# Fulfillment inventory allocation strategies

Defining a fulfillment inventory allocation strategies has two aspects, which are defined on different levels

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## Goods priorization strategy

The goods priorization strategy is defining which articles are taken from stock when multiple instances exist. There exist three goods priorization strategies:

- First In First Out (**FIFO**) - The goods which are longest on stock are pushed out first [default]
- Last In First Out (**LIFO**) - The goods which arrived last are pushed out first
- First Expiry First Out (**FEFO**) - The goods which will expire fist, will be pushed out first.

The fundamental strategy is defined:

- on digital level (global setting)
- on classification level (general setting), but can be overridden
- on warehouse and classification level (specific setting)

> On digital level, you may define a article classification structure, which holds the classification specific settings.

## Order priorization strategy

The order priority defines in which orders are processed in fulfillment. There are three priority decision dimensions:

1. **Order priority** - Shipment orders can be provided a priority (which commonly derives from a customer priority setting). Priority 0 is the highest priority, Priority 10 is the lowest. For each order priority, the strategy algorithm is triggered.
2. **Order priorization algorithm** - This defines the primary algorithm a by which allow mutiple-pass processing
   - No optimization algorithm (**NOA**) - This is just iterating through the orders in the defined order processing sequence trying to fill the orders
   - Optimized for Shipment Cost (**OSC**) - This tries to reduce shipment cost by favoring orders which can be fully fulfilled.

- Optimized for Order Completion (**OOC**) - This tries to reduce the number of unfilled orders by favoring orders with little order position count.
3. **Order processing sequence priority** - This defines in which orders are tried to fulfill
   - First Come First Serve (**FCFS**) - This is the default strategy, which processes orders in the sequence of their arrival. This is favorable, when no huge backlog is clogging up the fulfillment pipeline.
   - Last Come First Serve (**LCFS**) - This is atypical, but can be used to fulfill orders, which have been created most recent and general availability is better. This is used to focus on new customer happiness (on the cost of old orders which are anyways waiting)

> The order priorization strategies are defined on warehouse level

# Demand & inventory matching for customized goods

Matching customized or made to measure articles in a unique feature of ZUGSEIL, which allows taking items on stock and reuse them. ZUGSEIL has developed a matching algorithm for these articles, which allows matching of custoized goods on stock with a specific demand. Please see the article on [demand vs inventory matching algorithms](#)

# Related articles

- [Warehouse Management System (WMS)](#)