7.12. Intersite Optimization Tab

There is an alternative way to replenish your stock – through intersite transfers.

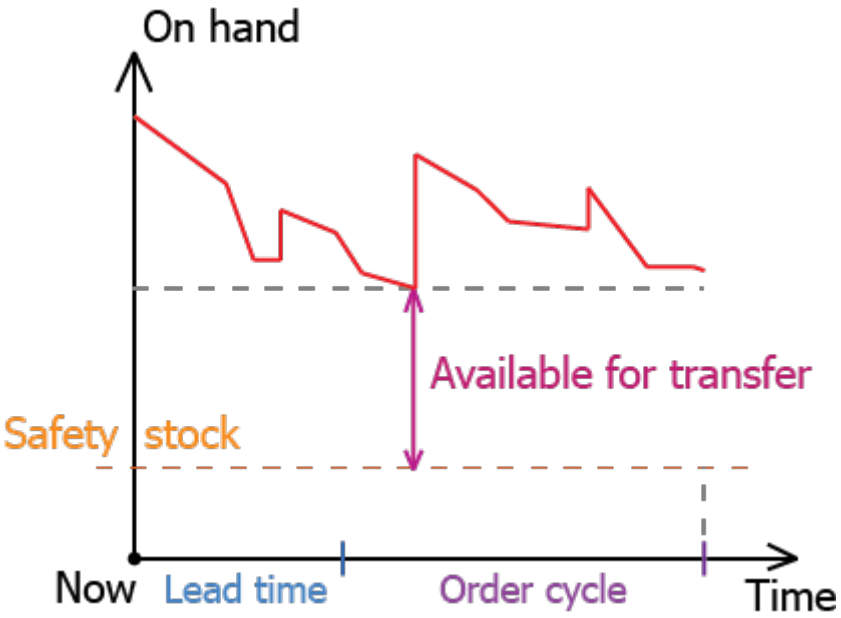
The purpose of intersite optimization is to help you release some frozen capital internally and replenish your inventory using your own overstocks before making any more replenishment orders (from supplier or DC).

In this article we describe the method used to generate intersite transfers and give a description of the **Intersite optimization** tab.

Intersite Transfer Generation Method

Let's describe a basic method used to generate intersite transfers. It consists of the following steps:

1. First, Streamline determines a list of planning items whose on-hand can be used to replenish other stores. For a planning item, the amount available for transfer is the minimal expected overstock amount during the **Lead time** plus **Order cycle** period (see figure below).



This quantity is found via event-based simulation of the future inventory movements. Let's denote it as *Qty available for transfer* and the list of found items as *Replenish-from list*.

2. Then, Streamline finds a list of planning items that either have stockouts or need to be replenished from suppliers or DCs. To determine this list, Streamline recalculates the Current order section based on the following lead time parameter:

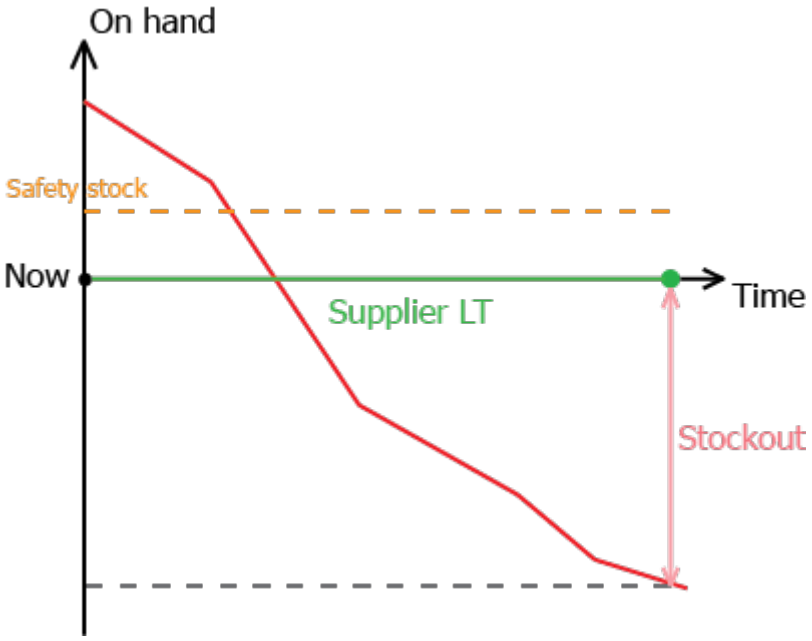
- If a planing item is supplied from a supplier, the default intersite lead time is used. By default, it

is **1 day**.

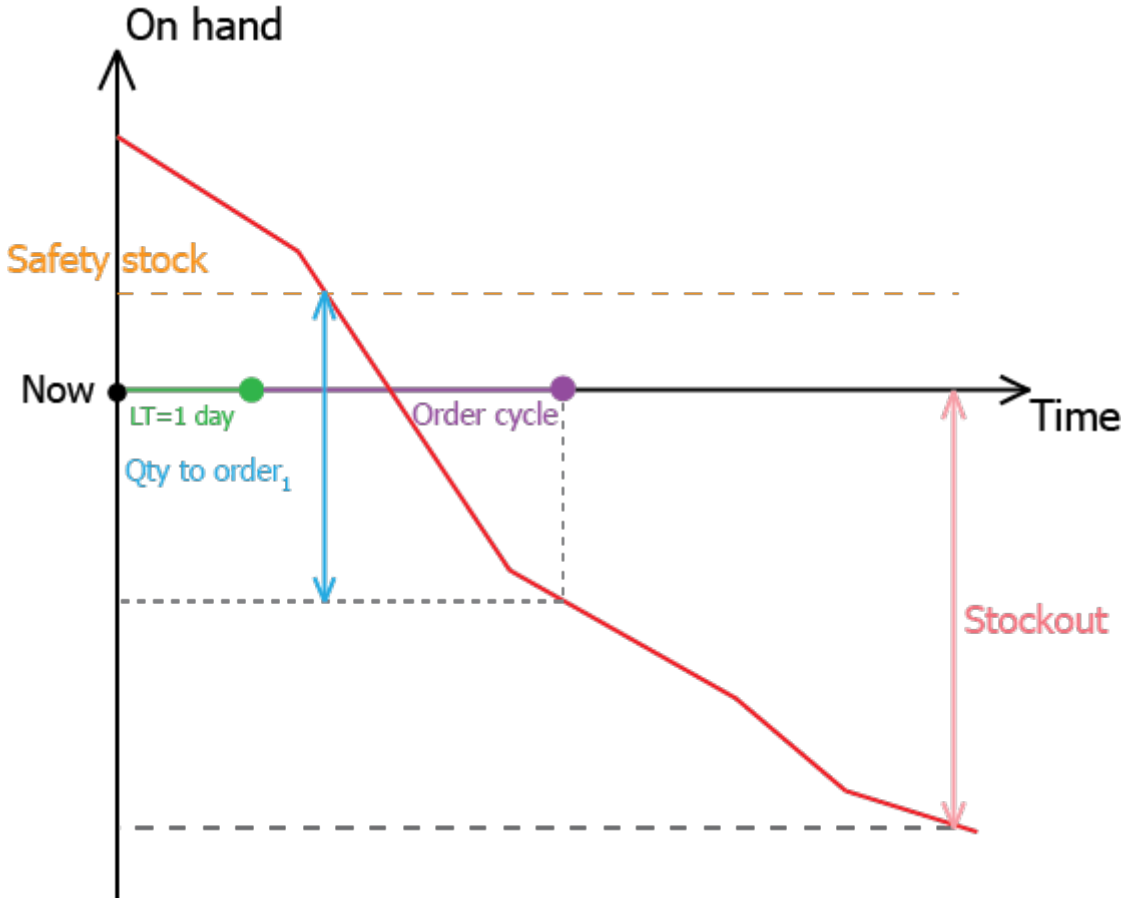
- If a planing item is supplied from a DC, the lead time from the DC to the store is used.

Let's denote this amount as *Qty to order*$_1$ for a planning item and the list, as *To-replenish list*.

Assume we have a stockout for a planning item (see figure below).



Recall that **Current order section** shows orders that cover the demand during **Order cycle** period coming after **Lead time**. Therefore, such a recalculation gives us ordering quantities to cover potential stockouts (see figure below).



In the figure above, **Order cycle** is less than supplier lead time, thus Current order qty covers a part of the stockout. However, this stockout will be covered completely with the future order cycles. If **Order cycle** is longer than supplier lead time, that will cover the stockout with a single order.

3. Then, two filtering procedures are applied to the *To-replenish list*. First, it is filtered using the *Replenish-from list* so that, only the items that can be replenished from the *Replenish-from list* are left. Then, lines having zero *Qty to order*$_1$ are removed from the list.

4. After that, for each planning item in the *To-replenish list* a *Qty to transfer* is found as minimal non-zero amount from the *Qty to order*$_1$ and the Stockout.

5. Then, Streamline sorts the *Replenish-from list* and *To-replenish list* in descending order by the *Qty available for transfer* and *Qty to transfer* correspondingly.

6. Finally, it goes through the sorted lists for each planning item in the *Replenish-from list* and generates transfers by taking lines from the *To-replenish list* till the remaining *Qty available for transfer* covers the current *Qty to transfer* completely.

This basic method:

- replenishes stockouts going down from biggest to smallest. The logic behind this is that the

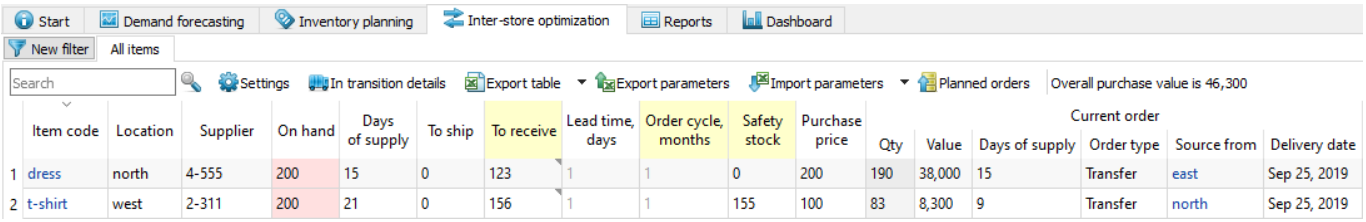
bigger the expected stockout, the higher is the probability of it occurring;

- preserves obtaining an overstock due to ordering a huge **Stockout** quantity. This ensures the second filtering procedure;
- creates transfers between locations that are not distribution centers.

In addition to that, there is an ability to add additional constraints into the basic method by introducing the regions where transfers are allowed. It is done by importing a special data type called Transfer region. Using this data type you can set up regions (sets of locations) where transfers are allowed. Transfers between regions are forbidden.

Description

Intersite optimization tab copies the layout of the Inventory planning tab (see figure below).



This tab is designed to view and export intersite transfers. It is automatically populated with transfer recommendations generated by Streamline.

The description of the columns in the **Intersite optimization** tab is the same as for **Inventory planning**, except for the columns shown in the table below.

Column	Description	
Lead time	Shows the lead time of the transfer. It is either the default intersite transfer lead time, if the planning item is sourced from a supplier; or the **Lead time** (from the **Inventory planning** tab), if it is sourced from a DC.	
Current order section	This section is recalculated based on the transfer lead time.	
	Qty	Shows the quantity to transfer, which is the minimal non-zero amount from the Qty to order$_1$ and the **Stockout** (from the **Inventory planning** tab).
	The other subcolumns of the **Current order** section show characteristics calculated for the **Qty** column of this section.	

Hyperlink in the **Source from** column sends you to the **Inventory planning** tab and sets the cursor at the planning item which is used as the source for the transfer. It is useful, for example, if want to ensure that the source location has enough **On hand** to fulfill the transfer.

The **Settings** button of the toolbar opens the Settings dialog. Options set in the **Inventory** tab of this dialog are applied to both **Inventory planning** and **Intersite optimization** tabs.

Description of the **Intersite optimization** toolbar is the same as for the **Inventory planning** tab.

Next: Distribution Center

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