime>_1.XML
```

although this can be overridden through the export configuration parameters in EPOD_XF_CONFIG.

In all cases, the file is created in a separate area as a temporary file, or created as a temporary file in the destination folder, then renamed, to prevent misreads by *CALIDUS* Portal of incomplete data.

3 Appendix A: Document References

A.1 References

Ref No	Document Title & ID	Version	Date
1	LOTS-tripOrder v1.17.xsd	1.17	13/08/2015
2	FS 328407 EPOD-TTM Interface Changes	0.3	14/08/2015

A.2 Glossary

Term	Definition
EPOD	Electronic Proof of Delivery. The OBS EPOD system is *CALIDUS* ePOD.
CALIDUS eSERV	The OBS mobile system to complete Service functionality in the field. This is part of the *CALIDUS* ePOD system.
PDA	The mobile device on which the C-ePOD system will run in the field. This can be a Phone, EDA or industrial PDA, running Android.
DAL	Data Access Layer. A mechanism for accessing data by the system that is removed from the application, allowing for simplified access and providing protection to the data, as only approved DAL methods can be used to modify it.
GPS	Global Positioning System. A mechanism of retrieving accurate positioning information in the form of Latitude and Longitude (Lat-Long) co-ordinates from a device.
GPRS, 3G, HSDPA, Data Service	All terms referring to mobile device network connectivity, and the speed at which the device connects to the internet.

A.3 Authorised By

Murray Middleton OBS Logistics Development Manager ______________________

—User:Anw, *31/1/2012 16:33:36*

Some complicated templates:

- Doc Title - creates a document title page.
- Doc Appendix - creates a document appendix page.

Some full document templates: Document templates have been produced for the following document types:

- Requirements
- Estimates
- Functional Specifications
- Small Change Requests
- Test Plans
- ERs
- Patches

and many more.

Full document templates can also be accessed through the Help:CreateNewPage page.

The links on that page will help you generate a new document or page.

- Enter the title of the page or document you are creating in the right entry box for the document that you want to create.
- Click the button.

The system will copy everything required in the template into a brand new page created for you, so that you can complete editing it.

There are pretty extensive guides in the Assist category on creating pages (specifically release notes) from Templates - it is advised that you look there for more information.

3.1 Transcluding

Tranclusion is all about re-using pages that you have already created. We can (and should) do this, as "edit once, edit everywhere" applies, meaning that the pages are updated in every other page or category that uses them, massively reducing the amount of effort required to get changes into the right places.

Say for example, you have documented the Resource Allocation process in a page called "Allocate Resources". That screen is called from the Planning Screen and from the Waterfall screen, which are also documented. You want to describe resource allocation in the documentation of those pages, but you don't want to have to type it all in again, or have to keep updating multiple pages because a small change has happened to that Resource Allocation screen. You could just add it as a like , for example, "see Allocate Resources for more information", but you really want a complete document here. Transclusion helps here.

In the Planning page, you add a Header for "Allocating Resources"

- Source Editing: `== Allocating Resources ==`
- Visual Editing: Choose the *Heading 2* format from the toolbar and type "Allocating Resources".

Then we can transclude the page:

- Source Editing: `{{:Allocating Resources}}`
- Visual Editing: On a new line, click the **Insert** toolbar option, then *Template*. Type a colon, followed by the page e.g. :Allocating Resources, then select it and **Insert**.

That's it - the page will be included at that point in your Planning page. Whenever Allocating Resources changes, the planning page will also update.

You can see wherever a page in included or linked to in any other pages really easily. Click "*What links here*" in the "*More*" toolbox section. That will show you a list of all:

- *Transclusions* - directly used in a page.
- *Redirects* - stub pages that immediately redirect to this page
- *Links* - just a link has been added.

That way, when you edit a page, if this edit fundamentally affects a document that is produced from those linked pages, you can edit those if necessary, perhaps to increment a version or modified date, if these pages are producing a PDF book.

3.2 Interwiki

As you know, the Assist systems are based on MediaWiki, then engine that powers Wikimedia.

Each product has its own instance of this, so we have Assist (wiki) instances of (amongst others):

- OBS - Calidus HUB
- MTS - Calidus TMS
- WCS - Calidus WCS
- WMS - Calidus WMS 3pl
- Portal - Calidus Portal (all types)
- MCS - Calidus MCS

In the interests of reducing duplication and possible out of date guides existing within other pages, each of these Assists can use pages out of the other Assists by using a defined interwiki reference.

What that means is you can link to or transclude ANY page from any other Assist, like you would for any page on your Assist.

So, the interwiki shortcuts are:

- Calidus HUB - "obs"
- Calidus TMS - "ctms"
- Calidus WCS - "cwcs"
- Calidus WMS 3pl - "cwms"
- Calidus Portal - "cportal"
- Calidus MCS - "cmcs"

Essentially, you use the Interwiki prefix before the page or template you want to use.

- To use a template from another wiki, the syntax is `{{iw:TemplateName}}`.
- To link to a page from another wiki, the syntax is `[[iw:PageName]]`.
- To transclude a page from another wiki, the syntax is `{{:iw:PageName}}`.
- To use an interwiki link for a DocLink, the syntax is `{{DocLink|:iw:PageName}}`.

As mentioned above, Glossaries for all systems are maintained within the Calidus HUB Assist. The page exists in the local wiki, but it transcludes the Calidus HUB version. So, you can continue to use the template `{{WMS Glossary}}` as normal. But you could also use `{{obs:WMS Glossary}}` instead and get the same result.

Best use cases for Interwiki functionality are:

- Repetitively-maintained and used data, for example Glossaries.
- Technical guides linking to customer-facing guides, for example on this wiki CTMS Paragon Interface, where the customer-facing guide maintained in the CTMS Assist is both linked to and transcluded.
- Product-specific pages linking to technical specs, for example, in WMS, you would find PoD Guide, which links to the Port of Dover SDD on this Assist SDD 350229 Port of Dover Solution Design as a DocLink to download the PDF i.e. `{{DocLink|obs:SDD 350229 Port of Dover Solution Design}}`

In this way, we further promote the "write once, write everywhere" mentality and reduce effort, which providing a more connected, more up to date documentation set to our customers.

3.3 Categories

Categories are used to group pages together. A category can be used to see all pages in that category, and can also be used to produce a combined PDF book of all pages in that category.

You add categories like this if you are editing the source page: `[[Category:Assist Guides]]`

When using the Visual Editor, you can add Categories from the **Menu** button on the top-right of the Visual Editor toolbar, and click *Categories*.

Any categories already on the page will be listed here. You can remove them, or add to existing ones by searching for the category in the box, or even create new categories - the search box will suggest what to do as you type.

When adding pages to categories that are intended to form part of a PDF book, then we want the pages sorted in a custom way, as opposed to the default, which is alphabetical.

When editing source, you do this as follows:

```
[[Category:Assist Guides|A-099]]
```

Here, we are saying that this page should be sorted in the category as A-099. Other pages will be sorted similarly, and therefore will appear in the correct sequence.

For example:

You have several pages, and you want them in this order on a category "Accounts":

- Accounts Title
- Accounts
- Contracts

- Invoices
- Debrief by Invoice
- Service Offerings
- Internal Recharging
- Accounts Appendix

If these pages were just added to the "Accounts" without sorting like `[[Category:Accounts]]`, they would appear in this sequence:

- Accounts
- Accounts Appendix
- Accounts Title
- Contracts
- Debrief by Invoice
- Internal Recharging
- Invoices
- Service Offerings

So, what we should do is add them with a sort key, for example:

- Accounts Title - added as `[[Category:Accounts|000]]`
- Accounts - added as `[[Category:Accounts|100]]`
- Contracts - added as `[[Category:Accounts|110]]`
- Invoices - added as `[[Category:Accounts|120]]`
- Debrief by Invoice - added as `[[Category:Accounts|130]]`
- Service Offerings - added as `[[Category:Accounts|140]]`
- Internal Recharging - added as `[[Category:Accounts|150]]`
- Accounts Appendix - added as `[[Category:Accounts|999]]`

The numbering leaves sufficient room to insert more pages in the place that we want them.

A page might (and very much should) be part of several categories.

For example, the Accounts page above is a page that is used as follows:

- Part of the Accounts PDF book
- Part of the CTMS Modules PDF Book
- Part of the CTMS User Guide PDF Book

So that page can be categorised into multiple categories like so:

```
[[Category:Accounts|100]]
[[Category:C-TMS Modules|C-100]]
[[Category:C-TMS User Guide|BC-100]]
```

Warning: When you add categories to a page, and then you use that page in another page (see Transcluding), the other page will by default inherit the sub-page categories - we don't want this.

So, by default, categories should be included within a <noinclude>...</noinclude> tag, like so:

```
<noinclude>
[[Category:Accounts|100]]
[[Category:C-TMS Modules|C-100]]
[[Category:C-TMS User Guide|BC-100]]
</noinclude>
```

Pages that have been added to categories will be shown in the *Categories* section of the toolbar - clicking these links will take you to all pages in that category.

3.4 Saving your Changes

Each change you make, however small, is included in the document's history. To ensure that these comments are not included, you should mark the change as minor when saving your changes. However, this should not be marked as minor if the edit fundamentally changes the document.

Comments should be added whenever saving edits. If you have edited a section directly, rather than the whole document, a comment will already be entered for you. You can leave this there, replace with a new comment or add your comment after this one.

Your comments should reflect the changes. It's good practice to reference any call numbers or system versions associated to the change of you know them. Avoid client names if you can - remember this is standard documentation! For example, for a SalesForce or DevOps change 123465 for customer ABC Travel, adding a new Customer Ref field to a screen, consider entering your comment as follows:

```
Added new Customer Ref field (123456)
```

As documentation should always be updated when software patches or releases are made available or released to a customer system, then consider using the ER/patch/release number in the comment, for example:

```
ER CTMS 047-101 - Added (some functionality) to the screen
```

When a document is going to be changed to a new version, you **should** change the version and date within the document, and add the version number to the start of the comment. For example:

- v0.02 - Draft issue for review
- v1.00 - Ready for Issue.

How this works is slightly different for each editor.

For Source Editing:

- Enter a summary comment.
- Check whether this is a *Minor edit*.
- Optionally you can *Watch this page* - if anyone edits it in the future, you'll get an email. You can manage your watchlist from user preferences accessed from your user name.

Once you have selected, you can do the following:

- **Save changes** - if you haven't entered a summary comment you will be reminded, or the changes will just be saved.
- **Show preview** - as you are probably using realtime previews, probably not required. If you do use it, the changes will be shown on the top of the page, but remember your changes have not yet been saved - use the **Save changes** button as above to commit them.
- **Show changes** - show all changes in text differences showing each line changed, added or modified in a list. Remember your changes have not yet been saved - use the **Save changes** button as above to commit them.

From Visual Editing:

- Click **Save Changes**
- You will be shown a popup - enter your summary here.
- Check whether this is a *Minor edit*.
- Optionally you can *Watch this page* - if anyone edits it in the future, you'll get an email. You can manage your watchlist from user preferences accessed from your user name.

You then have options.

- **Save changes** - if you haven't entered a summary comment you will be reminded, or the changes will just be saved.
- **Review your changes** - show all changes in differences. The changes will be shown in Visual ode with colour highlighting - you can switch to the text differences above as well if that suits you better. Remember your changes have not yet been saved - use the **Save changes** button as above to commit them.

3.5 Some Final Notes

Note:

- When creating a new document, you should ensure that the Category tags are added relevant to that document type and client. This allows for easy searching of documents. See the following section on Categories.
- A document should be checked that it exports to PDF correctly - in most cases, documents will export with no issues. However, it has been known that a document does not correctly format into PDF. If this is the case, the document should be referred to the Assist maintainer for checking. Documents can be exported to PDF from the toolbar.

3.6 Issuing Documents to a Client

- Documents should be issued in PDF form.
- The document title should follow the standard document template, with a version number, so:
    - EST 123456 CUSTREF Title v1.0.pdf
- If you use the standard document template with the Doc_Title title page and you specify a version, when you download the PDF, the document will be appended with the version number automatically.
- Whilst the Assist system is being adopted, these documents should be held in the standard development or project document folder - please consult your project or product documentation for details.

4 Support Tools

The intention of this guide is to provide support information, and a general knowledge base and tips for the ongoing maintenance of Assist implementations.

4.1 Requirements

MySQL WorkBench

Access to the Assist server.

4.2 Hosted Systems

All hosted systems are documented in SharePoint, along with users and passwords.

You must have access to the SharePoint to read this document.

https://apteanonline.sharepoint.com/teams/CALIDUS-CONNECTIONS/Shared%20Documents/Forms/AllItems.aspx?id=%2Ftear

4.3 Updating Data En Mass

By default, MySQL will not allow updating of data without explicit WHERE or LIMIT clauses. To enable this:

- Go to "Edit/Preferences"
- Choose "SQL Editor" Under "Query Results"
- Check "Safe Updates"
- Restart MySQL WorkBench.

❗ **Warning**: You will then be able to (for example) delete all data inadvertently, so enable this option with care.

4.4 Viewing BLOB fields

By default, MySQL WorkBench displays all text fields as "BLOB", which you must then right-click and choose "Open Value in Editor". To enable viewing the text directly in the results, do the following:

- Go to "Edit/Preferences"
- Choose "SQL Editor" Under "Query Results"
- Check "Treat BINARY/VARBINARY as nonbinary character string"
- Restart MySQL WorkBench.

💡 **Note:** Enabling this option comes with a performance hit - some text fields contain the entire page data, so enable this with care.

4.5 Recovering passwords from MYSQL Workbench

First go check where your encrypted file is. Usually it is stored at %AppData%\MySQL\Workbench\workbench_user_data.dat

If different, amend the commands below.

Use Powershell

```
Add-Type -AssemblyName System.Security
$cipher = Get-Content $env:APPDATA\MySQL\Workbench\workbench_user_data.dat -Encoding Byte -Raw
$scope = [System.Security.Cryptography.DataProtectionScope]::CurrentUser
$mysqlpwd = [System.Security.Cryptography.ProtectedData]::Unprotect( $cipher, $null, $scope )
[System.Text.UTF8Encoding]::UTF8.GetString($mysqlpwd)
```

4.6 Common Queries

```
-- Assist SQL

-- Find the page ID
SELECT * FROM obs_assist.obs_page
WHERE PAGE_TITLE LIKE '%SDD_366558%';


-- Find all revisions (to change comments)
SELECT * FROM obs_assist.obs_revision
where rev_page IN
(SELECT page_id FROM obs_assist.obs_page
WHERE PAGE_TITLE LIKE '%SDD_366558%'
);

-- Find unpatrolled pages to set them patrolled
SELECT *
FROM obs_assist.obs_recentchanges
where rc_patrolled = 0;

UPDATE obs_assist.obs_recentchanges
SET rc_patrolled = 1
where rc_user_text = 'StylesC'

-- Check the logs for details of PDF production
SELECT * FROM mts_assist.oh_logging
where log_action ='PdfBook'
-- order by log_id desc

-- For v1.34 and later, comments have changed:
SELECT log.*, CONVERT(comment.comment_text USING utf8) comment
FROM epod_assist.epodlogging log
left join epod_assist.epodcomment comment
on comment.comment_id = log.log_comment_id
where log_action ='PdfBook'
--ORDER BY log_id DESC
--LIMIT 20
```

4.7 Assist Database Backup

Backup each database separately.

Use MySQL Administrator Data Export option.

Always check boxes as follows:

- Dump Stored Procedures and Functions
- Dump Events
- Dump Triggers
- Export to Self-contained File
  - Name with the name of the Assist on the start of the dump.
- Include Create Schema

Advanced Options button

- Comments
- Create-options
- quote-names
- lock-tables

- dump-date
- disable-keys
- tz-utc
- add-locks
- extended-insert

Start Export

4.8 Assist Database Restore

If required, drop the database from MySQL Administrator:

- On Schema explorer, right click on schema and select Drop Schema.

Use MySQL Administrator Data Import/Restore option.

- Import from self-contained file
- Select the database backup dump
- Click Start Import
- Refresh the schema explorer when done - the database should be present.

Restore database users, passwords and permissions when complete.

Will need to create the assist owner with username and password from LocalSettings.php

- From MySQL Admin Management Explorer
- Users and Privileges
- Add Account
    - Login Name and Password - as per LocalSettings.php
- Administrative Roles tab - check DBA, which checks everything
- Schema Privileges - add entry
    - Selected Schema
    - Check everything (click Select 'ALL' button)
- Click Apply

Normal Assist users will need to be reset either by the users through 2FA, or through #Resetting User Passwords.

4.9 Creating Users/Resetting User Passwords

It is ALWAYS better to create a new user on the Wiki from the Special page "Create Account". In here, you should create the user and enter the email. This will send an email to the user to reset their own password.

However, in the event of coreecting a problem, this can be done from the command line:

```
{InstallDrive}:\xampp\php\php.exe {InstallDrive}:\xampp\htdocs\calidus-assist\{wikiname}\maintenance\create
```

Warning: You must change to the root of the install drive or this will not work e.g. enter "{InstallDrive}:" at the command prompt BEFORE the previous command.

You can also add some parameters to promote the user with group rights, as follows:

```
--bureaucrat    Add the account to the bureaucrat group
--sysop Add the account to the sysop group
--interface-admin       Add the account to the interface-admin group
--custom-groups Comma-separated list of groups to add the user to. This allows adding the user to any custo
Since MW 1.27, a user is only added to a custom group, if this group actually exists according to $wgGroupP
--force If account already exists, just grant it rights or change password. Do not create a new account in
```

In the event of needing to change a password, it is ALWAYS better to get the user to do it themselves - if the email has been set up, they can access the reset from there.

System admins can also force the sending of the reset password link from Special:ResetPassword.

In the event that this is simply correcting a previously set password, you can use the command line:

```
        {InstallDrive}:\xampp\php\php.exe {InstallDrive}:\xampp\htdocs\calidus-assist\{wikiname}\maintenance\change
```

❗ **Warning**: You must change to the root of the install drive or this will not work e.g. enter "{InstallDrive}:" at the command prompt BEFORE the previous command.

4.10 Upgrading a Wiki from 1.16 Upwards

The following is a checklist of actions.

{SYSTEM}

- Extracted - INCOMPLETE
- DB Import - INCOMPLETE
- DB User - INCOMPLETE
    - {SYSTEM}_owner/{PASSWORD}
- Version 1.31.6 - INCOMPLETE
    - Move old extensions to old folder - INCOMPLETE
    - Recreate LocalSettings.php
    - Update password sender and emergency contact
- Version 1.34.4 - INCOMPLETE
    - Leave LocalSettings.php
    - May need to remove some extensions like numberformat and variables
- Version 1.39.8 - INCOMPLETE
    - Leave LocalSettings.php
- New Extensions and files - INCOMPLETE
    - Overwrite MW-add-files - INCOMPLETE
- LocalSettings.php - INCOMPLETE
    - require_once "$IP/LocalSettingsAdditional.php";
- Gadgets and MediaWiki css/js hacks - INCOMPLETE
    - Import MW-hacks.xml file - INCOMPLETE
- Templates - INCOMPLETE
    - Import MW-Templates.xml - INCOMPLETE
- Additional Files - INCOMPLETE
    - C:\Users\twalker\OneDrive - Aptean-online\Documents\Work\Assist\OBS Templates Export
        - Aptean_Logo.png
        - Attention_niels_epting.png
        - Bulbgraph.png
        - Hint.png
- About/General Disclaimer/Privacy Policy - INCOMPLETE
- Users - INCOMPLETE
    - admin/Liverpool123
    - anw/Liverpool123
- Problems
    - NONE

4.11 Creating a Brand New Wiki

The following is a checklist of actions.

- Copy version 1.39.8 to a WIKI name - INCOMPLETE
    - Create LocalSettings.php
    - xxx_owner with appropriate password
    - Note the password!

- New Extensions and files - INCOMPLETE
    - Overwrite MW-add-files - INCOMPLETE
- LocalSettings.php - INCOMPLETE
    - require_once "$IP/LocalSettingsAdditional.php";
- Gadgets and MediaWiki css/js hacks - INCOMPLETE
    - Import MW-hacks.xml file - INCOMPLETE
- Templates - INCOMPLETE
    - Import MW-Templates.xml - INCOMPLETE
- Additional Files - INCOMPLETE
    - C:\Users\twalker\OneDrive - Aptean-online\Documents\Work\Assist\OBS Templates Export
        - Aptean_Logo.png
        - Attention_niels_epting.png
        - Bulbgraph.png
        - Hint.png
- About/General Disclaimer/Privacy Policy - INCOMPLETE
- Users - ensure that there is at least an Admin user with full user rights. Note the password:
    - Log in as administrative user
    - Special:Create Account
    - Create admin account - note the password.
    - Special:User Rights
    - Check Administrator, Interface Administrator, Bureaucrat and Suppressor
    - Save user groups

4.12 Extracting Hacks

- Extract from MTS Assist
- Special Pages
- Export Pages
- Add the pages specifically below

```
MediaWiki:Common.js
MediaWiki:Group-user.css
MediaWiki:Common.css
MediaWiki:Vector.css
MediaWiki:Timeless.css
MediaWiki:Gadget-veCenterLoader.js
MediaWiki:Gadget-autonum
MediaWiki:Gadget-autonum.js
MediaWiki:Gadget-autonum.css
MediaWiki:Gadget-veCenterLoader
MediaWiki:Gadget-veCenter.js
MediaWiki:Gadgets-definition
```

- Ensure the following are checked/unchecked:
    - Include only the current revision, not the full history - CHECKED
    - Include templates - UNCHECKED
    - Save as file - CHECKED
- Export to MW-hacks.xml

4.13 Extracting Templates

- Extract from MTS Assist
- Special Pages
- Export Pages
- Add the pages specifically below

```
Template:DocLink
Template:Doc_Title
Template:Comment
Template:Incomplete
Template:Note
Template:Hint
Template:Warning
Template:Xref
```

```
PageTemplate
DocTemplate
```

- Ensure the following are checked/unchecked:
    - Include only the current revision, not the full history - CHECKED
    - Include templates - UNCHECKED
    - Save as file - CHECKED
- Export to MW-Templates.xml

4.14 Extracting Common Additional Files

Take the following from an Assist implementation that has them:

```
Aptean_Logo.png
Attention_niels_epting.png
hint.png
Bulbgraph.png
```

- Special:All Pages
- Enter start of file name in "Display pages starting at:"
- Select File Namespace from drop-down list and then click Go.
- Click on the file until a full-screen version appears.
- Right-click, Save Image As
- Save to your chosen directory.

4.15 Extracting Namespace Files

- Extract from an existing Assist
- Special Pages
- Export Pages
- Add the pages specifically below, replacing the namespace with the namespace of the Assist system - in this case this is from CTMS Assist:

```
CTMS:Privacy_policy
CTMS:General_disclaimer
CTMS:Copyrights
CTMS:About
```

- Ensure the following are checked/unchecked:
    - Include only the current revision, not the full history - CHECKED
    - Include templates - UNCHECKED
    - Save as file - CHECKED
- Export to MW-Namespace.xml

Note: You will then need to amend the About page to change the product name and copyright dates.

4.16 Importing Additional Files, Templates and Hacks into a Wiki

- Ensure that all additional files from MW-add-files have been added.
- Upload additional files:
    - Special:Upload Multiple Files
    - Add a description if you want
    - Select the following files:

```
Aptean_Logo.png
Attention_niels_epting.png
hint.png
Bulbgraph.png
```

- As soon as you select the files, the files will be uploaded. The page will indicate if there is any error uploading the files (for example if they already exist)
- Upload hacks and templates:
    - Special Pages
    - Import Pages
    - Browse for the file to import, one of (do both)
        - MW-hacks.xml
        - MW-Templates.xml
    - Set InterWiki prefix to the name of the Wiki e.g. MTS, Portal, CTLTMS, etc
    - Add a comment if you want.
    - Ensure option "Import to original namespace" is selected
    - Upload File.

4.17 Importing Namespace Files

- Special Pages
- Import Pages
- Browse for the file to import
    - MW-Namespace.xml
- Set InterWiki prefix to the name of the Wiki e.g. MTS, Portal, CTLTMS, etc
- Add a comment if you want.
- Ensure option "Import to a namespace" is selected
- Select the namespace from the drop-down list that matches the Assist being imported into, for example, MTS for CTMS, EPOD for C-ePOD, etc
- Upload File.

4.18 Additional Actions

The following are additional actions that are required, with some sample pages.

- MediaWiki:Pagetitle-view-mainpage - change this text to define the title of the wiki e.g. Assist - OBS Hub
- Update the main page - the MTS one is the one with all the best notes in.
- Update the Did You Know page with the common Assist-based help topics - there is an example in this Assist of a Did You Know page which can be copied or exported, imported and then edited.
- "Download as PDF" to "Print as PDF" - e.g. "Print as PDF tab in the tab bar, typically on the top of the screen".

You can use the files on this Assist as templates:

- OBS:About
- OBS:General_disclaimer
- OBS:Privacy_policy
- OBS:Copyrights

4.19 MediaWiki

You can find the MediaWiki license, contributors, FOSS attributions and components here:

- Special:Version.

4.20 Other Actions

4.20.1 Managing Revisions

Sometimes, you may want to roll-back edits, or delete or hide revisions to a page, perhaps to remove dangerous content.

Using the rollback feature (for administrators and users with the "rollback" right)

- Go to the page history, the user contributions page, or a diff page.
- Find the "rollback" link next to the consecutive edits you want to revert. It appears before the "undo" link.
- Click the "rollback" link. The page will automatically revert to the previous version by another user, and a pre-filled edit summary will appear.
- Save the edit. The change is marked as a "minor" edit in the history.
- Important: After using rollback, it's recommended to check the recent revisions to ensure all disruptive edits were reverted and no constructive edits were accidentally removed.

Using the undo feature (for any user)

- Navigate to the page history.
- Find the specific edit you want to undo in the list.
- Click the "undo" link at the end of that edit's line.
- An edit page will load with the changes from that edit removed. Later edits are retained by default.
- You can modify the default edit summary if needed.
- Click "Save page" to revert the single edit.

When to use which method

- Use rollback for reverting a large number of consecutive bad edits, such as vandalism, by the most recent user. It's a one-click process for authorized users.
- Use undo to revert a single edit or to manually edit the page to combine or resolve conflicts with later edits. The undo feature is available to all users.

You can permanently flatter all history in a page using the command line.

- For page histories: Run the script from your MediaWiki installation's directory. You can delete all old revisions by using the flag or by specifying the page ID.
- Example command (once in your wiki's maintenance directory):
    - `{InstallDrive}:\xampp\php\php.exe deleteOldRevisions.php --delete 123`
- (Replace 123 with the page ID gathered from the page information).
- Note that running this script without `--delete` will just list the count of revisions that will be removed.

To delete a specific revision in MediaWiki, use the RevisionDelete feature, which administrators can enable to hide revisions from public view. This feature allows you to hide the content, username, or edit summary of one or more revisions without permanently removing them. First, enable the permission, then go to the page history, select the revisions using the checkboxes, and click "Change visibility of selected revisions" to hide them.

For administrators using RevisionDelete

1. Enable the permission: Ensure your user account has the permission. This may require editing LocalSettings.php.
2. Go to the page history: Navigate to the page and click the "View history" tab.
3. Select revisions: Check the boxes next to the revisions you want to hide.
4. Change visibility: Click the "Change visibility of selected revisions" button.
5. Choose what to hide: Select the options to hide the content, usernames, or summaries.
6. Apply changes: Add a log comment and click the "Apply to selected revisions" button.

4.21 Support Issues

4.21.1 Seeing a Cat in the Background

There is a cat.svg linked from Timeless skin. (/calidus-assist/OBS/skins/Timeless/resources/images/cat.svg). This is the default.

This is configurable in skin.json in the Timeless directory for your Wiki. i.e. D:\xampp\htdocs\calidus-assist\OBS\skins\Timeless\skin.json

Solution: Set this to user-grey.svg instead.

```
	"config": {
		"TimelessBackdropImage": {
			"value": "user-grey.svg",
			"description": "Set it as you would $wgLogo to an appropriate background image. Rec
```

```
                    },
```

With multiple wiki installs, this is onerous. To facilitate changing multiple wiki installs, there is a directory in D:\Assist Install Files\MW-add-files called skins.

To apply:

- Copy the directory skins.
- Navigate to your Assist main folder e.g. D:\xampp\htdocs\calidus-assist\WMS
- Paste - this will overwrite the config file with the corrected one.

❗ **Warning**: This file is delivered with MediaWiki. A new install will overwrite this file. If you have updated MediaWiki or installed a new version of the Timeless skin, then compare the saved skin.json file with the new one and update with any new/changed attributes.

5 Appendix A: Document History

A.1 References

Ref No	Document Title & ID	Version	Date
1			
2			
3			

A.2 Document History

Version	Date	Status	Reason	By
0.1	25/02/2020	Issue	Initial Version	ANW
1.0	13/03/2020	Issue	Issue	ANW

A.3 Authorised By

Julie Scott	OBS Manager	________________
Tony Walker	OBS Consultant	________________

6 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.

6.1 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.

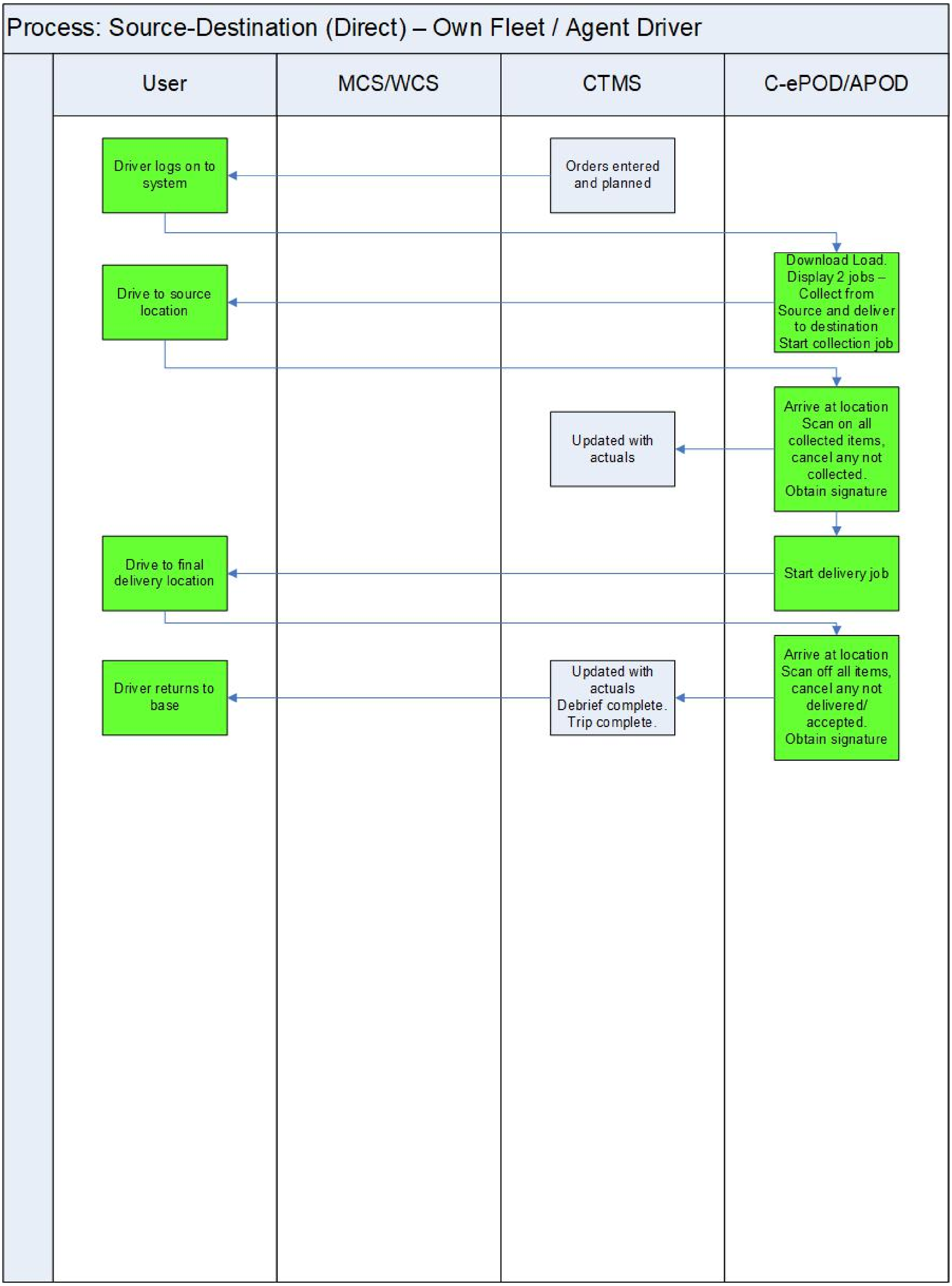
The following is a list of the individual trips required to action the order routing above, showing the potential executing agent:

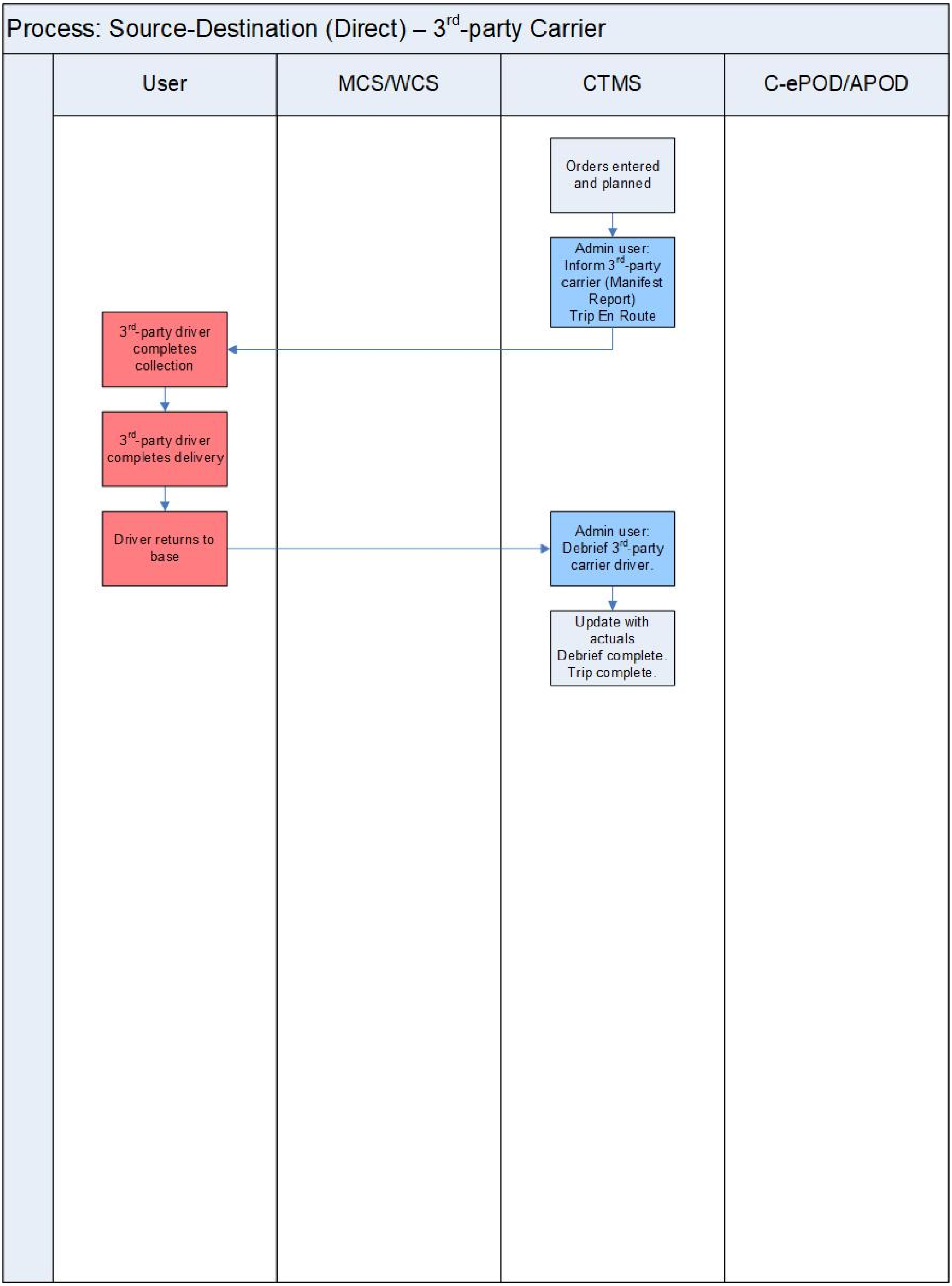
1. Source-Destination
   1. Can be completed by Own Fleet Driver, Agent or 3rd-party Haulier
2. Source-Depot
   1. Can be completed by Supplier, Own Fleet Driver, Agent or 3rd-party Haulier
3. Depot-Destination
   1. Can be completed by Own Fleet Driver, Agent or 3rd-party Carrier
4. Depot-RDC
   1. 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.

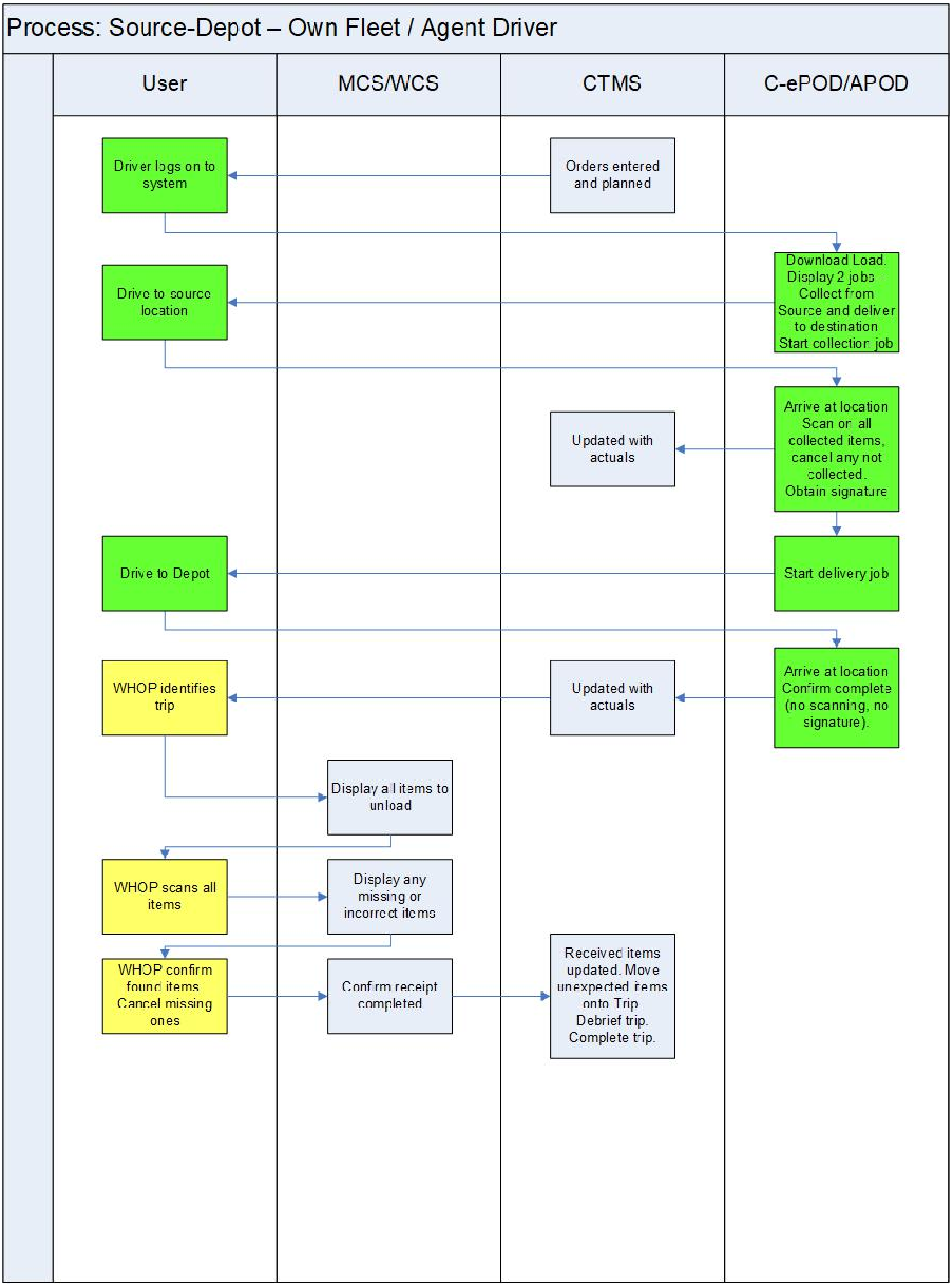
6.1.1 Cross-Functional Flows

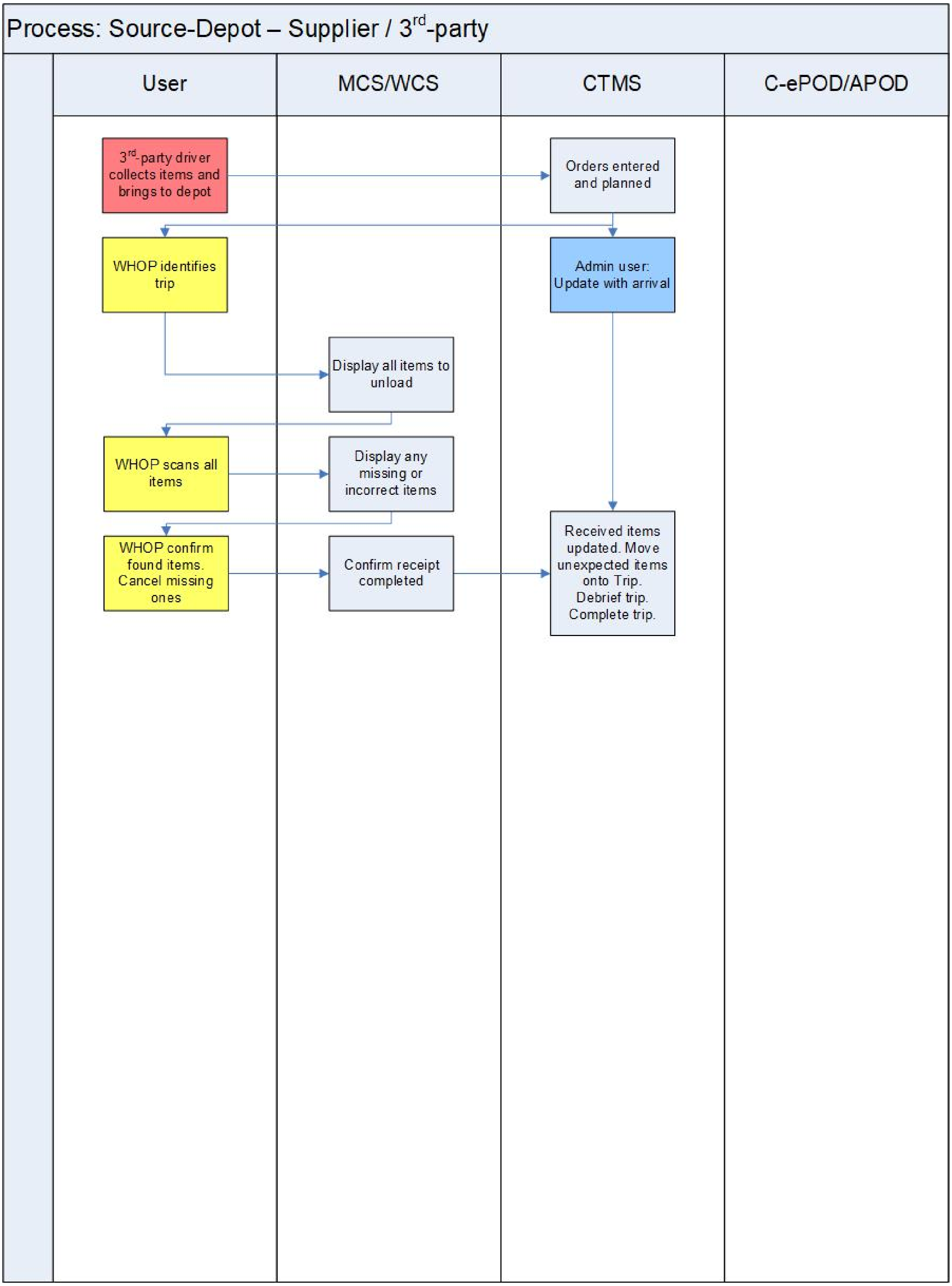
6.1.1.1 Source-Destination


Process: Source-Destination (Direct) – Own Fleet / Agent Driver
User
MCS/WCS
CTMS
C-ePOD/APOD
Orders entered and planned
Driver logs on to system
Download Load. Display 2 jobs – Collect from Source and deliver to destination Start collection job
Drive to source location
Arrive at location Scan on all collected items, cancel any not collected. Obtain signature
Updated with actuals
Start delivery job
Drive to final delivery location
Arrive at location Scan off all items, cancel any not delivered/ accepted. Obtain signature
Updated with actuals Debrief complete. Trip complete.
Driver returns to base

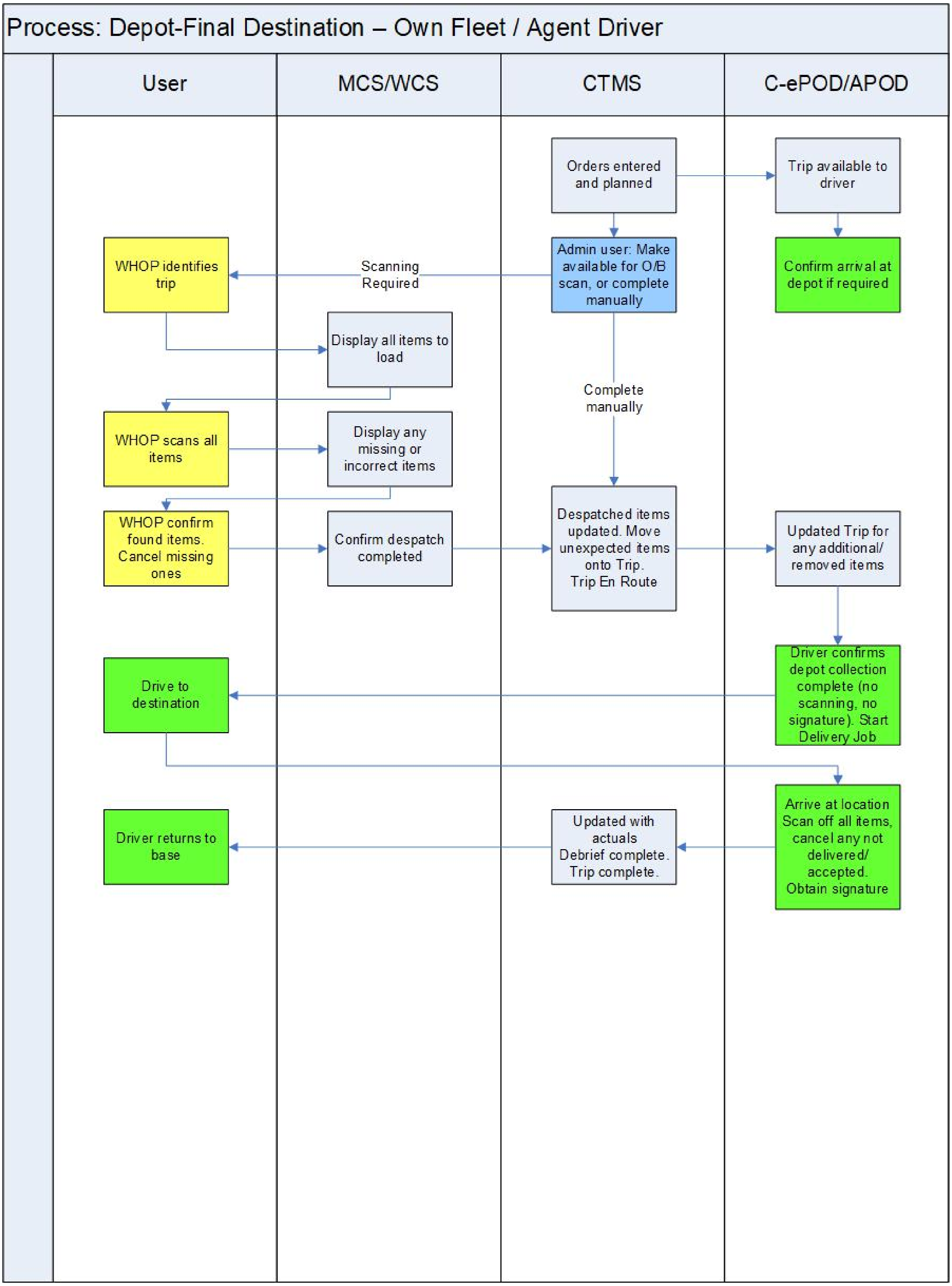

Process: Source-Destination (Direct) – 3rd-party Carrier
User
MCS/WCS
CTMS
C-ePOD/APOD
Orders entered and planned
Admin user: Inform 3rd-party carrier (Manifest Report) Trip En Route
3rd-party driver completes collection
3rd-party driver completes delivery
Driver returns to base
Admin user: Debrief 3rd-party carrier driver.
Update with actuals Debrief complete. Trip complete.

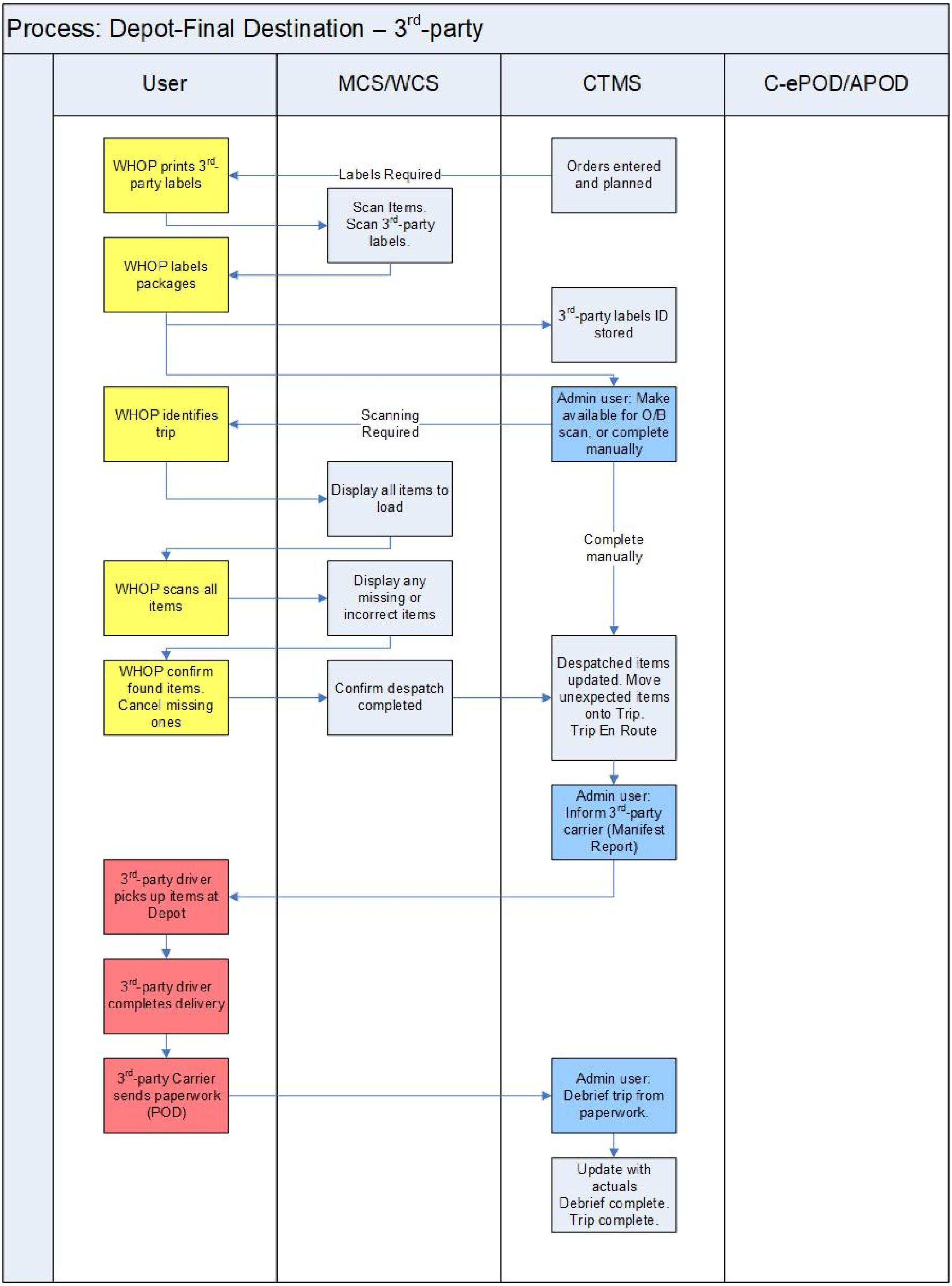
6.1.1.2 Source-Depot


Process: Source-Depot – Own Fleet / Agent Driver
User
MCS/WCS
CTMS
C-ePOD/APOD
Driver logs on to system
Orders entered and planned
Download Load. Display 2 jobs – Collect from Source and deliver to destination Start collection job
Drive to source location
Arrive at location Scan on all collected items, cancel any not collected. Obtain signature
Updated with actuals
Drive to Depot
Start delivery job
Arrive at location Confirm complete (no scanning, no signature).
Updated with actuals
WHOP identifies trip
Display all items to unload
WHOP scans all items
Display any missing or incorrect items
WHOP confirm found items. Cancel missing ones
Confirm receipt completed
Received items updated. Move unexpected items onto Trip. Debrief trip. Complete trip.


Process: Source-Depot – Supplier / 3rd-party
User
MCS/WCS
CTMS
C-ePOD/APOD
3rd-party driver collects items and brings to depot
Orders entered and planned
WHOP identifies trip
Admin user: Update with arrival
Display all items to unload
WHOP scans all items
Display any missing or incorrect items
WHOP confirm found items. Cancel missing ones
Confirm receipt completed
Received items updated. Move unexpected items onto Trip. Debrief trip. Complete trip.

6.1.1.3 Depot-Destination


Process: Depot-Final Destination – Own Fleet / Agent Driver
User
MCS/WCS
CTMS
C-ePOD/APOD
Orders entered and planned
Trip available to driver
WHOP identifies trip
Scanning Required
Admin user: Make available for O/B scan, or complete manually
Confirm arrival at depot if required
Display all items to load
Complete manually
WHOP scans all items
Display any missing or incorrect items
WHOP confirm found items. Cancel missing ones
Confirm despatch completed
Despatched items updated. Move unexpected items onto Trip. Trip En Route
Updated Trip for any additional/ removed items
Drive to destination
Driver confirms depot collection complete (no scanning, no signature). Start Delivery Job
Driver returns to base
Updated with actuals Debrief complete. Trip complete.
Arrive at location Scan off all items, cancel any not delivered/ accepted. Obtain signature

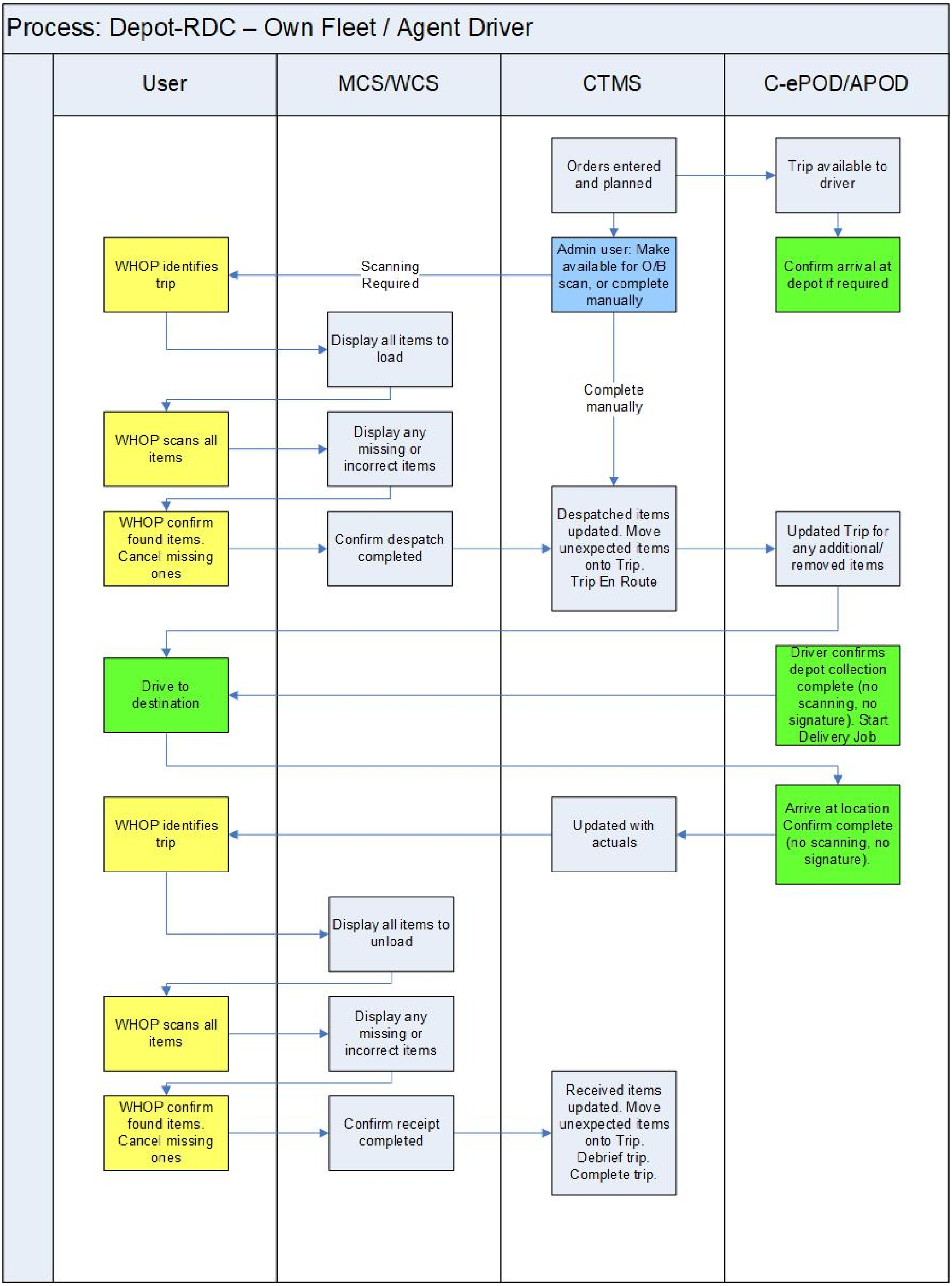

Process: Depot-Final Destination – 3rd-party
User
MCS/WCS
CTMS
C-ePOD/APOD
Orders entered and planned
Labels Required
WHOP prints 3rd-party labels
Scan Items. Scan 3rd-party labels.
WHOP labels packages
3rd-party labels ID stored
Admin user: Make available for O/B scan, or complete manually
Scanning Required
WHOP identifies trip
Display all items to load
Complete manually
WHOP scans all items
Display any missing or incorrect items
WHOP confirm found items. Cancel missing ones
Confirm despatch completed
Despatched items updated. Move unexpected items onto Trip. Trip En Route
Admin user: Inform 3rd-party carrier (Manifest Report)
3rd-party driver picks up items at Depot
3rd-party driver completes delivery
3rd-party Carrier sends paperwork (POD)
Admin user: Debrief trip from paperwork.
Update with actuals Debrief complete. Trip complete.

Notes:

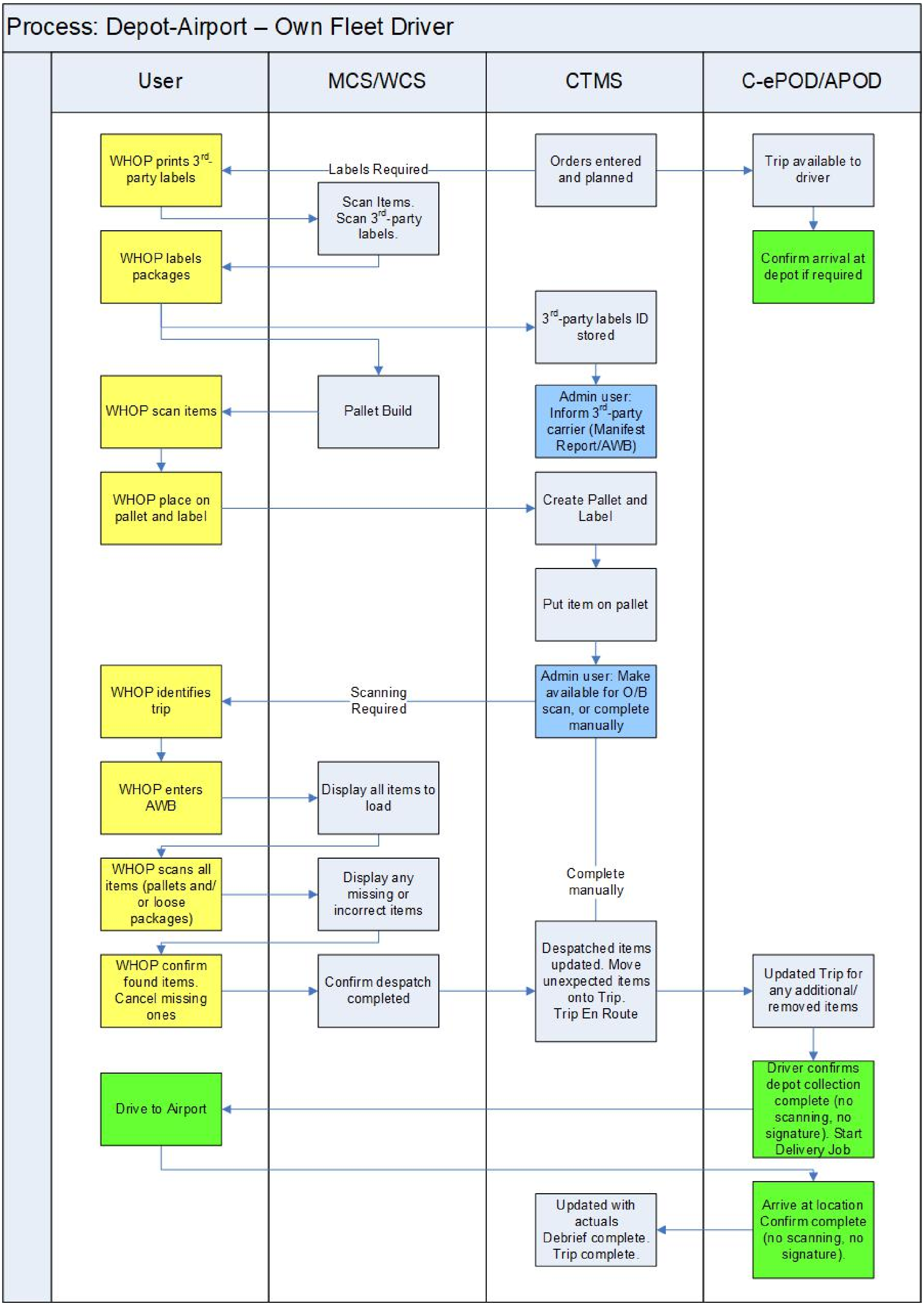
- This process includes a transit job to come to the depot to collect the order, if required.
- The process Agent Depot-Destination is identical to this process.

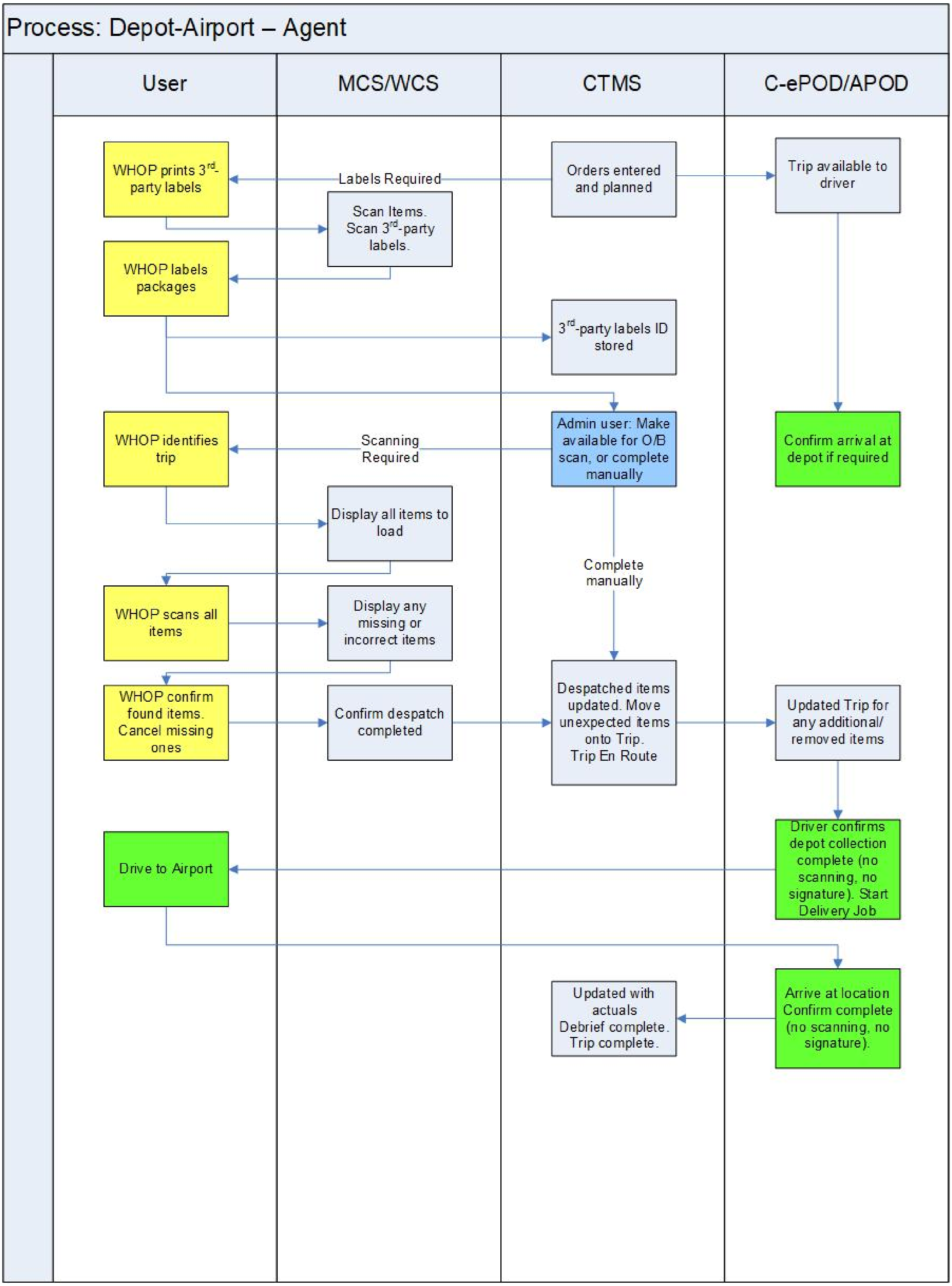
- The process Depot-3rd-party Carrier depot is identical to this process, if executed by an Own Fleet Driver or Agent.

6.1.1.4 Depot-RDC

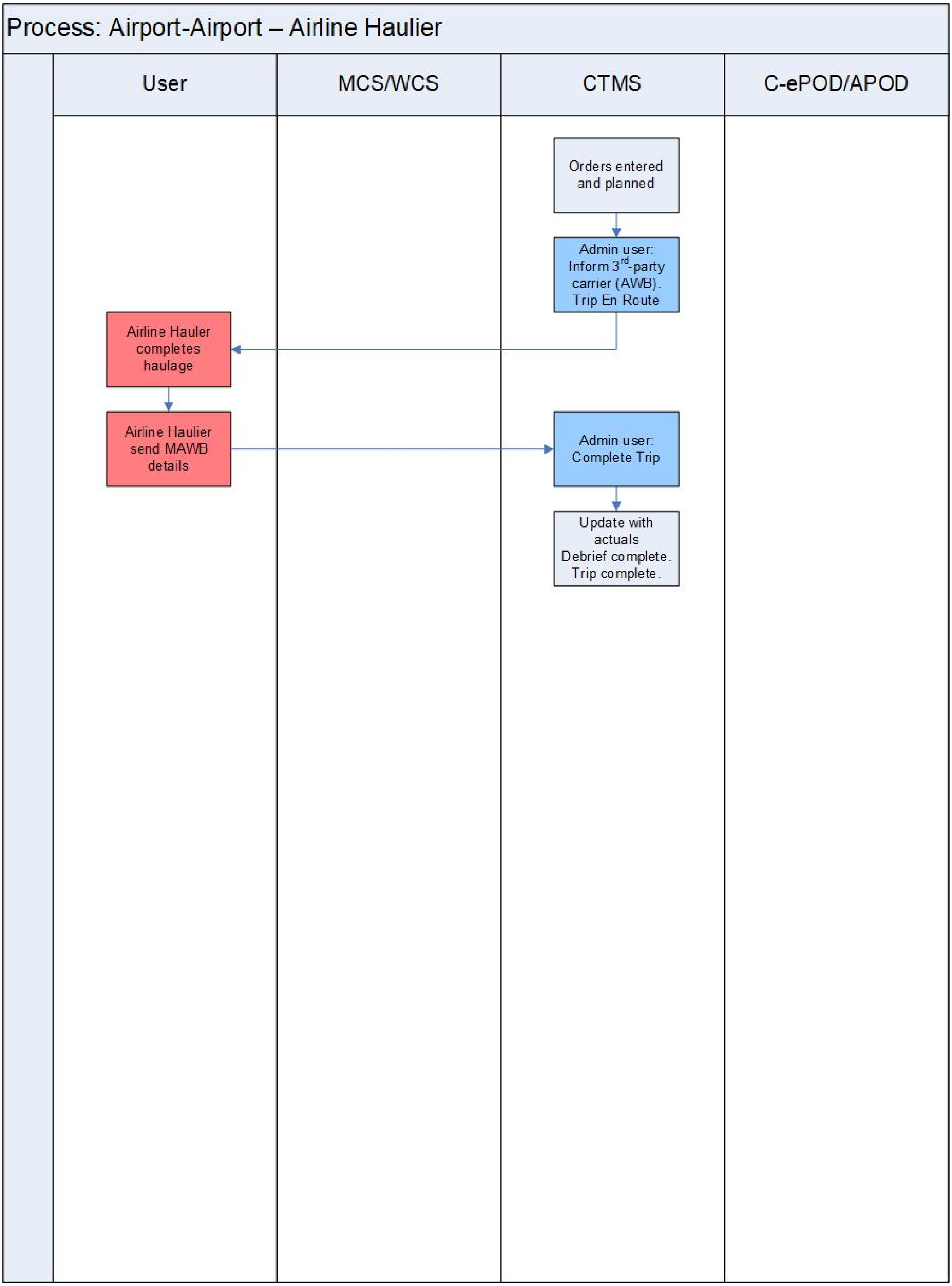

Process: Depot-RDC – Own Fleet / Agent Driver
User
MCS/WCS
CTMS
C-ePOD/APOD
Orders entered and planned
Trip available to driver
WHOP identifies trip
Scanning Required
Admin user: Make available for O/B scan, or complete manually
Confirm arrival at depot if required
Display all items to load
Complete manually
WHOP scans all items
Display any missing or incorrect items
WHOP confirm found items. Cancel missing ones
Confirm despatch completed
Despatched items updated. Move unexpected items onto Trip. Trip En Route
Updated Trip for any additional/ removed items
Drive to destination
Driver confirms depot collection complete (no scanning, no signature). Start Delivery Job
WHOP identifies trip
Updated with actuals
Arrive at location Confirm complete (no scanning, no signature).
Display all items to unload
WHOP scans all items
Display any missing or incorrect items
WHOP confirm found items. Cancel missing ones
Confirm receipt completed
Received items updated. Move unexpected items onto Trip. Debrief trip. Complete trip.

6.1.1.5 Depot-Airport1


Process: Depot-Airport – Own Fleet Driver
User
MCS/WCS
CTMS
C-ePOD/APOD
WHOP prints 3rd-party labels
Labels Required
Orders entered and planned
Trip available to driver
Scan Items. Scan 3rd-party labels.
Confirm arrival at depot if required
WHOP labels packages
3rd-party labels ID stored
Admin user: Inform 3rd-party carrier (Manifest Report/AWB)
WHOP scan items
Pallet Build
WHOP place on pallet and label
Create Pallet and Label
Put item on pallet
WHOP identifies trip
Scanning Required
Admin user: Make available for O/B scan, or complete manually
WHOP enters AWB
Display all items to load
WHOP scans all items (pallets and/ or loose packages)
Display any missing or incorrect items
Complete manually
WHOP confirm found items. Cancel missing ones
Confirm despatch completed
Despatched items updated. Move unexpected items onto Trip. Trip En Route
Updated Trip for any additional/ removed items
Drive to Airport
Driver confirms depot collection complete (no scanning, no signature). Start Delivery Job
Updated with actuals Debrief complete. Trip complete.
Arrive at location Confirm complete (no scanning, no signature).


Process: Depot-Airport – Agent
User
MCS/WCS
CTMS
C-ePOD/APOD
WHOP prints 3rd-party labels
Labels Required
Orders entered and planned
Trip available to driver
Scan Items. Scan 3rd-party labels.
WHOP labels packages
3rd-party labels ID stored
WHOP identifies trip
Scanning Required
Admin user: Make available for O/B scan, or complete manually
Confirm arrival at depot if required
Display all items to load
Complete manually
WHOP scans all items
Display any missing or incorrect items
WHOP confirm found items. Cancel missing ones
Confirm despatch completed
Despatched items updated. Move unexpected items onto Trip. Trip En Route
Updated Trip for any additional/ removed items
Driver confirms depot collection complete (no scanning, no signature). Start Delivery Job
Drive to Airport
Updated with actuals Debrief complete. Trip complete.
Arrive at location Confirm complete (no scanning, no signature).

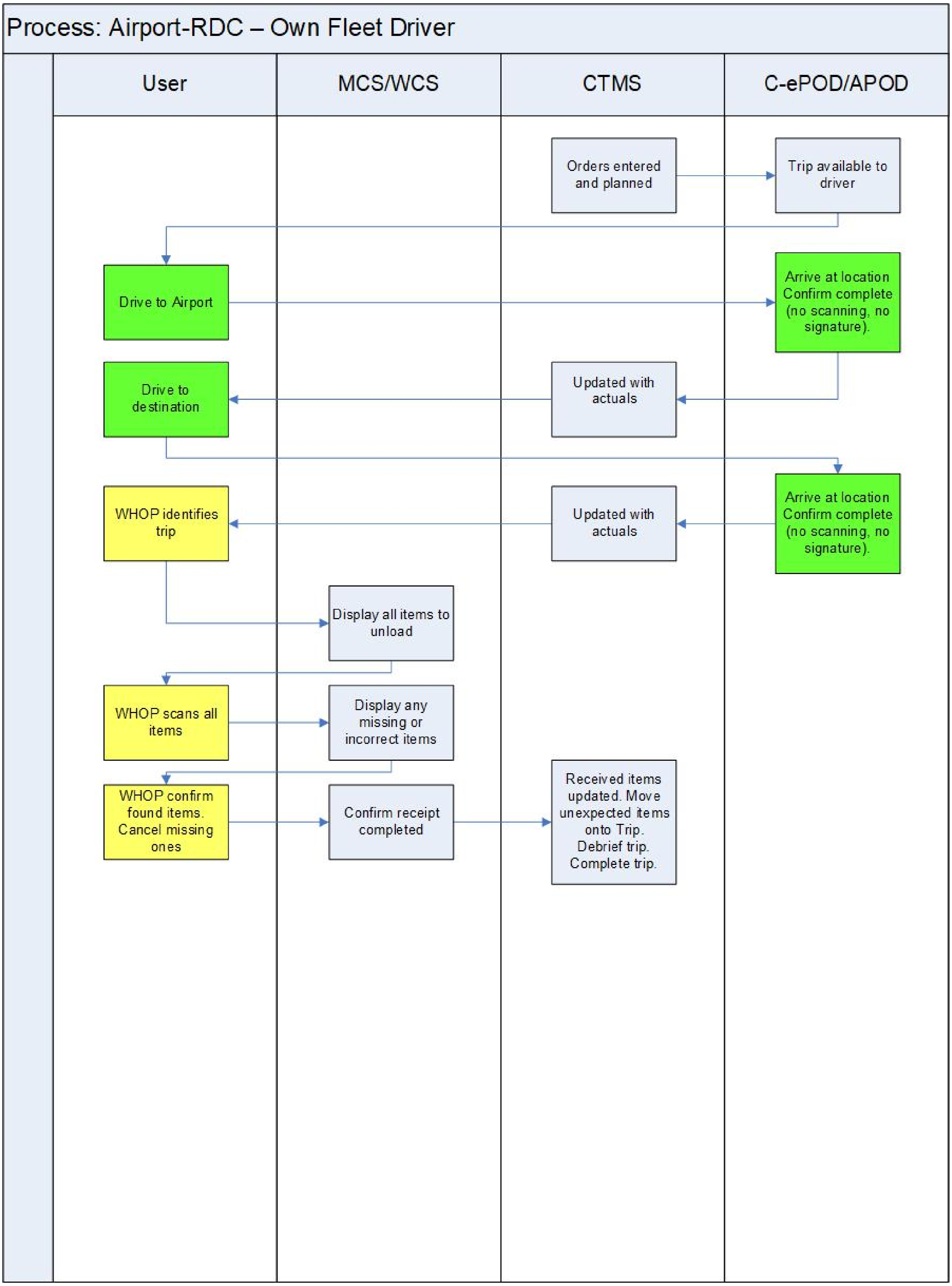
6.1.1.6 Airport1-Airport2


Process: Airport-Airport – Airline Haulier
User
MCS/WCS
CTMS
C-ePOD/APOD
Orders entered and planned
Admin user: Inform 3rd-party carrier (AWB). Trip En Route
Airline Hauler completes haulage
Airline Haulier send MAWB details
Admin user: Complete Trip
Update with actuals Debrief complete. Trip complete.

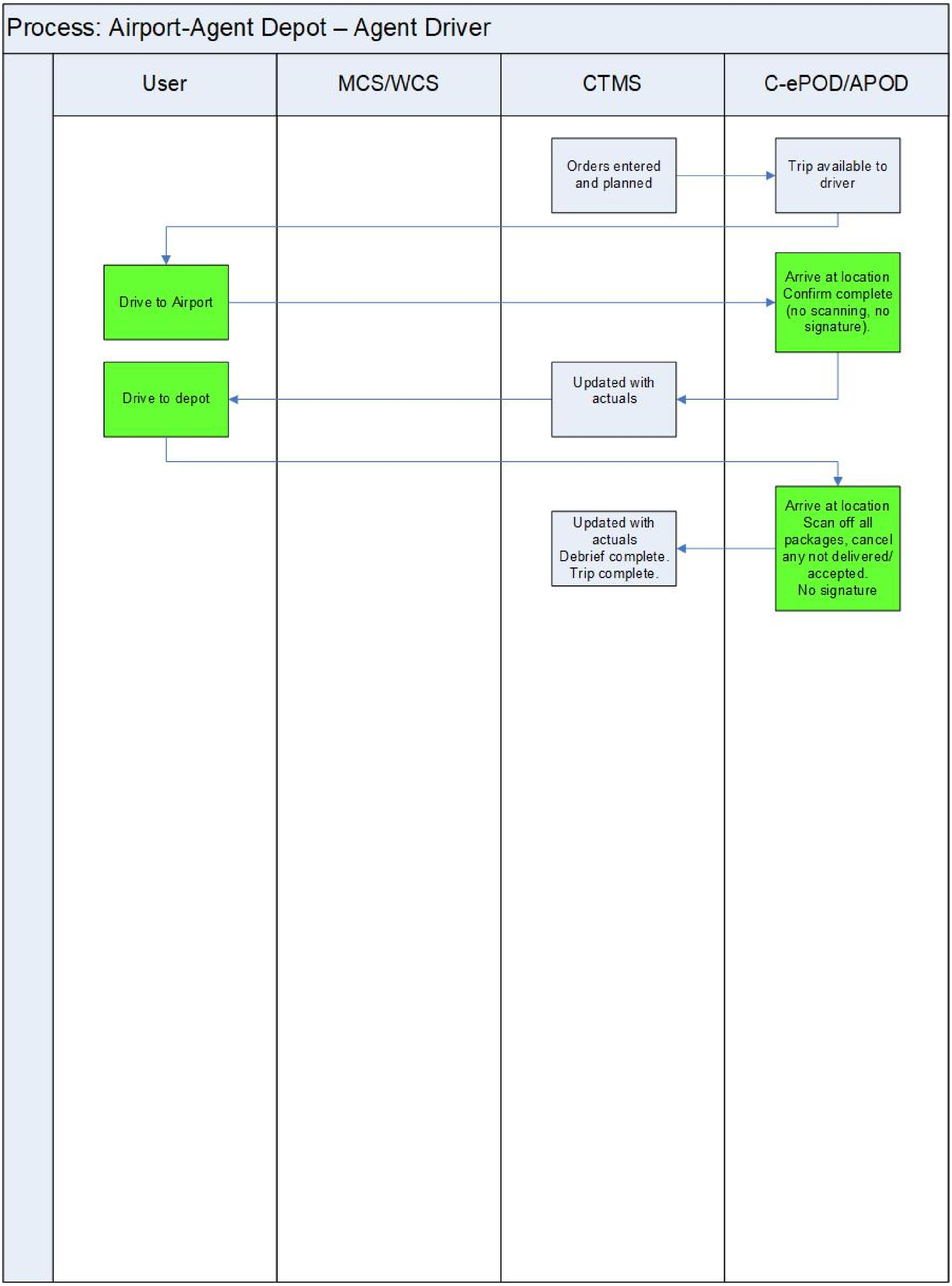
Notes:

- 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.

6.1.1.7 Airport2-RDC


Process: Airport-RDC – Own Fleet Driver
User
MCS/WCS
CTMS
C-ePOD/APOD
Orders entered and planned
Trip available to driver
Drive to Airport
Arrive at location Confirm complete (no scanning, no signature).
Drive to destination
Updated with actuals
WHOP identifies trip
Updated with actuals
Arrive at location Confirm complete (no scanning, no signature).
Display all items to unload
WHOP scans all items
Display any missing or incorrect items
WHOP confirm found items. Cancel missing ones
Confirm receipt completed
Received items updated. Move unexpected items onto Trip. Debrief trip. Complete trip.

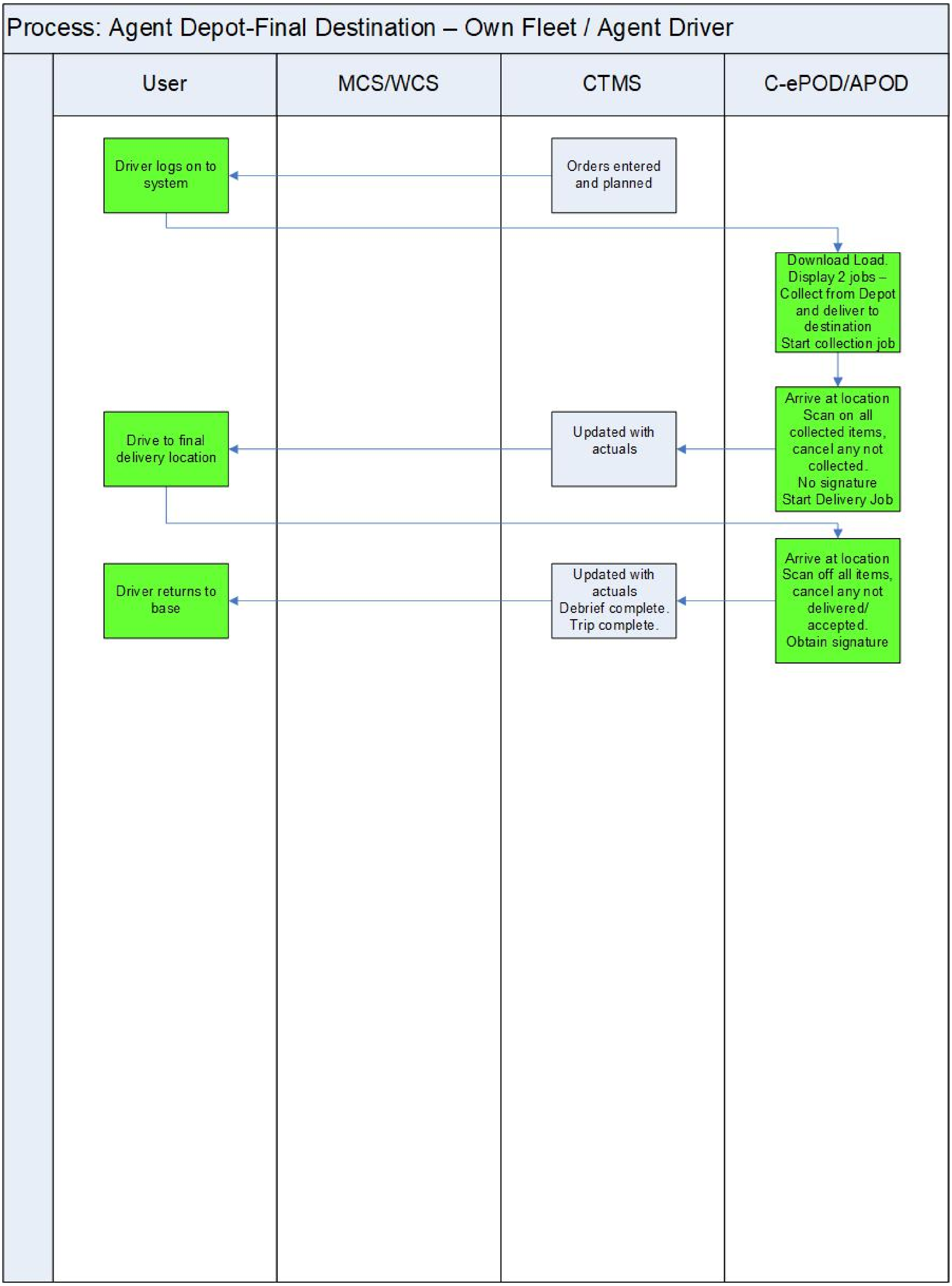
6.1.1.8 Airport2-AD


Process: Airport-Agent Depot – Agent Driver
User
MCS/WCS
CTMS
C-ePOD/APOD
Orders entered and planned
Trip available to driver
Drive to Airport
Arrive at location Confirm complete (no scanning, no signature).
Drive to depot
Updated with actuals
Arrive at location Scan off all packages, cancel any not delivered/ accepted. No signature
Updated with actuals Debrief complete. Trip complete.

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.

6.1.1.9 AD-Destination

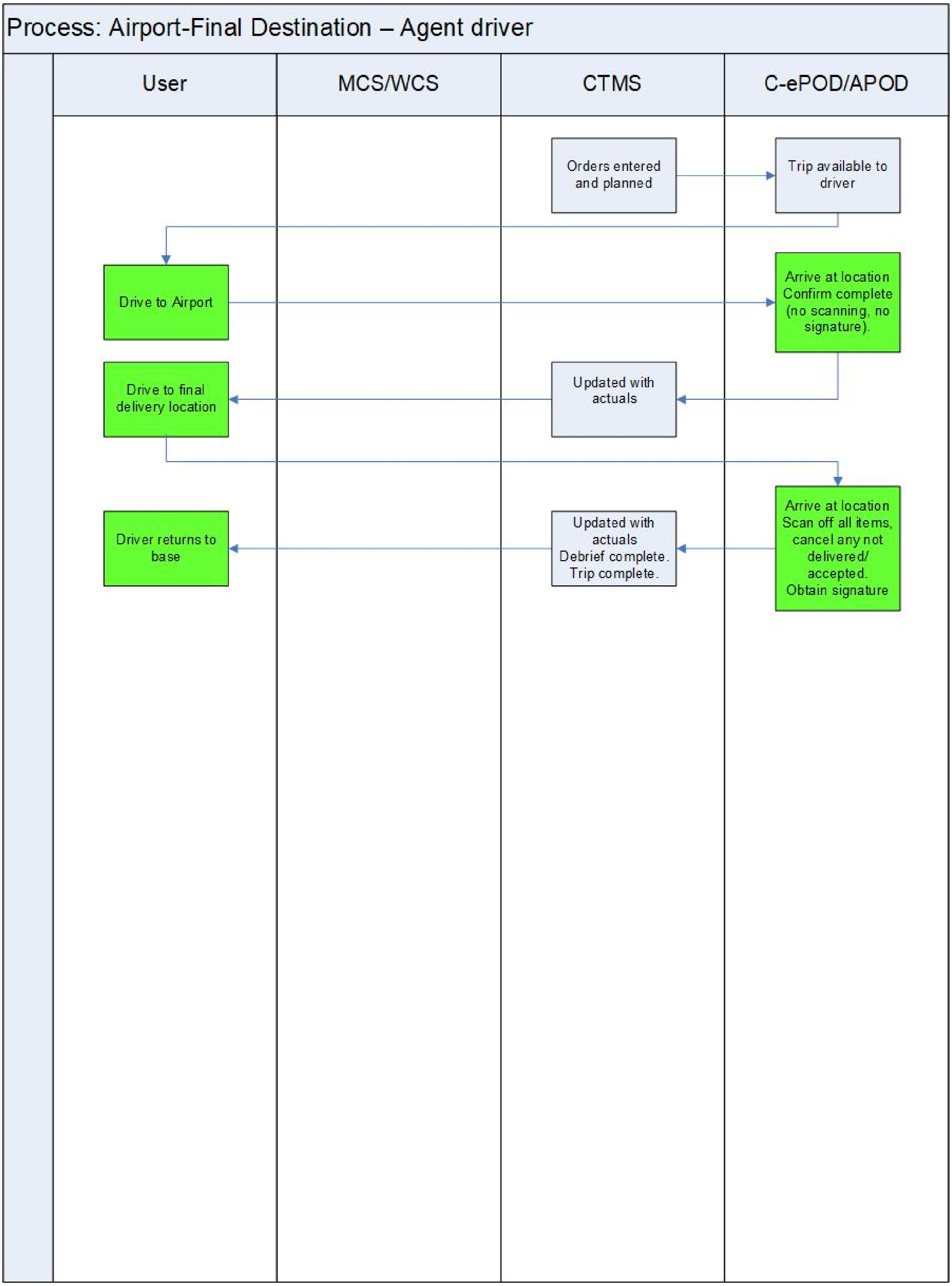

Process: Agent Depot-Final Destination – Own Fleet / Agent Driver
User
MCS/WCS
CTMS
C-ePOD/APOD
Driver logs on to system
Orders entered and planned
Download Load. Display 2 jobs – Collect from Depot and deliver to destination Start collection job
Drive to final delivery location
Updated with actuals
Arrive at location Scan on all collected items, cancel any not collected. No signature Start Delivery Job
Driver returns to base
Updated with actuals Debrief complete. Trip complete.
Arrive at location Scan off all items, cancel any not delivered/ accepted. Obtain signature

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.

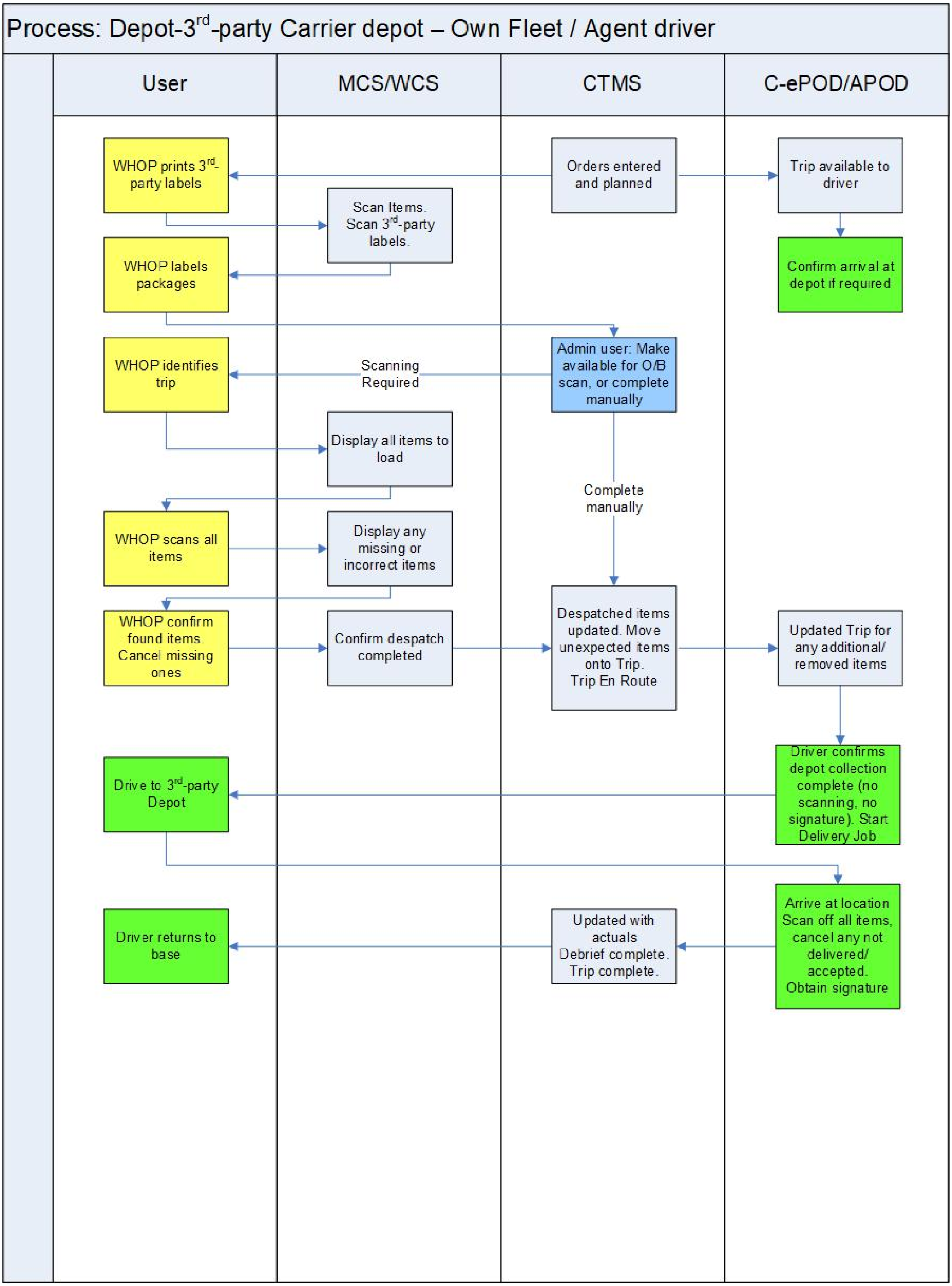
6.1.1.10 Airport2-Destination


Process: Airport-Final Destination – Agent driver
User
MCS/WCS
CTMS
C-ePOD/APOD
Orders entered and planned
Trip available to driver
Drive to Airport
Arrive at location Confirm complete (no scanning, no signature).
Drive to final delivery location
Updated with actuals
Arrive at location Scan off all items, cancel any not delivered/ accepted. Obtain signature
Driver returns to base
Updated with actuals Debrief complete. Trip complete.

Notes:

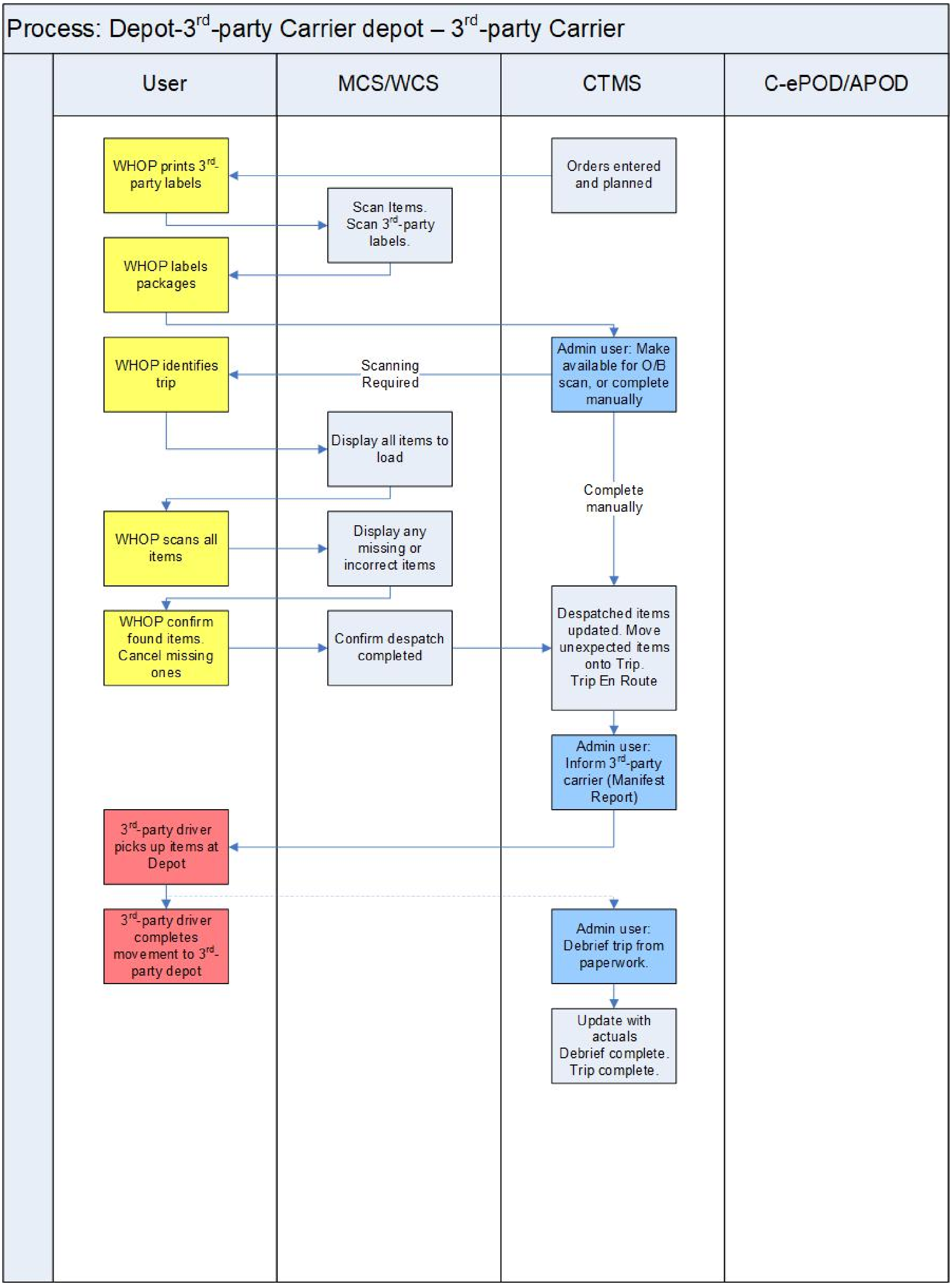
- This process assumes the agent is not using a depot for inbound movements, just routing them straight to final destination.
- In this case, EPOD is used to load the items without scanning, and then used to deliver directly to final destination - this is the process that is documented here.
- If the 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.

6.1.1.11 Depot-3rd-party Carrier


Process: Depot-3rd-party Carrier depot – Own Fleet / Agent driver
User
MCS/WCS
CTMS
C-ePOD/APOD
WHOP prints 3rd-party labels
Orders entered and planned
Trip available to driver
Scan Items. Scan 3rd-party labels.
WHOP labels packages
Confirm arrival at depot if required
WHOP identifies trip
Scanning Required
Admin user: Make available for O/B scan, or complete manually
Display all items to load
Complete manually
WHOP scans all items
Display any missing or incorrect items
WHOP confirm found items. Cancel missing ones
Confirm despatch completed
Despatched items updated. Move unexpected items onto Trip. Trip En Route
Updated Trip for any additional/ removed items
Driver confirms depot collection complete (no scanning, no signature). Start Delivery Job
Drive to 3rd-party Depot
Driver returns to base
Updated with actuals Debrief complete. Trip complete.
Arrive at location Scan off all items, cancel any not delivered/ accepted. Obtain signature

Notes:

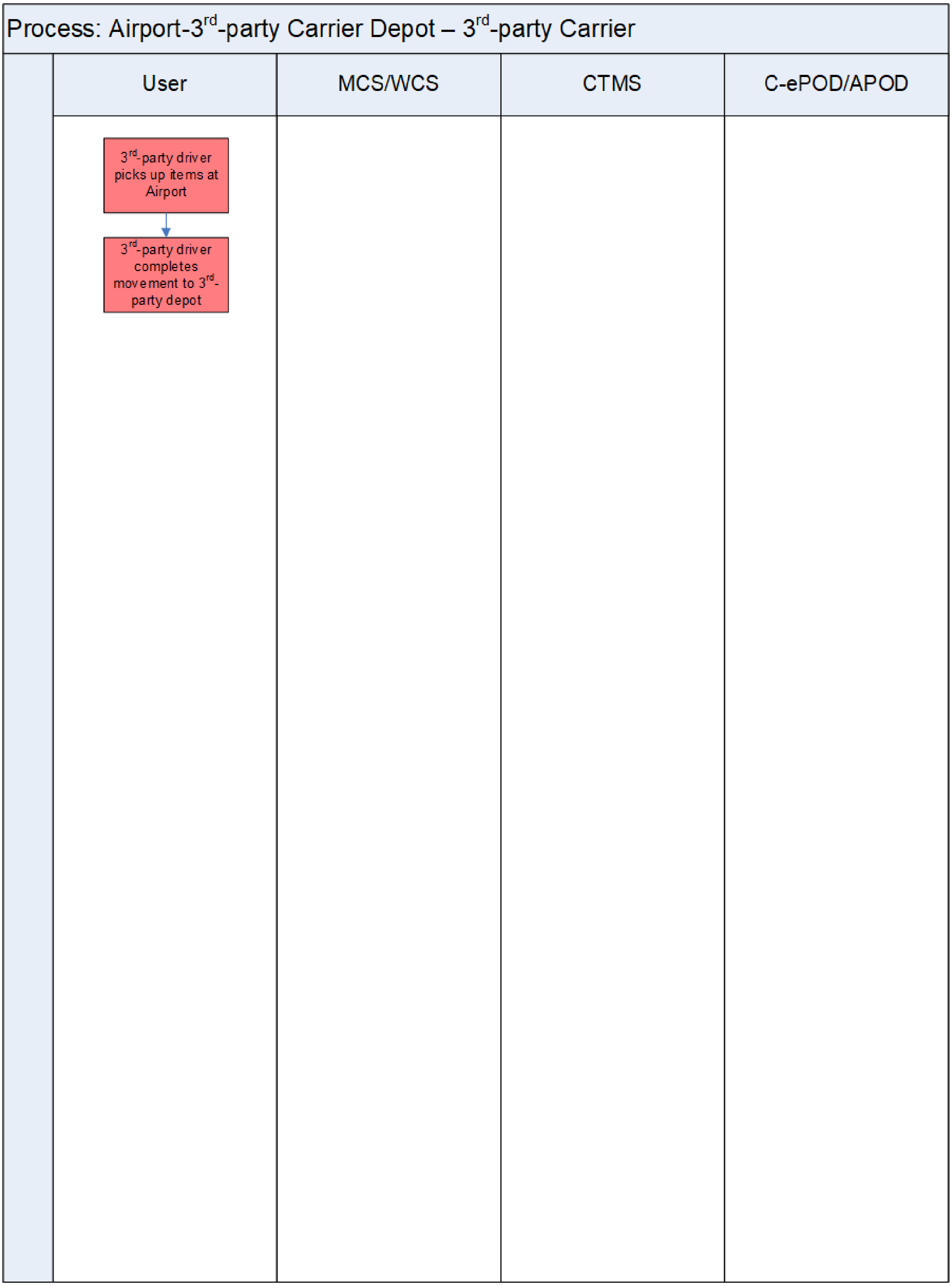
- This is a process covering trips being on-forwarded through a 3rd-party carrier depot, where the items are delivered to the 3rd-party depot by an Own Fleet or Agent driver.


Process: Depot-3rd-party Carrier depot – 3rd-party Carrier
User
MCS/WCS
CTMS
C-ePOD/APOD
Orders entered and planned
WHOP prints 3rd-party labels
Scan Items. Scan 3rd-party labels.
WHOP labels packages
Admin user: Make available for O/B scan, or complete manually
Scanning Required
WHOP identifies trip
Display all items to load
Complete manually
WHOP scans all items
Display any missing or incorrect items
WHOP confirm found items. Cancel missing ones
Confirm despatch completed
Despatched items updated. Move unexpected items onto Trip. Trip En Route
Admin user: Inform 3rd-party carrier (Manifest Report)
3rd-party driver picks up items at Depot
3rd-party driver completes movement to 3rd-party depot
Admin user: Debrief trip from paperwork.
Update with actuals Debrief complete. Trip complete.

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.

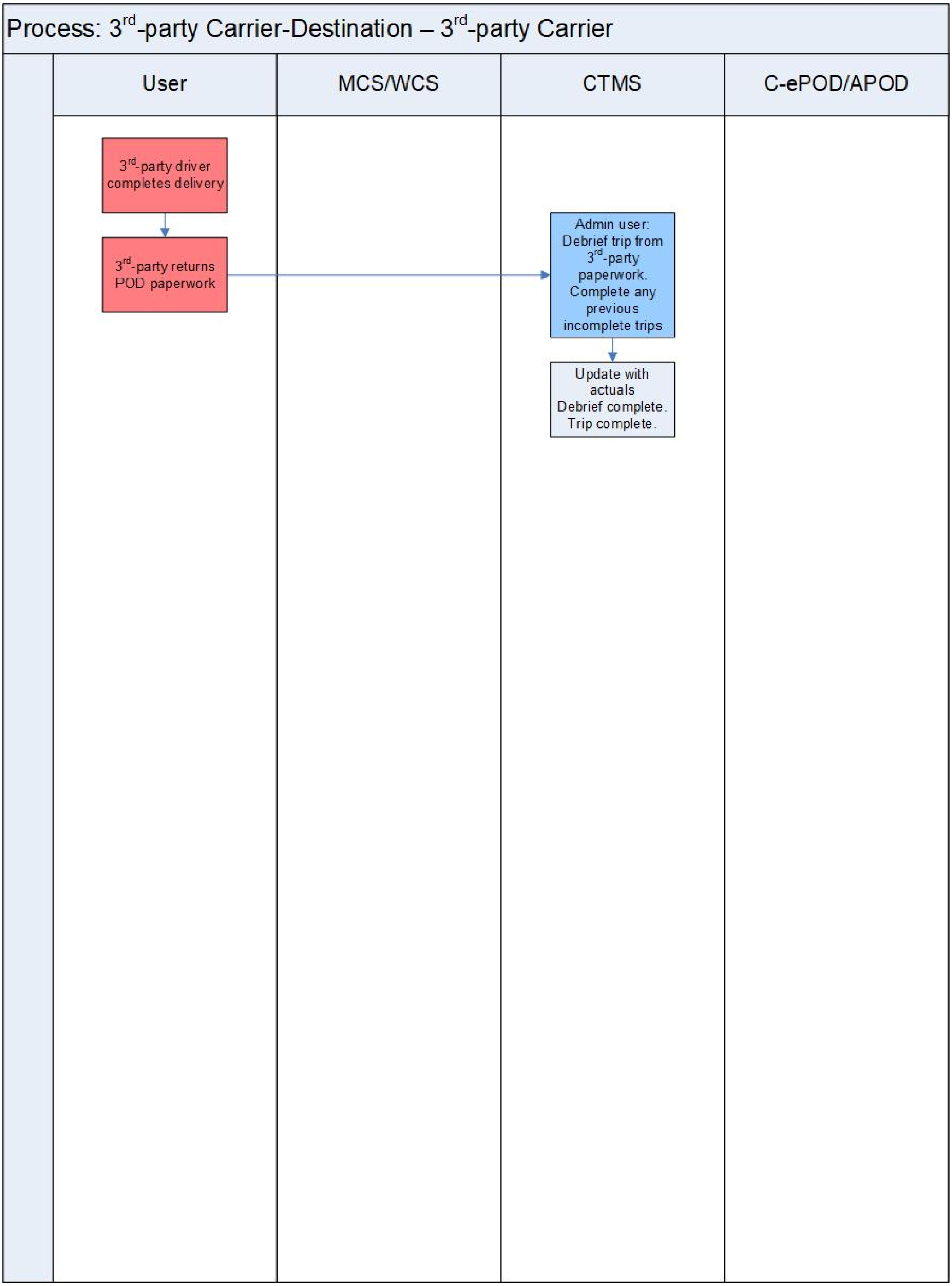
6.1.1.12 Airport2-3rd-party Carrier


Process: Airport-3rd-party Carrier Depot – 3rd-party Carrier
User
MCS/WCS
CTMS
C-ePOD/APOD
3rd-party driver picks up items at Airport
3rd-party driver completes movement to 3rd-party depot

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.

6.1.1.13 3rd-party Carrier-Destination


Process: 3rd-party Carrier-Destination – 3rd-party Carrier
User
MCS/WCS
CTMS
C-ePOD/APOD
3rd-party driver completes delivery
3rd-party returns POD paperwork
Admin user: Debrief trip from 3rd-party paperwork. Complete any previous incomplete trips
Update with actuals Debrief complete. Trip complete.