



Manufacturing Agility

Using Technology to Predict & Adapt

WHITEPAPER



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Logistics Management

Logistics management is complex. The individual components that make it up are themselves unique. Demand forecasting ... proof of delivery ... warehouse picking and packing ... yard management ... route planning ... inbound purchase logistics ... and much more. Each requiring distinct systems, processes, and people to make them run well. Yet at its heart, logistics is simply the marrying of demand creation with physical supply. From this, you can create a single plan for the flow of products and information through the business.

As early as 1915, management theorist Arch Shaw pointed out that: "The relations between the activities of demand creation and physical supply illustrate the existence of the two principles of interdependence and balance.

"Failure to co-ordinate any one of these activities with its group-fellows and also with those in the other group, or undue emphasis or outlay put upon any one of these activities, is certain to upset the equilibrium of forces which means efficient distribution."

It has taken almost 100 years for the acceptance of these basic principles of logistics management. Lack of recognition springs from low understanding of the benefits of integrated logistics.

Shaw goes on to state: "... supply must be met and answered before the work of distribution begins."

How manufacturers approach logistics management and the meeting of supply gives rise to a source of competitive advantage.

Three Points of advantage

Manufacturers gain commercial success in one of three ways. Either they have a cost advantage, a value advantage or, ideally, both. The most profitable manufacturers then, tend to be the lowest-cost producer; or those providing a product with the greatest perceived differentiated value.

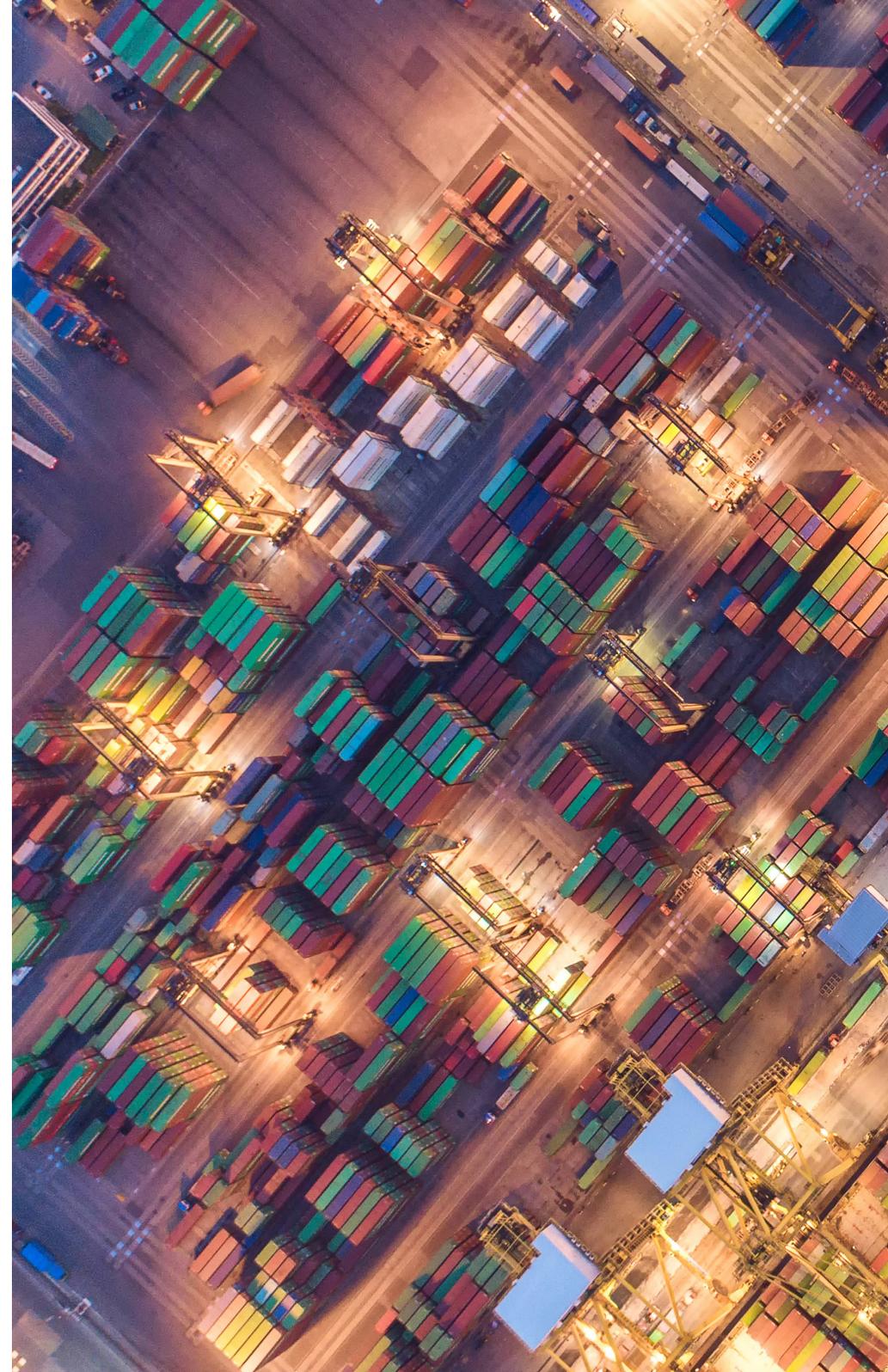
Referring to Arch Shaw's point, connecting your logistics processes will help you reach these points of value; processes from demand forecasting and warehouse picking and packing, through to yard management and proof of delivery at the point of customer handover.

If you can add incremental improvements at different points, you can flush value through the supply chain. Take product shipping for example. In platforms such as Microsoft Dynamics 365, load and container fill functionality help you maximize space. If you have a container that can take 500 units, but has only 350, the system can order an extra 150 units from the supplier. The more information you have, the more agile you can be in the decisions you make.

What have I got, and have I got enough of it?

Traceability is another important element in gaining value. Connected logistics helps you understand what you are delivering where.

Take the Azure IoT hub, for instance. A transmittable device goes into each container, sending information back to your connected system. You can now trace where a container is via GPS and work out where your stock is anywhere in the world. From this you know when it will arrive at your customer, supplier, or with yourself. You can tell if a storm in the Atlantic will cause a delay. Or if the shipping line goes bust, you can see the impact on delivery because stock can't be unloaded. Knowing when something will arrive allows for agile planning. If stock is held up on a ship, you may decide to airfreight items in to ensure order fulfillment.





Value from reverse logistics

How you manage reverse logistics may also influence the cost of supply.

As a matter of course, you will already plan for a percentage of returned stock. Once items come back, you will go through an expensive repacking exercise. Reviewing, cleaning, fixing, repackaging, and selling on. Or not. Whatever happens, you incur the cost of moving items back through the supply chain. But if you can anticipate returns, you have a better idea of the number of items you need to make and sell in the first instance.

To do this, Microsoft Dynamics 365 uses a forecasting engine together with Machine Learning. It analyses past sale and return patterns to advise order quantities. It learns that items are different. For example, that clothes sizes are sometimes different depending on the make. It will learn that certain items wear smaller, or larger, depending on brand or item type, and so inform you which will likely come back.

Tools such as Power BI provide this data to you in an all-up view. Information which is then added back into Dynamics 365 as a returns forecast, as part of your master planning.



Microsoft Dynamics 365 has enabled manufacturers to increase the number of meaningful customer interactions across digital and physical channels and created more opportunities to sell well as a result.

What next?

Agility and speed offer a competitive advantage for today's manufacturer. To discover how HSO can help you combine data and systems to run sales and marketing activities that deliver results, book your complimentary, no obligation consultation to understand what Microsoft Dynamics 365 can do for your organization.

Contact HSO

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