
odoo
INVENTORY
MANAGEMENT

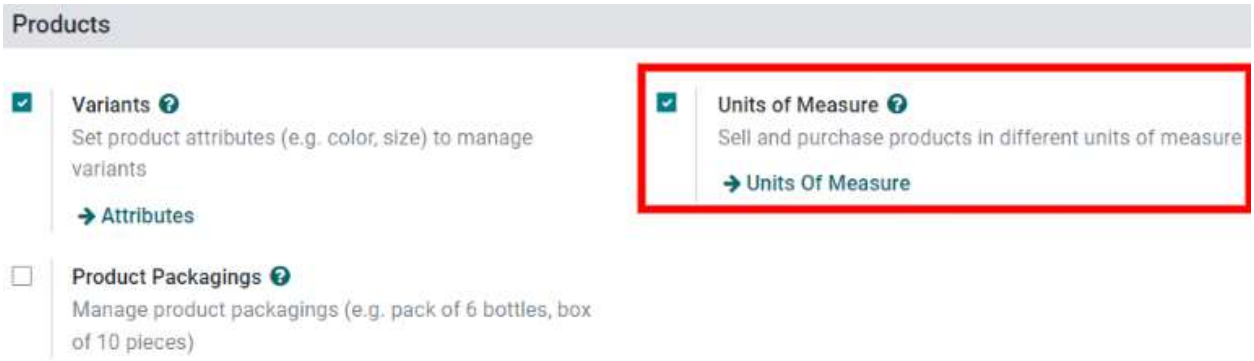
Use different units of measure

In some cases, handling products in different units of measure is necessary. For example, a business can buy products from a country that uses the metric system, and then sell those products in a country that uses the imperial system, so the business needs to convert the units. Another case for unit conversion is when a business buys products in a big pack from a supplier and then sells those products in individual units.

Odoo can be set up to use different units of measure for one product.

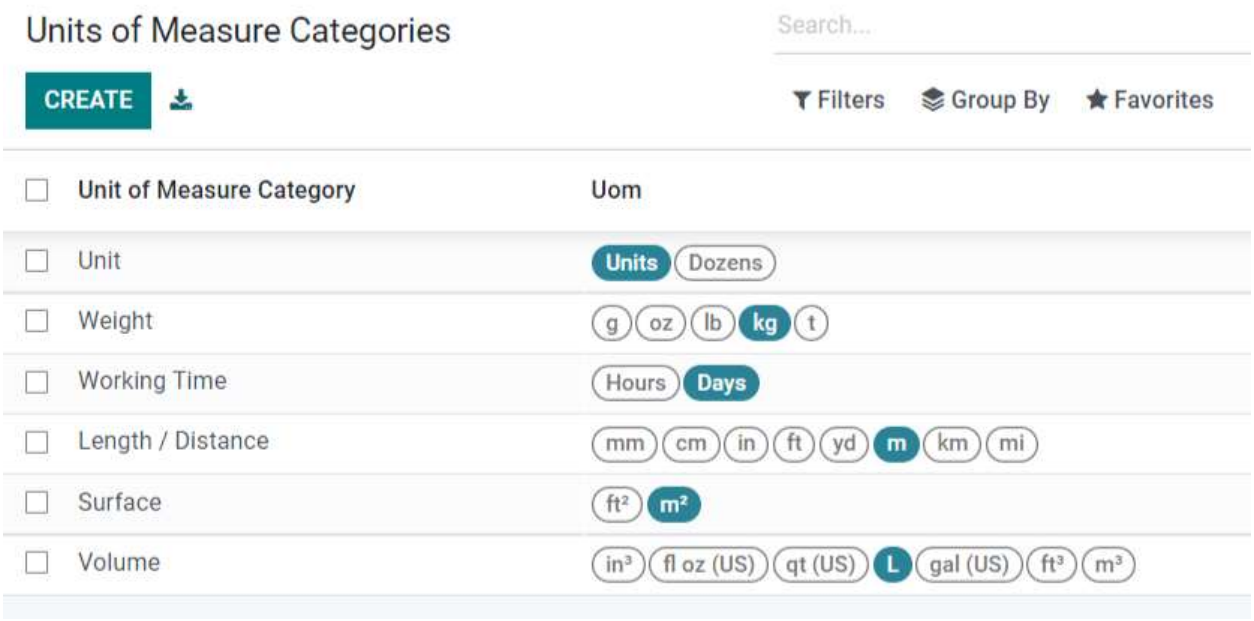
Configuration

To use different units of measure in Odoo, first go to **Inventory ‣ Configuration ‣ Settings ‣ Products** and activate the **Units of Measure** setting. Then, click **Save**.



Units of measure categories

After enabling the units of measure setting, view the default units of measure categories in **Inventory ‣ Configuration ‣ Units of Measures ‣ UoM Categories**. The category is important for unit conversion, Odoo can only convert a product's units from one unit to another only if both units belong to the same category.

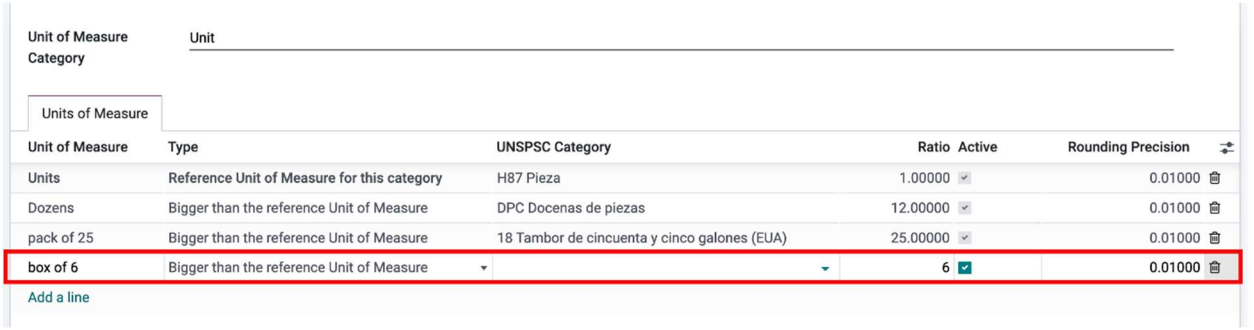


Each units of measure category has a reference unit. The reference unit is highlighted in blue in the **Uom** column of the **Units of Measure Categories** page. Odoo uses the reference unit as a base for any new units.

To create a new unit, first select the correct category. For example, to sell a product in a box of six units, click on the **Unit** category line. Next, click **Edit**. After that, click **Add a line**. Then, in the **Unit of Measure** field, title the new unit `Box of 6`. In the **Type** field, select **Bigger than the reference Unit of Measure**. In the **Ratio** field, enter `6.00000` since a box of six is six times bigger than the reference unit (`1.00000`). Finally, click **Save**.

Click on the **Unit** category.

Click **Add a line**. As an example, we will create a Box of 6 units that we will use for the Egg product. The box of 6 is 6 times bigger than the reference unit of measure for the category which is “Units” here.



Specify a product’s units of measure

To set units of measure on a product, first go to **Inventory ▸ Products ▸ Products** and click on a product to open its settings. Then, click on **Edit**.

In the **General Information** tab, edit the **Unit of Measure** field to specify the unit of measure that the product is sold in. The specified unit will also be the unit used to keep track of the product's inventory and internal transfers. Edit the **Purchase UoM** field to specify the unit of measure that the product is purchased in.

Unit conversion

Buy products in the Purchase UoM

When creating a new request for quotation (RFQ) in the Purchase app, Odoo automatically uses the product's specified purchase unit of measure. However, if needed, the **UoM** can be manually edited on the RFQ.

After the RFQ is confirmed into a purchase order (PO), click on the **Receipt** smart button at the top right corner of the PO. Odoo automatically converts the purchase unit of measure into the product's sales/inventory unit of measure, so the **Demand** column of the delivery receipt shows the converted quantity.

For example, if the product's purchase UoM is `Box of 6` and its sales/inventory unit of measure is `Units`, the PO shows the quantity in boxes of six, and the delivery receipt shows the quantity in units.

Replenishment

A request for quotation for a product can also be generated directly from the product form using the **Replenish** button. After clicking **Replenish**, a replenish assistant box pops up. The purchase unit of measure can be manually edited here if needed. Then, click **Confirm** to create the RFQ.

Next, click the **Units Forecasted** smart button on the product form and scroll down to **Forecasted Inventory ‣ Requests for quotation**. Click on the RFQ reference number to open the draft RFQ. The purchase UoM can also be edited here if needed.

Sell in a different UoM

When creating a new quotation in the Sales app, Odoo automatically uses the product's specified unit of measure. However, if needed, the **UoM** can be manually edited on the quotation.

After the quotation is sent to the customer and confirmed into a sales order (SO), click on the **Delivery** smart button at the top right corner of the SO. Odoo automatically converts the unit of measure into the product's inventory unit of measure, so the **Demand** column of the delivery shows the converted quantity.

For example, if the product's UoM on the SO was changed to `Box of 6`, but its inventory unit of measure is `Units`, the SO shows the quantity in boxes of six, and the delivery shows the quantity in units.

Select a replenishment strategy

In Odoo, there are two strategies for replenishing inventory: **Reordering Rules** and the **Make to Order (MTO)** route. Although these strategies differ slightly, they both have similar consequences: triggering the automatic creation of a purchase or manufacturing order. The choice of which strategy to use depends on the business's manufacturing and delivery processes.

Terminology

Replenishment report and reordering rules

The replenishment report is a list of all products that have a negative forecast quantity.

Reordering rules are used to ensure that there's always a minimum amount of a product in stock in order to manufacture products and/or fulfill sales orders. When the stock level of a product reaches its minimum, Odoo automatically generates a purchase order with the quantity needed to reach the maximum stock level.

Reordering rules can be created and managed in the replenishment report or from the product form.

Make to Order

Make to Order (MTO) is a procurement route that creates a draft purchase order or manufacturing order each time a sales order is confirmed, *regardless of the current stock level*.

Unlike products replenished using reordering rules, Odoo automatically links the sales order to the purchase order (PO) or manufacturing order (MO) generated by the MTO route. Another difference between reordering rules and MTO is with MTO, Odoo generates a draft PO or MO immediately after the sales order is confirmed. With reordering rules, Odoo generates a draft PO or MO when the product's forecasted stock falls below the set minimum quantity. In addition, Odoo will automatically add quantities to the PO/MO as the forecast changes, as long as the PO/MO is not confirmed.

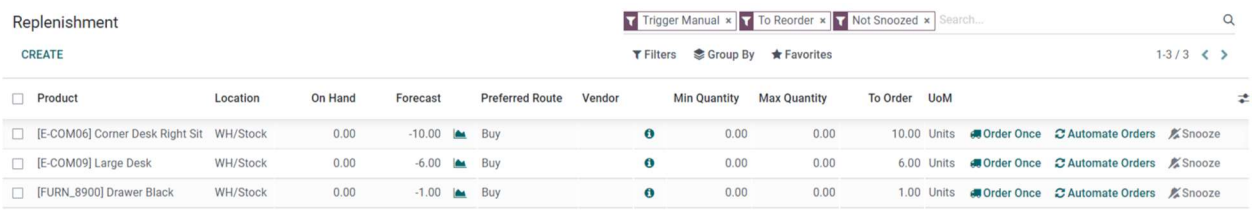
The MTO route is the best replenishment strategy for products that are customized and should be used for this purpose only.

Configuration

Replenishment report and reordering rules

To access the replenishment report, go to **Inventory ‣ Operations ‣ Replenishment**. By default, the replenishment report shows every product that needs to be manually reordered. If there is no

specific rule for a product, Odoo assumes that the **Minimum Quantity** and **Maximum Quantity** stock are both `0.00`.



Before creating a new reordering rule, make sure the product has a vendor or a bill of materials configured on the product form. Also, make sure the **Product Type** is set to `Storable Product` on the product form. By definition, a consumable product does not have its inventory levels tracked, so Odoo can not account for a consumable product in the stock valuation.

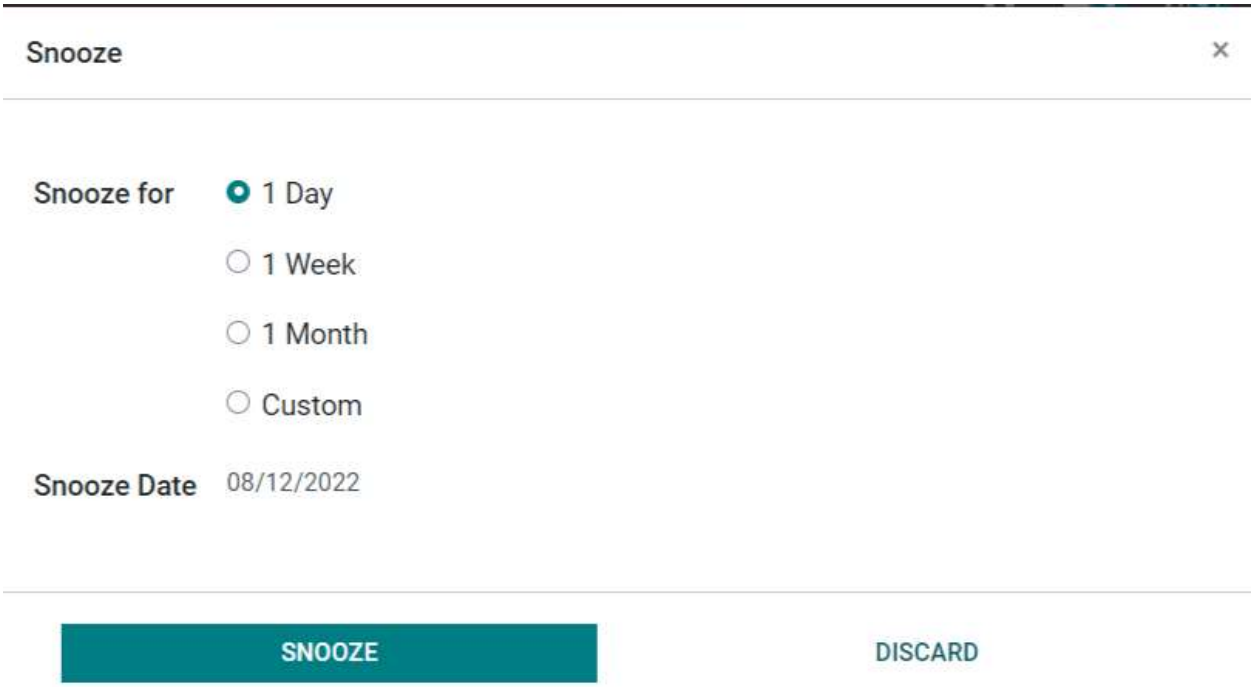
To create a new reordering rule from the replenishment report, go to **Inventory ‣ Operations ‣ Replenishment**, click **Create**, and set the **Product**. If desired, set a **Min Quantity** and a **Max Quantity**. Finally, click **Save**.

To create a new reordering rule from the product form, go to **Inventory ‣ Products ‣ Products**, select a product to open its product form, click the **Reordering Rules** smart button, and click **Create**. Then, fill out the fields and save the new reordering rule.

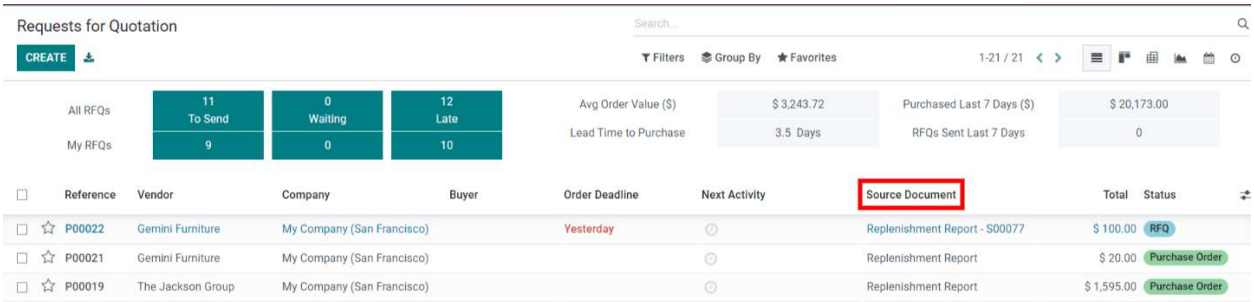
By default, the quantity in the **To Order** field is the quantity required to reach the set **Max Quantity**. However, the **To Order** quantity can be adjusted by clicking on the field, changing the value, and clicking **Save**. To replenish a product manually, click **Order Once**.

To automate replenishment, click **Automate Orders**. When this button is clicked, Odoo will automatically generate a draft PO/MO every time the forecasted stock level falls below the set **Min Quantity** of the reordering rule.

A reordering rule can be temporarily deactivated for a given period by using the **Snooze** button.



A PO or MO created by a manual replenishment will have `Replenishment Report` as the source document. A PO or MO created by an automated reordering rule will have the sales order(s) reference number(s) that triggered the rule as the source document.



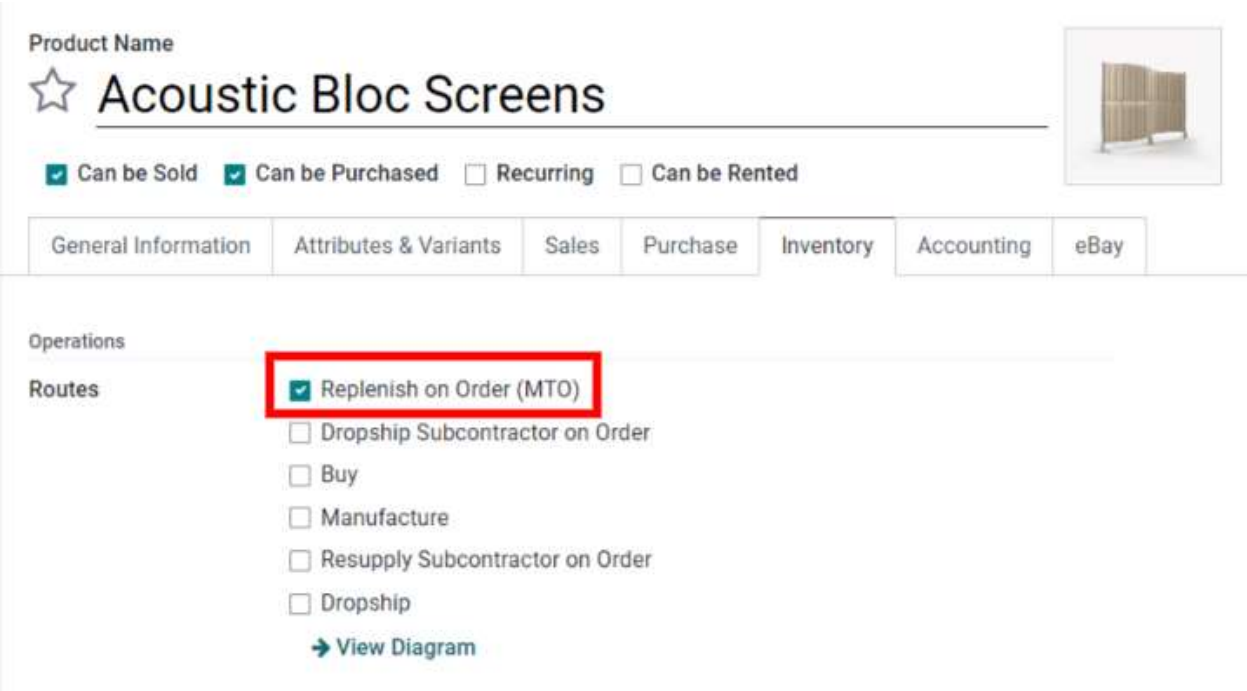
Make to order

Since the Make to Order (MTO) route is only recommended for customized products, the route is hidden by default.

To activate the Make to Order (MTO) route in Odoo:

1. Go to **Inventory ▸ Configuration ▸ Settings ▸ Warehouse**.
2. Activate **Multi-Step Routes** setting and click **Save**.
3. Go to **Inventory ▸ Configuration ▸ Routes**.
4. Click on **Filters ▸ Archived** to show archived routes.
5. Select the checkbox next to **Replenish on Order (MTO)**, and click on **Action ▸ Unarchive**.

To set a product's procurement route to MTO, go to **Inventory ▸ Products ▸ Products**, click on a product to open the product form, and click **Edit**. Then, click on the **Inventory** tab and in the **Routes** options, select **Replenish on Order (MTO)**. For products purchased directly from a vendor, make sure the **Buy** route is selected in addition to the MTO route and a vendor is configured in the **Purchase** tab. For products manufactured in-house, make sure the **Manufacture** route is selected in addition to the MTO route and a bill of materials is configured for the product. Finally, click **Save**.



Manage Warehouses and Locations

Terminology

Warehouse

In Odoo, a **Warehouse** is the actual building/place in which a company's items are stocked. Multiple warehouses can be set up in Odoo and the user can create moves between warehouses.

Location

A **Location** is a specific space within the warehouse. It can be a sublocation of the warehouse (a shelf, a floor, an aisle, and so on). Therefore, a location is part of one warehouse only and it is not possible to link one location to multiple warehouses. In Odoo, as many locations can be configured as needed under one warehouse.

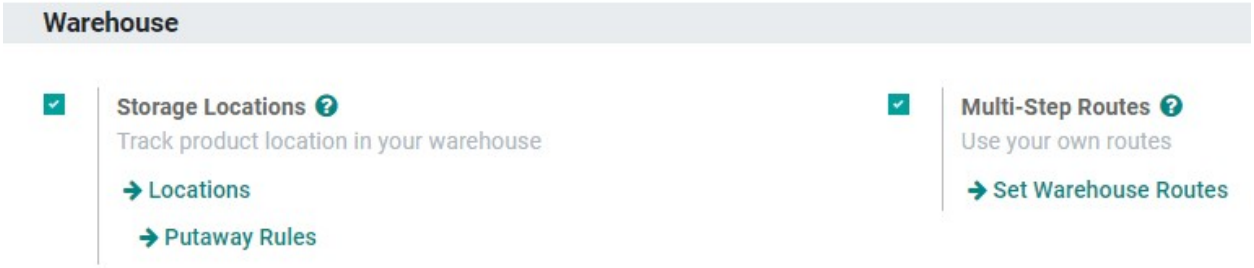
There are three types of locations:

- The **Physical Locations** are internal locations that are part of the warehouses that the company owns. They can be the loading and unloading areas of the warehouse, a shelf, a department, etc.
- The **Partner Locations** are spaces within a customer and/or vendor's warehouse. They work the same way as physical locations, with the only difference being that they are not owned by the user's company.
- The **Virtual Locations** are places that do not exist, but in which products can be placed when they are not physically in an inventory yet (or anymore). They come in handy when recording lost products (**Inventory Loss**), or accounting for products that are on their way to the warehouse (**Procurements**).

In Odoo, locations are structured hierarchically. Locations can be structured as a tree, dependent on a parent-child relationship. This gives more detailed levels of analysis of the stock operations and the organization of the warehouses.

Configuration

To activate locations, go to **Configuration ‣ Settings** and enable **Storage Locations**. Then, click **Save**.

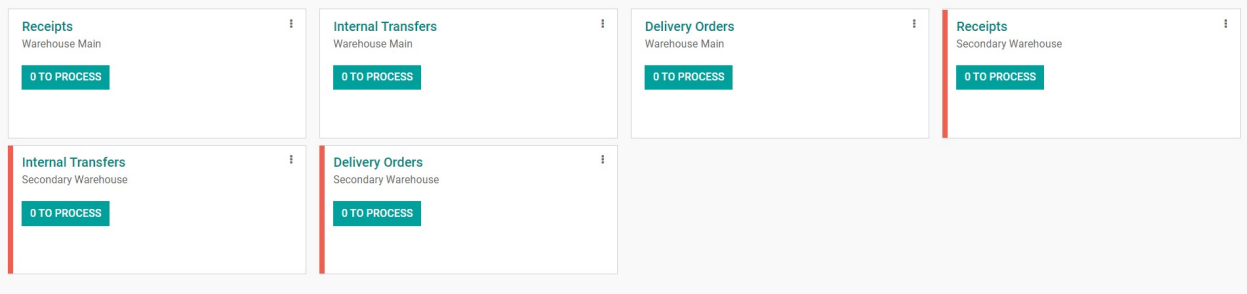


Create a new warehouse

To create a warehouse, go to **Configuration ‣ Warehouse Management ‣ Warehouses** and click on **Create**.

Then, fill out a **Warehouse Name** and a **Short Name**. The short name is five characters maximum.

Now, go back to the **Inventory** dashboard. There, new operations related to the newly created warehouse have been automatically generated.



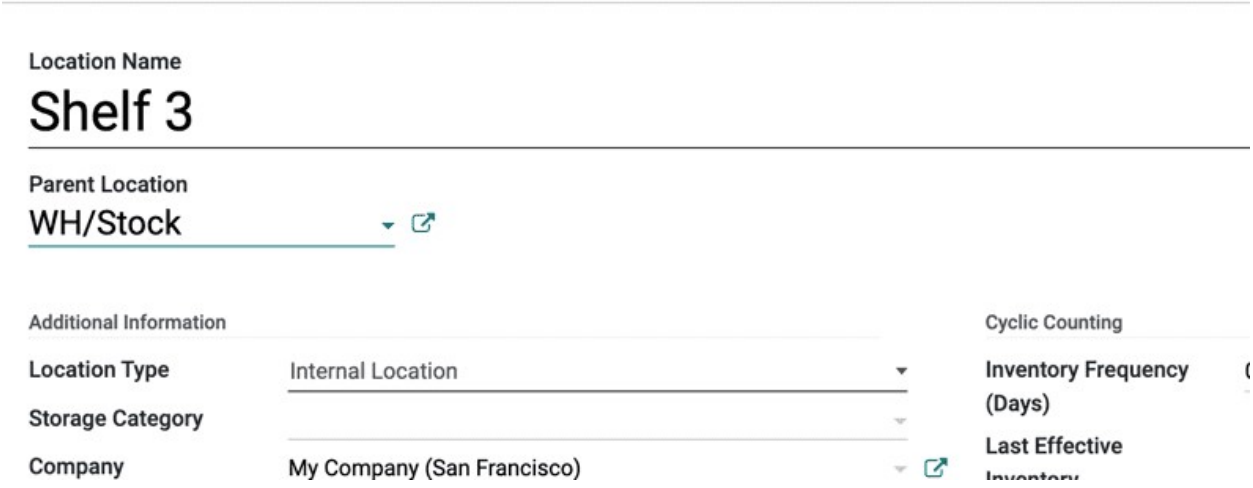
Note

Adding a second warehouse will automatically activate the **Locations** setting.

Create a new location

To create a location, go to **Configuration ▸ Warehouse Management ▸ Locations** and click on **Create**.

Then, fill out a **Location Name** and a **Parent Location** and click **Save**.

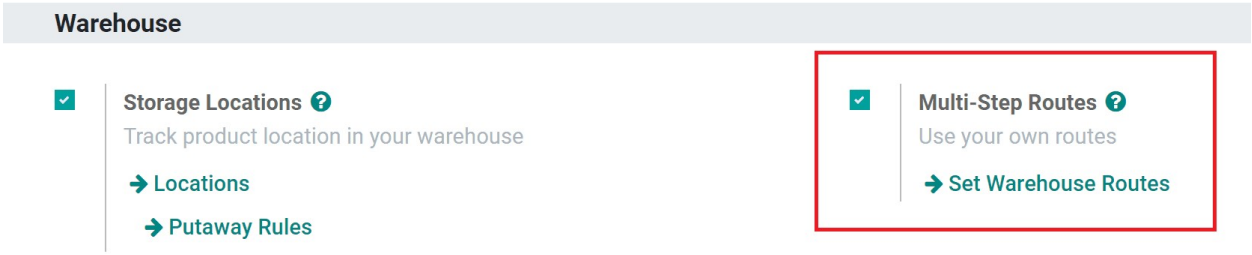


Resupply from another warehouse

A common use case for multiple warehouses is to have one central warehouse that resupplies multiple shops, and in this case, each shop is considered a local warehouse. When a shop wants to replenish a product, the product is ordered to the central warehouse. Odoo allows the user to easily set which warehouse(s) can resupply another warehouse.

Configuration

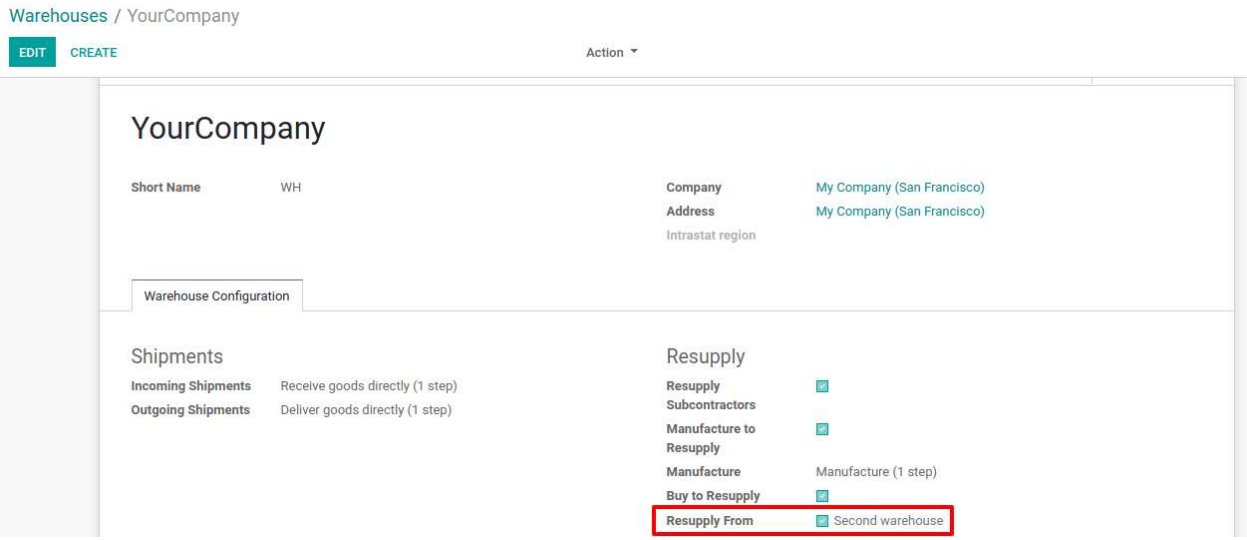
To resupply from another warehouse, first go to **Inventory ‣ Configuration ‣ Settings ‣ Warehouse** and activate **Multi-Step Routes**. Then, click **Save** to apply the setting.



View all the configured warehouses by going to **Inventory ‣ Configuration ‣ Warehouses**.

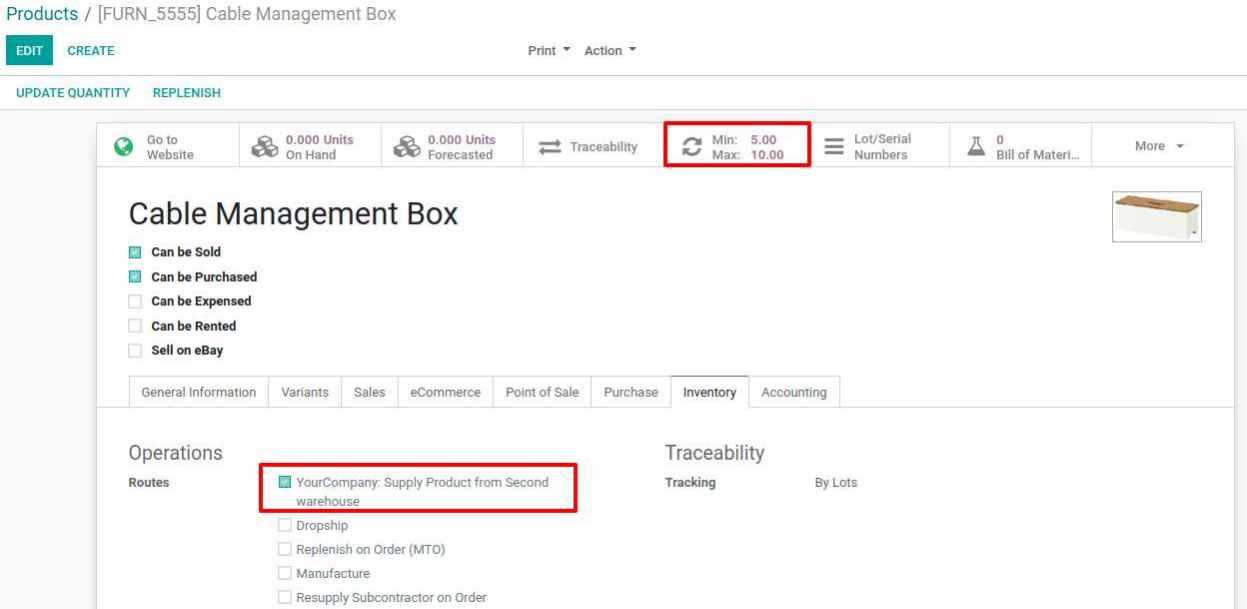
Create a new warehouse by clicking **Create**. Then, give the warehouse a name and a **Short Name**. Finally, click **Save** to finish creating the warehouse.

After that, go back to the **Warehouses** page and open the warehouse that will be resupplied by the second warehouse. Then, click **Edit**. In the **Warehouse Configuration** tab, locate the **Resupply From** field, and check the box next to the second warehouse's name. If the warehouse can be resupplied by more than one warehouse, make sure to check those warehouses' boxes too. Finally, click **Save** to apply the setting. Now, Odoo knows which warehouses can resupply this warehouse.



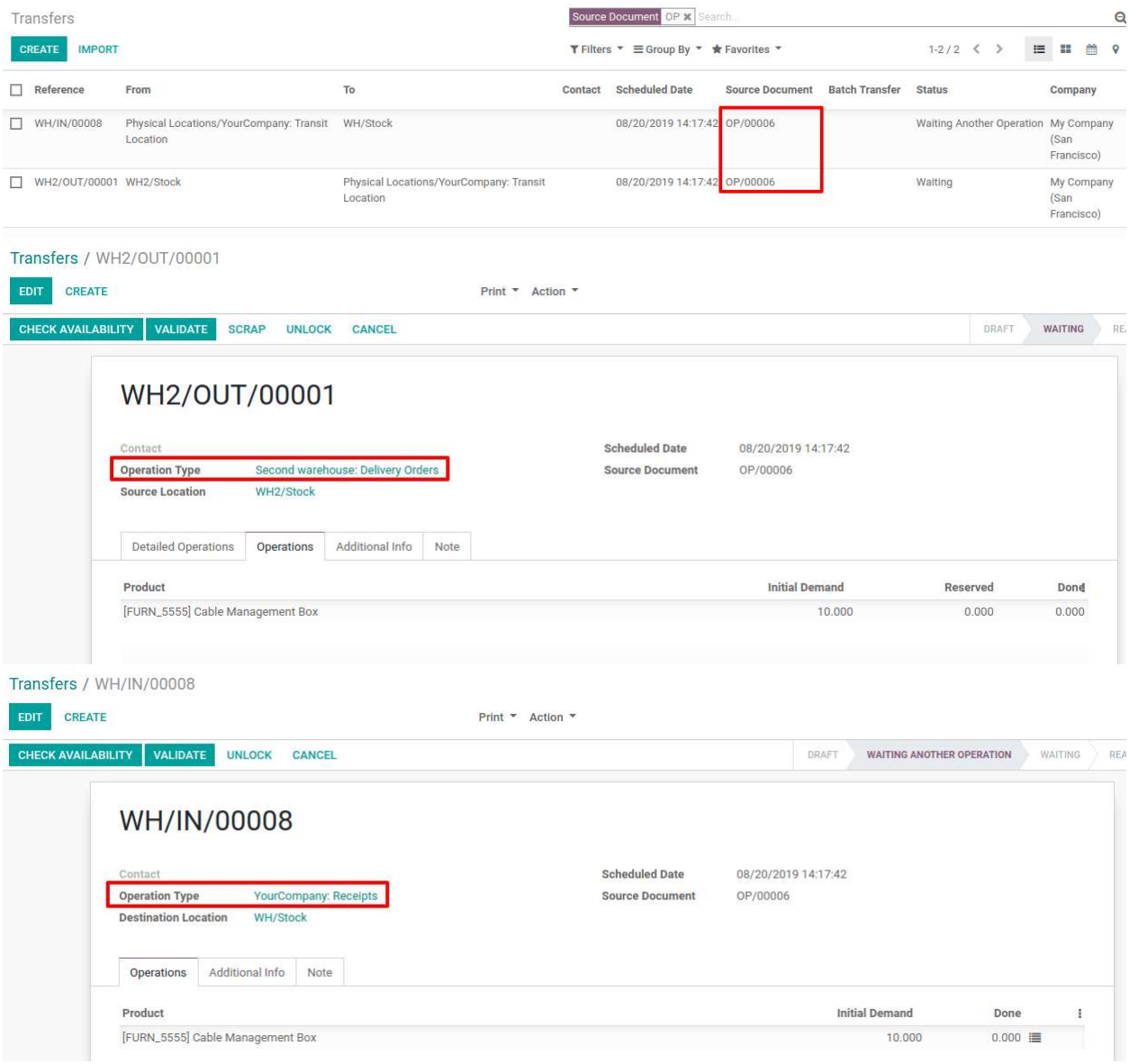
Set route on a product

After configuring which warehouse(s) to resupply from, a new route is now available on all product forms. The new route appears as **Supply Product from [Warehouse Name]** under the **Inventory** tab on a product form. Use the **Supply Product from [Warehouse Name]** route with a reordering rule or the make to order (MTO) route to replenish stock by moving the product from one warehouse to another.



When a product's reordering rule is triggered and the product has the **Supply Product from [Warehouse Name]** route set, Odoo automatically creates two pickings. One picking is a *delivery order* from the second warehouse, which contains all the necessary products, and the second picking is a *receipt* with the same products for the main warehouse. The product move from the second warehouse to the main warehouse is fully tracked in Odoo.

On the picking/transfer records created by Odoo, the **Source Document** is the product's reordering rule. The location between the delivery order and the receipt is a transit location.



Inventory adjustments

In any warehouse management system, the recorded inventory counts in the database might not always match the actual inventory counts in the warehouse. The discrepancy between the two counts can be due to theft, damages, human errors, or other factors. As such, inventory adjustments must be made to reconcile the differences, and ensure that the recorded counts in the database match the actual counts in the warehouse.

In Odoo, inventory adjustments can be accessed through **Inventory ‣ Operations ‣ Inventory Adjustments**.

The **Inventory Adjustments** page shows all products that are currently in stock. Each line contains the following information:

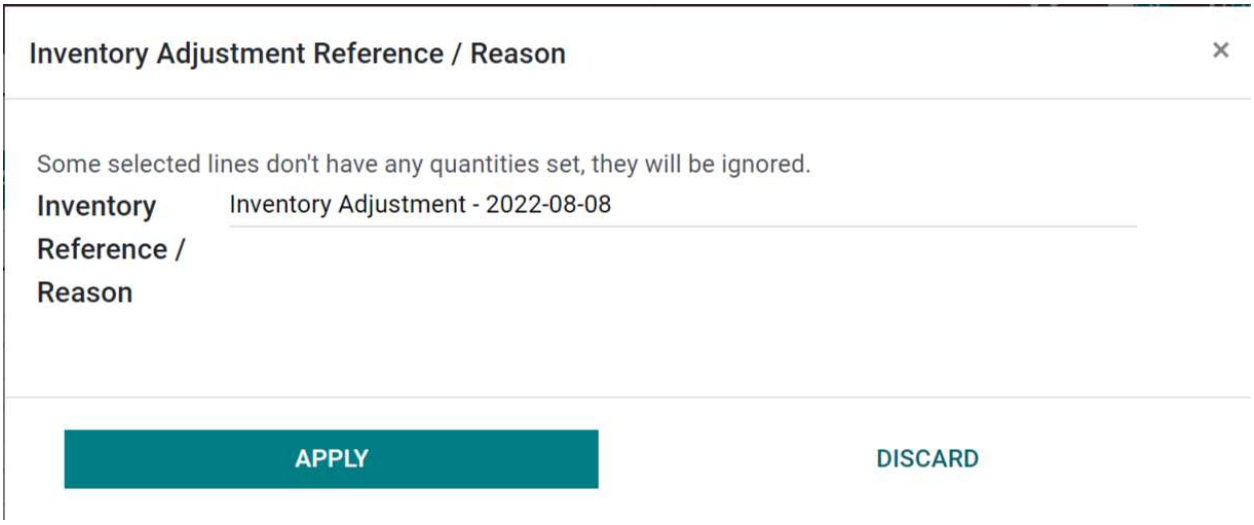
- **Product**
- **Lot/Serial Number**
- **On Hand Quantity**

Add a new line

To add an inventory adjustment line, click **Create** and fill in the **Product** and **Counted Quantity** fields. Then click **Save**.

At this stage, the count is recorded but not yet *applied*. Meaning the quantity on hand is not yet updated to match the new **Counted Quantity**.

To apply the new **Counted Quantity**, click **Apply** on the line or the **Apply All** button on the top of the page. If **Apply All** is clicked, a reference or reason can be entered before clicking **Apply**.



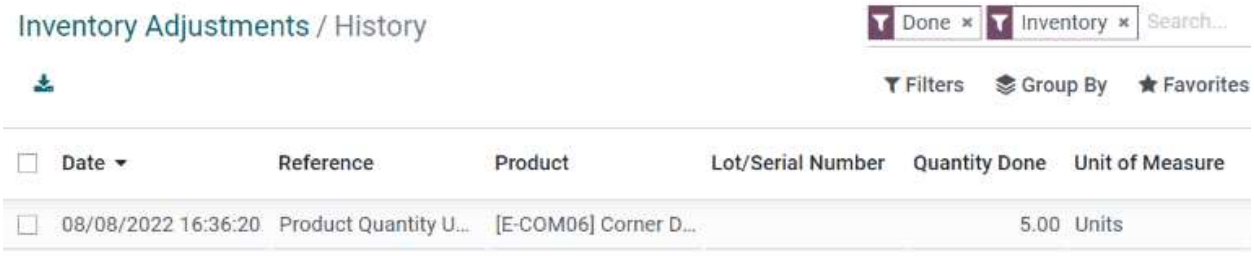
Count products

Counting products is a recurring activity in a warehouse. Once a count is complete, go to **Inventory ‣ Operations ‣ Inventory Adjustments** to update the **Counted Quantity** column for each product line.

If a count matches the **On Hand Quantity** recorded in the database, click on **Set**, which will copy the value in the **On Hand Quantity** field and paste it in the **Counted Quantity** field. A move with `0.00` **Quantity Done** will be recorded in the product's inventory adjustment history.

If a count does *not* match the **On Hand Quantity** recorded in the database, record the count in the **Counted Quantity** field. When **Apply** is clicked, a move with the difference between the **On**

Hand Quantity and **Counted Quantity** will be recorded in the product's inventory adjustment history.



Note

Sometimes a count occurs, but can not be applied in the database right away. In the time between the actual count and applying the inventory adjustment, product moves can occur. In that case, the **On Hand Quantity** in the database can change and will not be consistent with the counted quantity. As an extra caution measure, Odoo will ask for confirmation before applying the inventory adjustment.

Plan counts

Each inventory adjustment line contains the following information:

- **Scheduled Date**: the date at which a count should be made.
- **User**: the person in charge of the count.
- **Accounting Date**: the date at which the adjustments will be accounted. The column is hidden by default, but can be made visible by opening the column options icon.

Important

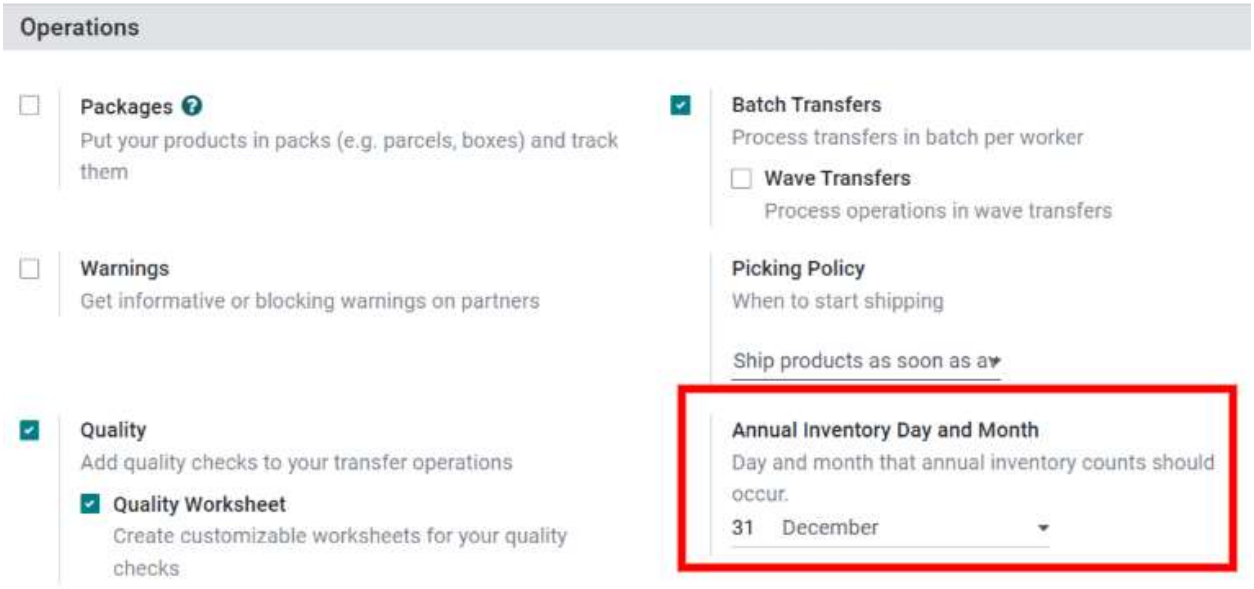
In the Barcode app, users can only view counts assigned to them that are scheduled for today or earlier.

To plan big counts, select the desired product lines on the **Inventory Adjustments** page. Then, click **Request a Count** and fill in the following information:

- **Inventory Date**: the planned date of the count.
- **User**: the user responsible for the count.
- **Accounting Date**: the date at which the inventory adjustment will be accounted.
- **Count**: to leave the **On Hand Quantity** of each product line blank, select **Leave Empty**. To prefill the **On Hand Quantity** of each product line with the current value recorded in the database, select **Set Current Value**.

Finally, click **Confirm** to request the count.

By default, after an inventory adjustment is applied, the scheduled date for the next count is the 31st of December of the current year. To modify the default scheduled date, go to **Inventory ▸ Configuration ▸ Settings ▸ Operations** and change the date in the **Annual Inventory Day and Month** setting.



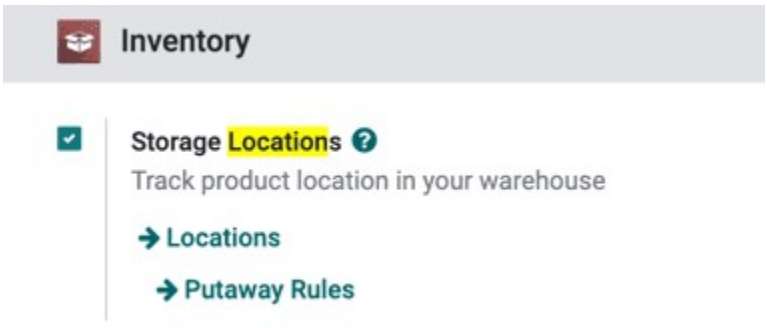
Cycle counts

In most companies, the stock is only counted once a year. That's why by default, after making an inventory adjustment in Odoo, the scheduled date for the next count is set on the 31st of December. However, for some businesses it's crucial to have an accurate inventory count at all times.

The goal of cycle counts is to keep critical stock levels accurate by counting more often at key locations.

Configuration

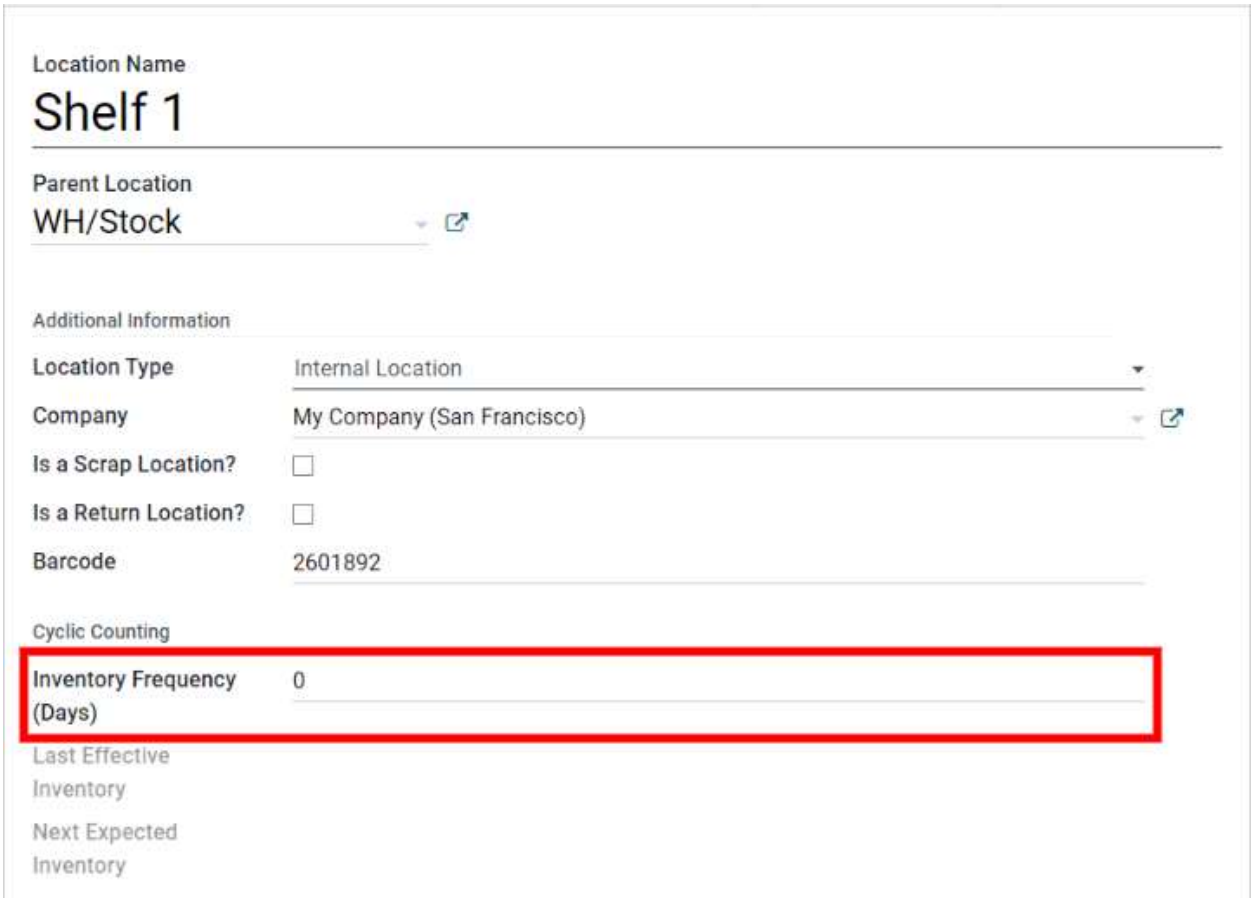
In Odoo, cycle counts are location-based. The frequency of the counts is defined by the storage location. To activate storage locations, go to **Inventory ‣ Configuration ‣ Settings ‣ Warehouse** and activate the **Storage Locations** setting. Next, click **Save** to apply the setting.



Change the inventory frequency

To change a location's inventory frequency, first, go to the locations by clicking **Inventory ▸ Configuration ▸ Locations**.

Then, click on a location to open the location settings. Next, click on **Edit**. In the **Inventory Frequency (Days)** field, set the number of days. For example, a location that needs an inventory count every 30 days would set the **Inventory Frequency (Days)** value to `30`. Once the value is entered, click **Save** to apply the setting to the location. Now, once an inventory adjustment is applied to this location, the next scheduled count date will be automatically set based on the number of days in the **Inventory Frequency (Days)** setting.



Process Delivery Orders in three Steps (Pick + Pack + Ship)

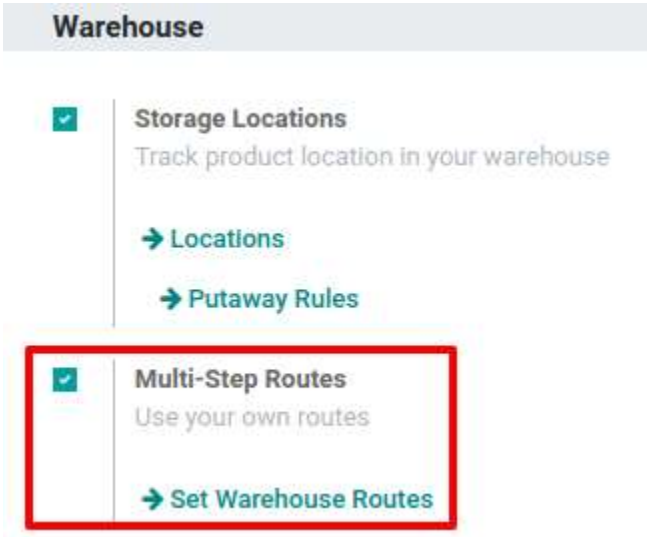
When an order goes to the shipping department for final delivery, Odoo is set up by default to utilize a one-step operation: once all goods are available, they are able to be shipped in a single delivery order. However, that process may not reflect reality and your company could require more steps before shipping.

With the delivery in 3 steps (Pick + Pack + Ship), the items will be picked to be transferred to a packing area. Then, they will be moved to an output location before being effectively shipped to the customers.

Activate Multi-Step Routes

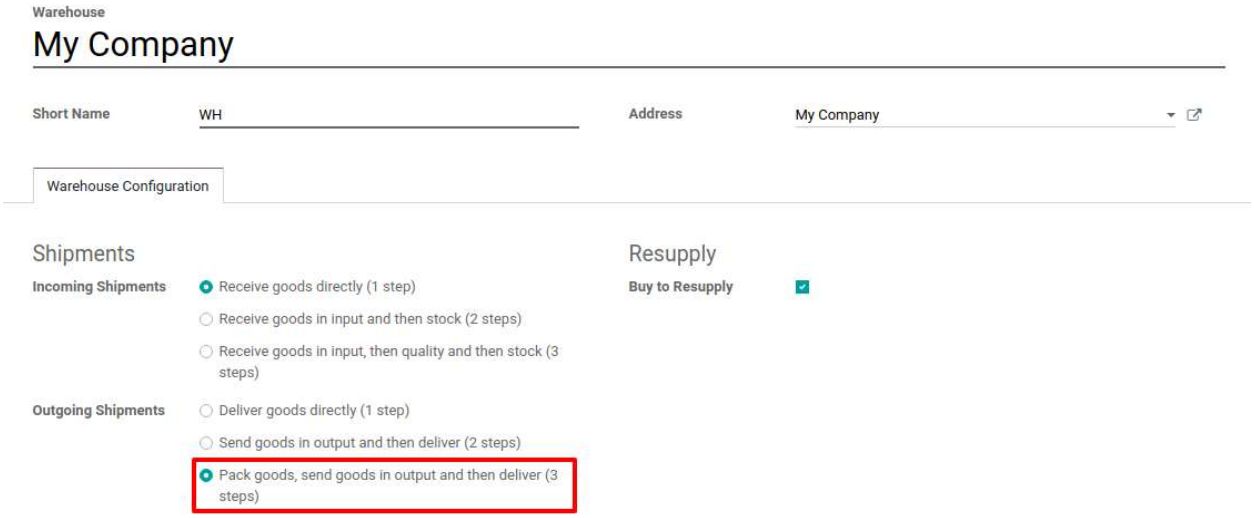
The first step is to allow using *multi-step routes*. Indeed, routes provide a mechanism to chain different actions together. In this case, we will chain the picking step to the shipping step.

To allow *multi-step routes*, go to **Inventory ‣ Configuration ‣ Settings** and activate the option. Note that activating *Multi-Step Routes* will also activate *Storage Locations*.



Configure Warehouse for Delivery in 3 Steps

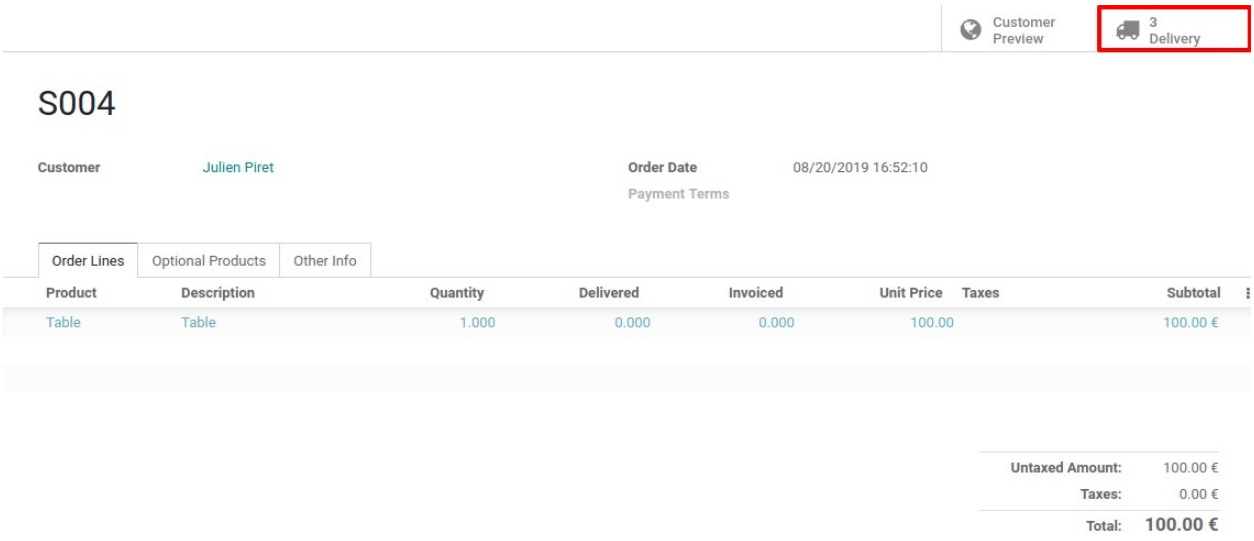
Once *Multi-Step Routes* has been activated, you can go to **Inventory ‣ Configuration ‣ Warehouse** and enter the warehouse which will use delivery in 3 steps. You can then select the option *Pack goods, send goods in output and then deliver (3 steps)* for *Outgoing Shipments*.



Activating this option will lead to the creation of two new locations, *Output* and *Packing Zone*. If you want to rename it go to **Inventory ▸ Configuration ▸ Locations**, *Select* the one you want to rename and update its name.

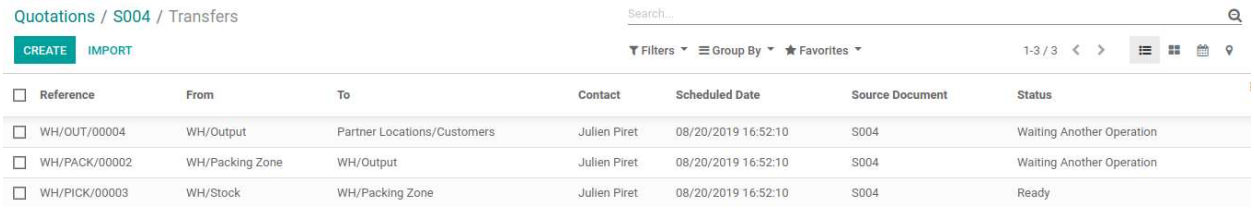
Create a Sales Order

In the *Sales* application, you can create a quotation with some storable products to deliver. Once you confirm the quotation, three pickings will be created and automatically linked to your sale order.



If you click the button, you should now see three different pickings:

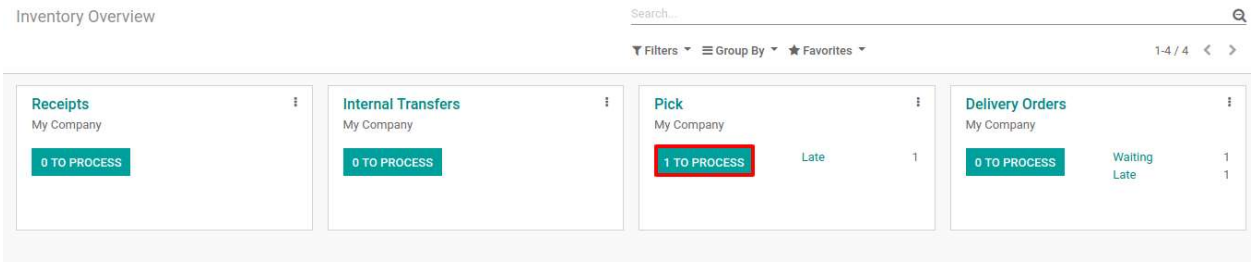
1. The first one with a reference PICK to designate the picking process,
2. The second one with the reference PACK that is the packing process,
3. The last one with a reference OUT to designate the shipping process.



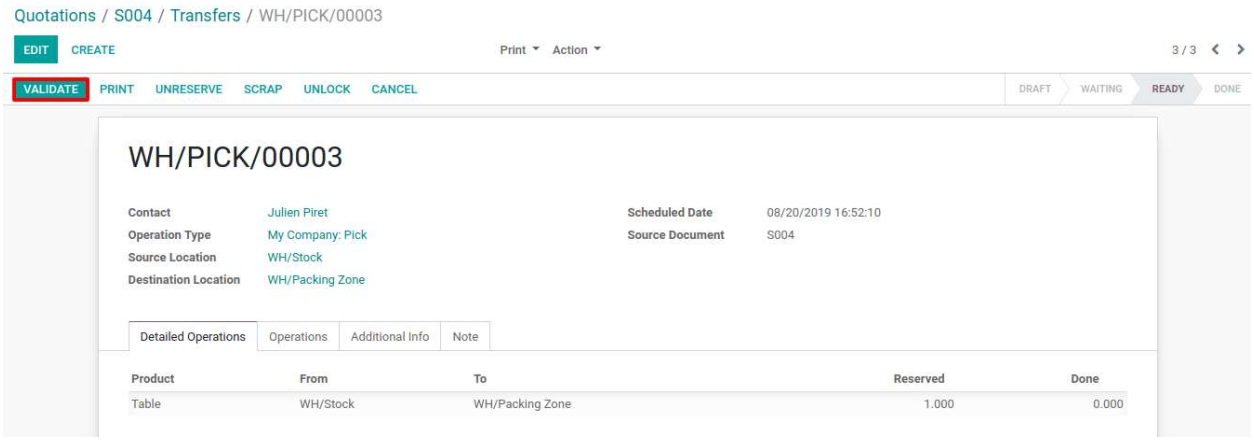
Process the Picking, Packing, and Delivery

The picking operation is the first one to be processed and has a *Ready* status while the other ones are *Waiting Another Operation*. The Packing operation will become *Ready* as soon as the picking one is marked as done.

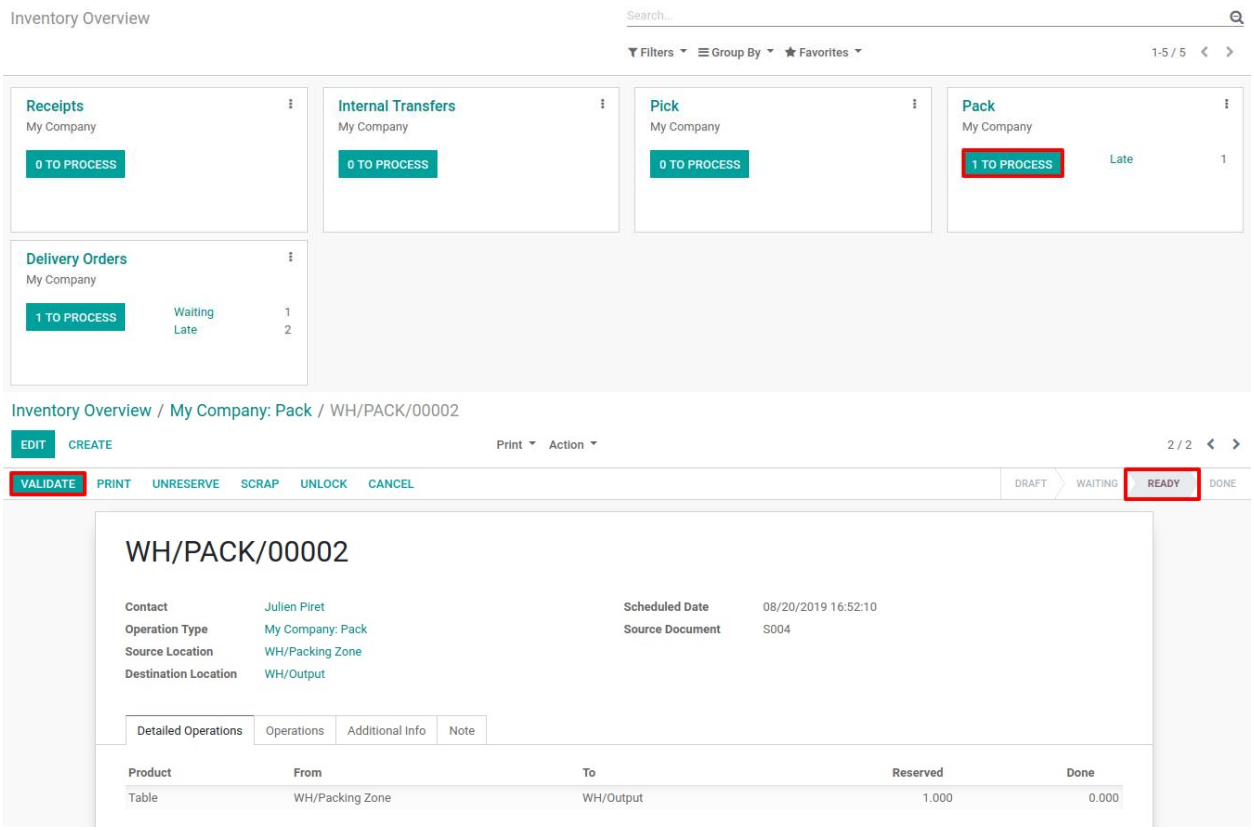
You can enter the picking operation from here, or access it through the inventory dashboard.



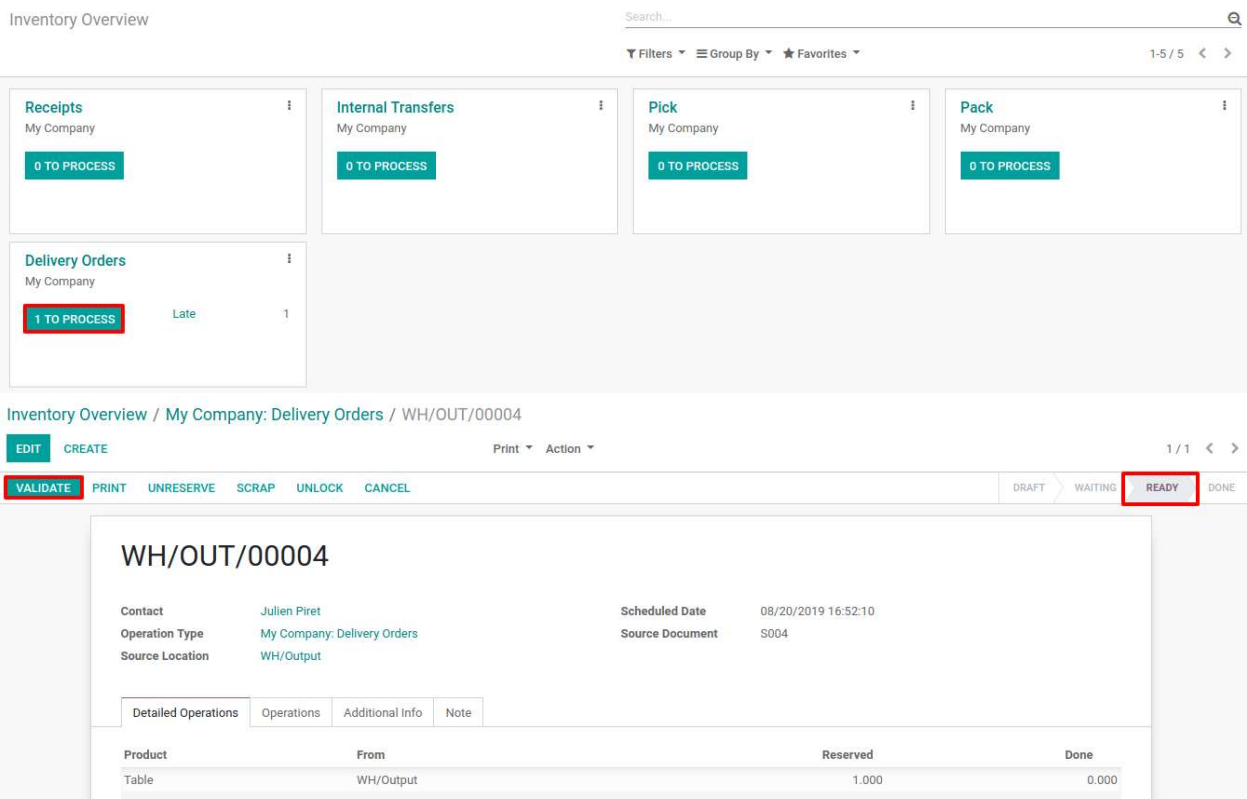
In case you have the product in stock, it has automatically been reserved and you can simply validate the picking document.



Once the picking has been validated, the packing order is ready to be processed. Thanks to the fact that the documents are chained, the products which have been previously picked are automatically reserved on the packing order which can be directly validated.



Once the packing has been validated, the delivery order is ready to be processed. Here again, it is directly ready to be validated in order to transfer the products to the customer location.



Process a Receipt in three steps (Input + Quality + Stock)

Quality is essential for most companies. To make sure we maintain quality throughout the supply chain, it only makes sense that we assess the quality of the products received from suppliers. To do so, we will add a quality control step.

Odoo uses routes to define how to handle the different receipt steps. Configuration of those routes is done at the warehouse level. By default, the reception is a one-step process, but it can also be configured to have two-steps or three-steps processes.

The three-steps flow works as follows: you receive the goods in your receiving area, then transfer them into a quality area for quality control (QC). When the quality check is completed, the goods that match the QC requirements are moved to stock

Activate Multi-Step Routes

The first step is to allow the use of *Multi-Step Routes*. Routes provide a mechanism to chain different actions together. In this case, we will chain the picking step to the shipping step.

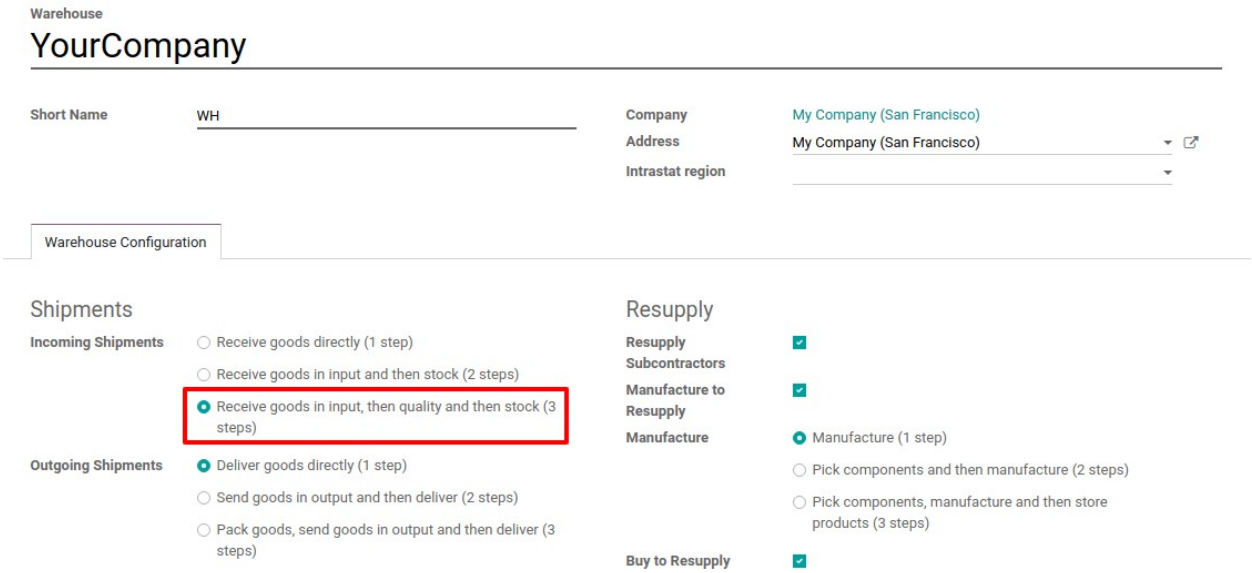
To enable *Multi-Step Routes*, go to **Inventory ‣ Configuration ‣ Settings** and activate the option.

Note

By default, activating *Multi-Step Routes* also activates *Storage Locations*.

Configure warehouse for receipt in 3-steps

Once *Multi-Step Routes* has been activated, go to **Inventory ‣ Configuration ‣ Warehouse** and enter the warehouse which should work with the 3-steps reception. Then, select *Receive goods in input, then quality and then stock (3 steps)* for *Incoming Shipments*.

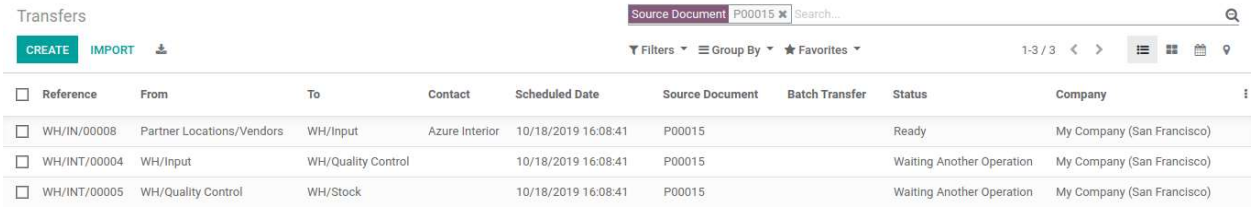


Activating this option leads to the creation of two new locations: *Input* and *Quality Control*. To rename them, go to **Inventory ‣ Configuration ‣ Locations** and select the one you want to rename.

Create a Purchase Order

To start the 3-steps reception process, create a *Request for Quotation* from the *Purchase* app, add some storable products to it and confirm. Then, three pickings are created with your *Purchase Order* as the source document:

1. The first one with a reference *IN* to designate the receipt process;
2. The second one with a reference *INT*, which is the move to the quality control zone;
3. The last one with a reference *INT* to designate the move to stock.

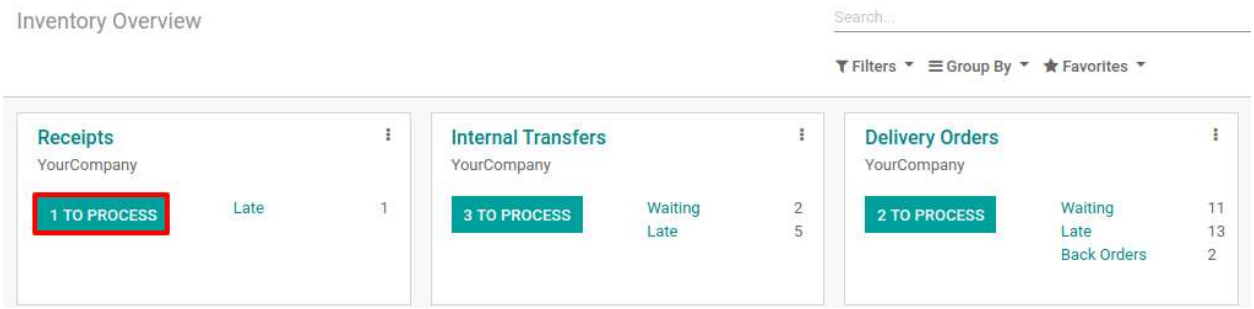


Reference	From	To	Contact	Scheduled Date	Source Document	Batch Transfer	Status	Company
WH/IN/00008	Partner Locations/Vendors	WH/Input	Azure Interior	10/18/2019 16:08:41	P00015		Ready	My Company (San Francisco)
WH/INT/00004	WH/Input	WH/Quality Control		10/18/2019 16:08:41	P00015		Waiting Another Operation	My Company (San Francisco)
WH/INT/00005	WH/Quality Control	WH/Stock		10/18/2019 16:08:41	P00015		Waiting Another Operation	My Company (San Francisco)

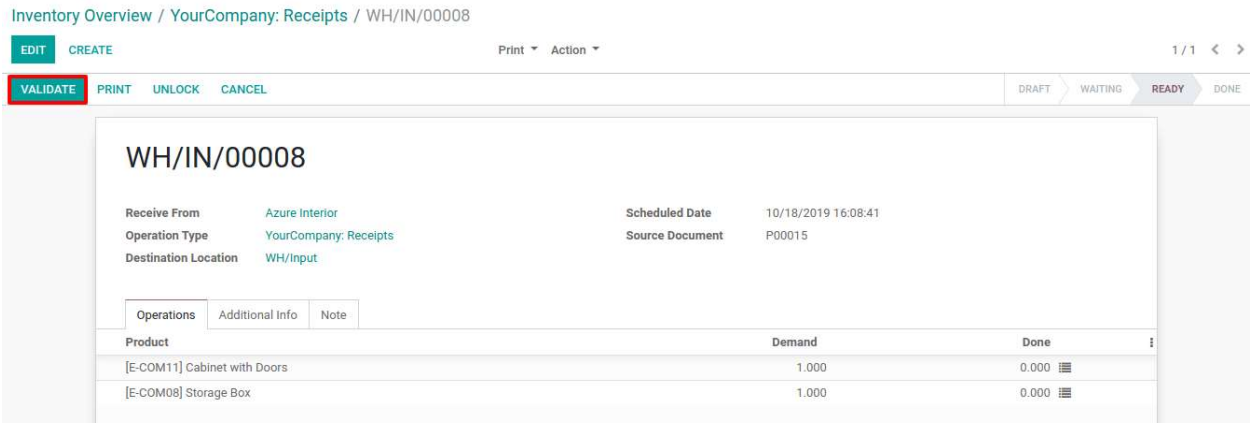
Process the receipt, quality control and entry in stock

As the receipt operation is the first one to be processed, it has a *Ready* status while the others are *Waiting Another Operation*.

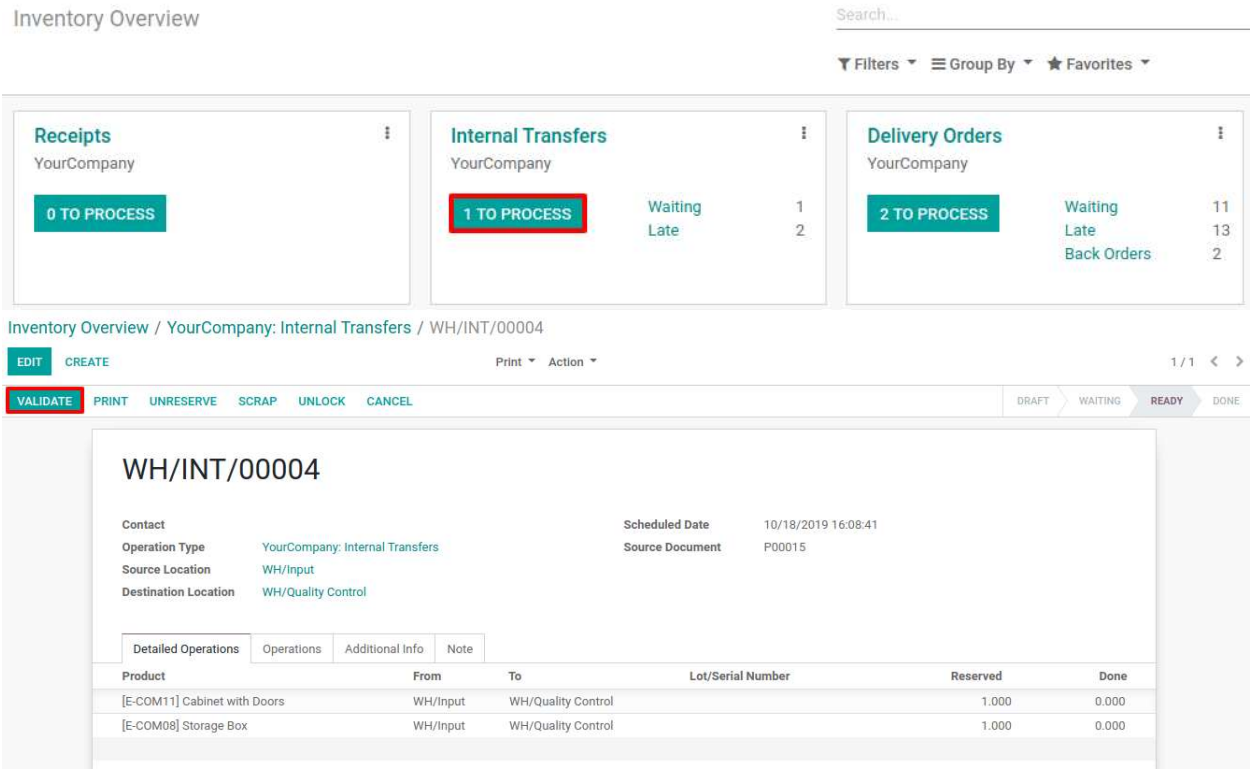
To access the receipt operation, click on the button from the *Purchase Order* or go back to the *Inventory* app dashboard and click on *Receipts*.



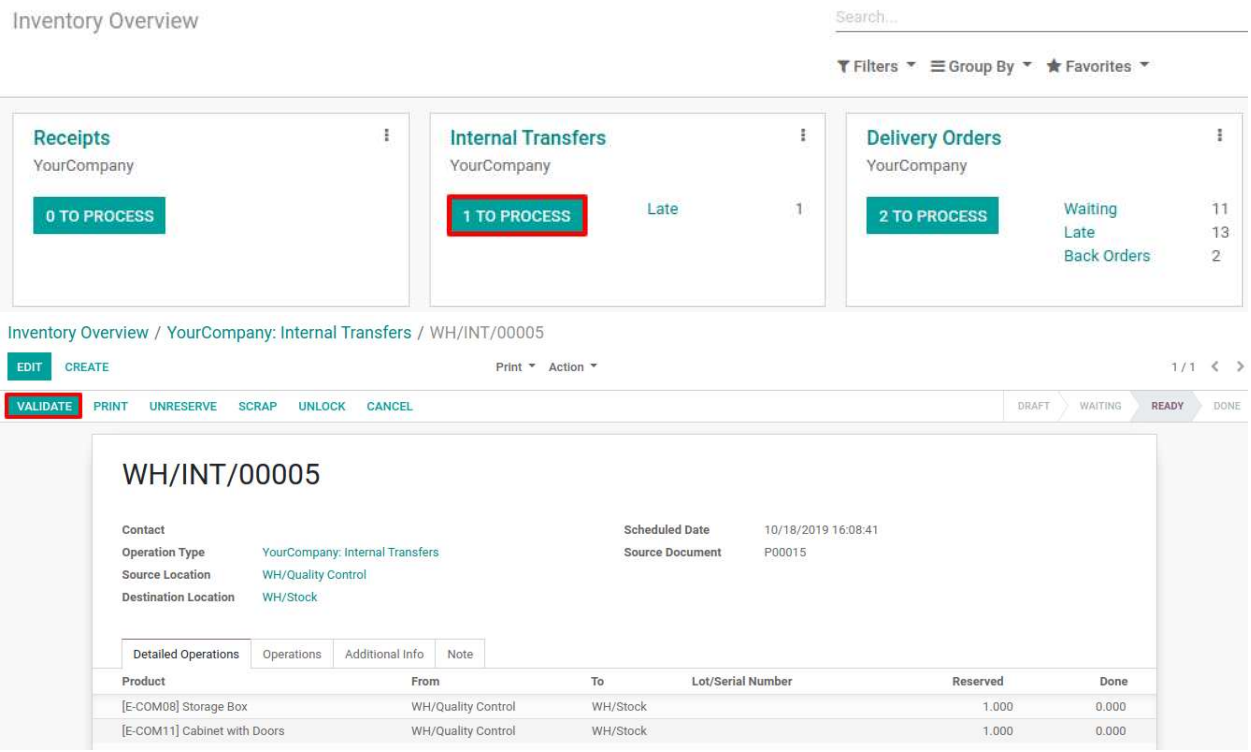
In the receipt order, products are always considered available because they come from the supplier. Then, the receipt can be validated.



Once the receipt has been validated, the transfer to quality becomes *Ready*. And, because the documents are chained to each other, products previously received are automatically reserved on the transfer. Then, the transfer can be directly validated.



Now, the transfer that enters the products to stock is *Ready*. Here, it is again ready to be validated in order to transfer the products to your stock location.

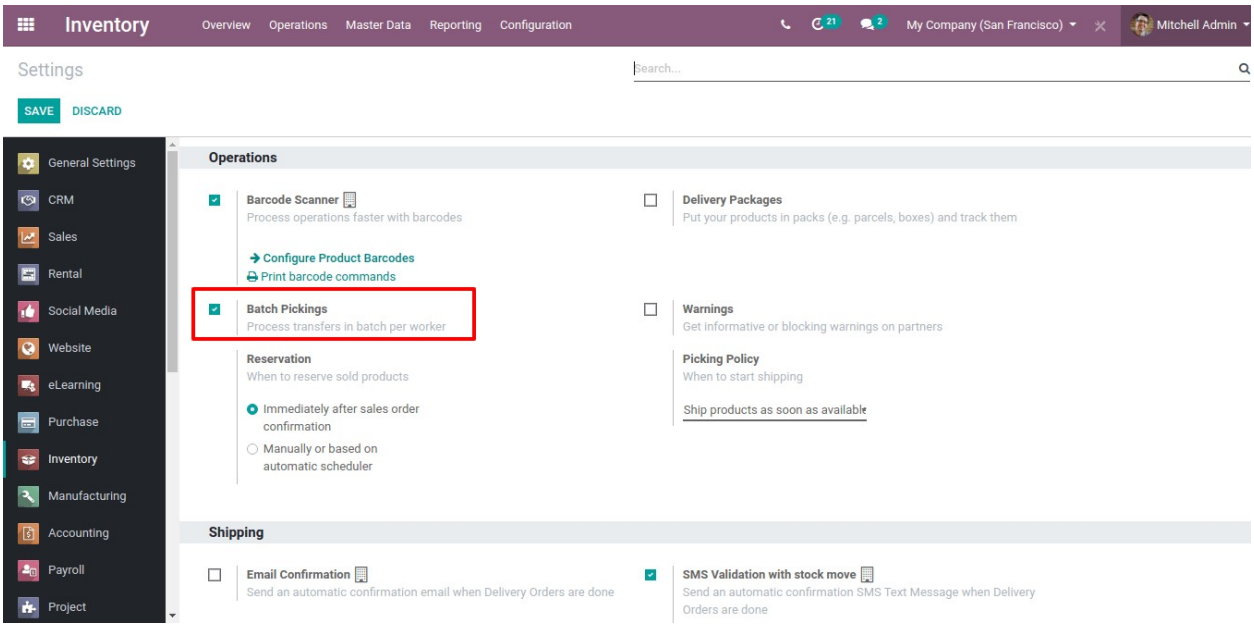


Process Batch Transfers

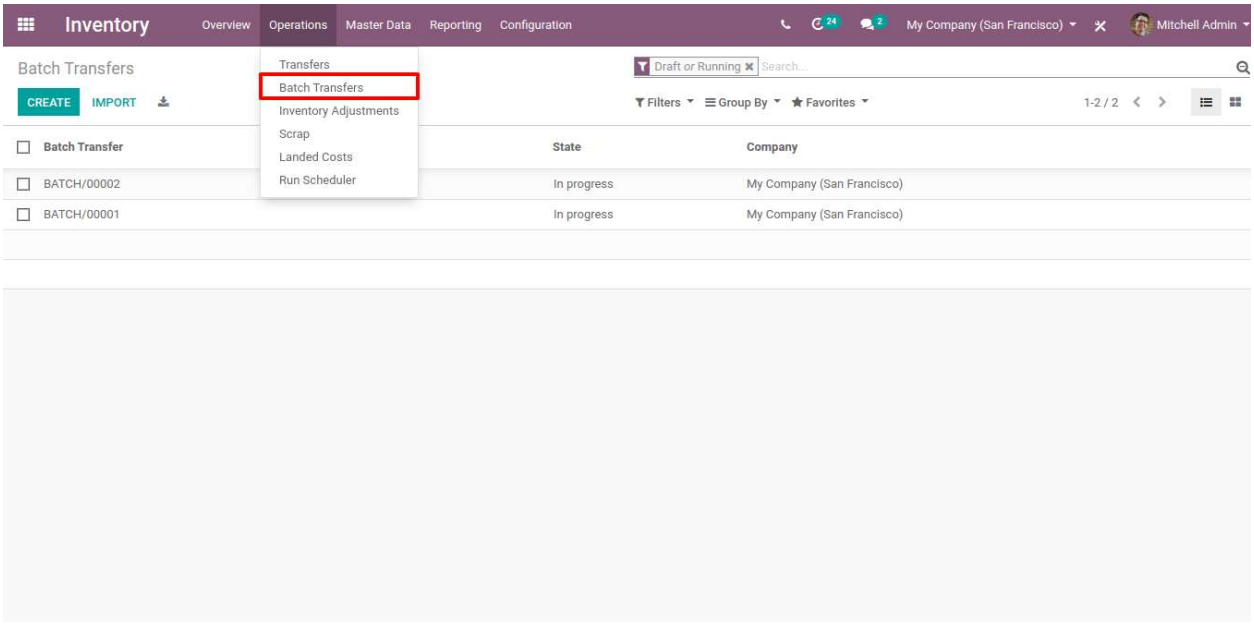
Batch picking allows a single picker to handle a batch of orders, reducing the number of times he must visit the same location. In Odoo, it means you can regroup several transfers into the same batch transfer, then process it, either via the barcode application or in the form view.

Create a Batch Transfer

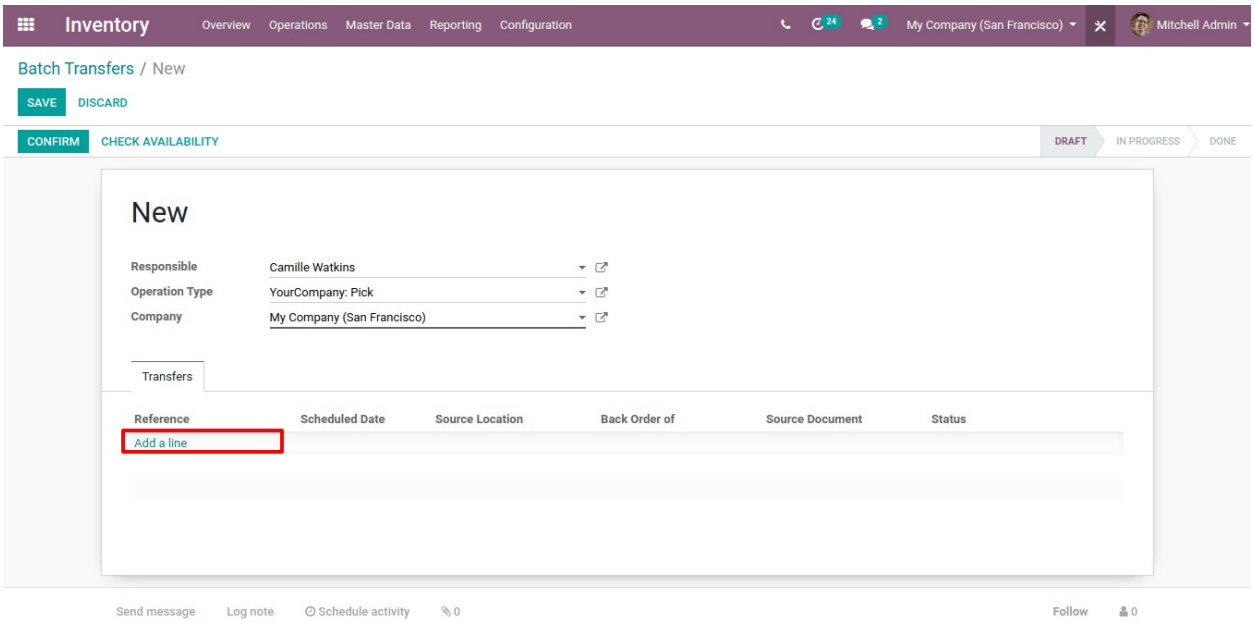
To activate the batch picking option, go to **Inventory ▸ Configuration ▸ Configuration** and enable *Batch Pickings*.



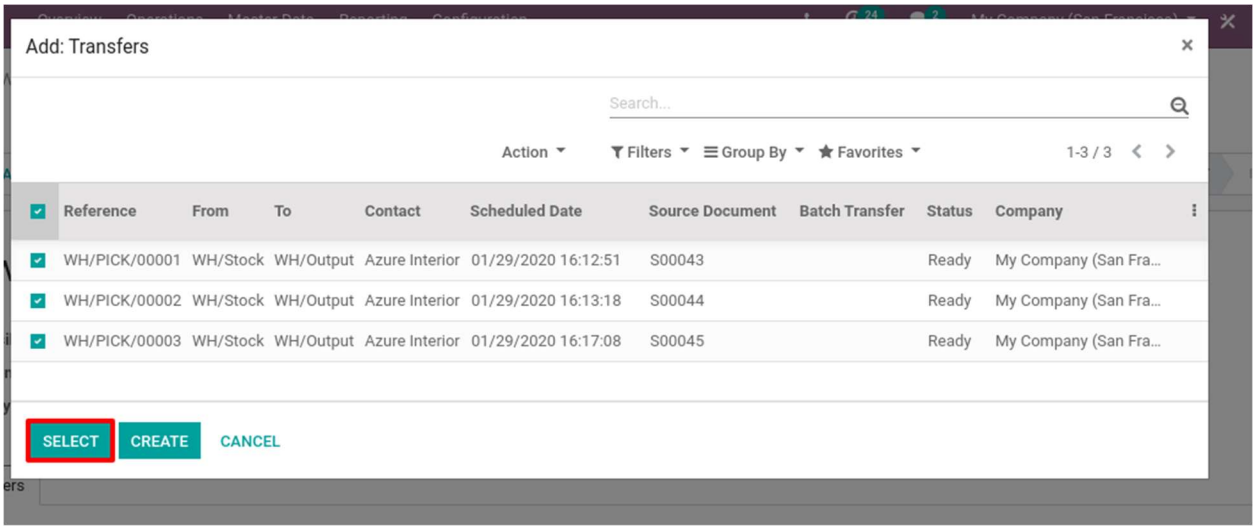
Then, go to **Inventory ‣ Operations ‣ Batch Transfers** and hit the create button.



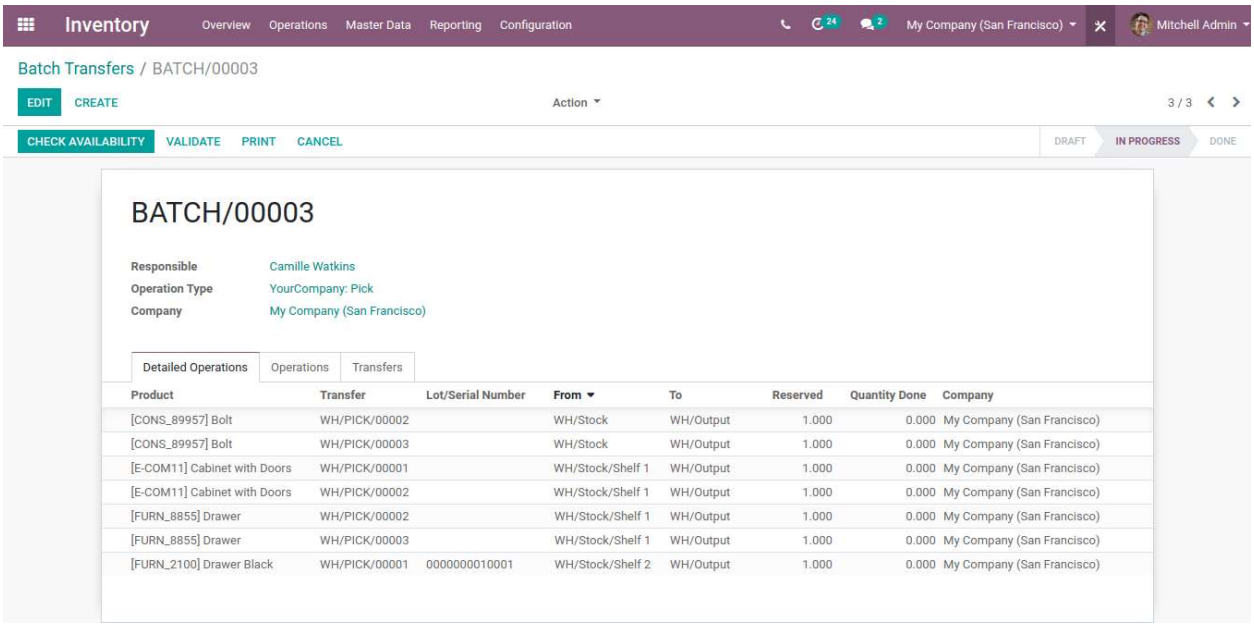
Now, determine the batch transfer responsible and the type of transfers you want to include in the batch. To add the types of transfers, click on *Add a line*.



In the example below, a filter was applied to only see the transfers that are in the *Pick* step. After that, the different transfers that needed to be included in the batch transfer were selected.

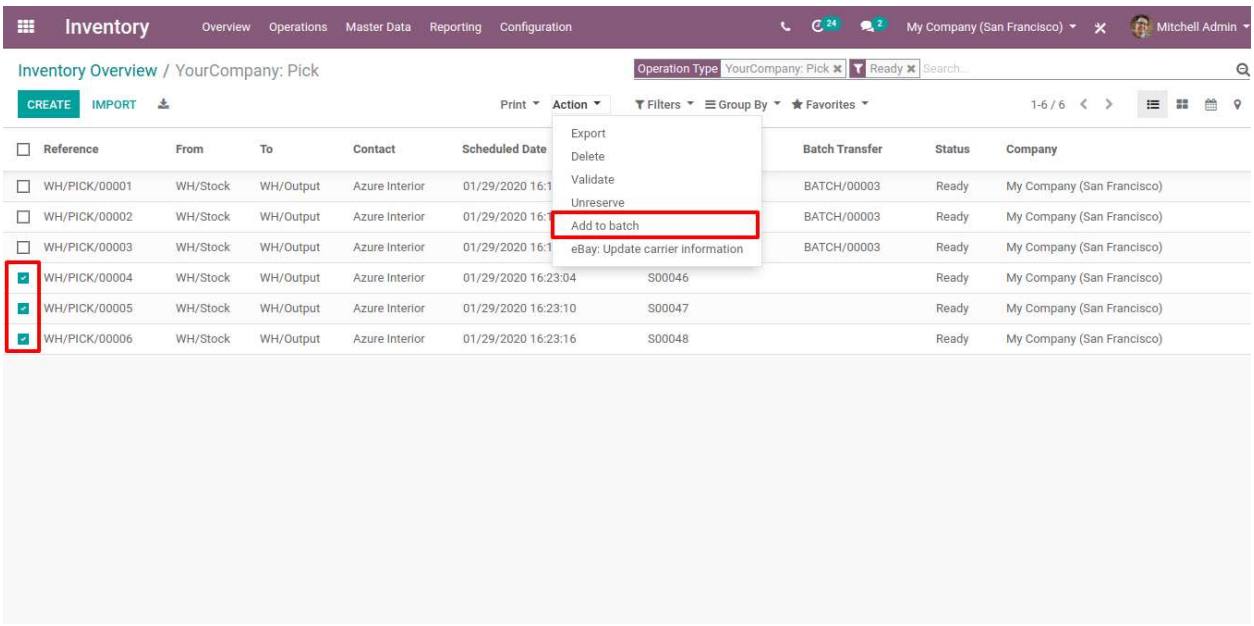


To see the products to pick for the different transfers, click on *Select*. If *Multi-locations* has been activated, the document also shows the locations they have been reserved from.

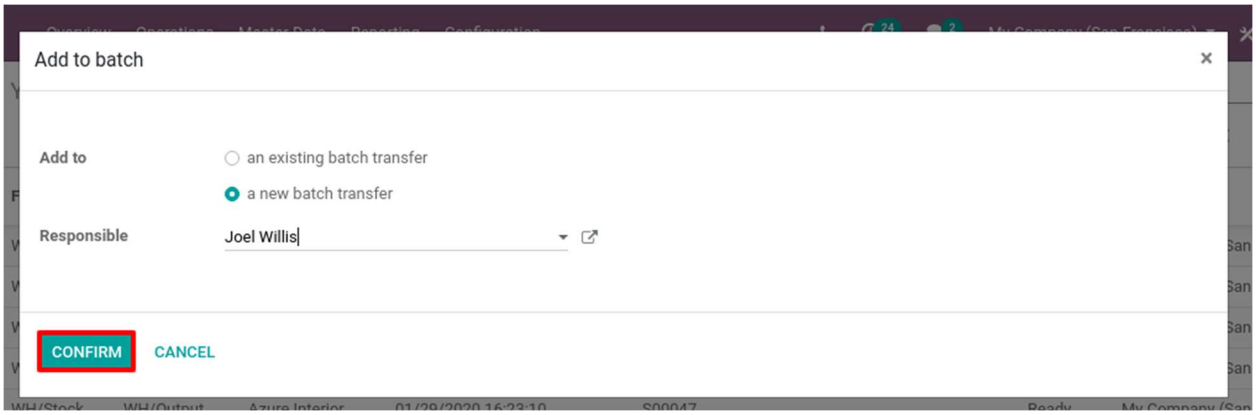


Create a Batch Transfer from the Transfers List View

From the *Transfers List View*, select transfers that should be included in the Batch. Then, select *Add to batch* from the *Action* list.

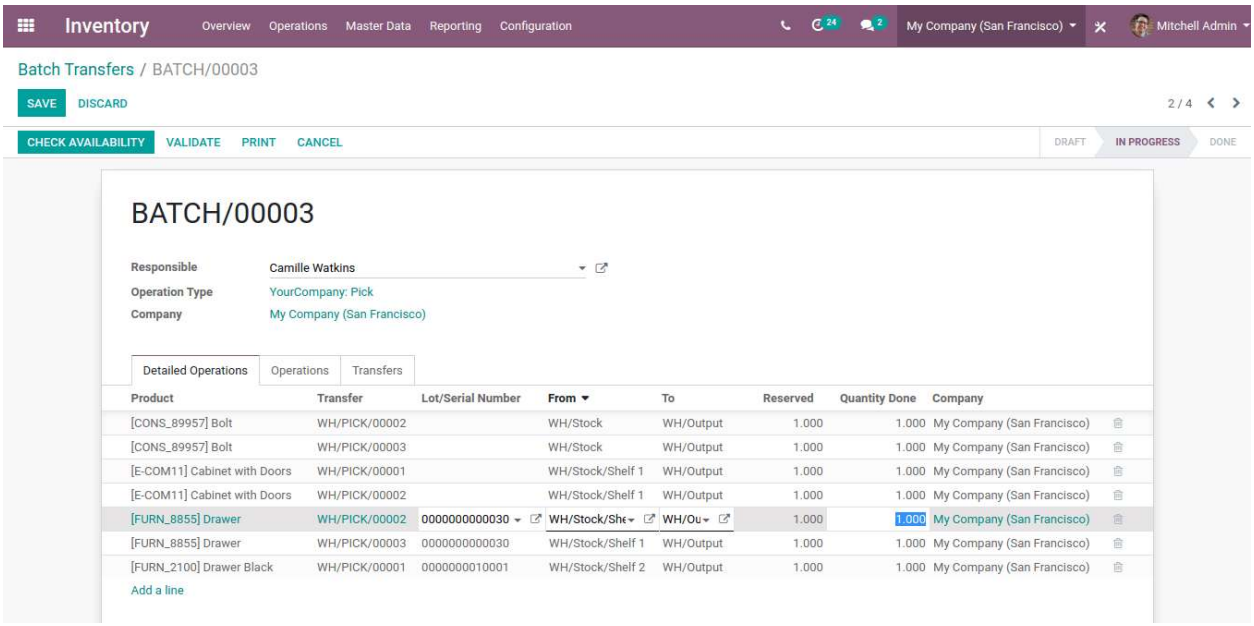


Next, determine if you want to add the transfers to an existing draft batch transfer or create a new one.

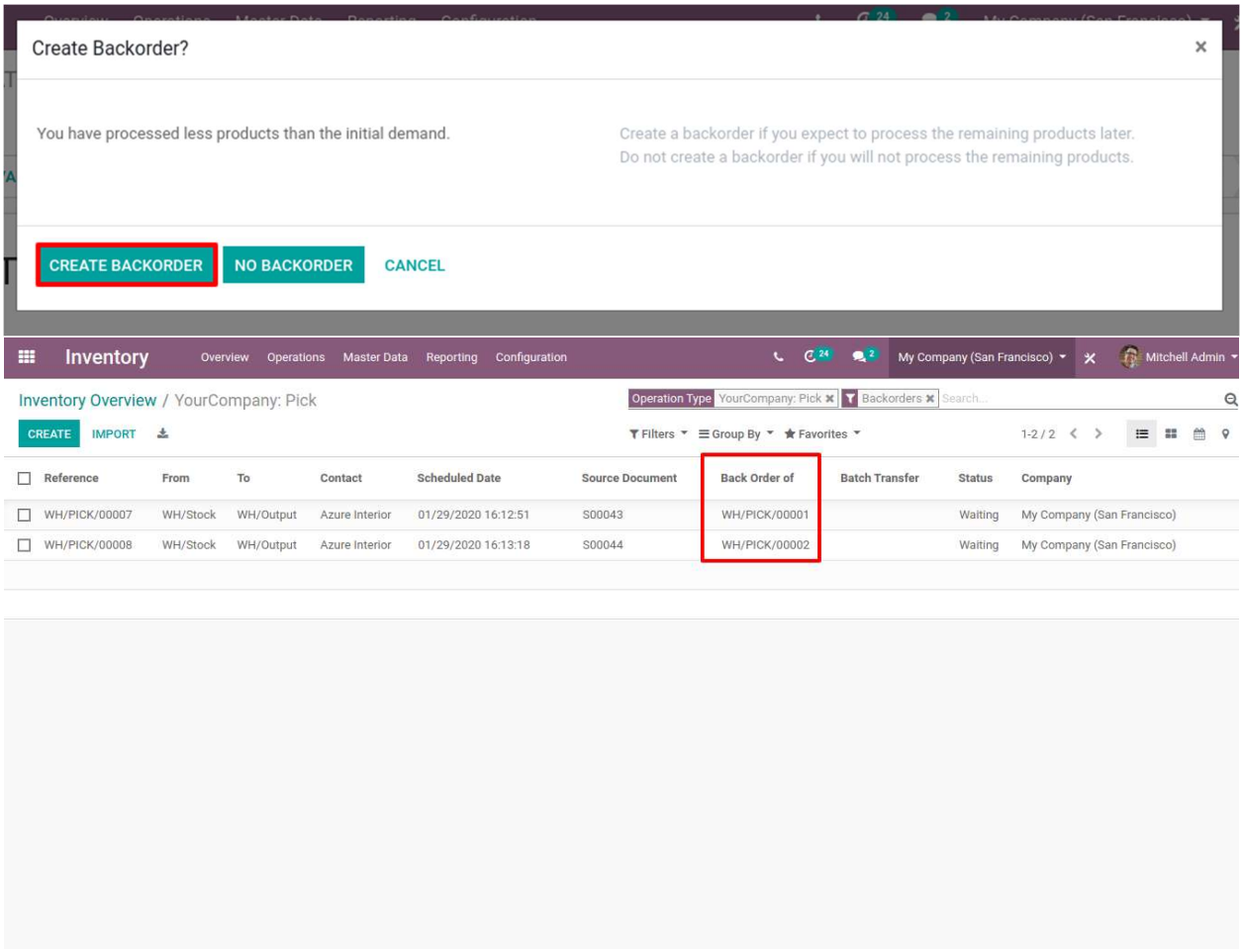


Process a Batch Transfer

While gathering the products, you can edit the batch transfer and update the *Quantity done* for each product. Once everything has been picked, select *Validate* so the different transfers contained in the batch are validated too.

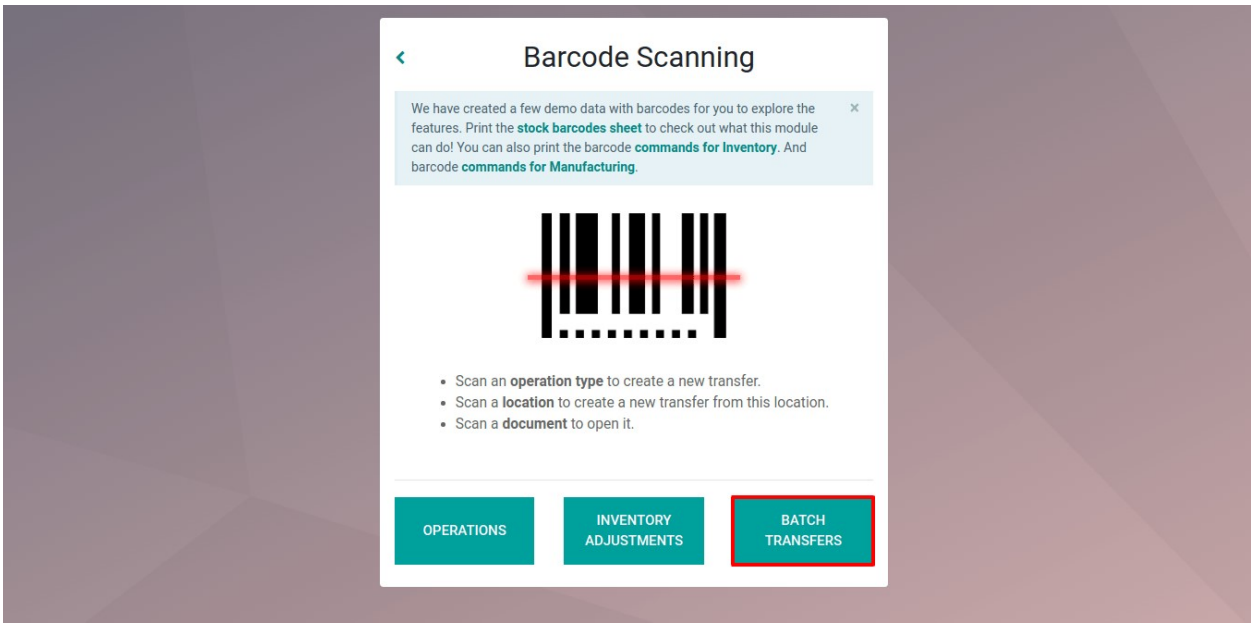


In case all the products cannot be picked, you can create backorders for each individual transfer which couldn't be completely processed.

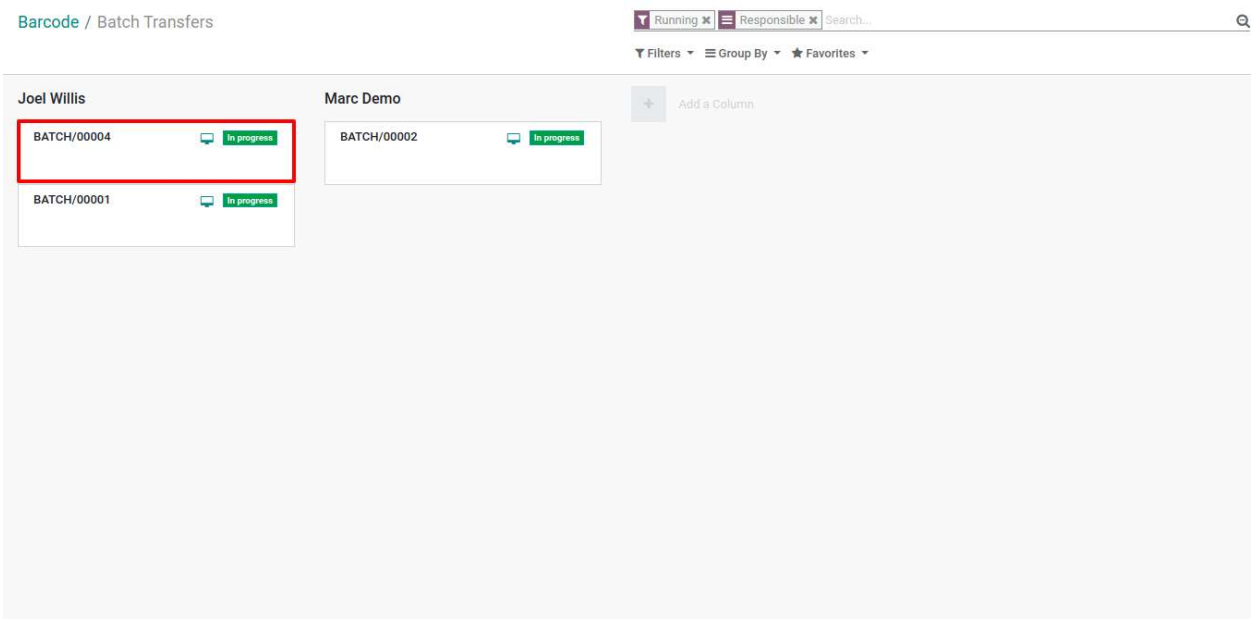


Process a Batch Transfer from the Barcode app

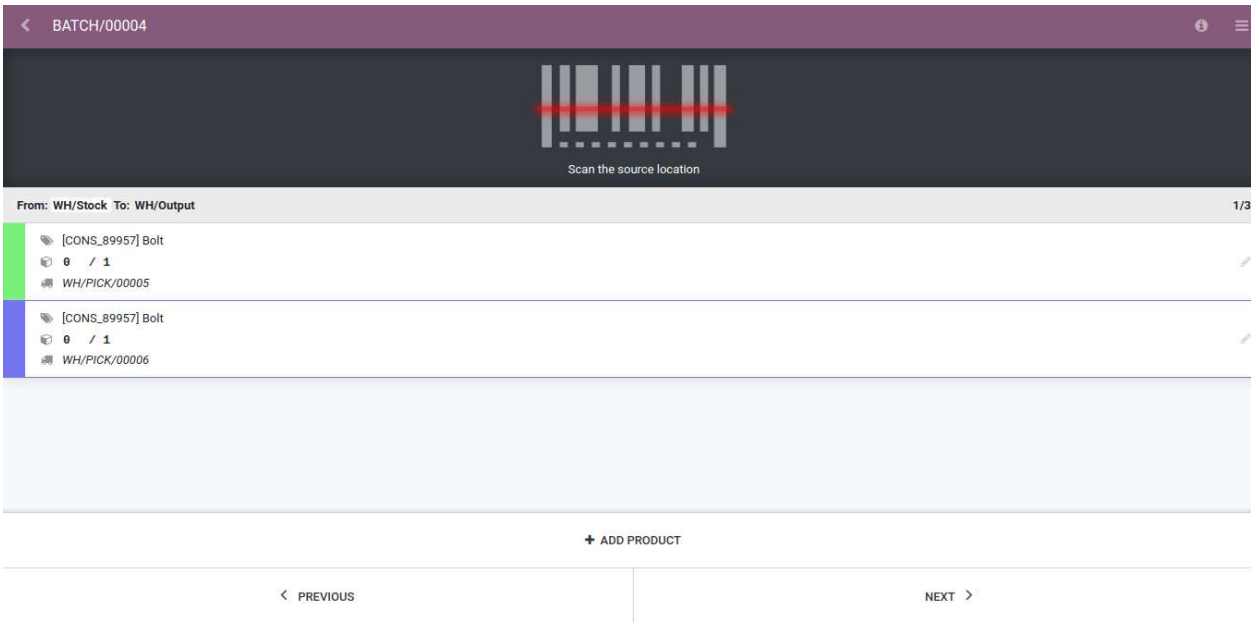
Enter the *Barcode* application, select the *Batch Transfers* menu.



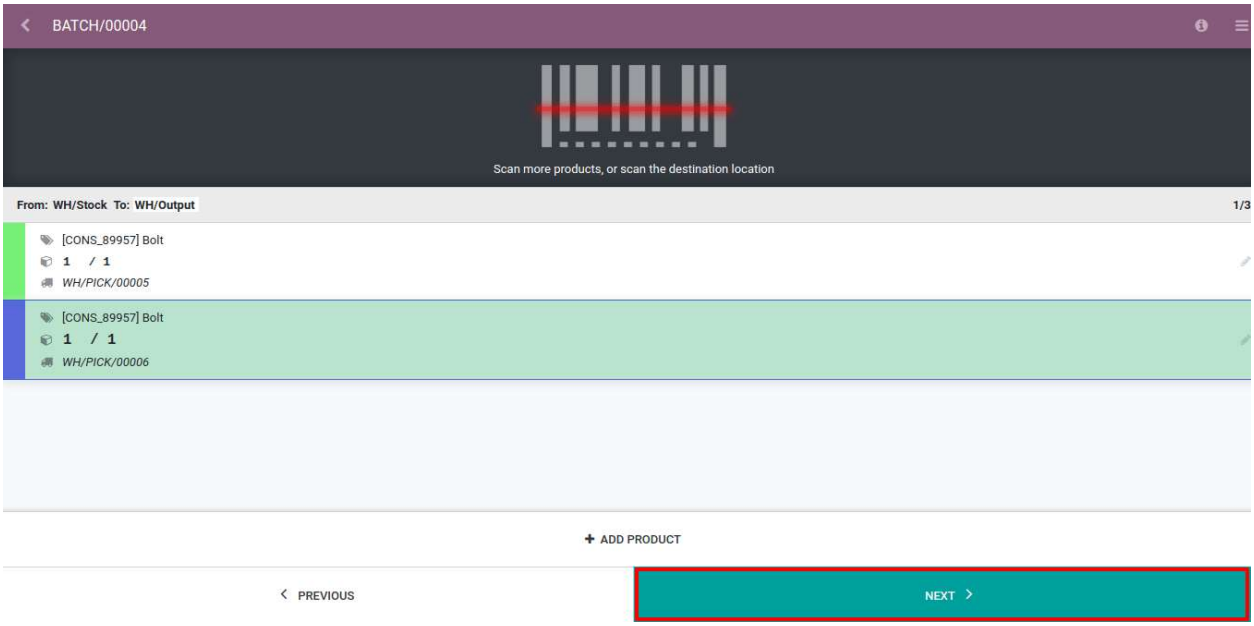
Then, you can enter the batch transfer on which you want to work. Batch transfers can easily be grouped per responsible if necessary.



In the batch transfer, products are classified per location. The source document is visible on each line and a color-code helps differentiate them.



To see the products to pick from another location, click on the *Next* button.



Once all the products have been picked, click on *Validate* (on the last page) to mark the batch transfer as done.

What's the difference between lots and serial numbers?

Introduction

In Odoo, lots and serial numbers have similarities in their functional system but are different in their behavior. They are both managed within the **Inventory**, **Purchases** and **Sales** app.

Lots correspond to a certain number of products you received and store altogether in one single pack.

Serial numbers are identification numbers given to one product in particular, to allow to track the history of the item from reception to delivery and after-sales.

When to use

Lots are interesting for products you receive in great quantity and for which a lot number can help in reportings, quality controls, or any other info. Lots will help identify a number of pieces having for instance a production fault. It can be useful for a batch production of clothes or food.

Serial numbers are interesting for items that could require after-sales service, such as smartphones, laptops, fridges, and any electronic devices. You could use the manufacturer's serial number or your own, depending on the way you manage these products

When not to use

Storing consumable products such as kitchen roll, toilet paper, pens and paper blocks in lots would make no sense at all, as there are very few chances that you can return them for production fault.

On the other hand, giving a serial number to every product is a time-consuming task that will have a purpose only in the case of items that have a warranty and/or after-sales services. Putting a serial number on bread, for instance, makes no sense at all.

Expiration Dates

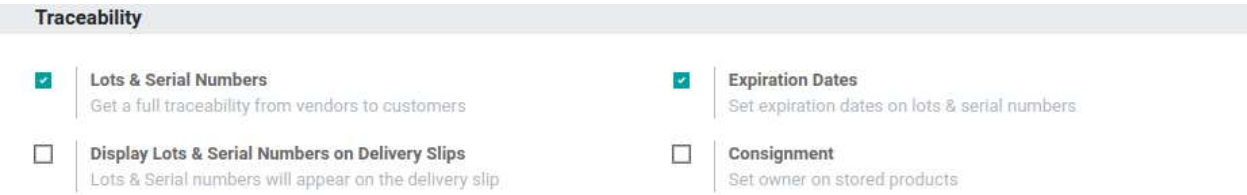
In many companies, products have expiration dates and they should be managed based on those dates. In the food industry, for example, tracking and managing product stock based on expiration dates is mandatory to avoid selling expired products to customers.

With Odoo, you can track and manage your products based on their expiration dates, even if they are already tracked by lots or serial numbers.

Configuration

Application configuration

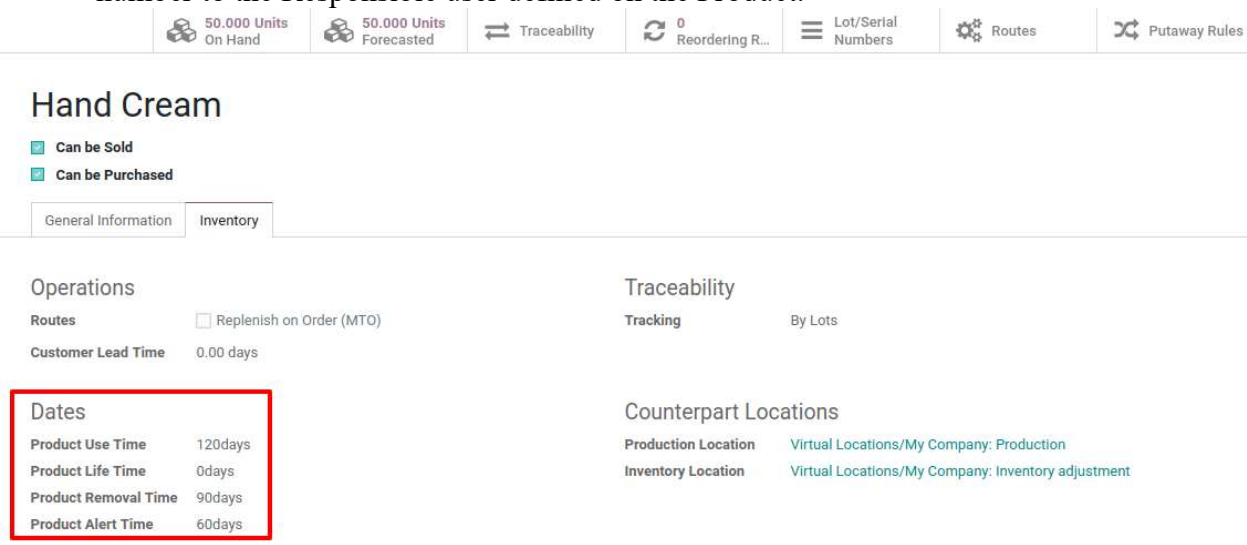
To use expiration date tracking, open the *Inventory* application and go to **Configuration ▸ Settings** and activate the *Lots & Serial Numbers* and *Expiration Dates* features.



Product configuration

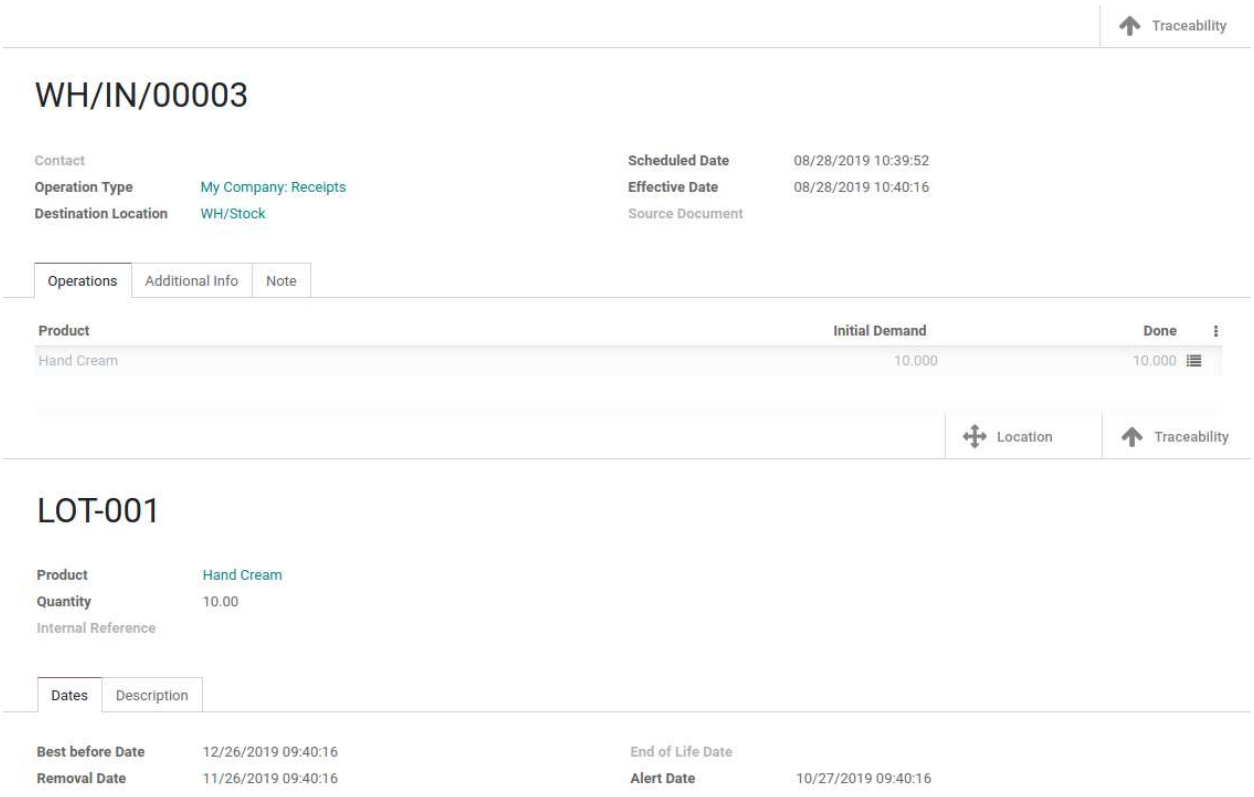
Now, you can define different dates in the *inventory tab* of the product form:

- Product Use Time: the number of days before the goods start deteriorating, without being dangerous. This is used to calculate the Best before date on each lot/serial number received.
- Product Life Time: the number of days before the goods may become dangerous and must not be consumed. This is used to calculate the Expiration date on each lot/serial number received.
- Product Removal Time: shows the number of days before the goods should be removed from the stock. This is used to calculate the Removal date on each lot/serial number received.
- Product Alert Time: refers to the number of days before an alert should be raised on the lot/serial number. This is used to calculate the Alert date on each lot/serial number received. Once the Alert date is reached, an Activity is assigned on the relevant lot/serial number to the Responsible user defined on the Product.



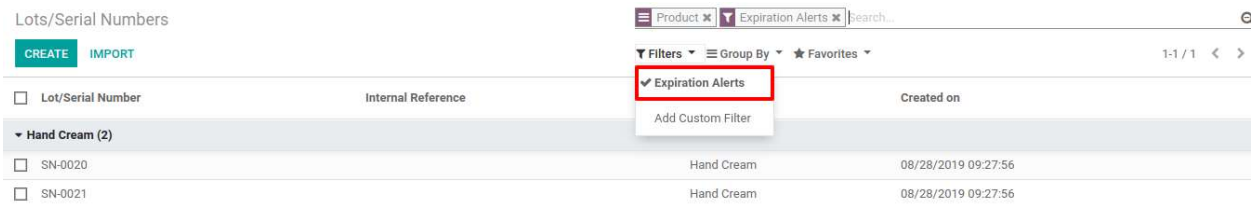
Expiration Date on Lots/Serial Numbers

When receiving a product into inventory, the dates will automatically be updated on the corresponding lot/serial number. These updates will be based on the receipt date of the product and the days set on the product form.



Expiration Alerts

You can access expiration alerts from the *inventory* app. To do so, go to **Master Data** ▸ **Lots/Serial Numbers**. There, you can use the pre-existing filter to show all the lots/serial numbers that have exceeded their respective alert dates.



Inventory valuation configuration

Inventory valuation refers to how you value your stock. It's a very important aspect of a business as the inventory can be the biggest asset of a company.

Inventory valuation implies two main choices:

- The cost method you use to value your goods (standard, fifo, avco)
- The way you record this value into your accounting books (manually or automatically)

Those two concepts are explained in the sections below.

Costing Methods: Standard, FIFO, AVCO

The costing method is defined in the product category. There are three options available. Each of them is explained in detail below.

Standard Price Average Price FIFO

Operation	Unit Cost	Qty On Hand	Delta Value	Inventory Value
	€10	0		€0
Receive 8 Products at €10	€10	8	+8*€10	€80
Receive 4 Products at €16	€10	12	+4*€10	€120
Deliver 10 Products	€10	2	-10*€10	€20
Receive 2 Products at €9	€10	4	+2*€10	€40

In **Standard Price**, any product will be valued at the cost that you defined manually on the product form. Usually, this cost is an estimation based on the material and labor needed to obtain the product. This cost must be reviewed periodically.

Inventory Valuation: Manual or Automated

There are two ways to record your inventory valuation in your accounting books. As the costing method, this is defined in your product category. Those two methods are detailed below.

It is important to also note that the accounting entries will depend on your accounting mode: it can be continental or anglo-saxon. In continental accounting, the cost of a good is taken into account as soon as the product is received in stock. In anglo-saxon accounting, the cost of a good is only recorded as an expense when this good is invoiced to a final customer. In the tables below, you can easily compare those two accounting modes.

Usually, based on your country, the correct accounting mode will be chosen by default. If you want to verify your accounting mode, activate the **developer mode** and open your accounting settings.

Manual Inventory Valuation

In this case, goods receipts and deliveries won't have any direct impact on your accounting books. Periodically, you create a manual journal entry representing the value of what you have in stock. To know that value, go in **Inventory ▸ Reporting ▸ Inventory Valuation**.

This is the default configuration in Odoo and it works out-of-the-box. Check following operations and find out how Odoo is managing the accounting postings.

Continental Accounting

Vendor Bill Goods Receptions Customer Invoice Customer Shipping Manufacturing Orders

	Debit	Credit
Assets: Inventory	50	
Assets: Deferred Tax Assets	4.68	
Liabilities: Accounts Payable		54.68

Configuration:

- Purchased Goods: defined on the product or on the internal category of related product (Expense Account field)
- Deferred Tax Assets: defined on the tax used on the purchase order line
- Accounts Payable: defined on the vendor related to the bill

---

At the end of the month/year, your company does a physical inventory or just relies on the inventory in Odoo to value the stock into your books.

Create a journal entry to move the stock variation value from your Profit&Loss section to your assets.

	Debit	Credit
Assets: Inventory	X	
Expenses: Inventory Variations		X

If the stock value decreased, the **Inventory** account is credited and the **Inventory Variations** debited.

Anglo-Saxon Accounting

Vendor Bill Goods Receptions Customer Invoice Customer Shipping Manufacturing Orders

	Debit	Credit
Assets: Inventory	50	
Assets: Deferred Tax Assets	4.68	
Liabilities: Accounts Payable		54.68

Configuration:

- Purchased Goods: defined on the product or on the internal category of related product (Expense Account field)
- Deferred Tax Assets: defined on the tax used on the purchase order line
- Accounts Payable: defined on the vendor related to the bill

---

At the end of the month/year, your company does a physical inventory or just relies on the inventory in Odoo to value the stock into your books.

Then you need to break down the purchase balance into both the inventory and the cost of goods sold using the following formula:

Cost of goods sold (COGS) = Starting inventory value + Purchases – Closing inventory value

To update the stock valuation in your books, record such an entry:

	Debit	Credit
Assets: Inventory (closing value)	X	
Expenses: Cost of Good Sold	X	
Expenses: Purchased Goods		X
Assets: Inventory (starting value)		X

Automated Inventory Valuation

In that case, when a product enters or leaves your stock, an accounting entry will be automatically created. This means your accounting books are always up-to-date. This mode is dedicated to expert accountants and advanced users only. As opposed to periodic valuation, it requires some extra configuration & testing.

First, you need to define the accounts that will be used for those accounting entries. This is done on the product category.

Continental Accounting

☐ Vendor Invoice (PO €50, Invoice €50) ☐ Vendor Goods Reception (PO €50, Invoice €50)

☐ Vendor Invoice (PO €48, Invoice €50) ☐ Vendor Goods Reception (PO €48, Invoice €50)

☐ Customer Invoice (€100 + 9% tax) ☐ Customer Shipping

	Debit	Credit	Balance
1 Assets			
11000 Cash			
13100 Accounts Receivable			
14000 Inventory			
14100 Raw Materials Inventory			
19000 Deferred Tax Assets			
2 Liabilities			

	Debit	Credit	Balance
21000 Accounts Payable			
26200 Deferred Tax Liabilities			
3 Equity			
31000 Common Stock			
4 Revenue			
41000 Goods			
5 Expenses			
51000 Purchased Goods			
52000 Purchased Services			
58000 Inventory Variations			
59000 Other Operating Expenses			

Configuration:

- Accounts Receivable/Payable: defined on the partner (Accounting tab)
- Deferred Tax Assets/Liabilities: defined on the tax used on the invoice line
- Revenues/Expenses: defined by default on product's internal category; can be also set in product form (Accounting tab) as a replacement value.
- Inventory Variations: to set as Stock Input/Output Account in product's internal category
- Inventory: to set as Stock Valuation Account in product's internal category

Anglo-Saxon Accounting

☐ Vendor Bill (PO $50, Invoice $50) ☐ Supplier Goods Reception (PO $50, Invoice $50) ☐ Vendor Bill (PO $48, Invoice $50) ☐ Supplier Goods Reception (PO $48, Invoice $50) ☐ Customer Invoice ☐ Customer Shipping ☐ Production Order

	Debit	Credit	Balance
1 Assets			
11000 Cash			
13100 Accounts Receivable			
14000 Inventory			
14100 Raw Materials Inventory			

	Debit	Credit	Balance
14600 Goods Issued Not Invoiced			
19000 Deferred Tax Assets			
2 Liabilities			
21000 Accounts Payable			
23000 Goods Received Not Purchased			
26200 Deferred Tax Liabilities			
3 Equity			
31000 Common Stock			
4 Revenue			
41000 Goods			
5 Expenses			
51100 Cost of Goods Sold			
52000 Manufacturing Overhead			
53000 Price Difference			

Configuration:

- Accounts Receivable/Payable: defined on the partner (Accounting tab)
- Deferred Tax Assets/Liabilities: defined on the tax used on the invoice line
- Revenues: defined on the product category as a default, or specifically to a specific product.
- Expenses: this is where you should set the “Cost of Goods Sold” account. Defined on the product category as a default value, or specifically on the product form.
- Goods Received Not Purchased: to set as Stock Input Account in product’s internal category
- Goods Issued Not Invoiced: to set as Stock Output Account in product’s internal category
- Inventory: to set as Stock Valuation Account in product’s internal category
- Price Difference: to set in product’s internal category or in product form as a specific replacement value