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SPECIAL ISSUE

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Mobilizing metrics: Handheld dimensioning rewrites the rules

Mobile dimensioning can speed up the cubing and weighing process and reduce the number of steps someone has to cover in the warehouse and improve fulfillment efficiency.

By **Bridget McCrea**, Editor at Large

It's not all that unusual to see warehouse employees shuttling packages back and forth to a fixed dimensioning machine for cubing and weighing. Yet another team member is probably stationed at the machine, which measures each package's dimensions and weight to calculate its billable volume.

This stationary setup—which requires equipment, manpower and dedicated time—can create workflow bottlenecks as employees divert their routes to a single point for data capture.

The parcel industry's 2015 shift to dimensional weight (DIM weight) created high demand dimensioning machines, but the automation trend that quickly followed is now driving a need for more mobile, flexible solutions.



Making the switch to mobile dimensioning can whittle the time it takes to get one SKU dimensioned to 2 minutes.



As warehouse operators seek ways to minimize the number of steps employees take on their shifts and use mobility for multitasking, some of them are turning to handheld dimensioning for help.

According to Matt Miller, chief technology officer at MobileDemand, making the switch can whittle the time it takes to get one SKU dimensioned to 2 minutes (versus an average of 7 minutes to 10 minutes at the fixed-item level).

Compounded across hundreds or thousands of parcels daily, that 5- to 7-minute time savings per package can add up to substantial productivity and efficiency gains.

So what exactly is handheld dimensioning and how does it work? According to Miller, it requires a mobile device that's slightly smaller than the typical tablet. The handheld device, which is battery-operated and includes a depth sensor (usually a 3D camera), scans bar codes or some other unique identifier on the parcel.

Next, the integrated sensor captures the package's precise dimensions and weight—the latter of which is handled by a portable scale (often belt-mounted). The data is then transmitted to the warehouse management system (WMS), providing real-time information for billing and space optimization.

A fixed dimensioning setup requires employees to gather items to be shipped in a pallet, tote or box; bring them to the machine; and then get the weights, dimensions and/or photos needed for outbound shipping. But, the handhelds and belt-mounted scales mobilize the whole process.

Having the photos also helps with shipment verification, damage assessments

and other uses where operators need to prove the condition of a single product or shipment.

"Pictures are valuable even at the picking level, where the handheld not only scans the bar code, but also provides visual verification," says Miller.

Once in place, mobile dimensioning speeds up the cubing and weighing process, reduces the number of steps someone has to cover in the warehouse and improves fulfillment efficiency. Asked whether more companies will replace their fixed dimensioning with mobile as part of their broader automation strategies, Miller says MobileDemand and its competitors are hopeful.

"It's a matter of us getting the message out from an industry perspective that mobile dimensioning is available and more efficient," says Miller, who adds that there's a place for fixed dimensioning on conveyor system workflows, and particularly for companies running millions of SKUs on those conveyors.

However, the business use case for mobile dimensioning gets stronger when fulfillment activities are taking place in different areas of the facility or when they involve robots that can accommodate items of certain dimensions and/or weights.

"The bottom-line net benefit is operational efficiency and being able to acquire dimensions, weights and even product pictures much faster than the traditional methods," Miller says. "When you're talking tens if not hundreds or thousands of SKUs across the enterprise, it's a daunting task." ■

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INSIDE THE 4 WALLS

A monthly column from
St. Onge Company

ier to build a stable mixed case pallet when the cases are of similar size than when they are dramatically different in size, weight or even fragility. The light bulbs do not last long if picked before the crowbars, and the care necessary to ensure they do last reduces the productivity with which they can be picked.

Overall volume—It's not so much the volume itself that might make one operation more productive than another (although there's something to be said for economies of scale), but an operation with enough volume to justify capital investment in mechanization or automation will surely have a great productivity level. But that does not mean the mechanized or automated solution is the right answer for

the lower volume operation, since there may not be anywhere near enough labor for the mechanization to reduce to pay for the mechanization itself.

Though not exhaustive, the factors above all can contribute to a particular metric having very different productivity levels, *and there being nothing wrong with those differences.*

The level of similarity between the operations used to develop a benchmark, and the operation to which the benchmark is compared will determine if it represents valuable insight that can allow an operation to work toward world class capability, or if that particular benchmark for your operation is nothing more than what the other kids are doing. ■

Bryan Jensen is executive vice president and chairperson with St. Onge Company and has 41 years of experience in retail and wholesale distribution, transportation and logistics, 27 of those years with St. Onge Company (stonge.com).

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