LIGHT UP YOUR WAREHOUSE

Light directed picking has emerged as one of the important picking technologies for faster order fulfilment with great accuracies. Before implementing the PTL systems into your warehouse storage zones/aisles, here we take a look at the important points that need to be thoroughly worked upon to earn the best ROI from automation:

1.Know your product SKU volumes: Pick-To-Light systems are the fastest picking methodology in the segment – “person to good” system. They are used for high throughput (fast moving) SKUs. Light directed picking gives the highest pick rate in case of break pack picking and is equally effective for full case dispatch. These fast moving skus are brought together to a picking zone, which is different from the storage zone. They are stored close to each other in a dense form. Every sku has 1-12 cartons (cases) stored in this pick zone. They are regularly replenished. They are either stored in a shelving rack or carton flow racks. A SKU can get more than one lane depending on the velocity of the SKU. Usually these light-directed systems are used in zone picking formats, where an order tote moves on a conveyor/ trolley, stopping at individual zones, and the pickers in that respective zone pick & place the items required for the order from that zone. Typically a warehouse deploys 500 to 10000 lights for their top skus in light directed picking.

2.Integration is the Key: Swift integration of the pick to light systems into the existing WMS/WCS/ enterprise software of the warehouse is very critical to realize the productivity gains through automation.

3.Throughput: Pick-To-Light systems are highly accurate and usually give a very high throughput Generally, with Pick to Light systems, the order pick rates would run between 120 and 400 lines per hour with an accuracy of 99.5 to 99.7%. This would entail a redesigning of the picking philosophy to reap the benefits of the light directed picking in true sense.

4.Evaluate alternatives: Do Cost-benefit Analysis – Once the objectives are finalized, the next thing is to check for the best possible way of achieving the solution. For a stated objective there are multiple ways of order fulfilment so evaluate all the other options, RF Picking, voice, vision. Light directed operation is an umbrella of various lighting techniques like sequential and simultaneous picking.
Evaluation of vendors to be carried out taking multiple factors into consideration like the technical expertise to integrate PTL into the existing systems; the light technology being offered – the processor, number of lights, functionality; flexibility of the vendor to customize hardware and software etc. Deep understanding of the warehouse operations, warehousing design & the proficiency in handling smooth integration of new technologies is of paramount importance in choosing the vendor.

5.Semi Automation is the new norm: Semi automation is the latest norm across the warehouses, where only the critical parts of the supply chain are being automated to boost the productivity. With the growing variety of products stored in warehouses & the complexities of the warehouse operations, one solution/technology does not serve the purpose well. In order picking also, it is very common & cost effective to use Pick to light systems for the critical zones/ aisles & the rest of the picking zones can be with other picking technologies.

6.Use data efficiently to realize full benefits: Data speaks volumes & data is everything in the world of IIoT. With the ever rising competition for providing superior customer experiences & achieving operational efficiencies every step of the order needs to be traced. Light directed picking systems provide real time analytics which can be utilized to study the storage patterns & the performance analytics for performance improvement in terms of speed/accuracy/overall productivity etc.

As the saying goes, **“One that gets measured can be managed & improved”.** Automation comes at a cost, and to measure the return on investment, businesses need to be crystal clear on the objectives they wish to achieve through automation. For the PTL solution to achieve the desired goal it is very important to have a comprehensive understanding of the challenges that business is facing in order fulfilment. For instance:

1. Picking speed of the people
2. Time to train the workforce
3. The attrition rate in the warehouse
4. Lower picking rates than industry average
5. Demographics of the labour (multi-lingual people, gender)etc.

By proper analysis of these challenges, business can arrive at measurable goals in terms of no. of orders to

be picked per day, reduction of labour costs by x%, reduction of reverse logistics costs due to mis-ships by y% .etc. In the end, a light directed picking is for sure going to drive these parameters up north.

P.S. Light is also used for sorting application. More about it in next blog. Keep watching this space.