



Improve Order Fulfillment

7 Features of Color Picking

7 Features of Color Picking to Improve Order Fulfillment



A guide for warehouse managers who want to improve order fulfillment, manage fluctuating order volume, reduce space, minimize intralogistics costs, and maximize order processing.

Estimated reading time: 11 min

Introduction

Efficient and modern order processing is even more important today than yesterday. Internal processes must be put to the test over and over again, and new challenges keep surprising us. The retail sector increasingly requests "on demand" orders with shorter delivery times. It's no secret that demand fluctuation is also a big challenge for manufacturers and distributors, but this problem became even more apparent recently. In fact, many fast-moving consumer goods (FMCG) manufactures and distributors are experiencing their highest spikes ever. They are facing an unprecedented (and likely unexpected) predicament right now! How to produce an overwhelming demand for essential FMCG (e.g., prepared food, cleaning products, non-prescription medicines, toiletries) while facing a surge in e-commerce sales.

As the world recovers from COVID-19, consumer demand for some of these products might slow down, but experts predict the undistributed shift to e-commerce as a main shopping outlet will remain steady. With a potential second wave on the horizon, we're finding warehouse managers are searching for ways to manage future demand spikes. The answer starts with an underlying foundation: a well-organized and efficient production and order fulfillment process.

Why Color Picking is the right picking strategy for your order fulfillment

Combining daily, weekly, or seasonal order demand fluctuations with a rapidly growing company leaves supply-chain managers eager for a solution.

Based on the principles of pick-to-light technology, Color Picking guides multiple operators through the picking process using colors as pick-lights. This allows warehouse managers to add or reduce staff based on current order demands. It improves performance, increases picking throughput, and optimizes labor costs.

“Before we were ten people picking in one area and we reduced it to four people and they were actually picking faster than what ten people did before and also the stock quality was really improving and the picking quality, because we reduced the amount of mispicks.”

Thomas Lampinen, Supply Chain Manager KICKS Cosmetics

“With a really minimal investment, we have given them great performance.”

Johan Palm, Project Manager Kardex Remstar

Watch the [KICKS Cosmetics customer video](#) to see Color Picking in action.

How Color Picking works

An example of a common Color Picking work zone includes eight vertical carousel modules (VCM) RS – four on each side facing each other with a pick lane between them. Orders are transferred via a software interface from the host system (ERP/PPS) to the warehouse management software (WMS), Power Pick Global. Power Pick Global dynamically creates batches of orders based on customer criteria (e.g., required delivery date, priority, shipping method, line of business).

When the batch starts, the system automatically assigns a color to the cart and all units with order lines for that batch show the matching color and move to retrieve the stored items required. All picking carts consecutively pass through each area. They do not overtake or pass batch carts. The same cart is assigned a different color in another storage area or in a new batch.

The operator follows the pick-to-light colors on the pick locations and batch carts during the entire picking process, picking and putting goods easily and quickly with the correct order (box or compartment in the picking cart).

Each operator processes items as they are displayed. When there are no more lines required for the batch, the cart moves on to the next work zone for fulfillment or to shipping, and the following cart gets activated (new color). Each item is a new process – there aren't fixed assignments between operators and orders/carts. Any number of operators pick in one area or jump in to support another area as needed.



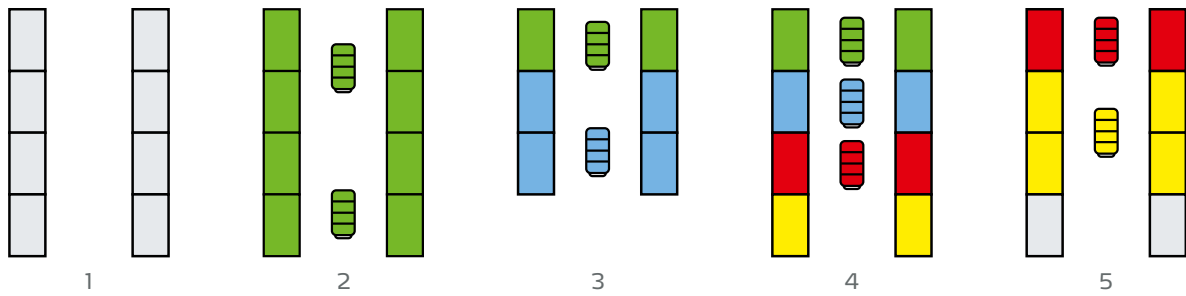
A simple process

- Kardex solutions, such as a Kardex Shuttle XP or Megamat RS, stores and automatically provides the picking materials.
- A pick-to-light display shows the color, article, quantity and destination/cart-position.
- The operator confirms the pick.
- The matching cart shows the matching color. Numbered compartments ensure accuracy.
- Operators know where to pick next when they see a nearby storage system display a colored pick screen.

An example:

The batch for the green picking cart starts. One or more operators pick the articles from the picking locations with a green display and place them in the right compartments of the matching cart. As soon as there are no more articles in the storage system, the display turns to the next color. The following blue cart comes into this zone. This is how dynamic zones, in which any number of operators process batches, are created.

There may also be the case that a unit does not contain any articles for a batch and then skips this color. If, for example, a unit has no articles for the upcoming blue batch after the green batch finishes, it switches directly to red. Within the zones, however, there is no overtaking. This means that the red operator will not overtake or pass the blue picking cart, but he/she might support the blue batch operator. This prevents deadlocks within the zone.



The aim is to get the picking carts through the aisle(s) as quickly as possible, one after the other.

Why is color picking faster and more profitable than other picking processes?

- Storage systems are never left idle waiting for the next batch to start
- Continuous flow
 - Batches enter the picking zones continuously and automatically – product organization happens before inventory is needed
 - Parallel or sequential processing of carts
- Cost-effective
 - Minimal investment compared to alternative solutions that deliver the same throughput
 - Quick return on investment (ROI), normally less than two years

With Color Picking, fluctuating demand is no longer a challenge. Throughput and work efficiency both increase.



Warehouse of our customer Med24 before using ASRS and Color Picking



Warehouse of our Customer Med24 with ASRS and Color Picking

Trends in retail trade influence order fulfillment – the 7 features of Color Picking tackle today’s challenges

Efficient order fulfillment is your all-around tool to combat fluctuating demand, high costs, inventory chaos, limited warehouse space and short delivery times. To enable sustainable growth and high performance, we outlined 7 features of Color Picking that will optimize your fulfillment process.

#1 | Easily adjust labor resources to meet order demand

With Color Picking, it’s easy to increase and decrease staff based on order demand. The picking process is flexible and doesn’t require significant system changes – workers simply follow colors to pick from the right locations and put to the matching batch carts. Several operators support one another by working simultaneously on the same batch. The number of staff needed for the Color Picking system is determined based on order demand: fixed overhead staff costs are not necessary.



The labor used within the system can scale to meet order demand at any given hour

Let’s look at an example. On Monday morning, you are surprised to find order volume very high. No problem – add a team of six operators. If suddenly on Tuesday morning order demand drops by 70-80%, reduce your workforce to two operators.



#2 | Manage a variety of products

If your inventory is quite diverse, you have likely experienced a chaotic warehouse, especially when orders are up. But ask yourself, does it have to be this way? Kardex systems are flexible enough to balance the see-saw of order fluctuation and they efficiently manage a variety of products in the same unit regardless of their shapes or sizes.

If we take a look at Color Picking, it uses a combination of automated storage and retrieval systems (ASRS). This enables you to implement different systems based on the needs of the goods that will be stored and picked. A Color Picking solution easily extends to more units, as demand grows. For example, if you start with small-sized parts with a Vertical Carousel Module (VCM) RS, you can transition the solution to cover medium-sized parts with a Vertical Lift Module (VLM) XP

However, integrating a suitable storage system is not the end of the story. Changes in demand (e.g., new or seasonal articles) require a reorganization of the storage locations from time to time. This does not have to be challenging for warehouse managers either. The integrated WMS Power Pick Global organizes inventory and their storage location in all ASRS units.

For example, when demand for disinfecting wipes skyrocketed earlier this year, many manufacturers shut down other manufacturing lines to produce more of this essential item. With Color Picking, the type of goods managed within the ASRS are interchangeable. The VLM scans every single tray with the help of Optiflex technology and electronic height measurement to dynamically adjust the storage location to current needs and facilitate highly dense storage.

The FIFO (First In First Out) principle can be used to manages all articles. If one storage location is empty after the last picking process, it automatically becomes the next replenishment spot. The WMS system, Power Pick Global, also manages article expiration dates. If expiration dates are a concern, program soon-to-be-expired articles to be picked first. You decide the picking rules based on what works for your business.

#3 | Ensure constant availability of products

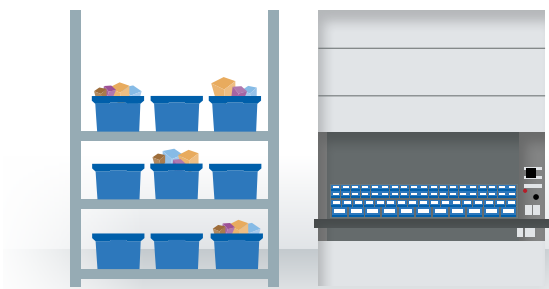
Continuous availability is essential for an order fulfillment process to be efficient. Instead of wasting time searching and waiting for a replenishment, critical products must be available when requested. The WMS system guarantees articles are distributed equally between the various ASRS units. Products stored in numerous units are still available even if one unit needs maintenance or has a system failure.



The system also shows real-time inventory counts. This ensures continuous availability and allows you to always know what you have on hand. Reorder points take this one step further by signaling when stock is low.

In addition to providing inventory transparency, Color Picking also maximizes pick and put times. The inbound process happens in sync with the outbound process: **operators simultaneously pick and put**. A typical day might require picking during peak times and then a mix of picking and putting the rest of the day.

#4 | Manage multiple order lines for higher performance and shorter delivery times



Also known as batch picking, Color Picking fills orders in batches. Several orders are combined into a batch and processed at once. Using colors allows several operators to pick from dynamic work zones, filling multiple orders at a time. Colors are an easy way to direct the operator to the correct pick location and matching batch cart.

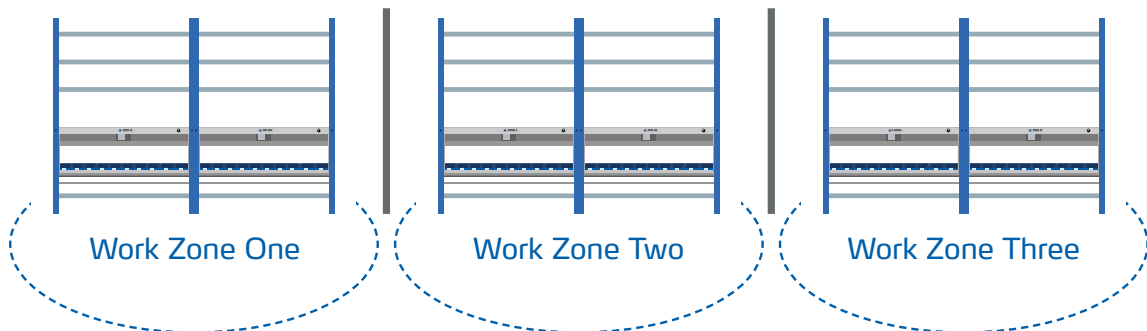
The result is significantly higher throughput, reduced search time, and fewer errors. With Color Picking, picking performance increases 100-300%! **Up to 300 order lines** per hour per operator are possible.

#5 | Achieve new social distancing standards

Recently escalating in importance, social distancing will remain a crucial topic, inevitably impacting future warehouse operations. New guidelines for social distancing in the workplace will challenge logistics managers worldwide, and companies will find themselves squeezed for space now more than ever.

To comply with social distancing recommendations and prepare for future virus outbreaks, we recommend an ASRS coming with Color Picking for two main reasons:

- 1) An ASRS requires less floor space – use the space instead for social distancing.
- 2) Color Picking reduces the number of pickers in the warehouse. For example, when comparing Color Picking to static racks, workers reduce from ten to four people. This also means fewer people in the overall building including the locker rooms, canteen, etc. There's plenty of room for everyone to move around!



To ensure workers keep a safe distance we suggest that they organize themselves to work in zones and “push” the trolleys to the next zone for order picking. It only requires discipline – one operator per batch/trolley, and never pass another worker in the queue.

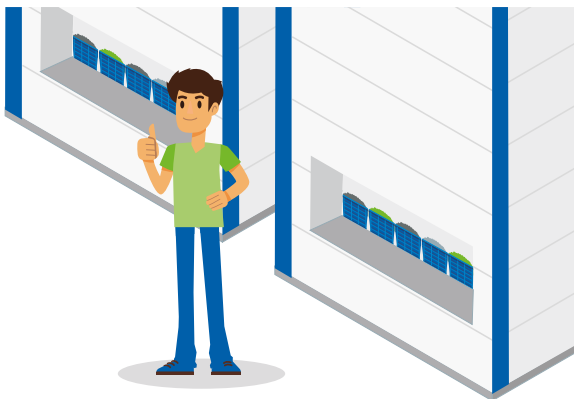
#6 | Easy and fast employee training

During these uncertain times, it's critical to have a fulfillment system that's easy to use with minimal training required. When workers become ill or need to take care of family members, replacement workers must quickly fill the gap. With Color Picking, training takes no time at all. New employees start immediately – they simply need to follow colors and display instructions.

In addition to being efficient, this is also quite cost-effective. The number of operators adjusts as needed. When demand spikes, employees from other departments or with other tasks easily jump in to help.



#7 | Enable business growth



Color Picking solutions are modular, scalable, and cost-effective. The up-front initial investment is comparably low considering the output received. It's possible to start small and then grow as the business grows or adapt as inventory changes (e.g., starting with small-sized parts and adding medium-sized parts later).

Many of our current clients using Color Picking, transitioned from a static solution. After seeing a high growth rate of 20-30% per year or more, they expanded and added additional solutions during full production.

If you are considering Color Picking, one of our experts can help you. [Send a request](#) to receive more information on our solutions and how they can improve your warehouse.