DYNUG

Dynamics 365 SCM Warehouse management

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Microsoft

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Warehouse management in D365 SCM

Agenda

- What’s new in 10.0.40
- About the workshop tomorrow
- Examples of customer use cases
- Warehouse management only mode
- Q&A

10.0.40 Warehouse management features

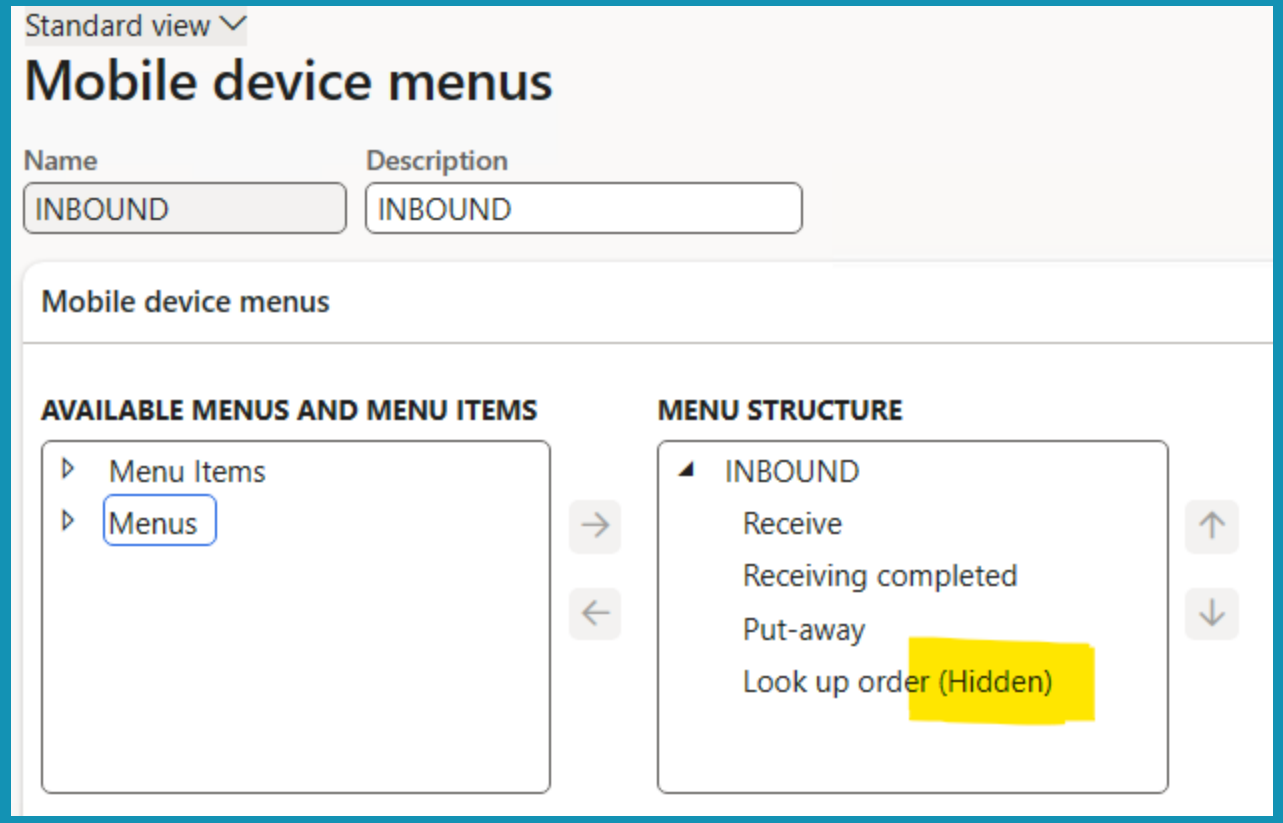
Not Warehouse management mobile app focused

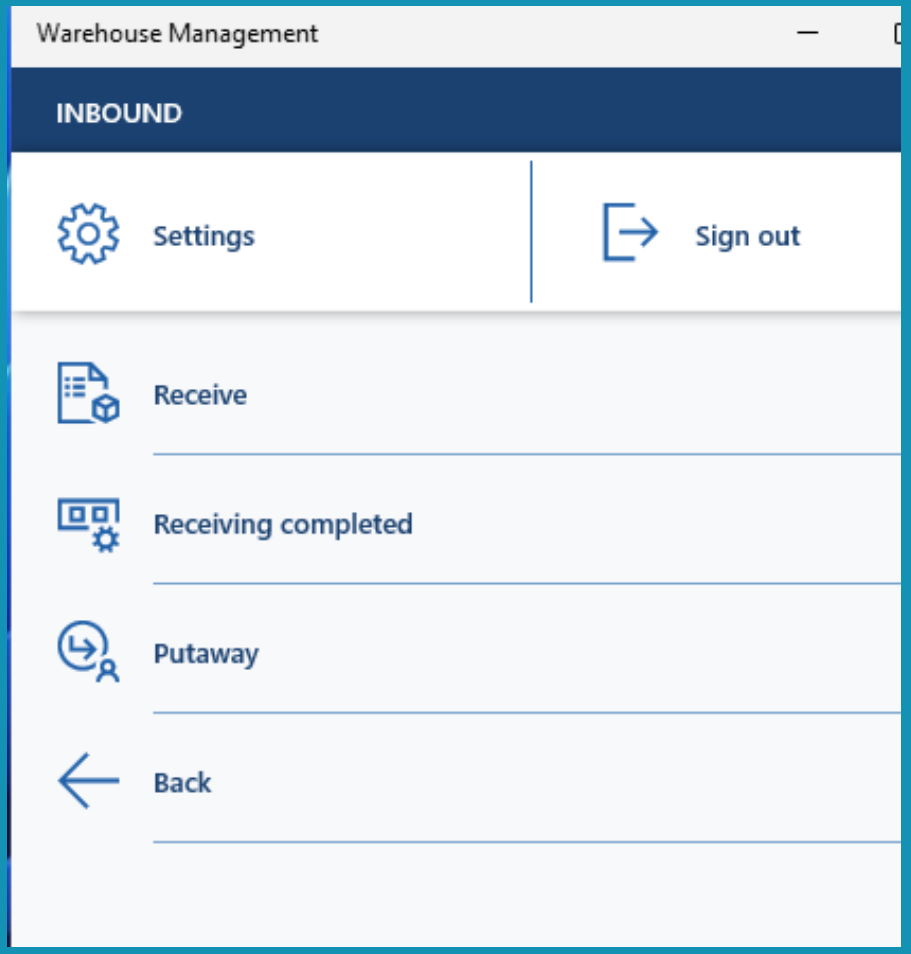
https://learn.microsoft.com/en-us/dynamics365/supply-chain/warehousing/whats-new-wma

Hide mobile device menu items in the menus

Warehouse management

Support for concealing your mobile device menu items from the mobile device menu layout.





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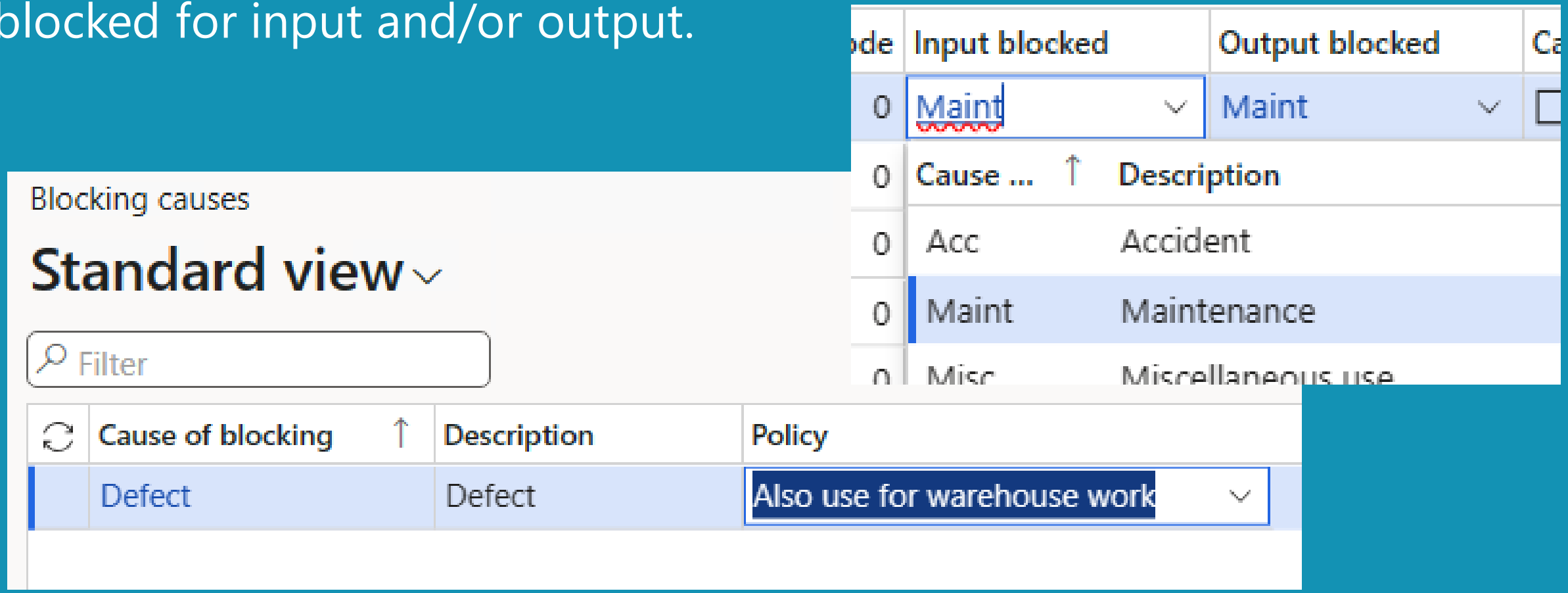
Location blocking causes policy

Warehouse management

New policy decides if warehouse work location processing should be blocked for input and/or output.



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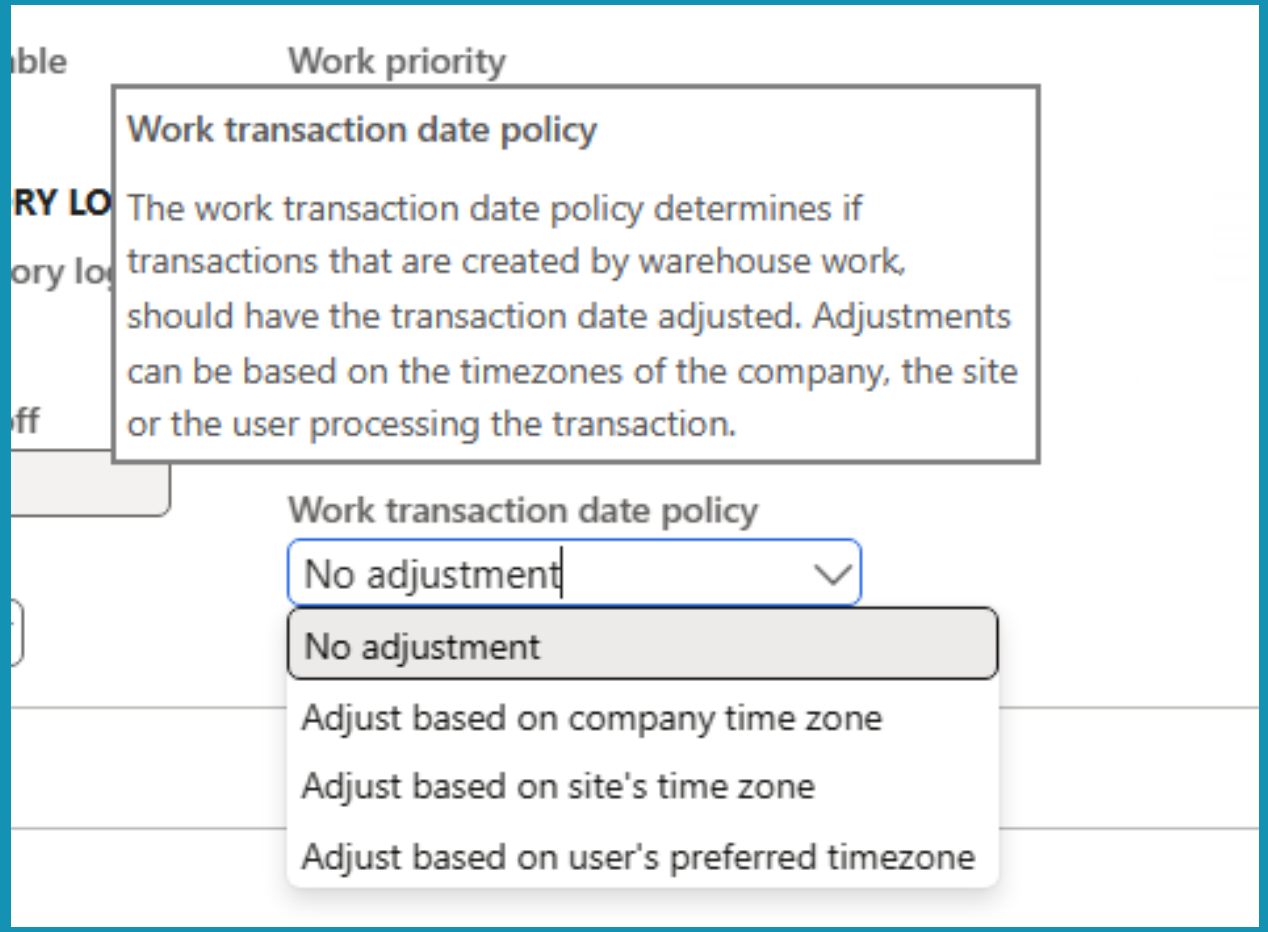
Work transaction date policy

Warehouse management

Warehouse work transaction dates adjusted to a different time zone than the one used by the system.



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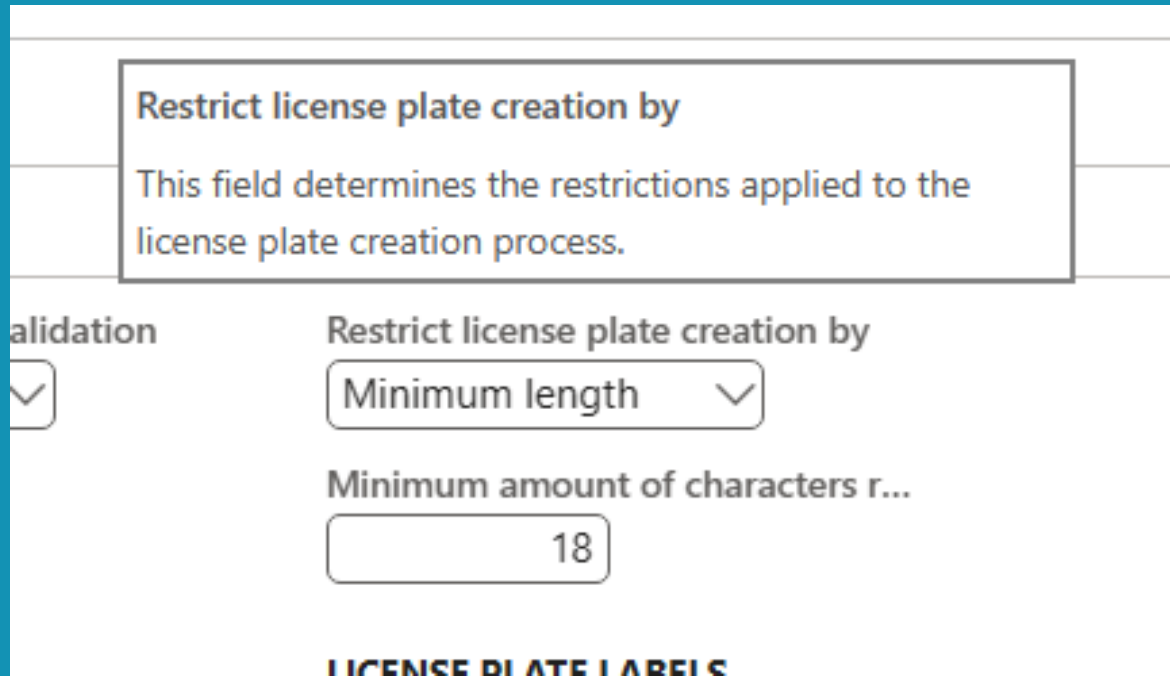
Minimum amount of characters required for license plate numbers

Warehouse management

Prevention of creation of license plate Ids that are too short. This can help avoid the error of scanning a location barcode instead of a license plate barcode by a warehouse worker.



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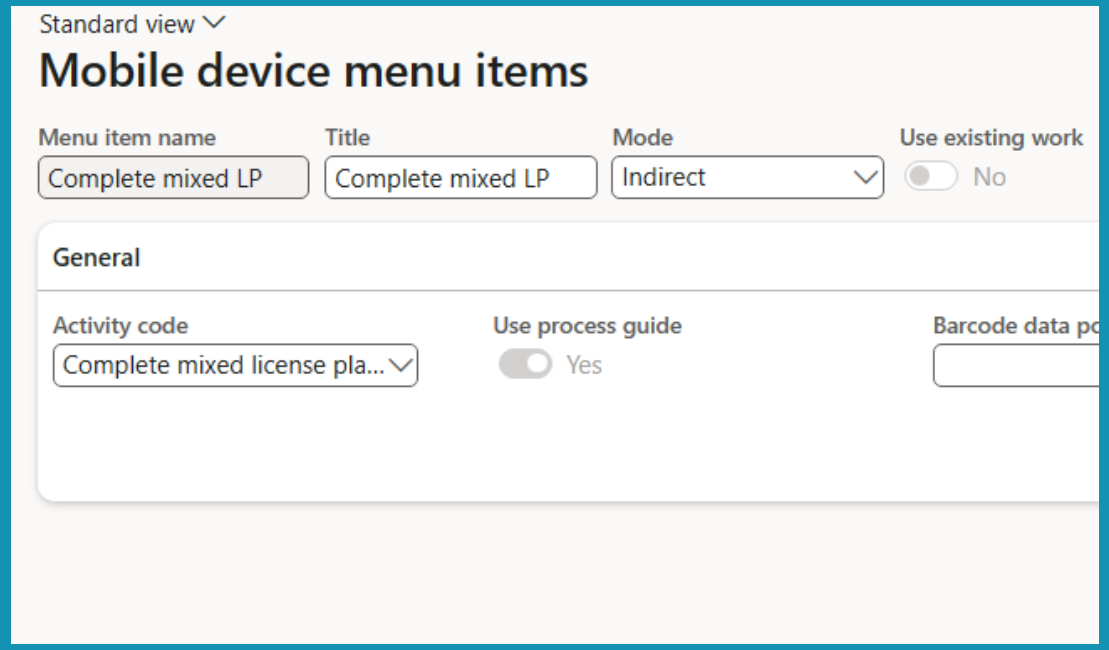
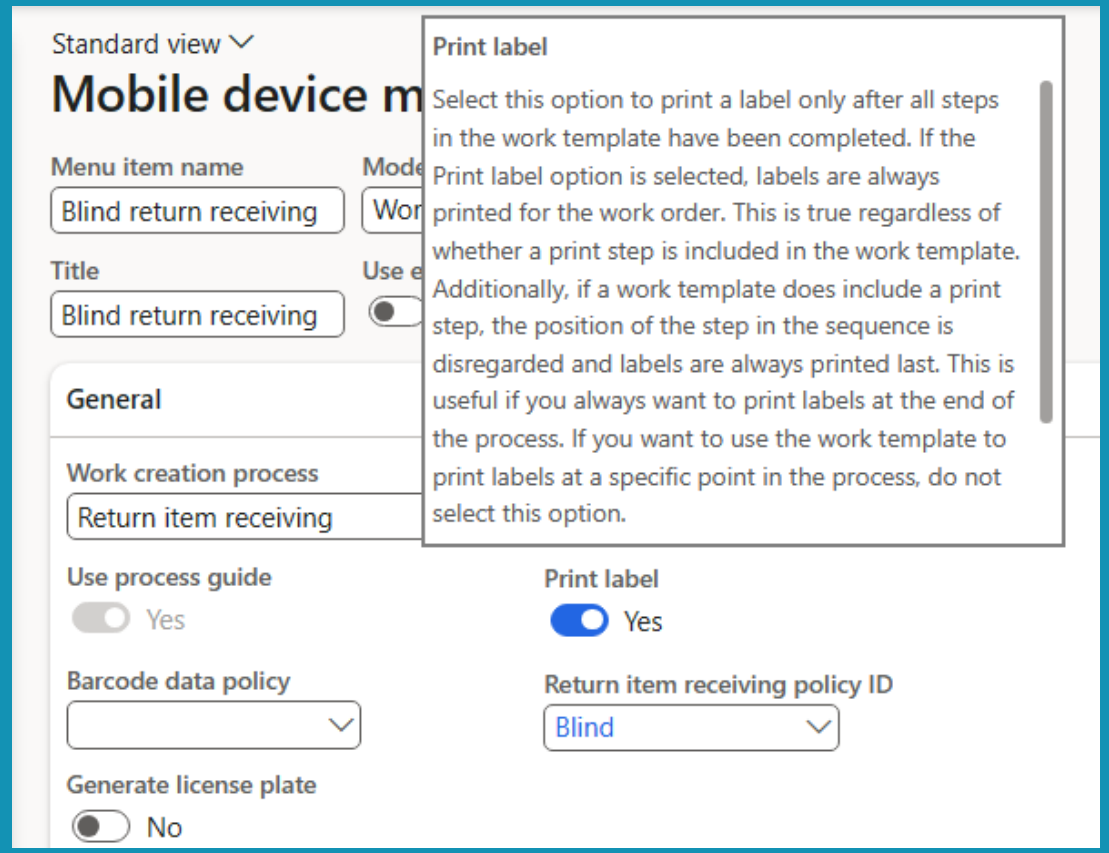
Enhancements to the customer return process

Warehouse management

- “Complete mixed license plate” menu item
- Keeping the captured license plate number as part of the process
- “Print label” support





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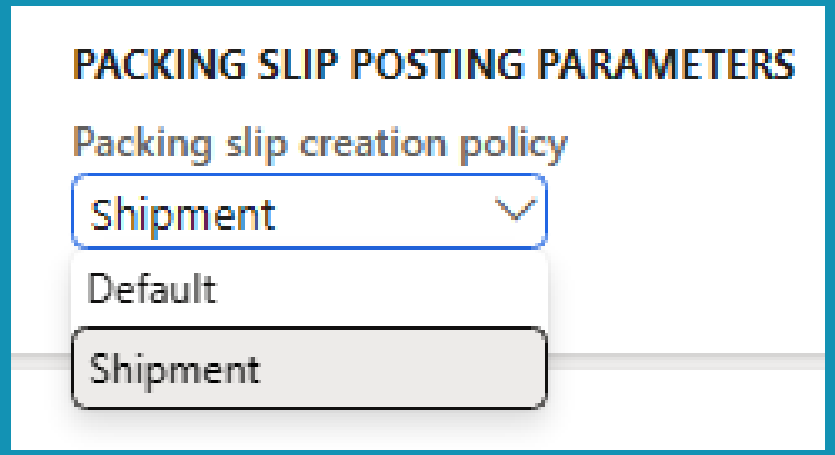
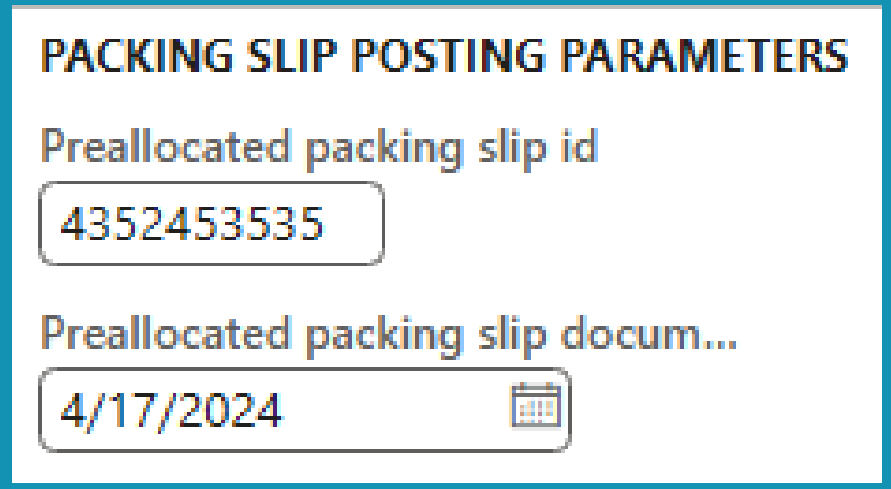
Split sales packing slip posting per shipment

Warehouse management – Extension prepared

When using external shared warehouse processing with Warehouse management only mode, the sales packing slips can be divided automatically by shipments. You can also use this feature without the Warehouse management only mode if you provide the required values for the outbound processing.





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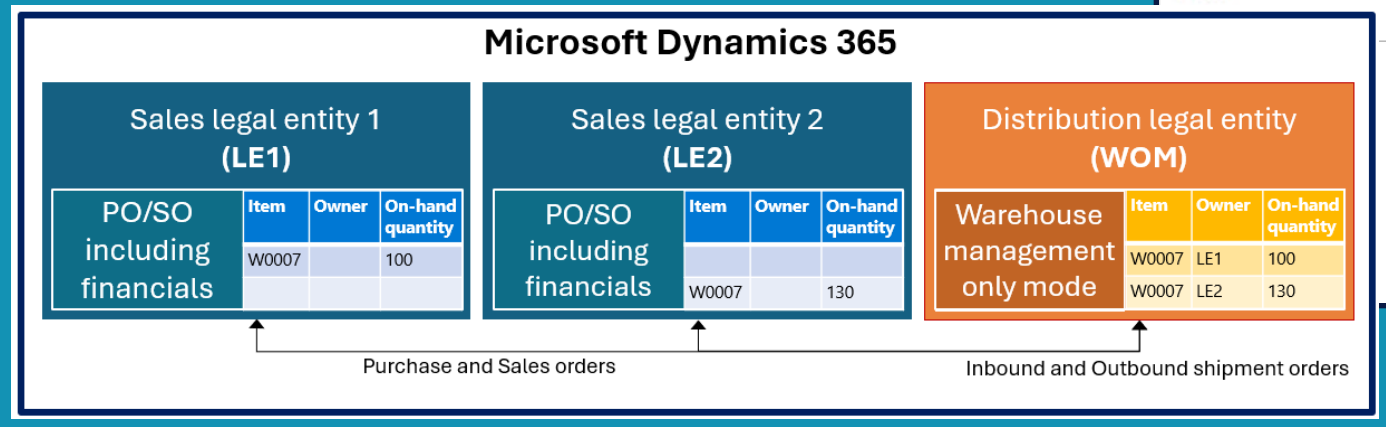
External shared warehouse processing

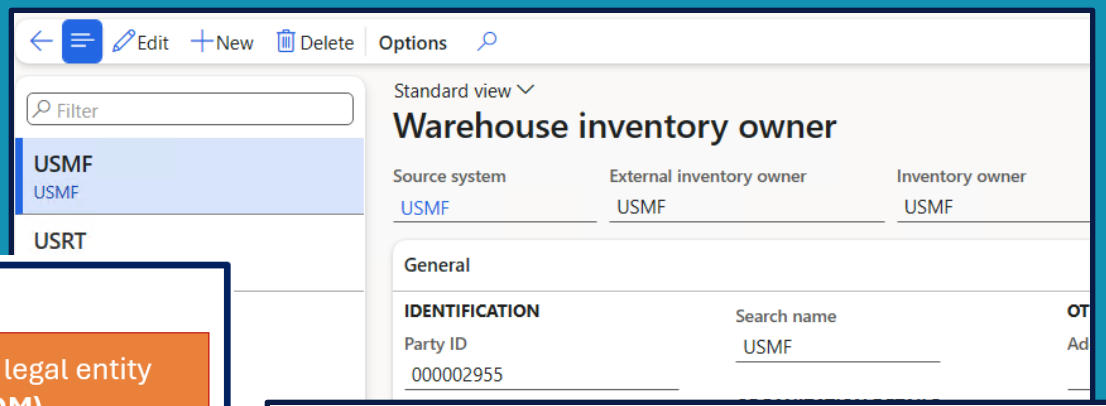
Warehouse management only mode – GA in 10.0.40

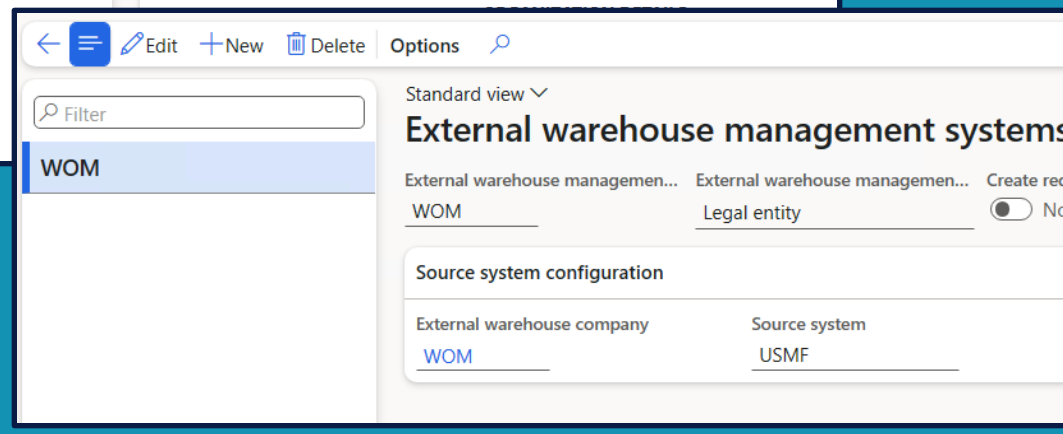
Support for running shared warehouse management processing in multiple legal entities including use of the owner dimension.

[WOM - External shared warehouse setup demo]

[WOM - External shared warehouse processing demo]







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Microsoft Dynamics 365

Warehouse management workshop

29-05-24 10:00 – 14:45

Per Lykke Lynnerup
Product manager
Microsoft

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Workshop agenda

Workshop with an introduction to Warehouse management only mode

- What is Warehouse Management Only Mode?
- Why is it important?
- Examples of customer use cases
- How does it work?
- License information
- Resources
- Q&A

Customer Examples

Warehouse management only mode has various applications.

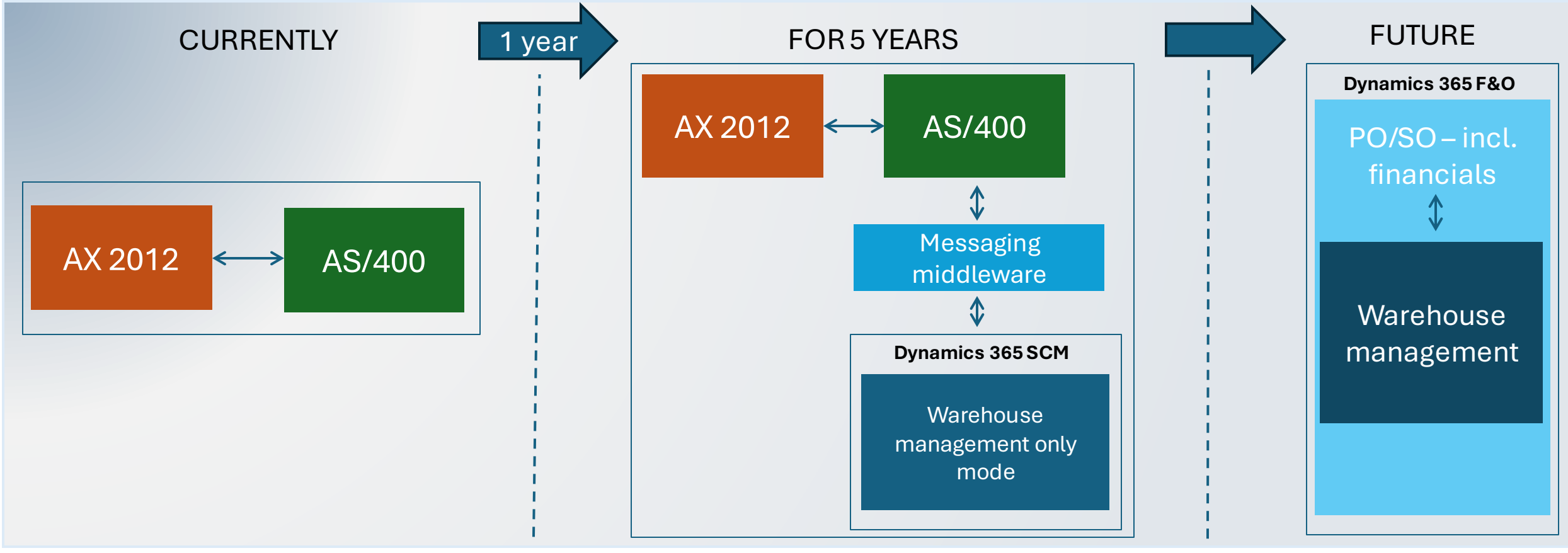
We can examine some of the customer interactions that the R&D product group has been involved with as samples of use cases.

Customer example #1: Classic standalone warehouse with non-D365 ERP

Warehouse management only mode with external ERP (as first step)

Customer situation: In need for replacement of old warehouse management software solution.

The customer has for many years been running on AS/400 for fashion industry. Their plan is to use the Warehouse management only mode up against AS/400 for the next 5 years and then potentially replace AS/400 to Dynamics 365.
As a side note the customer runs other business processes using AX2012 without any warehouse management operations.



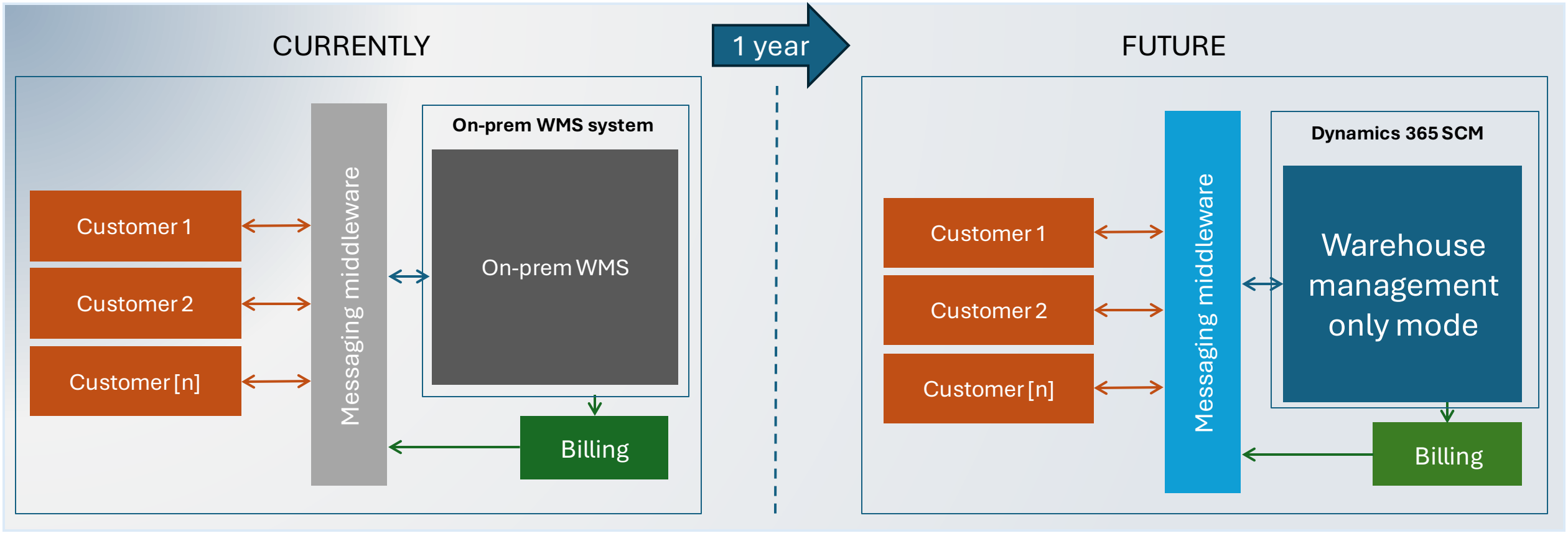
Customer example #2: 3PL use case

Warehouse management only mode for 3PL businesses

Customer situation: Replacement of old on-prem solution to new D365 cloud solution.

A 3PL company wants to use the new **Warehouse management only mode** capability for their customers to receive, store, and ship inventory.

For the past 18 years the customer has been using an on-prem platform and has previously been engaging in a non-Microsoft cloud migration which delivered suboptimal implementation experiences and was dismissed.



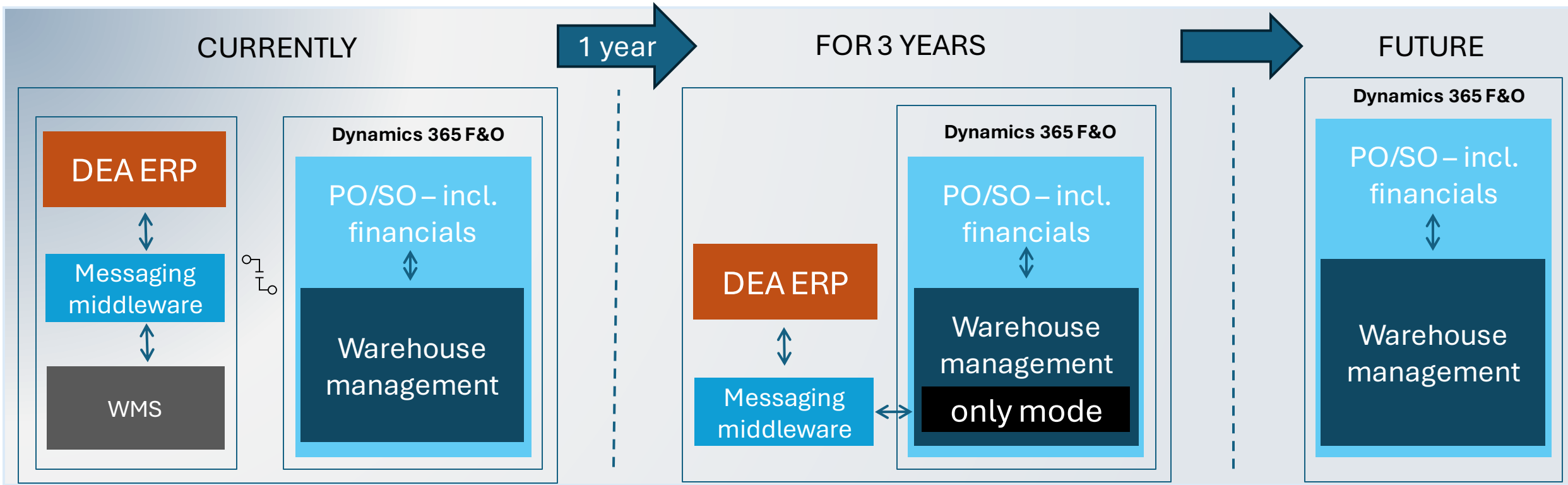
Customer example #3: Integrated and external operations

Warehouse management only mode with external ERP + integrated warehouse

Customer situation: Slowly migrate non-D365 ERP solution into D365 (Start by replacing a best-of-breed warehouse system).

An existing Microsoft Dynamics 365 F&O retail customer running with the "integrated" warehouse management solution. The customer has acquired a new brand, currently operating in own isolated ERP and warehouse solution.

Will use the new **Warehouse management only mode** capability to maintain inventory from the other business brand running within the existing operating D365 SCM warehouse.
The warehouse will handle existing purchase and sales order processes as well as new inbound and outbound shipment order processes using the same material handling equipment, workers, and devices.

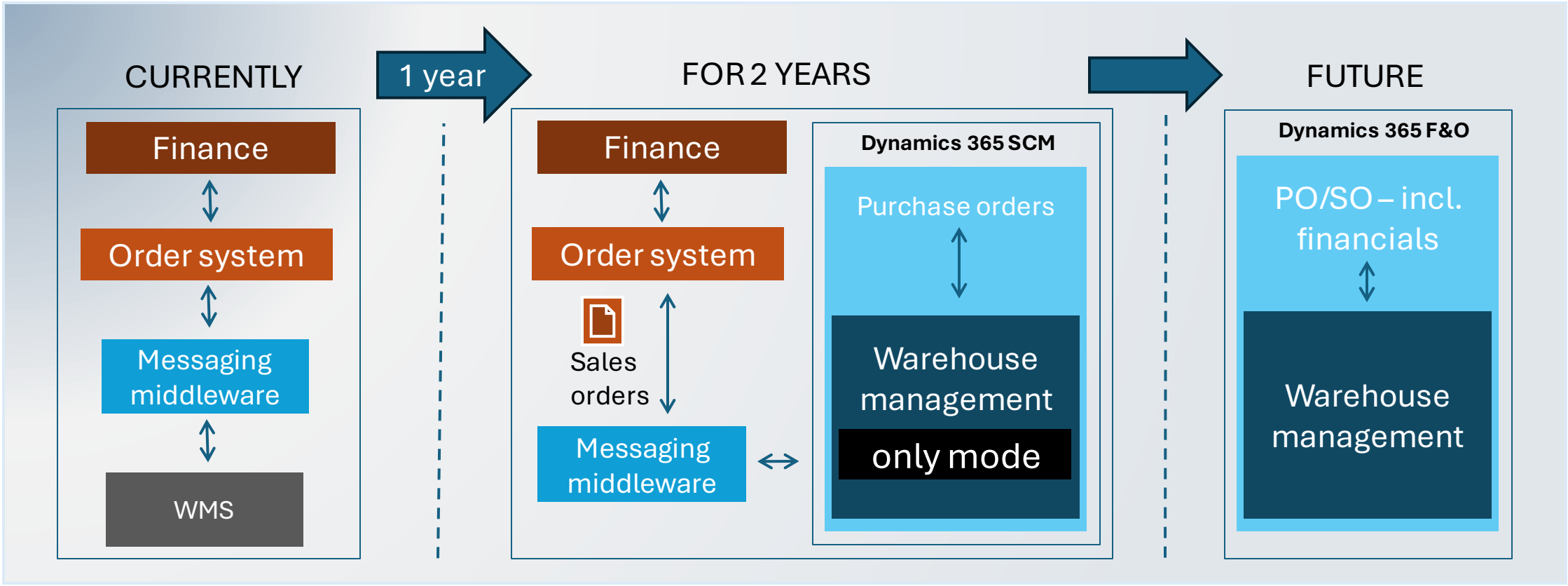


Customer example #4: Mix mode – Inbound / Outbound

Warehouse management only mode for outbound processing

Customer situation: Slowly migrate non-D365 ERP solution into D365 – Keeping outbound legacy order system processes

Customer will keep their legacy ERP/order system to handle all the outbound processing for some years and startup using purchase order processing and outbound shipment orders within the same warehouse for the same item numbers and using the same material handling equipment, workers, and devices.

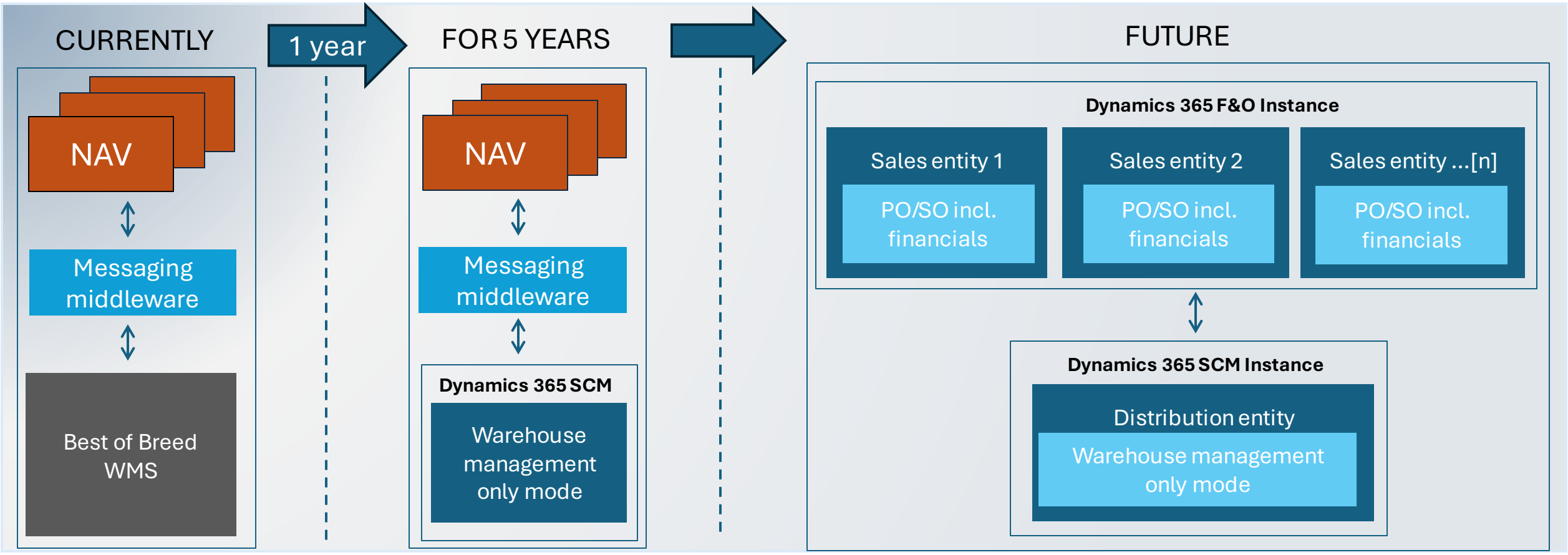


Customer example #5: External shared warehouse – multi-instance

Warehouse management only mode as 'External warehouse' - multiple instances

Customer situation: Slowly migrate non-D365 ERP solution into D365

Large company which will replace a best-of-bread warehouse implementation with the new **Warehouse management only mode** capability. Long term the warehouse will be running as a 'shared warehouse' implementation in own D365 SCM deployment, integrated with another Microsoft Dynamics D365 F&O deployment instance handling all their sales subsidiaries (legal entities) incl. processing with single SKU owned by several sales subsidiaries.



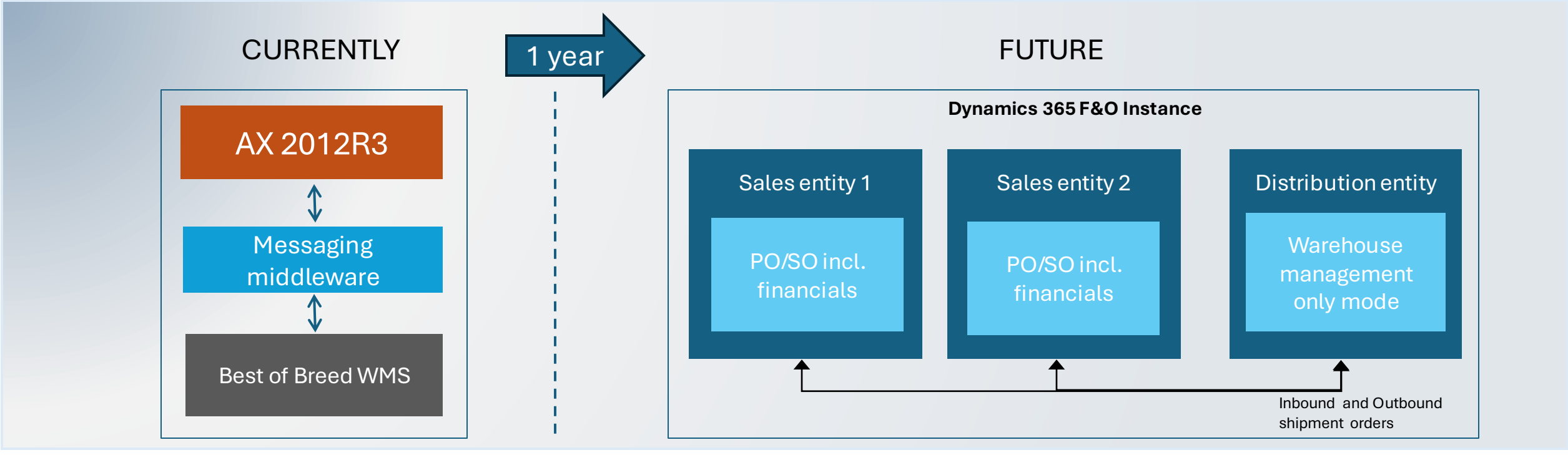
Customer example #6: Shared warehouse – single instance

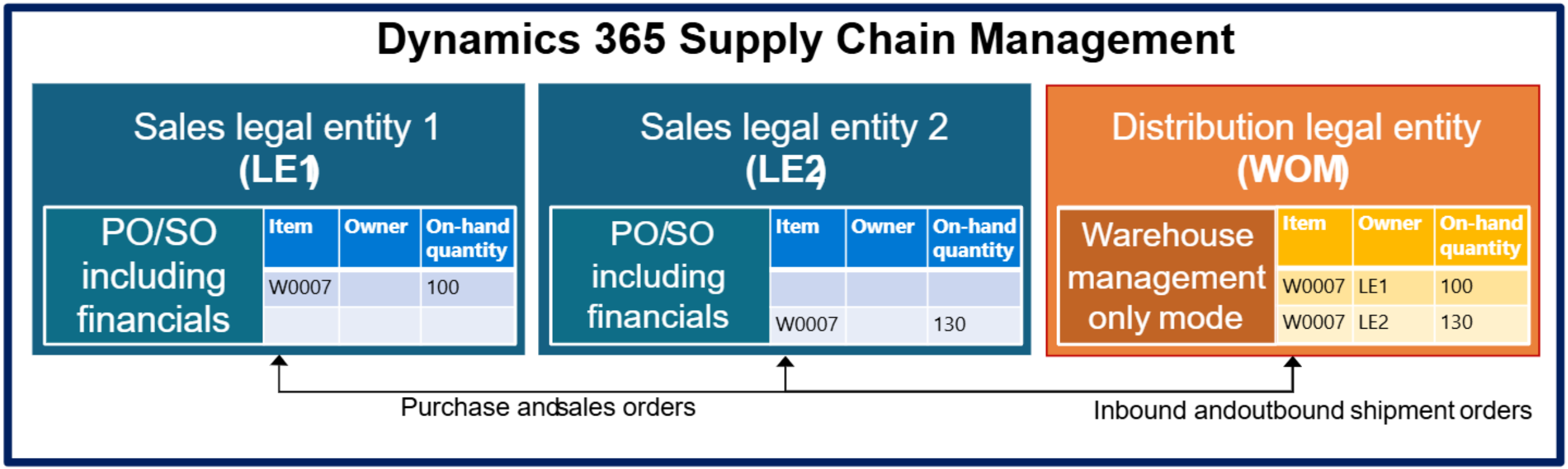
Warehouse management only mode as ‘external shared warehouse’ in single instance

Customer situation: Migration from older ERP solution to Microsoft Dynamics 365.

An existing Microsoft AX2012R3 customer, not running the "integrated" warehouse management solution will replace an existing integration to an external best-of-breed warehouse management solution with the new **Warehouse management only mode** capability as a ‘external shared warehouse’ implementation running within the same D365 SCM deployment instance.

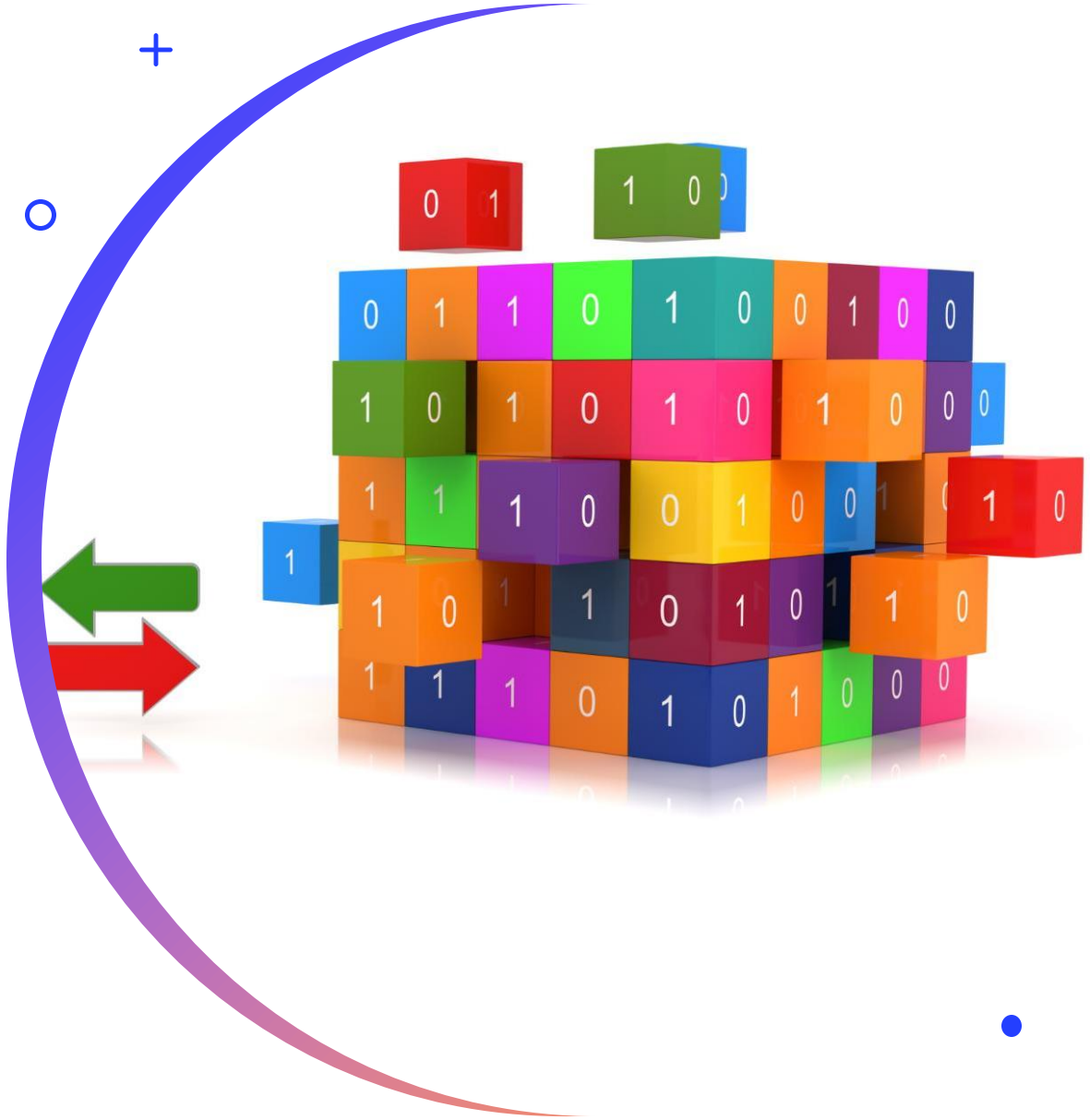
Their sales subsidiaries (legal entities) will be processing orders against a separate legal entity running the Warehouse management only mode functionality.




Dynamics 365 Supply Chain Management
Sales legal entity 1 (LE1)
PO/SO including financials
Item
Owner
On-hand quantity
W0007
100
Sales legal entity 2 (LE2)
PO/SO including financials
Item
Owner
On-hand quantity
W0007
130
Distribution legal entity (WOM)
Warehouse management only mode
Item
Owner
On-hand quantity
W0007
LE1
100
W0007
LE2
130
Purchase and sales orders
Inbound and outbound shipment orders

What is the Warehouse management only mode?

- A new feature in Microsoft Dynamics 365 SCM
- Designed for warehouse management tasks only
- Designed for integration with ERP/order management systems
- Designed for external shared warehouse processing
- Allows for streamlined, more efficient warehouse management processing using inbound and outbound shipment orders



Integrating with ERP/Order Systems

- Microsoft Dynamics 365 SCM Warehouse management only mode can integrate with any ERP and order system
- Integrating with other systems can increase efficiency and reduce manual data entry
- Integration is possible using the out-of-the-box integration entity messages
- Warehouse management only mode can as well be ‘integrated’ as shared warehouse up against D365 SCM companies out-of-the-box

How does the Warehouse management only mode work?

Warehouse management only mode

- Master data (Products, etc.)
- Inbound/outbound delivery requests
  - Purchase
  - Sales
  - Return
  - Transfer

Other ERP / Intelligent Order Management

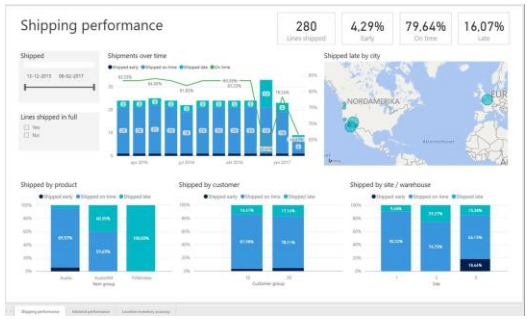
MS D365 ERP

Other integrations (Carriers, material equipment, etc.)

- Delivery status updates
- On-hand updates

Same platform as standard

D365 Warehouse



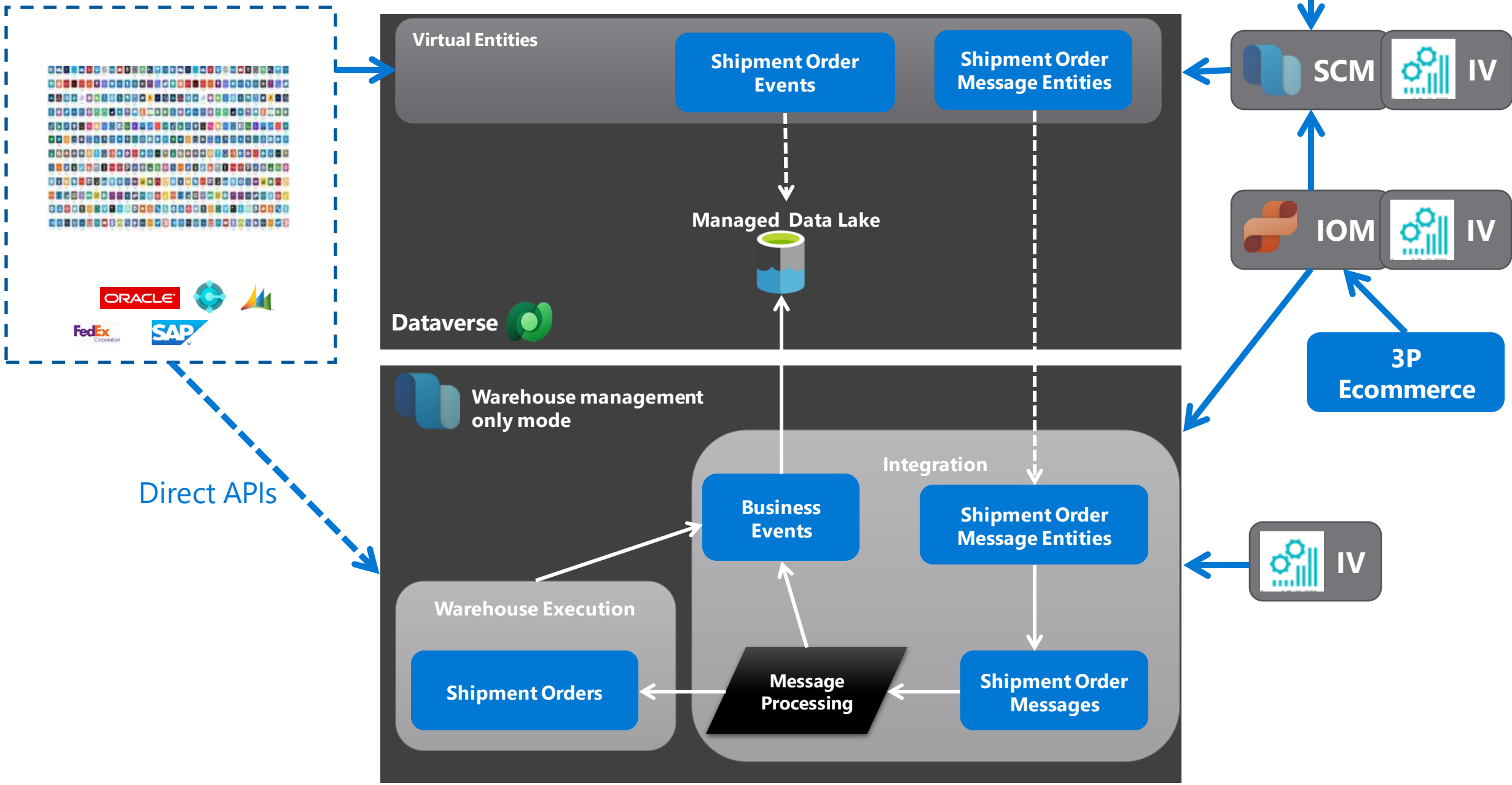
Warehouse planning and optimization

Receive and put away

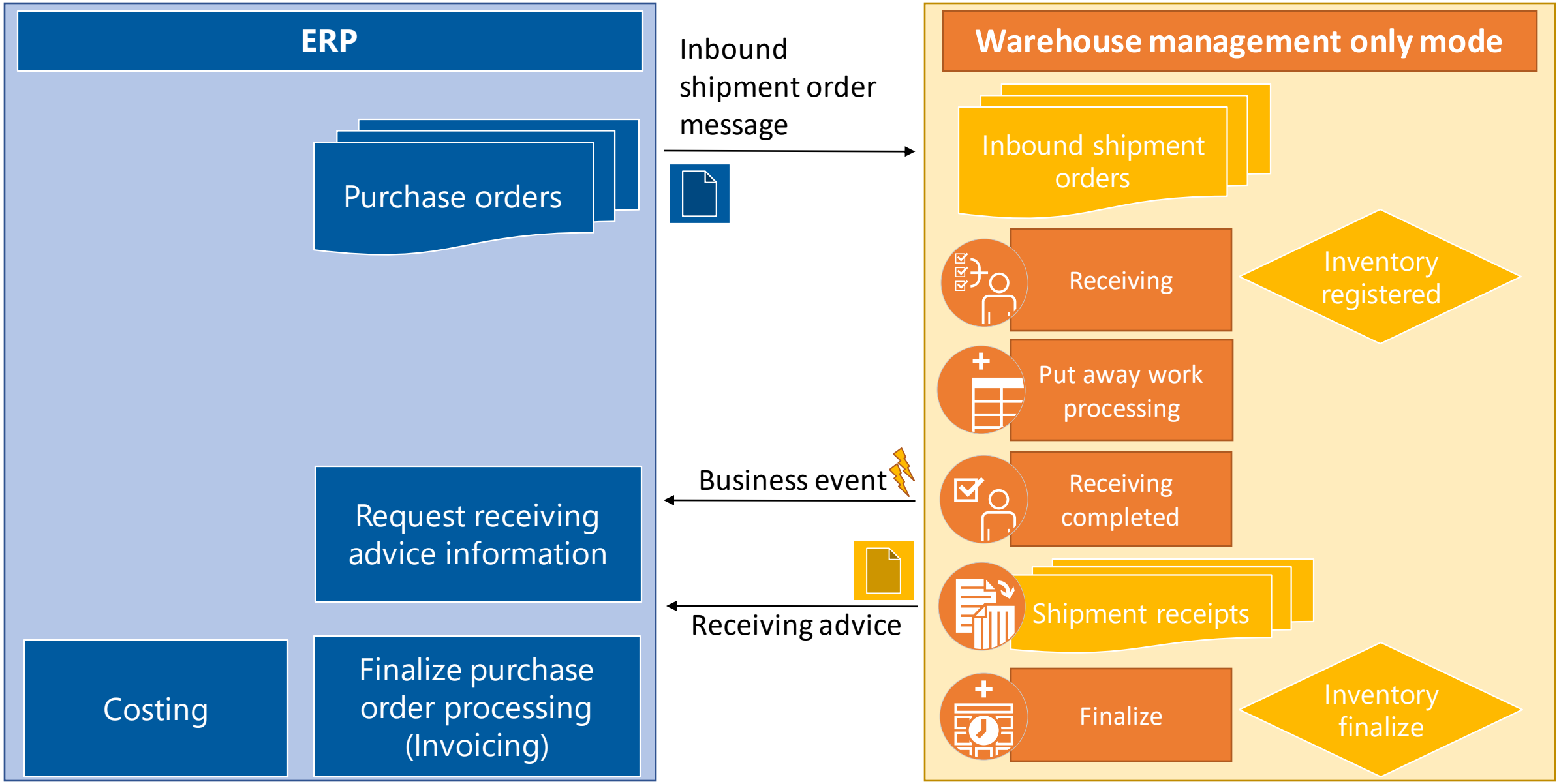
Outbound wave and Work processing

Ship

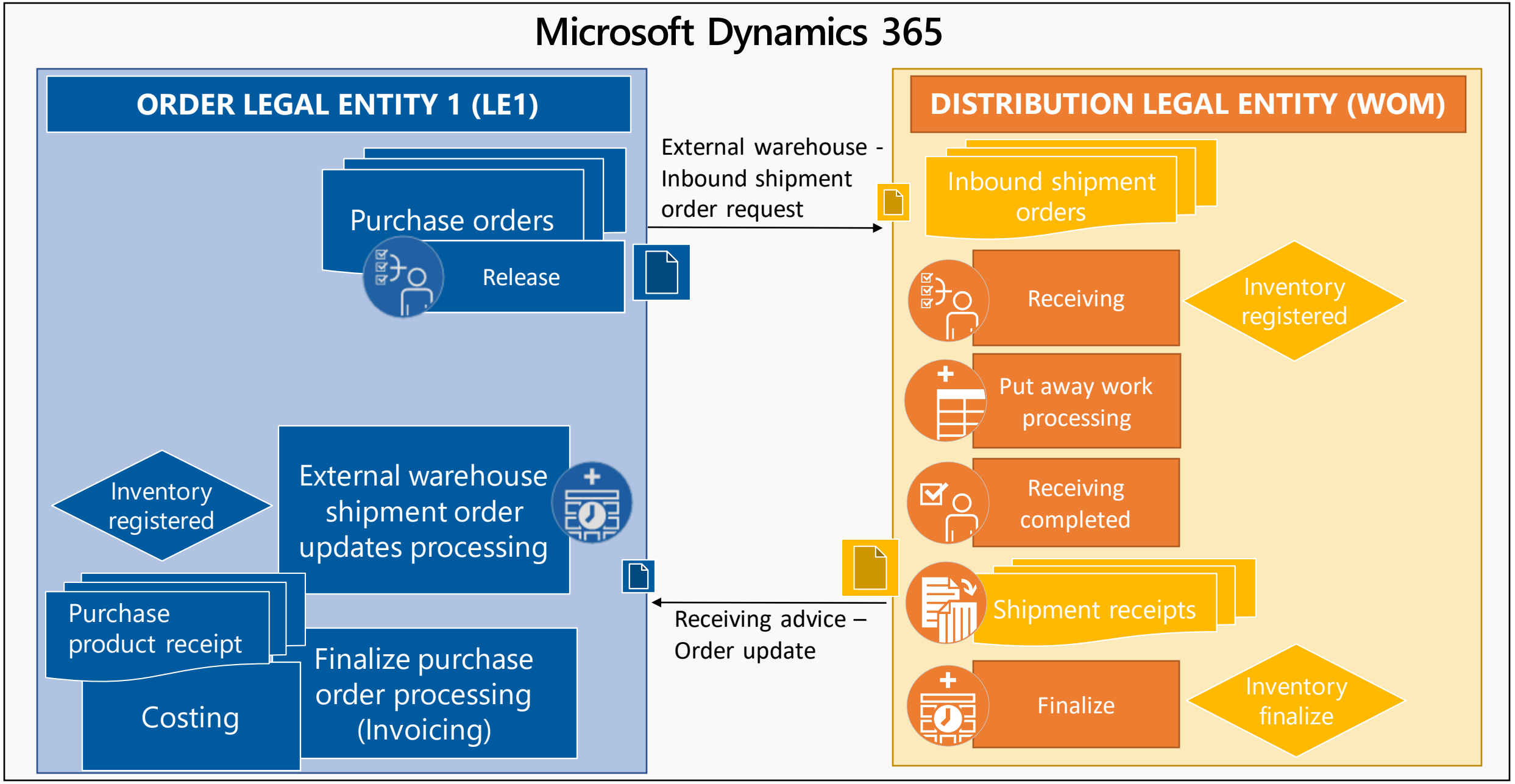
High-level integration architecture



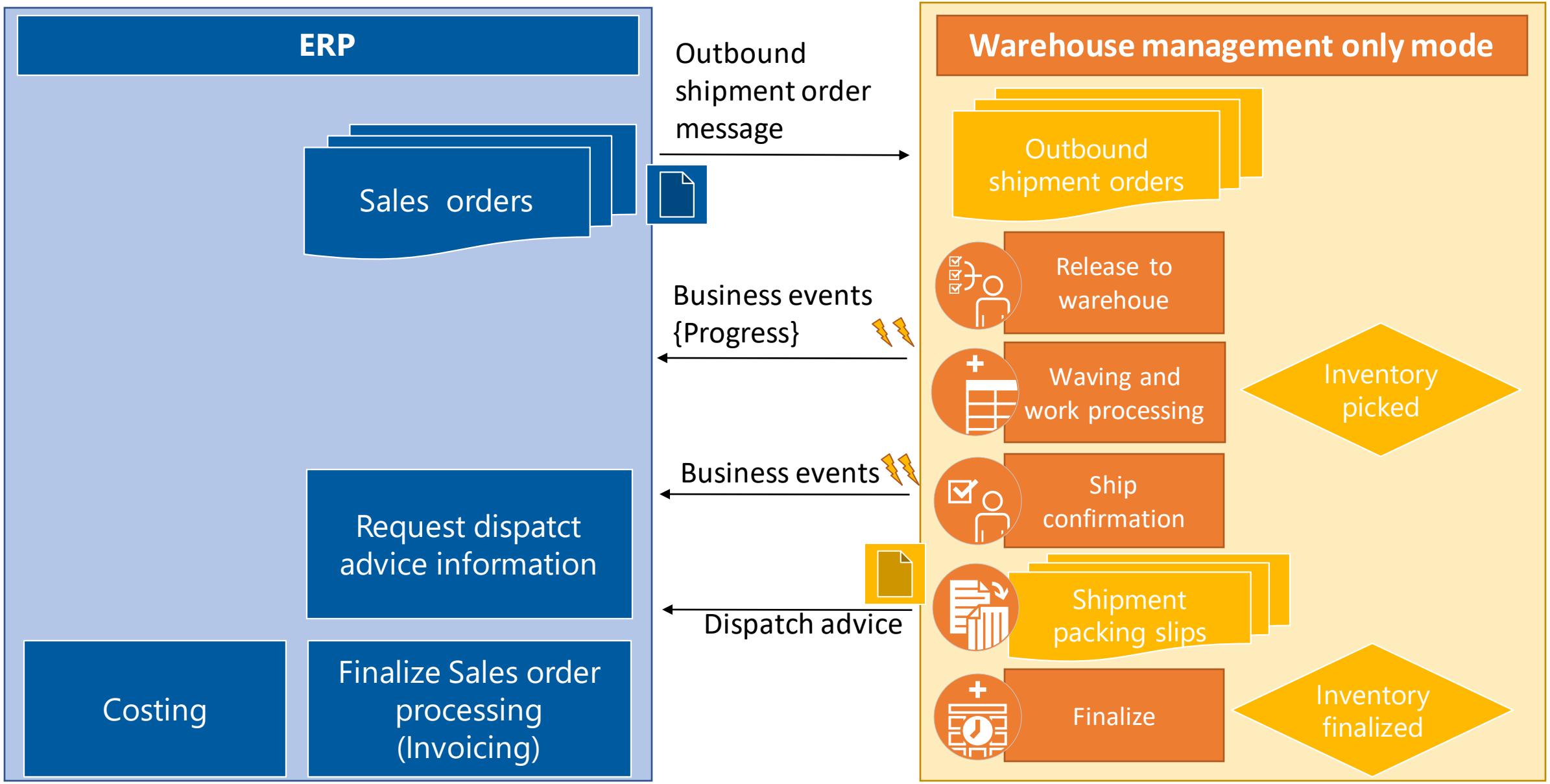
Inbound processing with external ERP



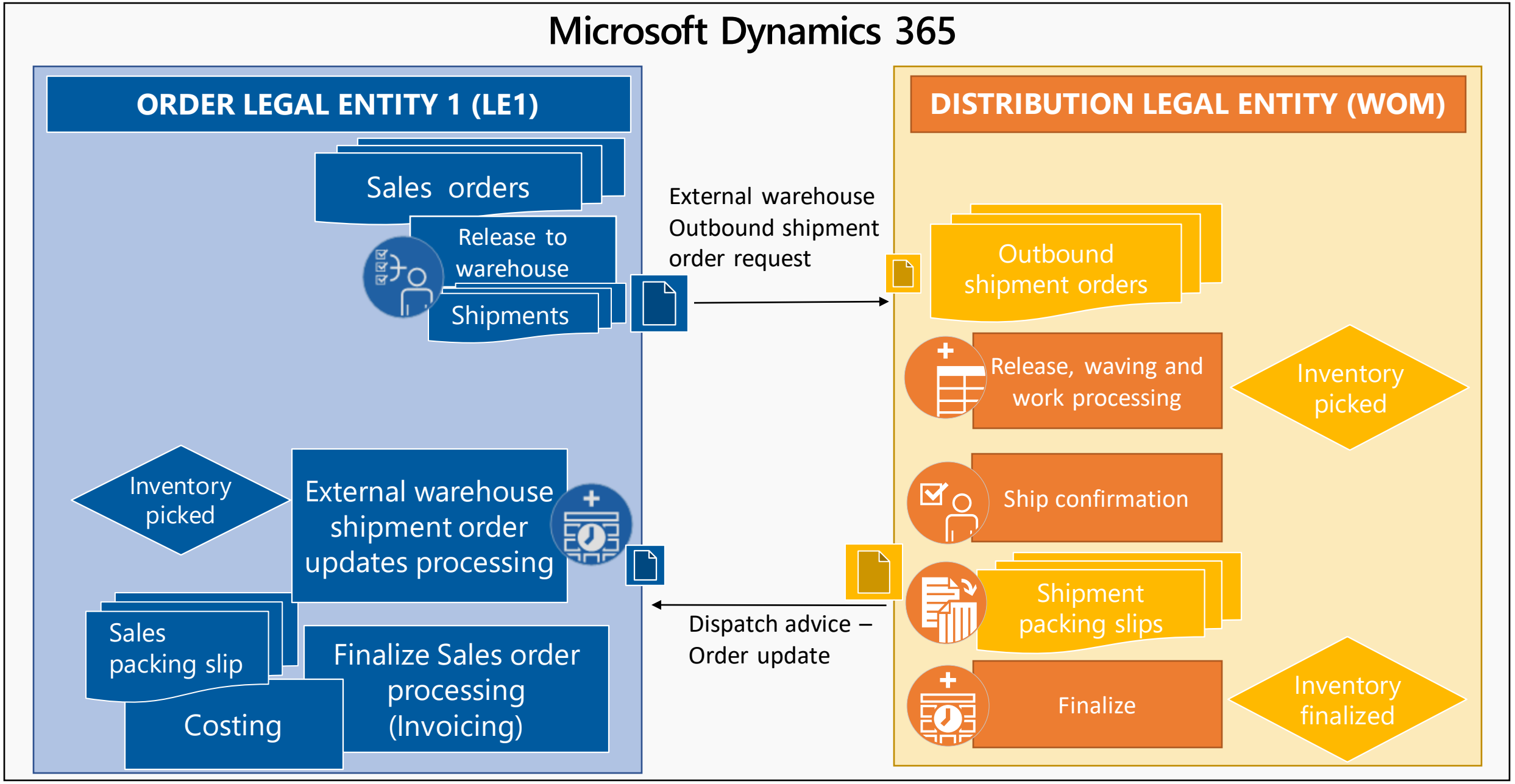
Inbound processing with external shared warehouse setup



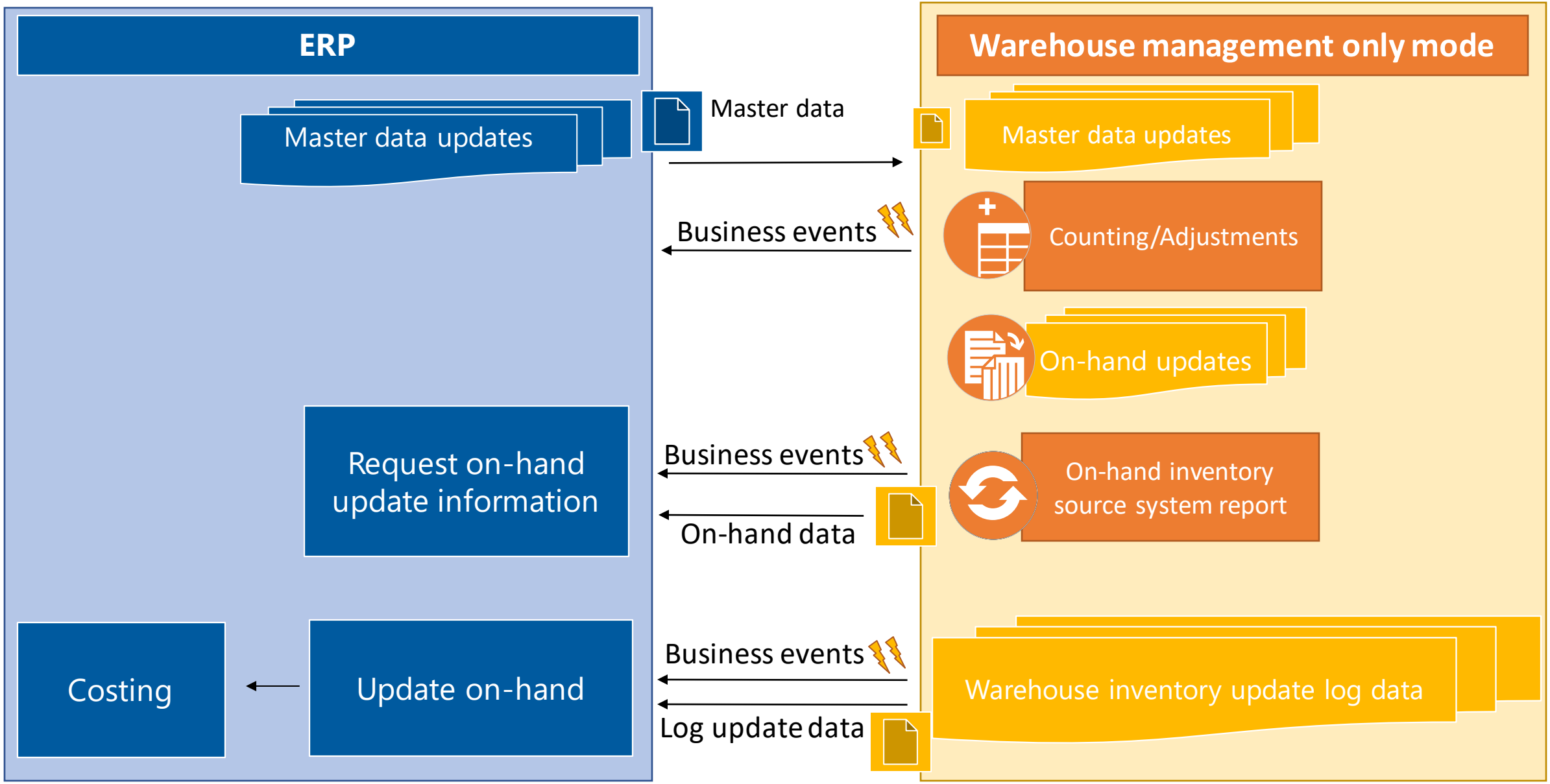
Outbound processing with external ERP



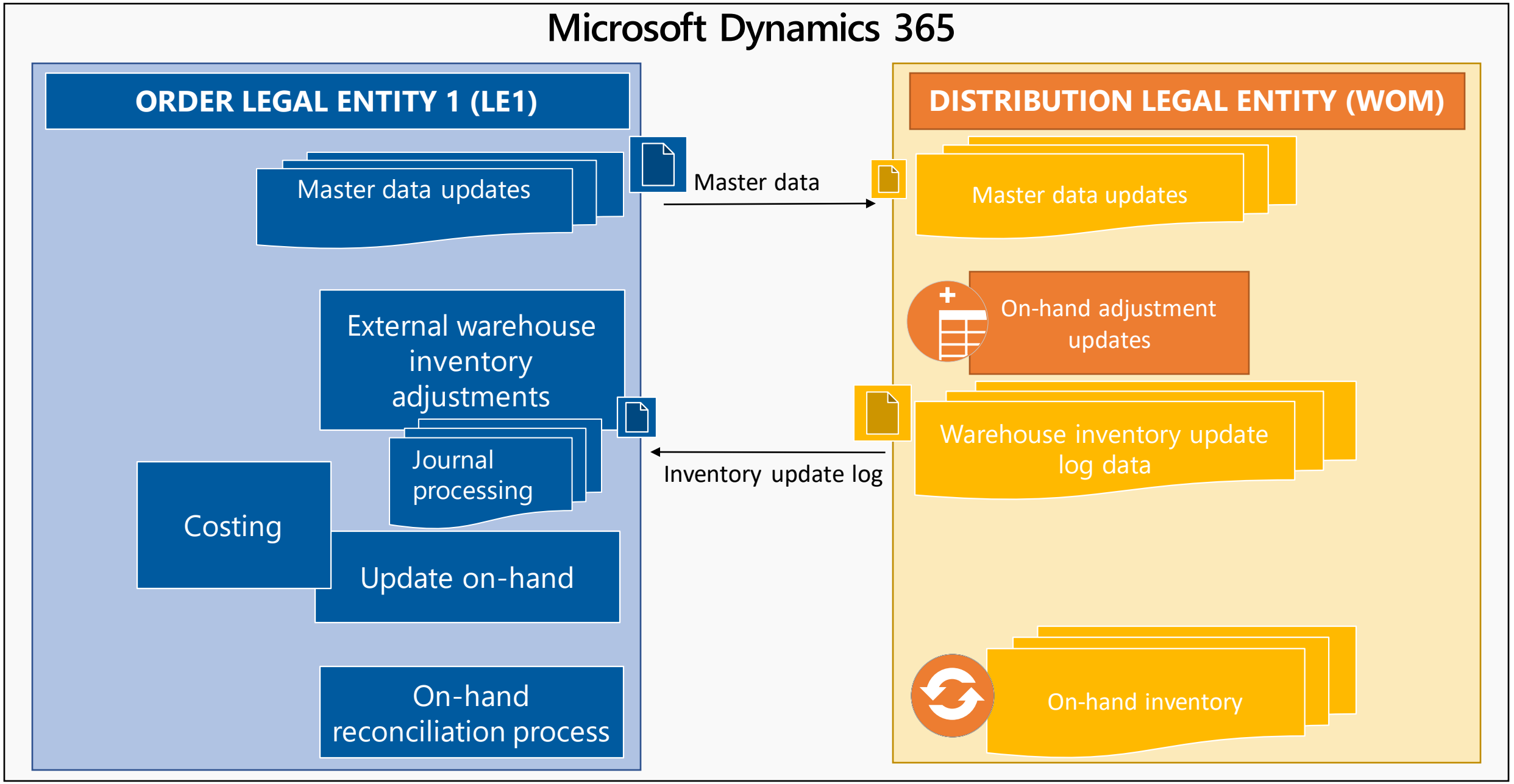
Outbound processing with external shared warehouse setup

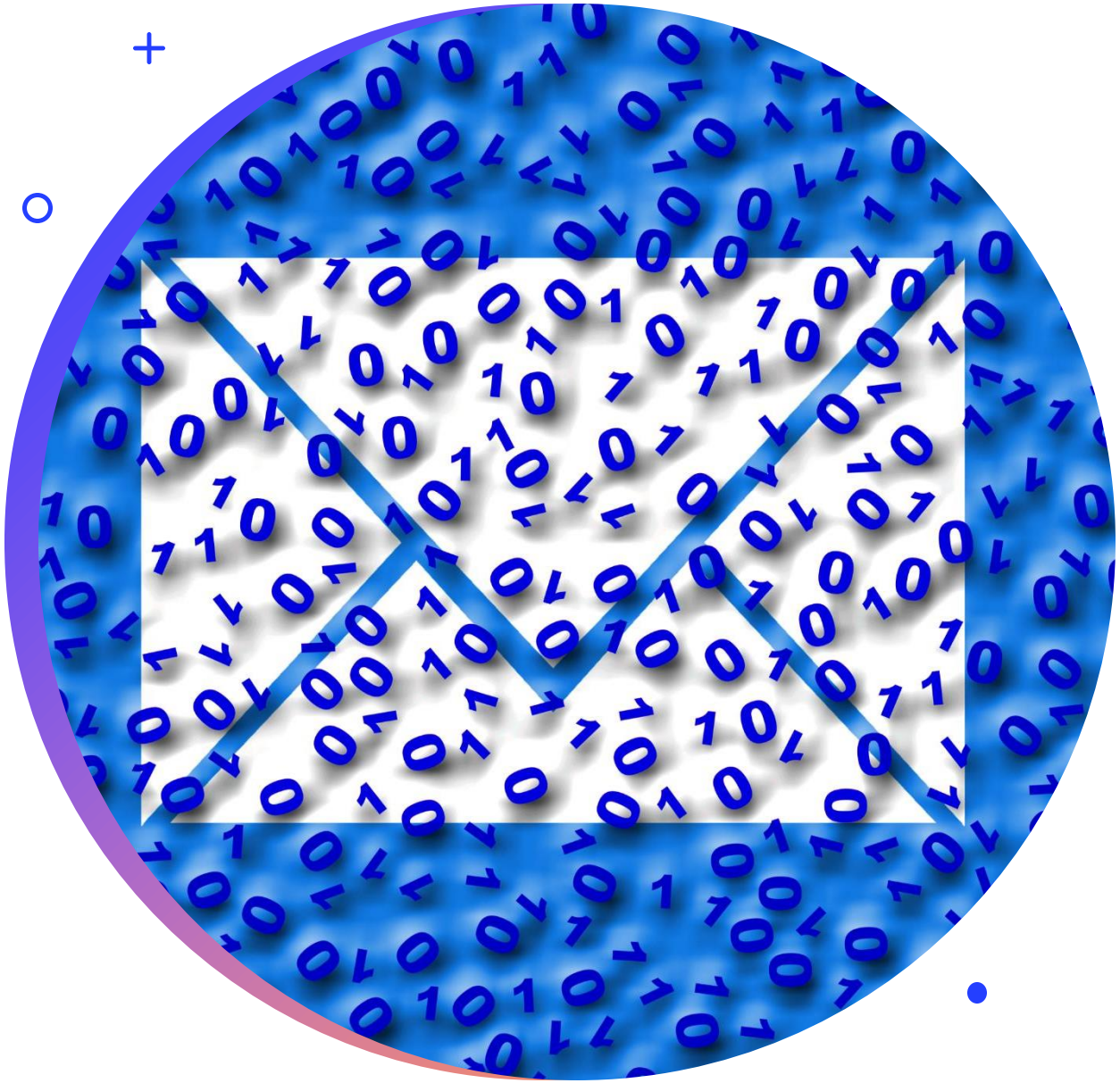


Warehouse operations with external ERP



Warehouse operations with external shared warehouse setup

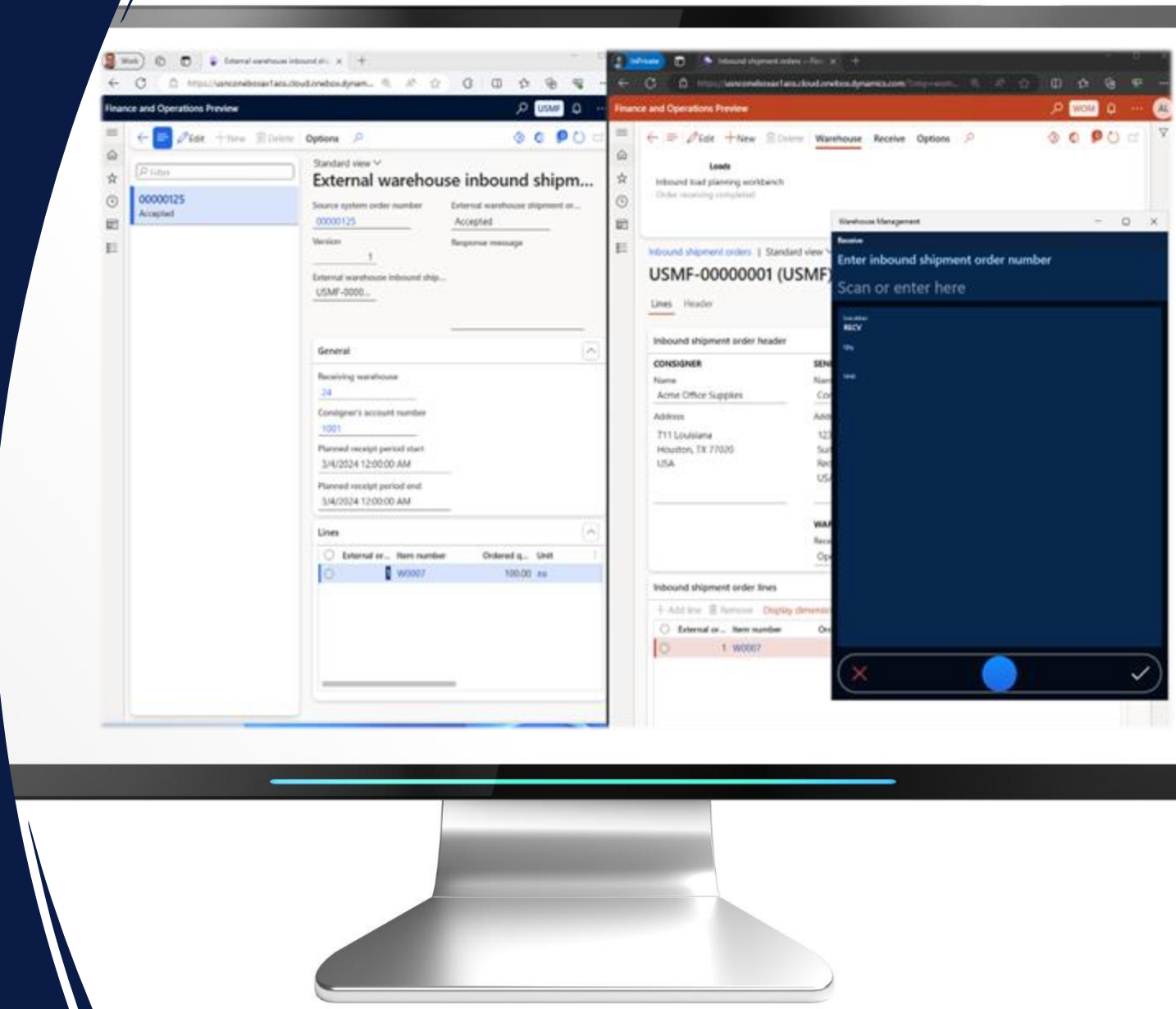




What other data, besides shipment orders and on-hand, needs to be shared?

- The product master data must get created in Dynamics 365 SCM
- Product message entities can be integrated with any ERP and order system
- Product master data creation is more efficient and reliable when it uses message entity data instead of manual data entry

Demo



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License information for Warehouse management only mode

Users license

To use the Warehouse management only mode you must buy “User licenses” for **Microsoft Dynamics 365 Supply Chain Management**.

The product requires a minimum of 20 user licenses.

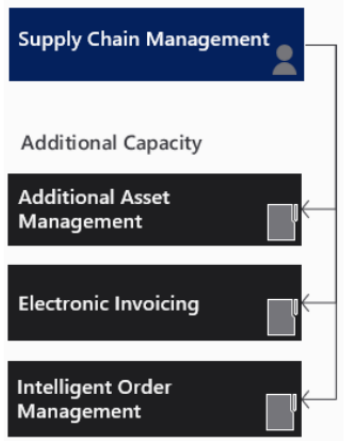
Dynamics 365 Supply Chain Management

$180

per user/month

Scalable, composable, secure, and streamlined solution for an intelligent supply chain.

Dynamics 365 Supply Chain Management



Supply Chain Management provides manufacturers, distributors, and retailers with the real-time visibility and intelligence they need for proactive operations. It unifies data and uses predictive insights from AI and IoT—across order fulfillment, planning, procurement, production, inventory, warehousing, and transportation processes—to maximize operational efficiency, product quality, and profitability. Supply Chain Management is licensed per user and has minimum purchase requirements detailed in the Product Terms.

Supply Chain Management automatically includes Asset Management capacity and Intelligent Order Management capacity. Asset Management capacity is enough for you to manage and maintain up to 100 physical assets throughout their lifecycles. Intelligent Order Management capacity includes 1K order lines. Additional capacity is available for purchase separately.

Note additional users can get licensed according to use cases like the cheaper “Operations – device” and/or “Operations – Activity user” licenses.

Resources

- Leverage Warehouse management only mode to optimize your business - Blog
- Operating an External Shared Warehouse with Warehouse Management Only Mode - Blog
- Warehouse management only mode documentation
- Supply Chain Management Software Pricing | Microsoft Dynamics 365
- Recordings:
  - Viva Engage External shared warehouse
  - Tech-Talk - Warehouse management only mode
  - Viva Engage Partner Architect Community
  - Accenture/Avanade - WOM presentation
  - Viva Engage WOM Setup in new LE
  - Viva Engage WOM customer examples
  - Viva Engage WOM .35
  - Viva Engage WOM .36 & .37
  - Viva Engage WOM .38 & .39 + .40 roadmap

Thank you!

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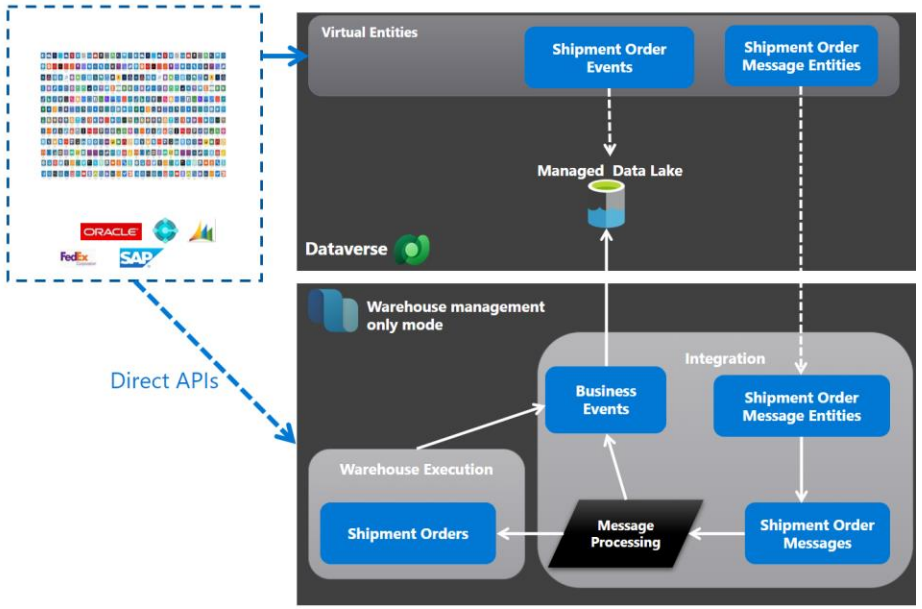
Appendix

License information for Warehouse management only mode

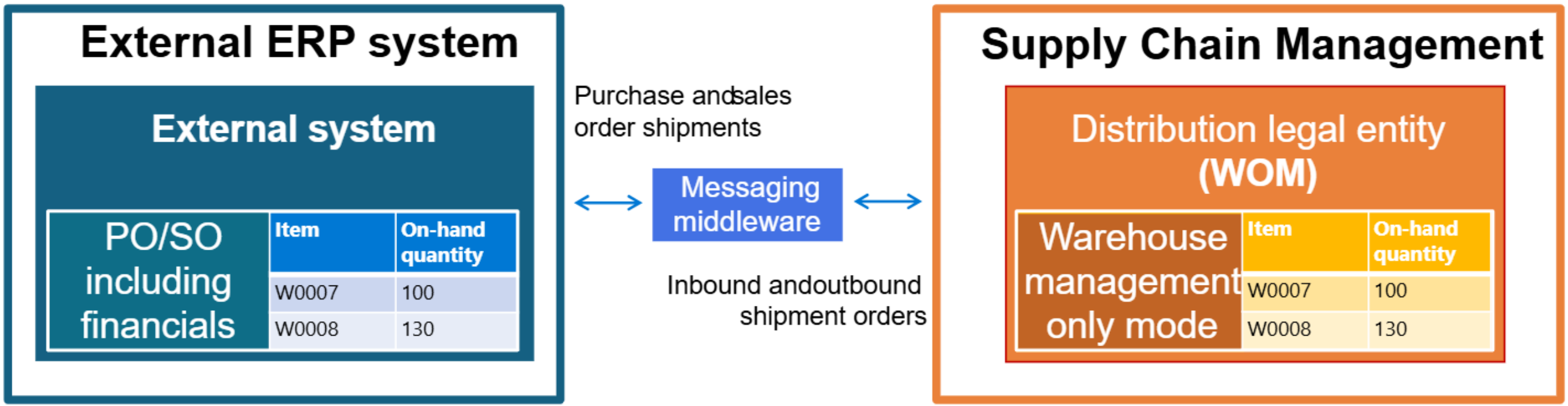
Order lines license

Use of the “Operations – Orders lines license” when importing the *Inbound and Outbound shipment order* data instead of manually entering directly in the D365 SCM pages using “User licenses”.

Operations Table
SALESLINE
CUSTINVOICELINE
VENDINVOICEINFOLINE
PURCHLINE
LEDGERJOURNALTRANS
camdatacostobjectcostentry
WHSINBOUNDSHIPMENTORDERLINE
WHSOUTBOUNDSHIPMENTORDERLINE
• PRODJOURNALTRANSBOM (JOURNALLINE



Operations – Order lines is licensed by tenant per month, with an annual commitment, and includes an allowance of 100K transactions per month, enforced annually for a total of 1.2 million transactions. The creation of new order lines and updates to existing order lines count against the 100K transaction allowance. Deletions do not count. If you reach the transaction limit before the subscription year is complete, orders will not be blocked, but you’ll receive warnings and can address the difference on your subscription anniversary by purchasing additional capacity.


External ERP system
External system
PO/SO including financials
Item
On-hand quantity
W0007
100
W0008
130
Purchase and sales order shipments
Messaging middleware
Inbound and outbound shipment orders
Supply Chain Management
Distribution legal entity (WOM)
Warehouse management only mode
Item
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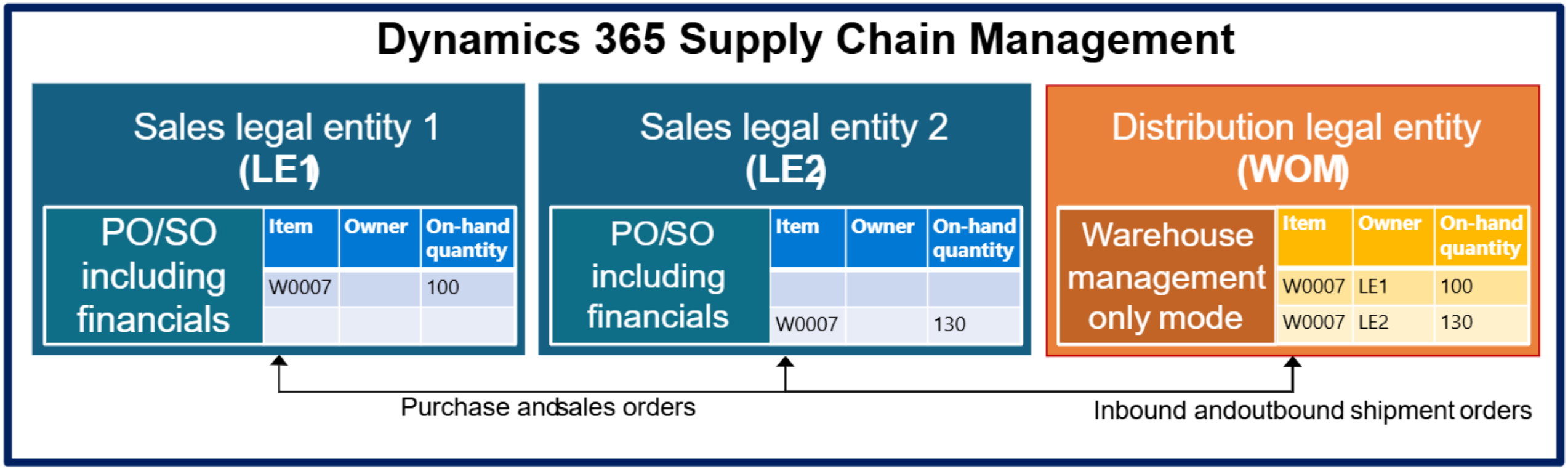
W0007
100
W0008
130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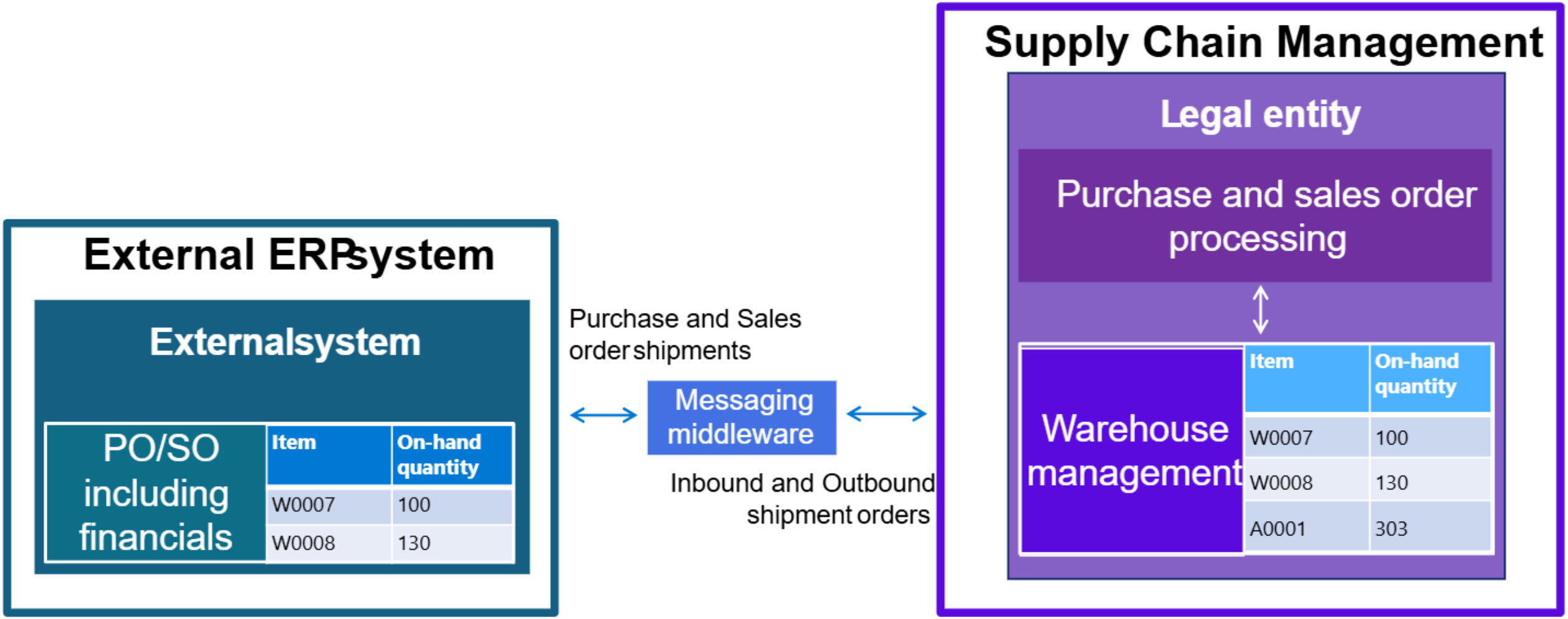
Purchase and sales orders
Inbound and outbound shipment orders


External ERP system
External system
PO/SO including financials
Item
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Purchase and Sales order shipments
Messaging middleware
Inbound and Outbound shipment orders
Supply Chain Management
Legal entity
Purchase and sales order processing
Warehouse management
Item
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100
W0008
130
A0001
303

Save | New | Delete | Source system items | Options

Filter

ERP1

Standard view

Source systems

Source system: ERP1

Product master source system:

Outbound shipment orders

Outbound shipment order fulfill...:

Reservation policy at import: Require full reservation

Is reservation policy mandatory: Yes

Outbound shipment order conso...: Always release shipment or...

Convert cross dock requests to ...: Never

OUTBOUND SHIPMENT ORDER NUMBERS

Internal order number policy: Use external order number

Order number prefix:

Order number suffix:

SHIPMENT PACKING SLIPS POSTING DELAY

Shipment packing slips posting d...: 0

Shipment packing slips posting d...: Minutes

MANUAL ORDER CREATION

Enable manual outbound shipme...: Yes

Number sequence code:

WAREHOUSE INVENTORY UPDATE LOGS

Enable warehouse inventory upd...: Yes

Inbound shipment orders

INBOUND SHIPMENT ORDER NUMBERS

Internal order number policy: Use external order number

Order number prefix:

Order number suffix:

SHIPMENT RECEIPTS POSTING DELAY

Shipment receipts posting delay: 0

Shipment receipts posting delay ...: Minutes

MANUAL ORDER CREATION

Enable manual inbound shipmen...: Yes

Number sequence code:

WAREHOUSE INVENTORY UPDATE LOGS

Enable warehouse inventory upd...: Yes

RETURNS PROCESS

Enable returns process: Yes

Number sequence code: ReturnWOM

Return order type: Return order

Source system items

ITEM NUMBERS

Internal item number policy: Use external item number

Item number prefix:

Item number suffix:

NUMBER SEQUENCE

Number sequence code:

Inbound shipment order policies

Integration

MESSAGE PROCESSOR

Include message processing log i...: Yes

OUTBOUND SHIPMENT ORDER MESSAGES

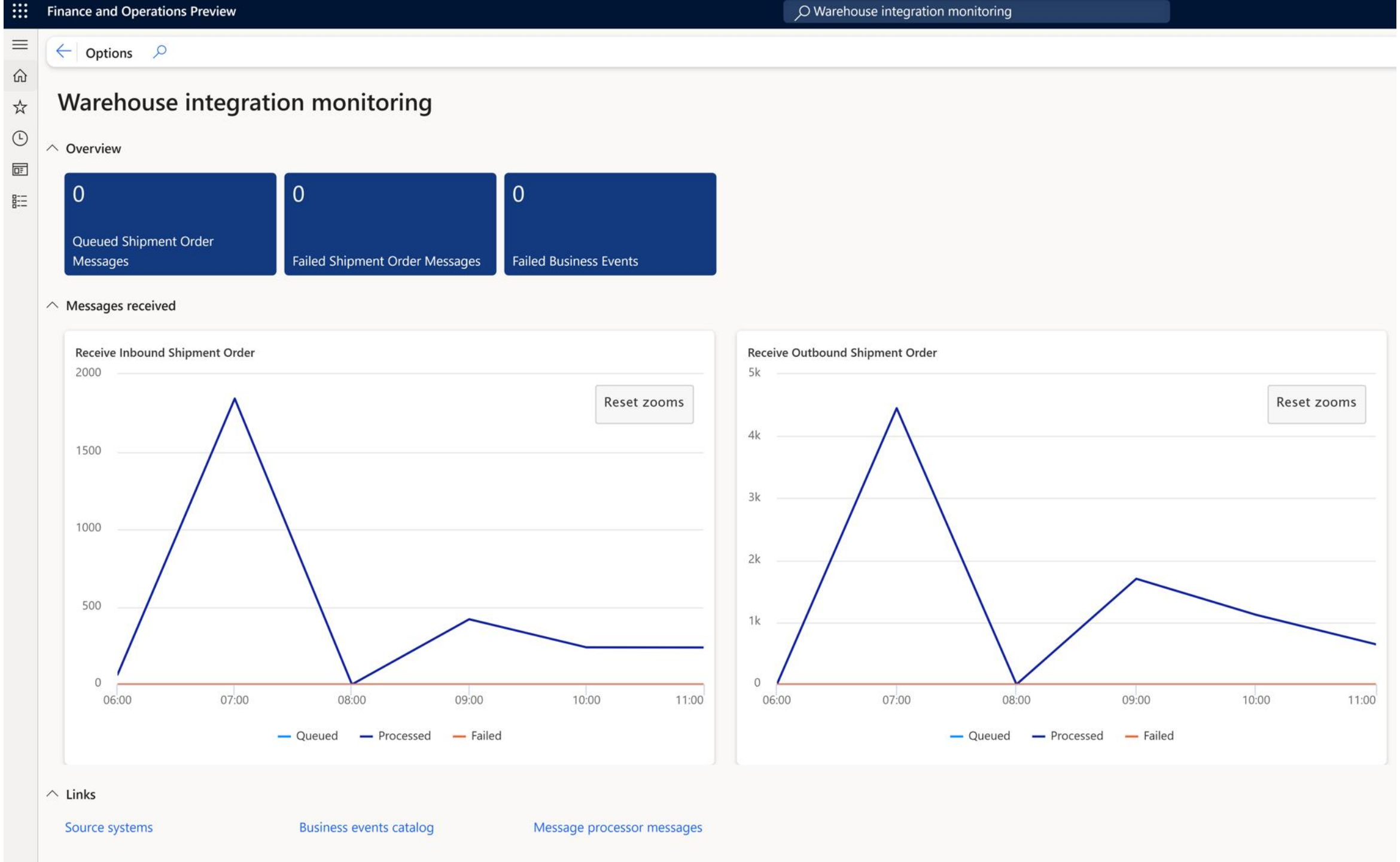
Enable manual outbound shipme...: Yes

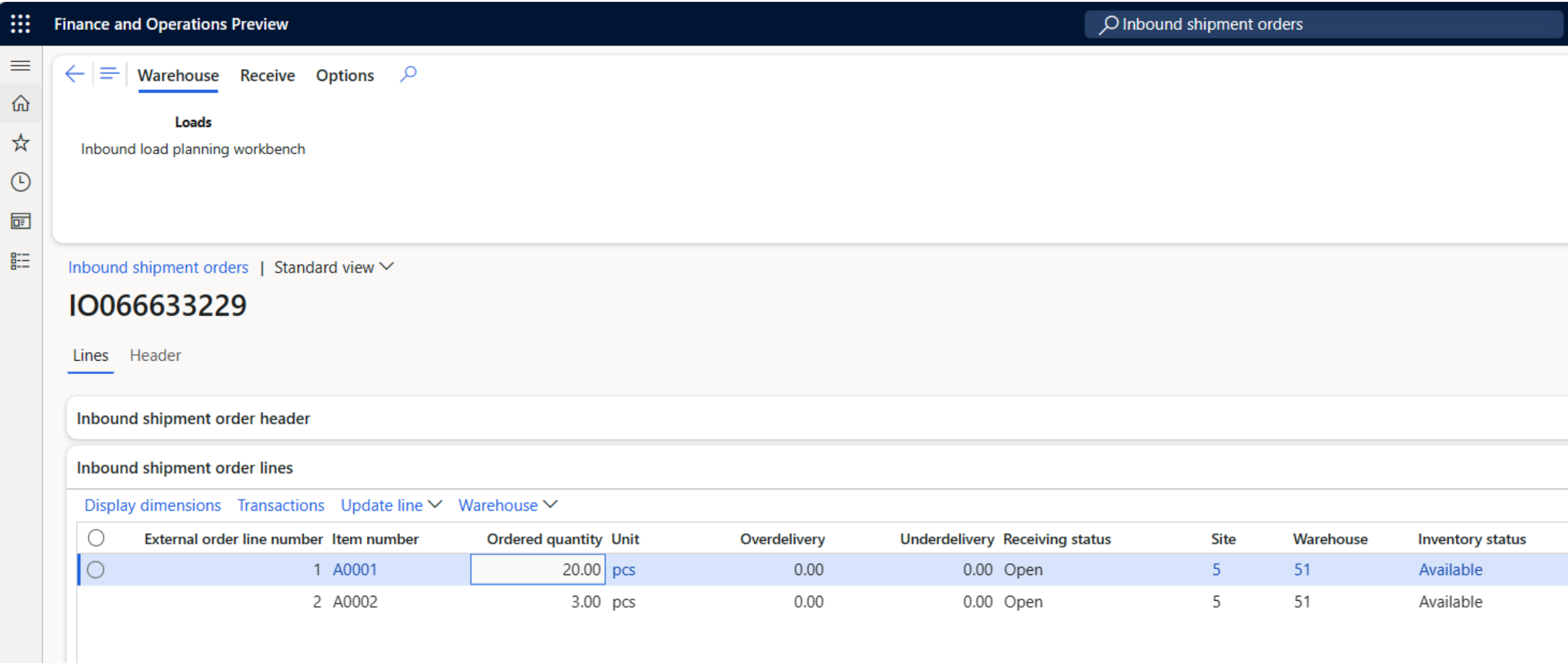
INBOUND SHIPMENT ORDER MESSAGES

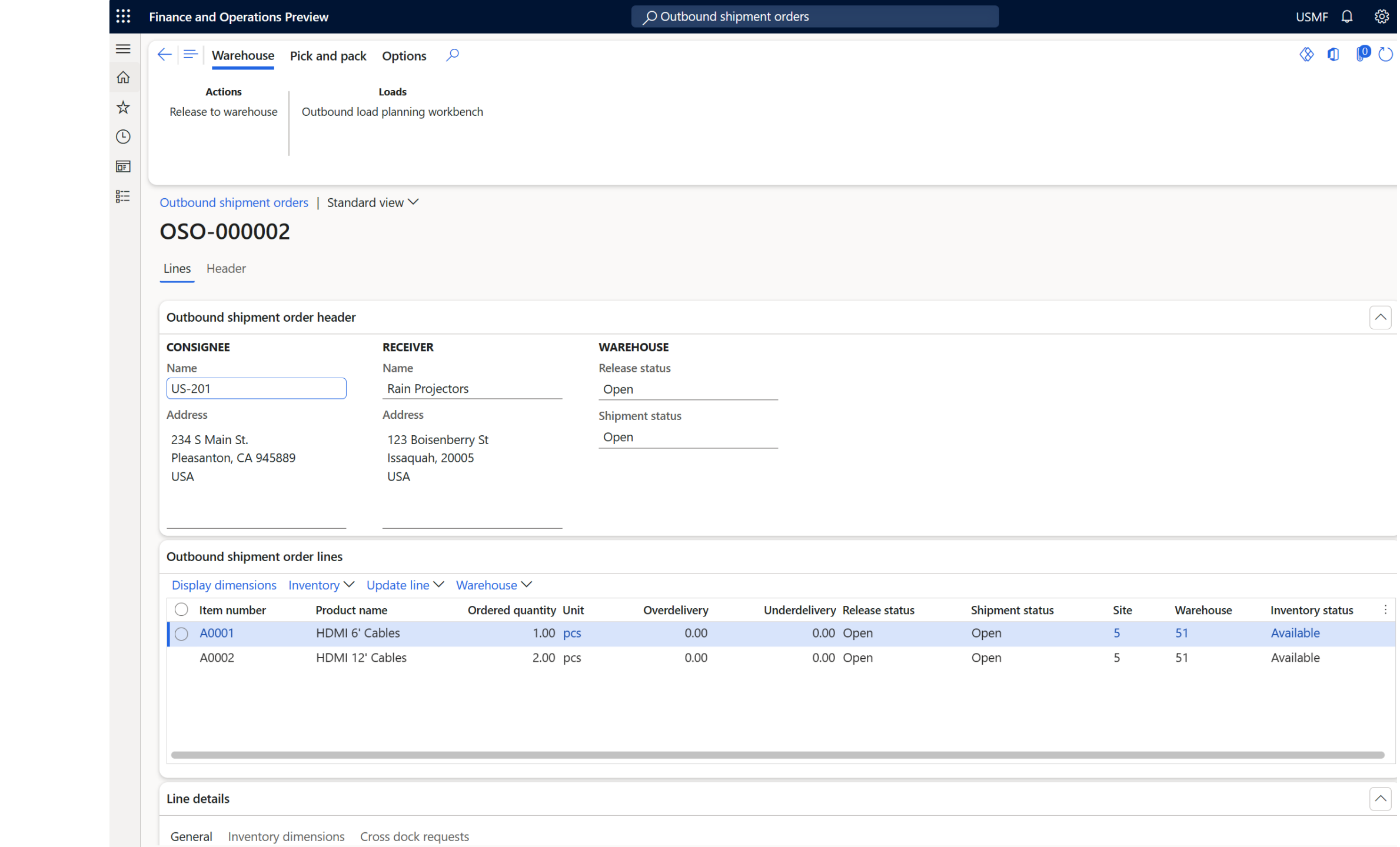
Enable manual inbound shipmen...: Yes

SOURCE SYSTEM PRODUCT MESSAGES

Enable manual source system pr...: Yes


Finance and Operations Preview
Warehouse integration monitoring
Options
Warehouse integration monitoring
Overview
0
Queued Shipment Order Messages
0
Failed Shipment Order Messages
0
Failed Business Events
Messages received
Receive Inbound Shipment Order
Reset zooms
2000
1500
1000
500
0
06:00
07:00
08:00
09:00
10:00
11:00
Queued
Processed
Failed
Receive Outbound Shipment Order
Reset zooms
5k
4k
3k
2k
1k
0
06:00
07:00
08:00
09:00
10:00
11:00
Queued
Processed
Failed
Links
Source systems
Business events catalog
Message processor messages


Finance and Operations Preview
Inbound shipment orders
Warehouse
Receive
Options
Loads
Inbound load planning workbench
Inbound shipment orders | Standard view
IO066633229
Lines
Header
Inbound shipment order header
Inbound shipment order lines
Display dimensions
Transactions
Update line
Warehouse
External order line number
Item number
Ordered quantity
Unit
Overdelivery
Underdelivery
Receiving status
Site
Warehouse
Inventory status
1 A0001 20.00 pcs 0.00 0.00 Open 5 51 Available
2 A0002 3.00 pcs 0.00 0.00 Open 5 51 Available


Finance and Operations Preview
Outbound shipment orders
USMF
Warehouse
Pick and pack
Options
Actions
Release to warehouse
Loads
Outbound load planning workbench
Outbound shipment orders | Standard view
OSO-000002
Lines
Header
Outbound shipment order header
CONSIGNEE
Name
US-201
Address
234 S Main St.
Pleasanton, CA 945889
USA
RECEIVER
Name
Rain Projectors
Address
123 Boisenberry St
Issaquah, 20005
USA
WAREHOUSE
Release status
Open
Shipment status
Open
Outbound shipment order lines
Display dimensions
Inventory
Update line
Warehouse
Item number
Product name
Ordered quantity
Unit
Overdelivery
Underdelivery
Release status
Shipment status
Site
Warehouse
Inventory status
A0001
HDMI 6' Cables
1.00
pcs
0.00
0.00
Open
Open
5
51
Available
A0002
HDMI 12' Cables
2.00
pcs
0.00
0.00
Open
Open
5
51
Available
Line details
General
Inventory dimensions
Cross dock requests

The value 'A0001' in field 'Item number' is not found in the related table 'Items'.

Process | Cancel | Queue | **Options**

Message processor messages

Standard view

Message type	Message queue	Message state
Receive Inbound Shipment ...	Shipment Orders	Failed

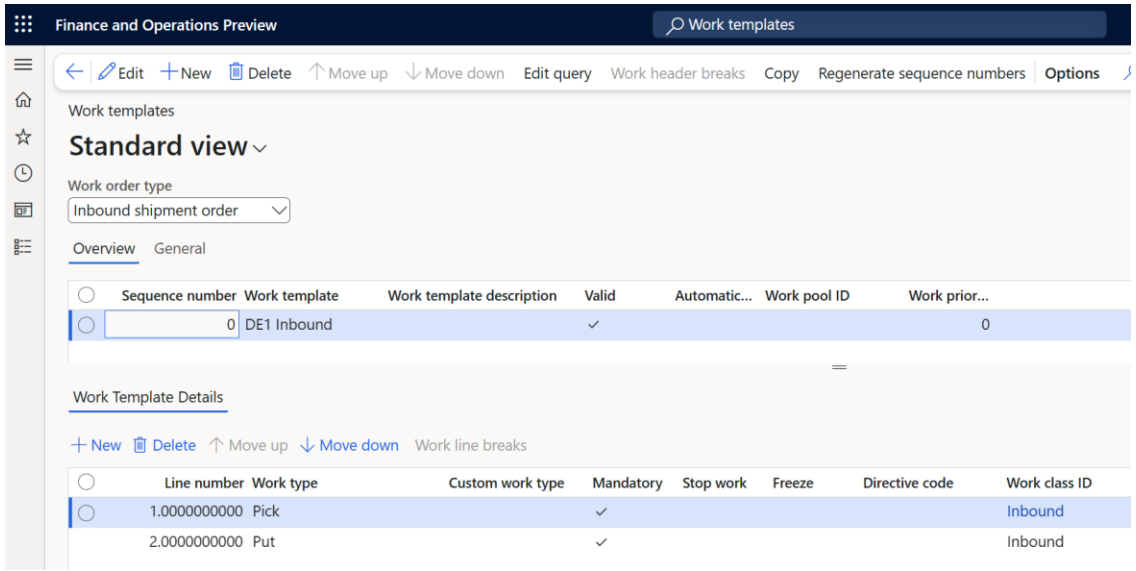
Message content

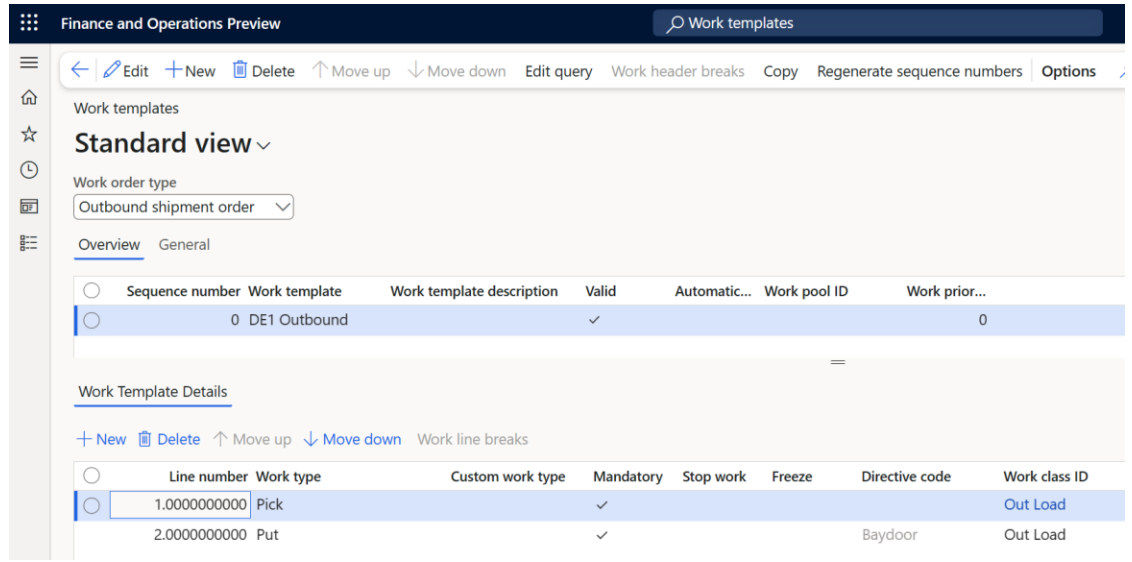
Message type	Message queue	Message state	Failed attempts	Created date and time
Receive Inbound Shipment Order	Shipment Orders	Failed	3	3/6/2023 11:10:12 AM
Receive Inbound Shipment Order	Shipment Orders	Failed	3	3/6/2023 11:10:11 AM

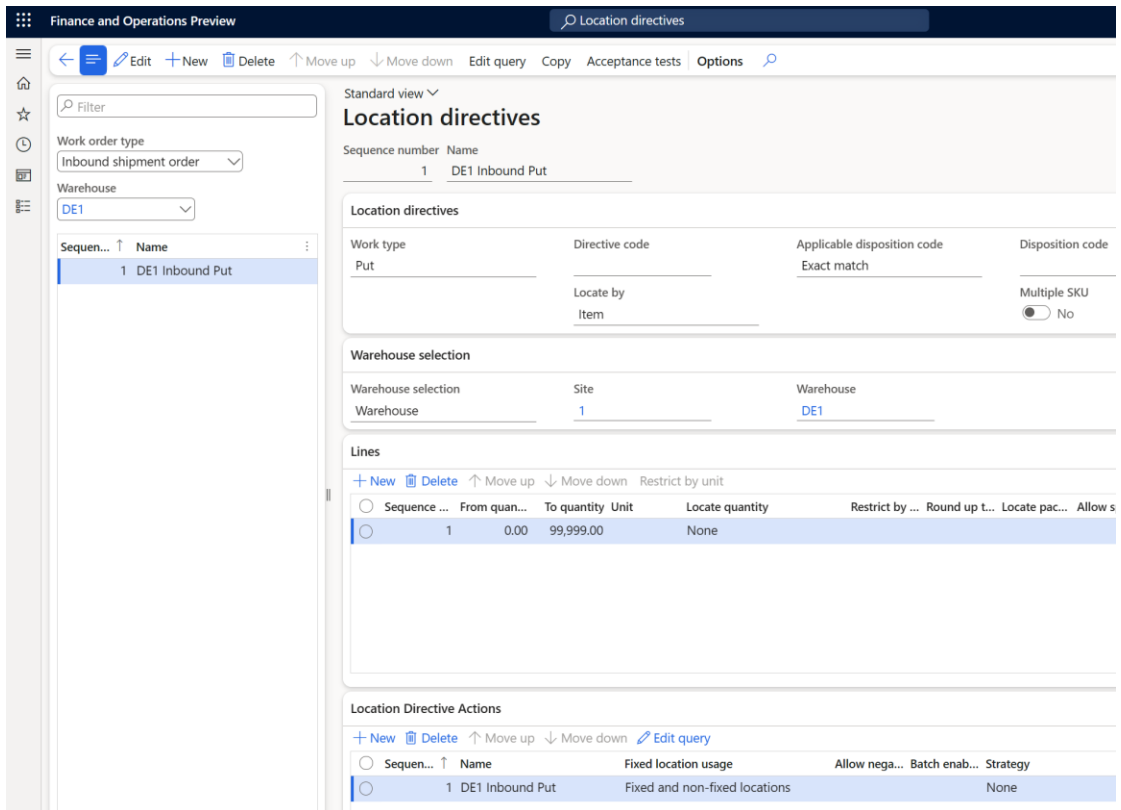
Log | Message content

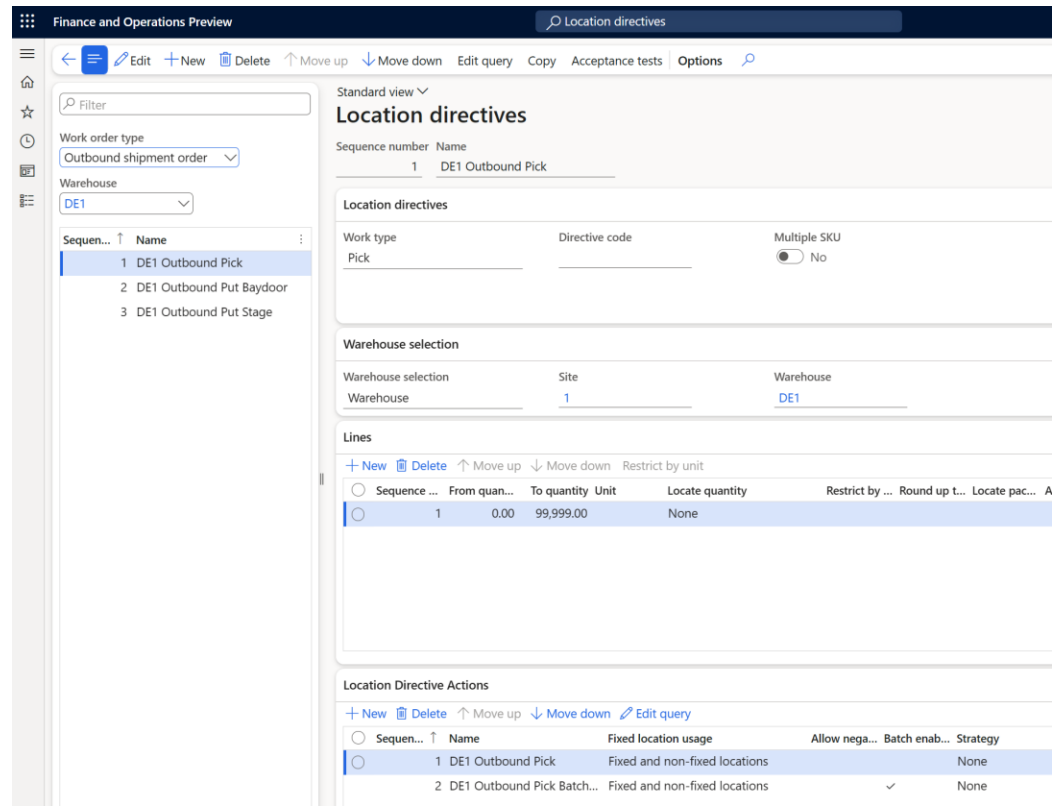
Log | Bundle

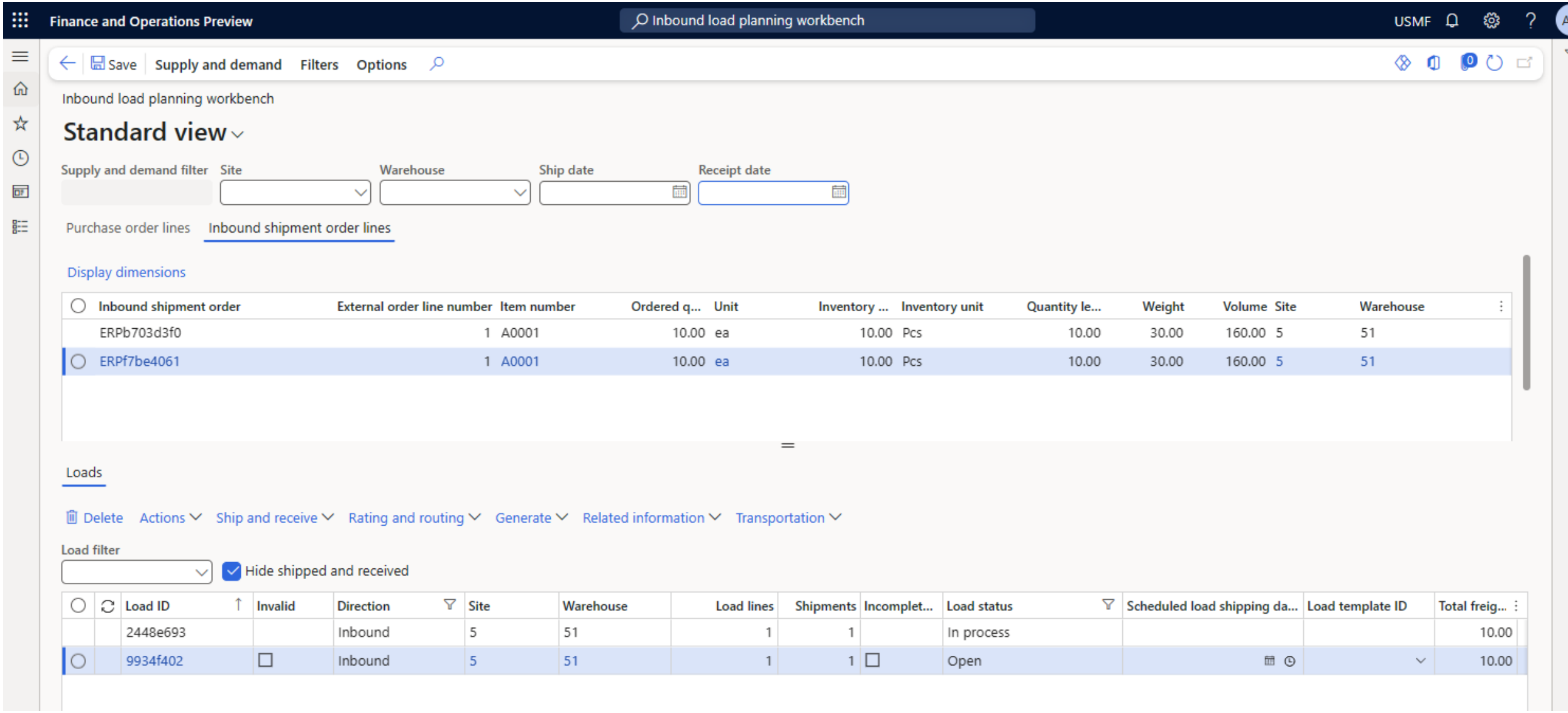
Start date/time	End date/time	Next message state	Processing result
3/10/2023 8:16:51 AM	3/10/2023 8:16:51 AM	Processed	Failed
3/10/2023 8:11:16 AM	3/10/2023 8:11:16 AM	Processed	Failed
3/6/2023 11:10:56 AM	3/6/2023 11:10:56 AM	Processed	Failed

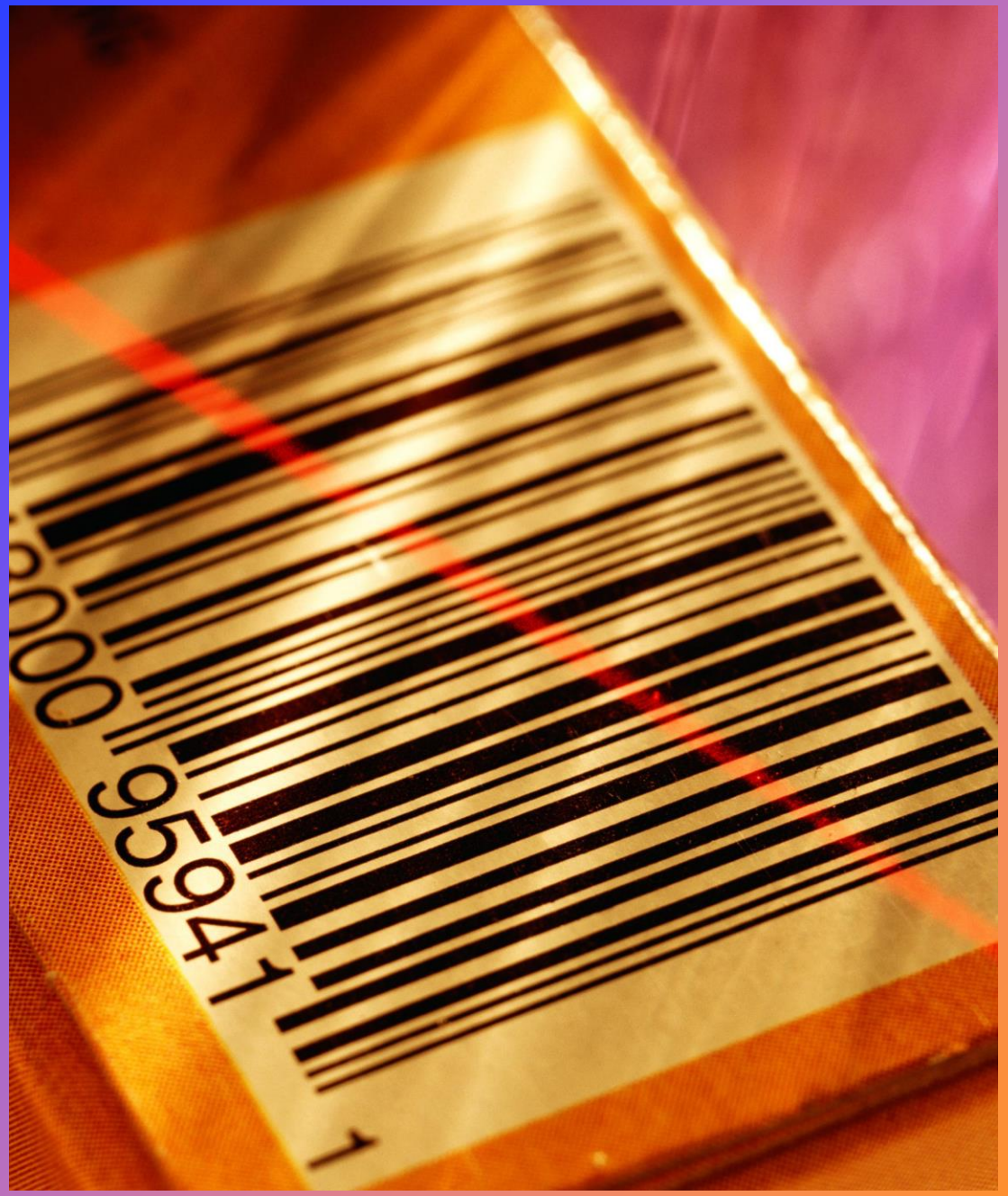

Finance and Operations Preview
Work templates
Edit
New
Delete
Move up
Move down
Edit query
Work header breaks
Copy
Regenerate sequence numbers
Options
Work templates
Standard view
Work order type
Inbound shipment order
Overview
General
Sequence number
Work template
Work template description
Valid
Automatic...
Work pool ID
Work prior...
0
DE1 Inbound
Work Template Details
New
Delete
Move up
Move down
Work line breaks
Line number
Work type
Custom work type
Mandatory
Stop work
Freeze
Directive code
Work class ID
1.0000000000
Pick
Inbound
2.0000000000
Put
Inbound


Finance and Operations Preview
Work templates
Edit
New
Delete
Move up
Move down
Edit query
Work header breaks
Copy
Regenerate sequence numbers
Options
Work templates
Standard view
Work order type
Outbound shipment order
Overview
General
Sequence number
Work template
Work template description
Valid
Automatic...
Work pool ID
Work prior...
0
DE1 Outbound
Work Template Details
New
Delete
Move up
Move down
Work line breaks
Line number
Work type
Custom work type
Mandatory
Stop work
Freeze
Directive code
Work class ID
1.0000000000
Pick
Out Load
2.0000000000
Put
Baydoor
Out Load


Finance and Operations Preview
Location directives
Edit
New
Delete
Move up
Move down
Edit query
Copy
Acceptance tests
Options
Filter
Work order type
Inbound shipment order
Warehouse
DE1
Sequen...
Name
1
DE1 Inbound Put
Standard view
Location directives
Sequence number
Name
1
DE1 Inbound Put
Location directives
Work type
Put
Directive code
Locate by
Item
Applicable disposition code
Exact match
Disposition code
Multiple SKU
No
Warehouse selection
Warehouse selection
Warehouse
Site
1
Warehouse
DE1
Lines
New
Delete
Move up
Move down
Restrict by unit
Sequence ...
From quan...
To quantity
Unit
Locate quantity
Restrict by ...
Round up t...
Locate pac...
Allow s
1
0.00
99,999.00
None
Location Directive Actions
New
Delete
Move up
Move down
Edit query
Sequen...
Name
Fixed location usage
Allow nega...
Batch enab...
Strategy
1
DE1 Inbound Put
Fixed and non-fixed locations
None

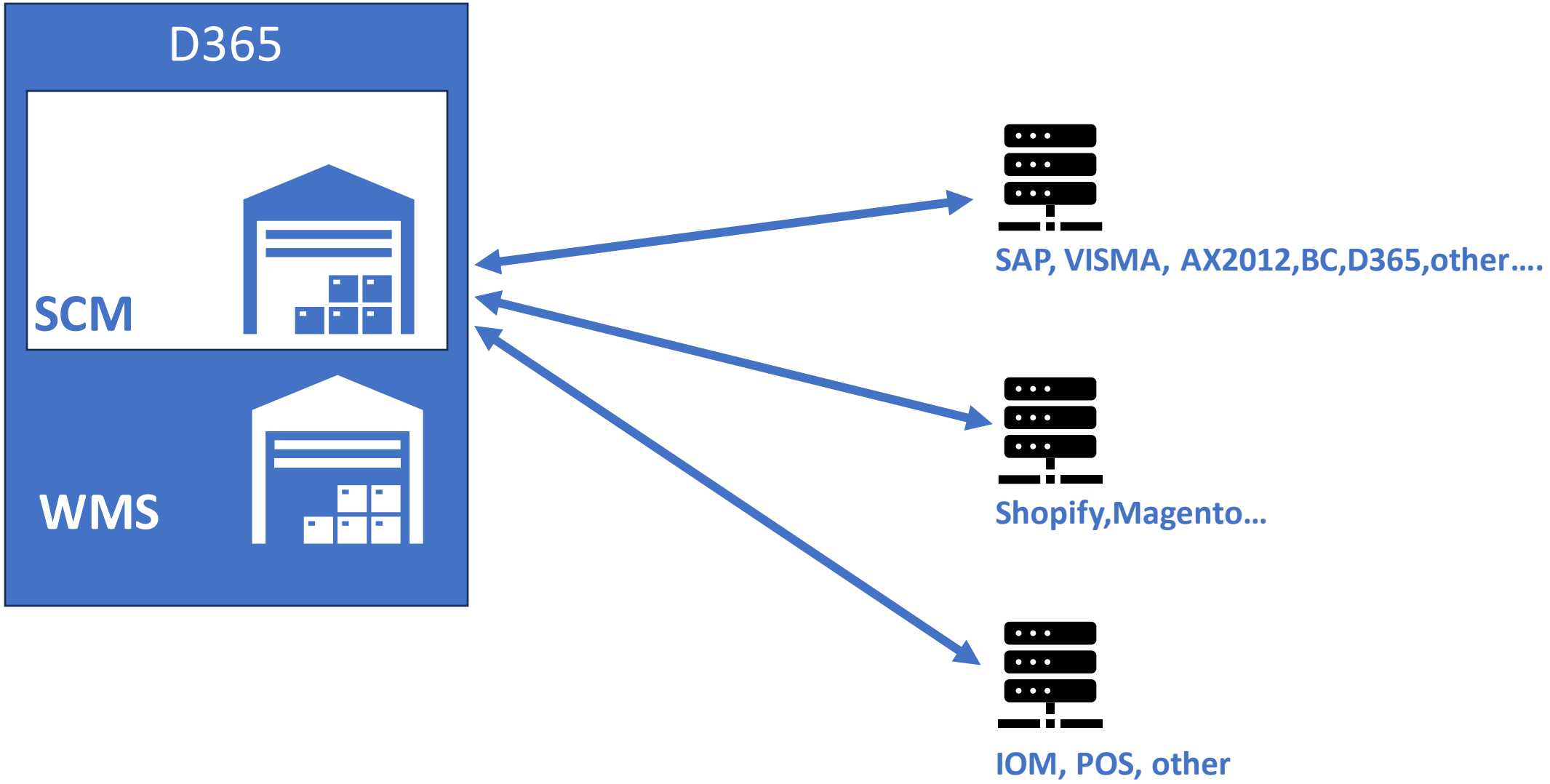

Finance and Operations Preview
Location directives
Edit
New
Delete
Move up
Move down
Edit query
Copy
Acceptance tests
Options
Filter
Work order type
Outbound shipment order
Warehouse
DE1
Sequen...
Name
1
DE1 Outbound Pick
2
DE1 Outbound Put Baydoor
3
DE1 Outbound Put Stage
Standard view
Location directives
Sequence number
Name
1
DE1 Outbound Pick
Location directives
Work type
Pick
Directive code
Multiple SKU
No
Warehouse selection
Warehouse selection
Warehouse
Site
1
Warehouse
DE1
Lines
New
Delete
Move up
Move down
Restrict by unit
Sequence ...
From quan...
To quantity
Unit
Locate quantity
Restrict by ...
Round up t...
Locate pac...
1
0.00
99,999.00
None
Location Directive Actions
New
Delete
Move up
Move down
Edit query
Sequen...
Name
Fixed location usage
Allow nega...
Batch enab...
Strategy
1
DE1 Outbound Pick
Fixed and non-fixed locations
None
2
DE1 Outbound Pick Batch...
Fixed and non-fixed locations
None


Finance and Operations Preview
Inbound load planning workbench
USMF
AD
Save
Supply and demand
Filters
Options
Inbound load planning workbench
Standard view
Supply and demand filter
Site
Warehouse
Ship date
Receipt date
Purchase order lines
Inbound shipment order lines
Display dimensions
Inbound shipment order
External order line number
Item number
Ordered q...
Unit
Inventory ...
Inventory unit
Quantity le...
Weight
Volume
Site
Warehouse
ERPb703d3f0 1 A0001 10.00 ea 10.00 Pcs 10.00 30.00 160.00 5 51
ERPf7be4061 1 A0001 10.00 ea 10.00 Pcs 10.00 30.00 160.00 5 51
Loads
Delete
Actions
Ship and receive
Rating and routing
Generate
Related information
Transportation
Load filter
Hide shipped and received
Load ID
Invalid
Direction
Site
Warehouse
Load lines
Shipments
Incomplet...
Load status
Scheduled load shipping da...
Load template ID
Total freig...
2448e693 Inbound 5 51 1 1 In process 10.00
9934f402 Inbound 5 51 1 1 Open 10.00

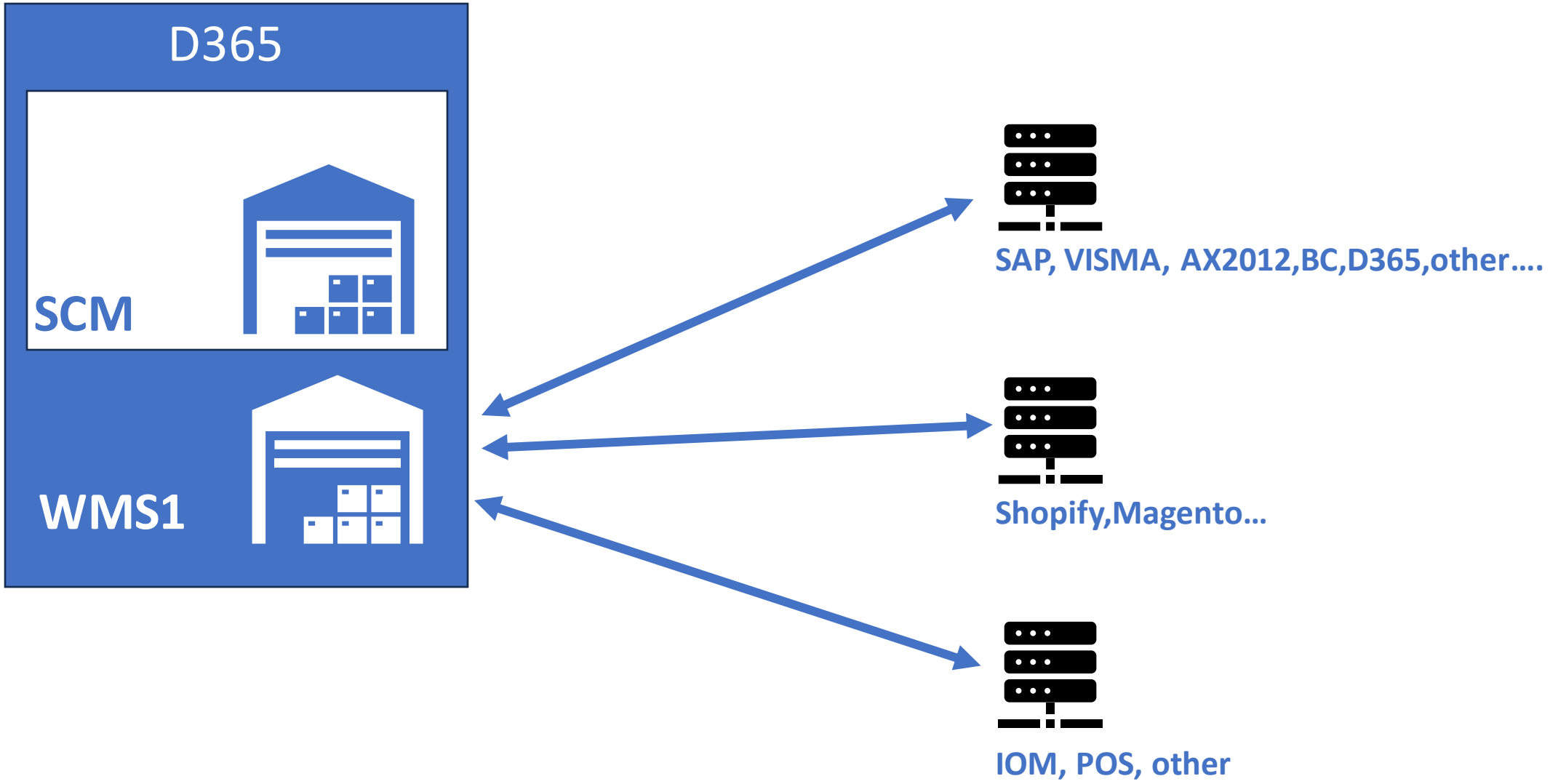


Scenarios for the Warehouse management only mode capabilities…

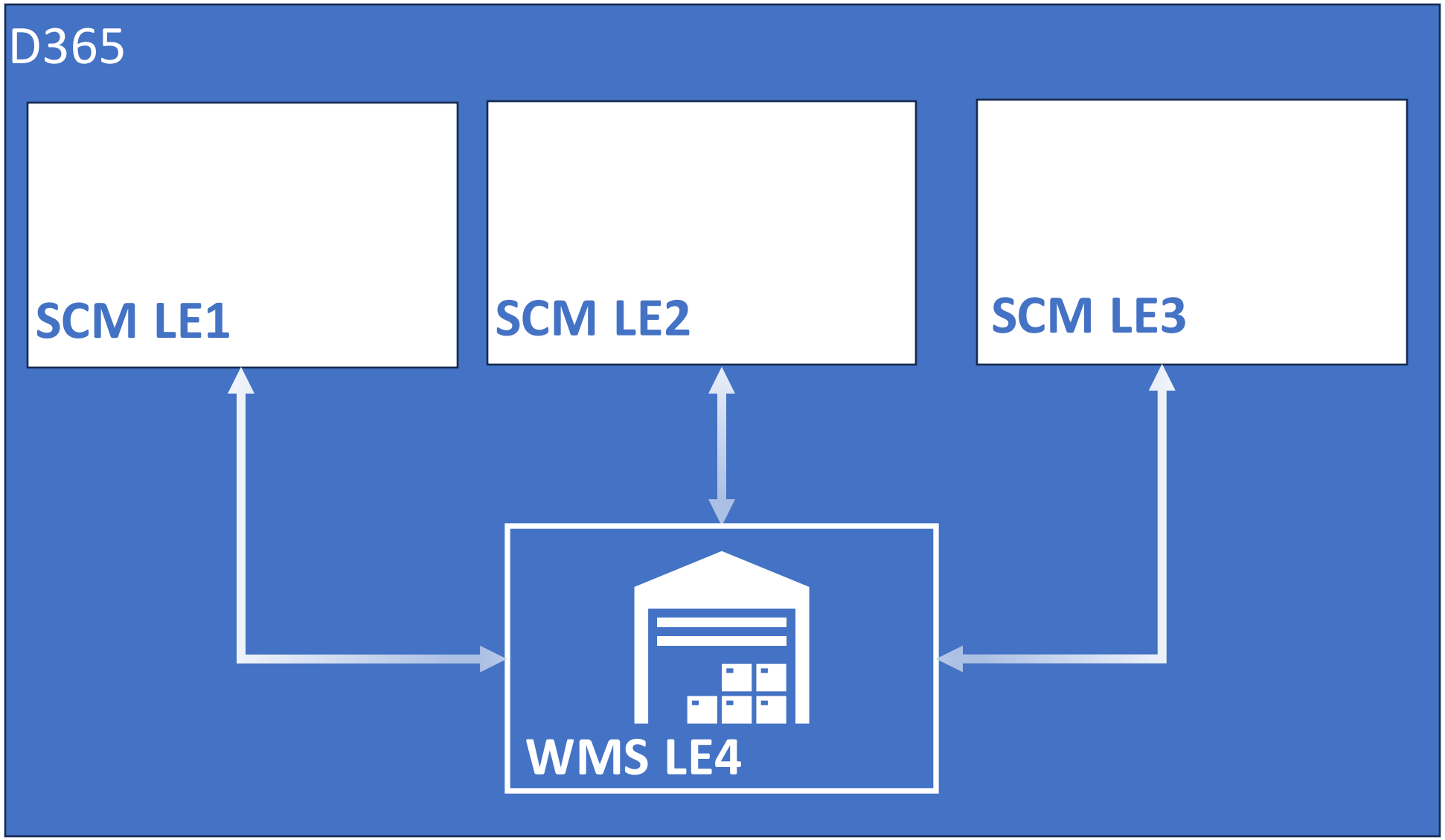
Scenarios for Warehouse management only mode



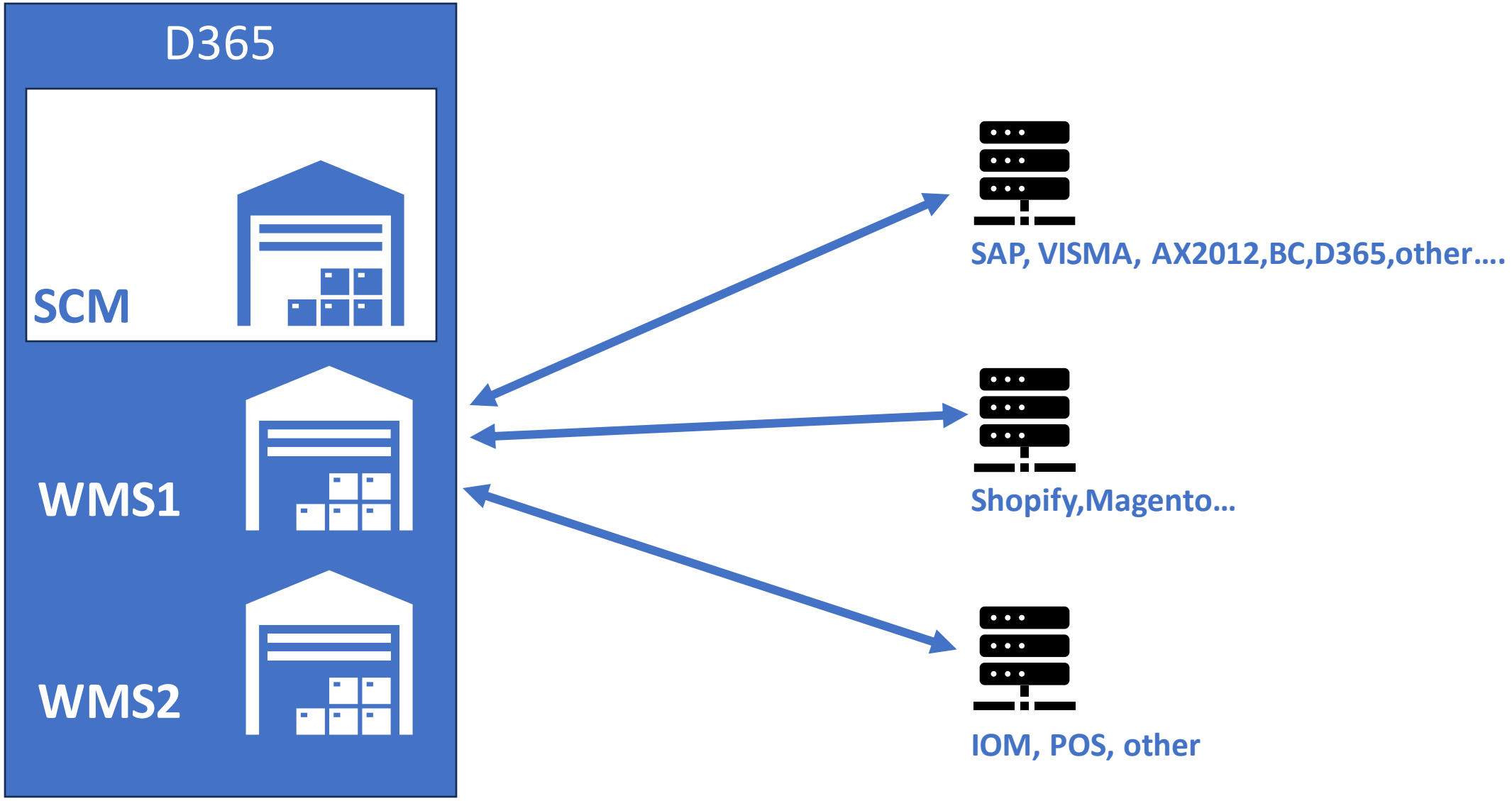
Scenarios for Warehouse management only mode



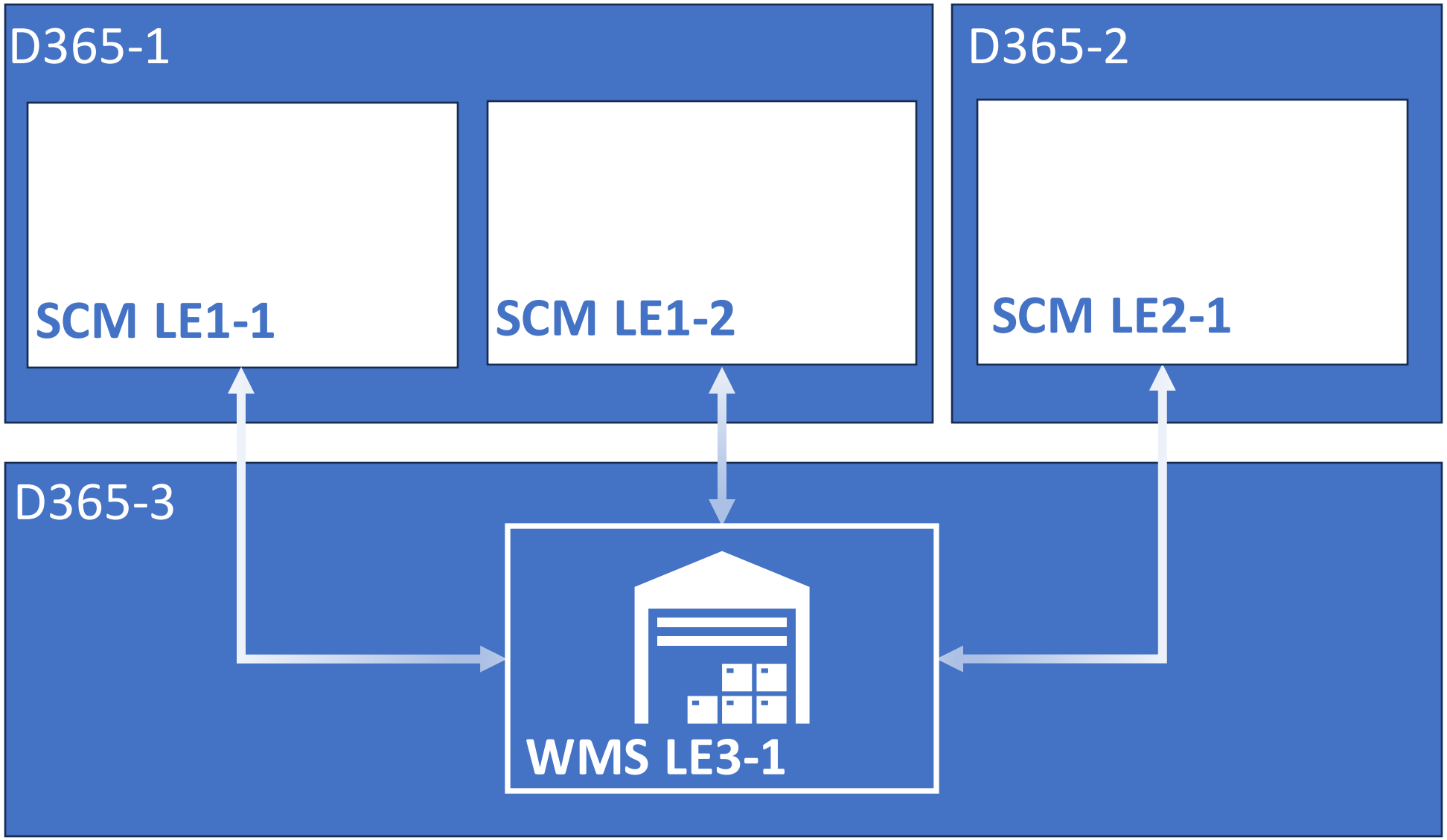
Scenarios for Warehouse management only mode



Scenarios for Warehouse management only mode



Scenarios for Warehouse management only mode



Thank you!

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Q&A

Thank you