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INDUSTRIAL WAREHOUSE AUTOMATION

By Steve Bergsman, Sponsored by SIOR Foundation

The opportunities for advanced automation in industrial, warehouse, and distribution facilities is picking up steam, reports VDC Research Group Inc., a Natick, Mass., market intelligence and advisory firm.

The current situation, according to VDC, is that companies are facing significant pressures to optimize operations as the complexity of processes increase, including the need for on-time shipments, reducing cost of errors, perfecting order rate, improving storage utilization, and reducing expenses involved in expanding warehouse operations and labor forces.

The warehouse and distribution environment is changing: facilities are growing larger, the required workforce is increasing, and the number of SKUs (stock keeping units) that have to be managed has spiked, reports VDC. "As a result, companies are seeking new ways to optimize their operations with Amazon, Nike, Tesco, Wal-Mart, and UPS, piloting or having adopted robotics solutions for automated storage, picking, and transportation. Robotic technologies such as automated storage and retrieval systems, automated guided vehicles, picking robotics, and delivery drones, are being deployed to meet higher expectations for order fulfillment, cost, material handling, and employee turnover."

The normally staid and stable world of industrial real estate is on the verge of some major alterations, which, in turn, will affect the brokerage side of the business. While, technically, a "box" is still a "box," what goes into those four walls is transformative and that, in turn, will change the requirements of clients who need to be in those boxes.

The necessity for more efficient warehouse and distribution systems has come about due to the rapid expansion of e-commerce — companies such as

Amazon that need to move a lot of single product to individual customers as rapidly as possible. It's important to note, that what happens in one sector of the industrial world will affect all others; technologies that were pioneered in e-commerce are beginning to penetrate other industries.

Travis Land, SIOR, a partner with NAI Partners in Houston, is beginning to see changes in the region's main industrial sector, oil and gas. Despite being the country's fourth largest city with a huge port, Houston was not originally targeted for big distribution centers of e-tailers. That has changed in recent years.

"Our market has been slower to receive some of these e-commerce centers, but as they have come it has become obvious the importance of automation," says Land. "Other industries are starting to take notice."

Indeed, companies that are at the forefront of robotics and automation, that are selling equipment or creating training facilities are washing into Houston, hoping to see the "transition from e-commerce to the large oil and gas manufacturing companies," says Land.

Even that has been good business for brokers. An international robotics company recently expanded to Houston just to train people on its equipment.

Land found the company an existing 25,000-square-foot building in north-west Houston, near to the oil and gas manufacturers. "We did a shorter term transaction, expecting there would be strong demand for the robotics and automation they were selling. They wanted a first-class facility with constant 72-degree temperature in the warehouse but also to have a pleasant showroom," he explains.

However, the true effect of automation is with manufacturers. Land, for example, worked with an injection-molding company that, because new automation, was doubling capacity while keeping the same number of employees.

"With automation they were able to double output, but it also needed more space," says Land. "It needed a specialized facility, so we interviewed developers and went through the design-build process. A 65,000-square-foot building on 10 acres was designed to be expandable in case the business continued to grow. It had higher ceilings, advanced sprinkler systems, tilt-wall (the company had been a metal facility) and ovens that needed numerous air changes per hour."

Asked if there were any trend lines in regard to companies expanding with automation technologies, Land answered that it depended on whether a company wanted to be at the forefront of new technology.

"The warehouse and distribution environment is changing: facilities are growing larger, the required workforce is increasing, and the number of SKUs that have to be managed has spiked."

"A company that is dipping its toes in new technology waters or going to second or third stages of robotics will likely go into an institutional, REIT-owned, distribution building that is first generation as far as height and truck courts," Land says. "But, if they are pushing the envelope, as some of the larger retailers are, the majority of those have done short-term leases in a first-generation REIT building and then went on to do a build-to-suit or design-build."

Amazon, for example, did a short-term lease in the Houston area before building its own facility.

According to VDC research, distribution centers and warehouses will undergo the following changes:

- Robotics and autonomously guided vehicles will become more prevalent.
- Material handling systems will make the workforce more productive.
- Expect to see more use of imaging solutions for quality checks, barcode scanning and dimensioning systems for cubing of product for high-density storage and transportation.
- Wearable devices that provide augmented reality and voice technologies will support order fulfillment, improve picking efficiency and order accuracy.

This might seem to be a strange brew to the average industrial broker, which is why some commercial real estate companies have taken the next step, coordinating with product handling and automation specialists.

Colliers International in Richmond, Va., recently teamed up with Peaklogix, a local integrator of material handling systems.

"It's a value-add to the end-user," says Austin Newman, SIOR, senior vice

president with Colliers in Richmond, Va. "In a situation where a tenant is in X square feet in an inefficient, low-ceiling building and moving to a 36-foot-clear, tilt-up, new construction, it might mean more rent, but if the company can shrink its footprint because Peaklogix helped it understand how much more efficient they can be in that newer space, all things are equal."

Robert Giberson, principal at Peaklogix, adds: "We teamed up with Colliers to help its clients understand what a distribution or commercial space might be able to yield. We talk about static systems in terms of racking, traditional storage layouts and more specifically about automation. We can help clients reduce their footprint and get more productivity because we have automated some of the material handling functions such as order picking, order packing, order shipping and raw materials storage."

"Over the past 10 years, the internet has changed the operational needs for clients, Giberson adds. "With the widespread expansion of business-to-consumer, e-commerce operations, clients are now competing with large-scale distributors, like the Amazons of the world, while adjusting their models to remain competitive and profitable. It's a whole different process to ship one of something versus a case or a pallet."

Generally, a Fortune 500 company is looking at a new building when coming to Richmond, but that's not always the case, especially for retailers adjusting to the realities of rapid delivery.

"We are seeing a continuing bifurcation of functions for consumer product delivery," observes David Williams, SIOR, CCIM, the managing director and CEO of Colliers in Richmond, Va. "The last mile of delivery often means a fair amount of infill, and, perhaps, older buildings that are now being used for satellite distribution locations. We are seeing

some migration from everything being in the main distribution center, with companies pushing out to be closer to the customer. In those instances some of the older buildings that are in dense areas are becoming popular again."

Even these older buildings need to be automated.

Brokers deal with the land and the building, but companies need to know how automation will change what happens inside those structures. It helps to have expertise on the team. ♥



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Self Storage: The Best Performing REIT Sector

Warehousing personal goods is not quite as big a business as holding and distributing corporate assets, but over the last three decades, that industry has become a realized commercial real estate sector in the same way that industrial real estate is one.

The largest industrial portfolios are now in the big publically-traded real estate investment trusts, such as Prologis, and the same holds true for individual warehousing, known to the world as self-storage.

The National Association of Real Estate Investment Trusts established self-storage as a separate sector within its index back in 1994. Today with a market of capitalization of \$70 billion the self-storage REIT sector sits just behind the industrial REIT sector at \$81 billion market cap, reports the Wall Street Journal.

Here is the real surprise: over the past 23 years, the REIT sector that has performed the best over that extended period of time is not industrial, not office, apartments, or shopping centers, but self-storage, with annualized returns of over 17 percent.

So, self-storage is not a small industry anymore and to make individual units work better and be more efficient and profitable, it too must succumb to automation. Although in self-storage, automation is not so much about moving goods as it about accessibility, convenience, and security.

Melanie Wollenberg is the head of development for Brexton LLC, a Columbus, Ohio-based real estate company specializing in healthcare, retail and self-storage. Recently, she assisted in the effort by Brexton to create and build a new generation of luxury self-storage. The prototype opened in downtown Columbus this year and the

company expects to open six more in Ohio and Louisville, Kentucky, in 2017.

The original format for self-storage was mostly single-story with endless rows of individual units. There was a single-lock on each self-storage unit and the manager was really the main security point. In the Brexton format, everything is electronically automated. The building is multistory, and looks on the outside like a typical office building in a pleasant neighborhood. There is still an on-site manager who mostly sells packing supplies, helps people move in and out, and maintains the facility. Otherwise, it is all electronic – and well-secured. The facility boasts 32 security cameras on the inside and outside.

You can rent a unit from the kiosk and when you access your unit, you do so through the security systems keypad. You are given a fob for access to the facility and elevator, or if you utilize wine storage, you will have enabled finger-print security as well. The system recognizes the fob or temporary key code assigned by the kiosk and unlocks your interior lock in the unit when you swipe the fob. The fob also allows access to the elevator, which only goes

to the floor where the unit is located. In addition to the electronic lock inside the individual storage unit, we require an exterior lock as well.

“The technology of storage has changed tremendously,” says Wollenberg “When we installed the Janus SecurGuard Product Line we were only one in four companies at the time that implemented it. In the old days it was often a live in manager in front and a manual exterior lock. You drive your car down the alleys of the facility and those units only had a manual lock. We still have the manual lock but have added the dual locking system that provides state-of-the-art security to the entire facility. It’s nearly impossible for someone to get into a unit without the system notifying the manager.

This dual locking system also provides management with additional revenue protection tools, which means if you don’t pay your rent or have other issues with management that second lock will be enabled and the delinquent customer is locked out, says Wollenberg, “our new self-storage kiosk reduces labor, deals with delinquencies and gives us a measure of control over processes.” ▽

