

ORDER PREPARATION AUTOMATION

GOODS-TO-PERSON (GTP) SOLUTION:

12 QUESTIONS BEFORE STARTING YOUR PROJECT



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BACKGROUND

Currently, the logistics industry is confronted by a high increase in the number of flows that have to be dealt with. When there are large volumes to assimilate, warehouses using manual processes face difficult working conditions, problems of inefficiency and complications. The answers to these difficulties can be found in mechanisation, automation and robotisation.

Among these solutions, the Goods-To-Person (GTP) solution is intended for warehouses looking to increase their productivity.



THE CHECKLIST

In this document we set out several questions under four main headings that will help you find your ideal GTP solution:

HEADING 1 > SYSTEM PERFORMANCE

HEADING 2 > WORKSTATION PERFORMANCE


HEADING 3 > STORAGE EFFICIENCY

HEADING 4 > OPERATION AND ASSISTANCE

With **12 questions to answer**, these headings will help you assess which solution is best suited to your situation while highlighting the functions that are essential to a high quality system.

GOODS-TO-PERSON (GTP) SOLUTION

12 QUESTIONS BEFORE STARTING YOUR PROJECT

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- WHAT IS IT SUITABLE FOR?
 - HOW DOES THIS SOLUTION FIT INTO AN EXISTING PLATFORM OR WORK TOGETHER WITH OTHER PREPARATION PROCESSES?
 - HOW REACTIVE IS THE SYSTEM?
 - WHAT TYPE OF ORDERS IS IT SUITABLE FOR?
 - WHAT IS THE PREPARATION WORKSTATION'S PERFORMANCE?
 - WHAT IS THE IMPACT ON THE OPERATOR?
 - WHAT QUALITY OF PREPARATION IS IT SUITABLE FOR?
 - HOW MUCH SPACE DOES THE SOLUTION TAKE UP?
 - WHAT VOLUME OF SKUS IS IT SUITABLE FOR?
 - WHAT MECHANISMS HAVE BEEN PROVIDED TO GUARANTEE STORAGE EFFICIENCY?
 - WHICH MAINTENANCE PROCESSES ARE NEEDED?
 - IS OPERATING HELP AND ASSISTANCE AVAILABLE?



HEADING 1

SYSTEM PERFORMANCE

1

WHAT IS IT SUITABLE FOR?

A goods-to-person solution is not only for use in picking operations but also for the temporary storage of finished packages before they are placed on pallets and sent out for delivery. It is therefore essential for the system to be able to deal with and run two types of work flows simultaneously, either at project start-up or during future developments.

2

HOW DOES THIS SOLUTION FIT INTO AN EXISTING PLATFORM OR WORK TOGETHER WITH OTHER PREPARATION PROCESSES?

The goods-to-person solution is very often used in addition to other order preparation processes, either manual or automated, that deal with SKUs which have very high or very low levels of turnover, or outsize products. It is therefore essential that the goods-to-person solution can be implemented in any situation:

- Possibility of integration either upstream or downstream of a compatible preparation process with a joint launch zone.
- With the possibility of sending packages directly from the preparation workstations.

3

HOW REACTIVE IS THE SYSTEM?

The time that the system takes to react is measured from between the moment when the order is sent by the WMS or ERP and the start of the order preparation at the preparation workstation. The more reactive a system, the more it is equipped to deal with orders that are urgent and close to transporter leaving times, for single orders as well as batch orders.

4

WHAT TYPE OF ORDERS IS IT SUITABLE FOR?

The goods-to-person solution must be able to deal with any type of order:

- Capable of dealing with orders from a low number of lines (4) as well as from a high number (10 +).
- Presence of an order treatment mechanism requiring the same product SKU, enabling a reduction in the number of movements for stored containers of this SKU. Please note that this mechanism can only be used if the goods-to-person solution is not installed downstream from an additional preparation process.



HEADING 2

WORKSTATION PERFORMANCE

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WHAT IS THE PREPARATION WORKSTATION'S PERFORMANCE?

Preparation workstation performance is a key component to ensuring a good return on investment for the goods-to-person solution. The higher the performance, the quicker the return on investment.

This performance is directly correlated to:

- the mechanical design of the workstation.
- the specific characteristics of the activity such as product weight, size and type, the number of lines per order, the number of parts per line, possible operations such as bagging, labelling or recording the series/batch number.
- the number of orders being prepared in parallel, the greater the number the lower the performance level.
- the capacity of the system to transport all the products from a same order from largest to smallest, to eliminate stowing operations for the operator. As performance is directly linked to ROI, we strongly recommend that you assess it under working conditions, at a workstation using standard orders and products.

6

WHAT IS THE IMPACT ON THE OPERATOR?

Having performance as a goal demands a higher level of repetition of the same movements than any other order preparation process. To keep strenuous working conditions to their minimum, it is essential that picking and placing movements are carried out as follows:

- always between the shoulder and the hip and ideally always at hip level.
- from sloping shelves to reduce the effort on the arms and the torso.

7

WHAT QUALITY OF PREPARATION IS IT SUITABLE FOR?

The preparation workstation must be designed to guarantee a high level of order preparation. Straightforward processes, clear information and directions given to the operator (for example automatic checking devices for compartmented containers), as well as a minimum of picking and placing possibilities, all work together to eliminate the risk of error.



HEADING 3

STORAGE EFFICIENCY

8

HOW MUCH SPACE DOES THE SOLUTION TAKE UP?

The area occupied by the solution results from the number of SKUs to be stored, the amount of stock required per SKU, production flow requirements and the constraints of the available surface whether that be in an existing building or a new one. The occupied area includes storage infrastructure, preparation workstations and the space needed to connect the storage areas to the workstations. The smaller the occupied area the greater the possibilities of extension by adding storage space or preparation workstations. Moreover the cost of owning the warehouse will be reduced.

9

WHAT VOLUME OF SKUS IS IT SUITABLE FOR?

The system must maximise the occupancy rate of the occupied area, by keeping empty spaces to a minimum and by adapting stock volumes as closely as possible to the required volumes for each SKU. This is directly linked to:

- the mechanical design of the storage infrastructure.
- the space required for the equipment transporting the stock to move.
- the constraints imposed by insurers such as a sprinkler system.
- the flexibility in the choice of product storage (container size, compartmented containers) to guarantee that the correct volume of parts by SKU has been chosen.

10

WHAT MECHANISMS HAVE BEEN PROVIDED TO GUARANTEE STORAGE EFFICIENCY?

As SKU storage and removing from storage operations are carried out automatically, it is important to fully understand the operational process that is used:

- storage rules that take into account the turnover level of the SKUs.
- preventive and curative methods to maximise storage infrastructure use that could give rise to manual operations of no added value (compacting, defragmentation).
- inventory logic.

11

WHICH MAINTENANCE PROCESSES ARE NEEDED?

When there is a problem with a piece of equipment, it must be possible to carry out maintenance work without disrupting the rest of the system's production:

- it must be possible for an operator to work in the problem area without having an impact on the activities in other areas.
- during production, if an equipment needs to be replaced, it must be possible to remove and replace it quickly.



HEADING 4

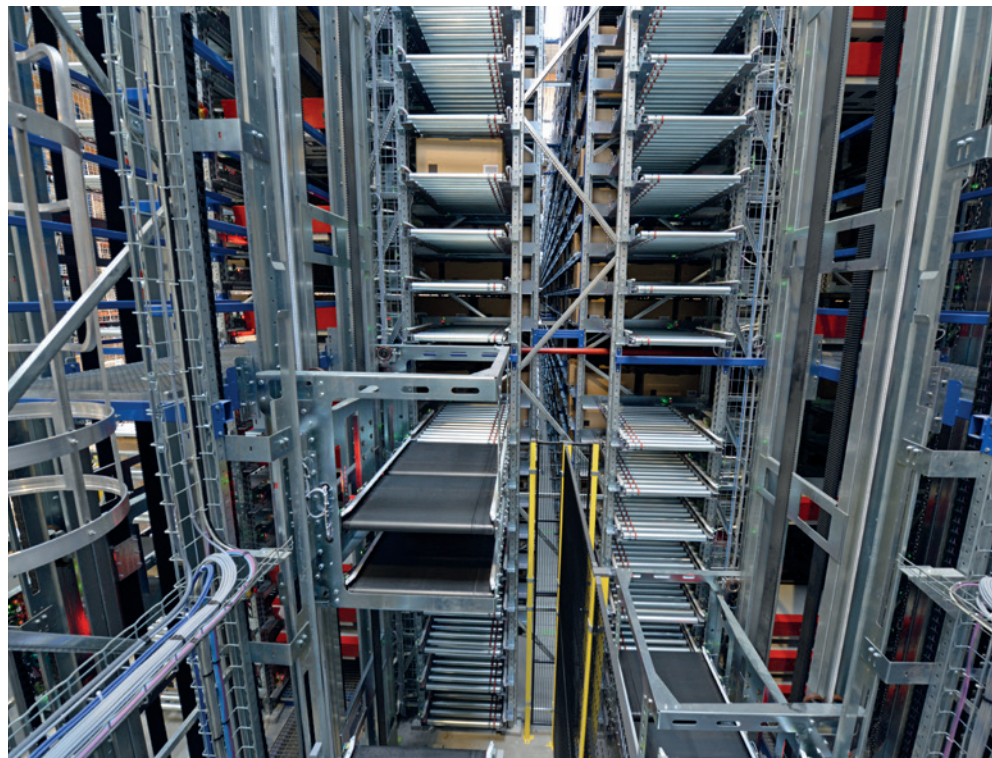
OPERATION AND ASSISTANCE

12

IS OPERATING HELP AND ASSISTANCE AVAILABLE?

The goods-to-person solution is inseparable from its operating system whose functions must enable the work to be monitored and operated in real time:

- Ability to balance loads according to the work to be done, the number of preparation workstations open, the difference in productivity between two operators, etc.
- Job, operations, equipment and stock monitoring functions.
- Key performance indicators (KPI) for production and also for system availability. Implementing a goods-to-person solution has an impact on the teams as well as on processes. It is therefore essential to ensure a transition period that is as efficient as possible to achieve an increase in the system's load that is both rapid and sustainable.
- System operator training.
- Changeover management assistance.
- Operator on-the-ground and e-learning training.
- Post start-up audit, key indicator monitoring and practice analysis.



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TO CONCLUDE

Especially suitable for logistics centres that have to combine high reactivity with high-level preparation quality, Goods-To-Person systems enable preparation performance gains, a reduction in the picking storage surface area as well as in the associated operating costs.

You now have all the keys in hand to ask yourself the right questions before setting your project in motion.

If you need further help, SAVOYE offers an expertise and audit service to help you assess the feasibility of installing a Goods-To-Person solution.

Whether you need help with sizing, feasibility studies or calculating the ROI, our teams are available to assist you in seeing your projects through to the end.

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