

⚙️ Influence productivity

HOW IS PRODUCTIVITY AFFECTED BY PICKING MORE GOODS PER CYCLE?

Here we assume a system consisting of a warehouse with approx. 5,300 pallet positions.

150 pallets/day come into the warehouse and are stored in buffer positions above the picking positions.

150 pallets/day are lifted down to the picking positions.

2,500 order lines are handled per day. Each order line contains an average of 3 items.

A customer order consists of about 10 order lines.

In the example, three picking methods are tested, low-level picking trucks being equipped for 1, 2 and 3 rolling cages respectively. This means that 1, 2 or 3 orders can be picked at the same time in a picking cycle. In this example:

- **Truck 1 picks one order/cycle**
- **Truck 2 picks two orders/cycle**
- **Truck 3 picks three orders/cycle.**

RESULT

Productivity may be measured both as orders/hour and as the system's total logistics cost/unit.

Truck 1: Picking one order per cycle



Truck 2: Picking two orders per cycle



Truck 3: Picking three orders per cycle



	Truck 1	Truck 2	Truck 3
Travel distance/order line, m	44.6	32.7	27.4
Order lines/hour	34.1	38.9	40.1
Logistics cost/unit, €	19.8	18.9	18.2

Method 3, where 3 orders are picked at once, is 17% more efficient than method 1.

The main reason is reduced travelling time per order line. The distance travelled has been cut by nearly 40%. Total productivity, measured as logistics cost/unit, is 8% better than with method 1. (€ 1.56).

PRODUCTIVITY UP BY 8%

ANALYSIS

Increasing picking efficiency enables lead times to be shortened. More orders can be executed per hour. Handling performance and costs often vary between product groups because of weight and volume.

Different storage methods also give rise to differences. It is therefore important from the point of view of productivity to set key ratios for different product groups.