

A C K E R M A N
**WAREHOUSING
FORUM**

The industry publication dedicated to helping warehouse managers and their bosses improve productivity and manage more profitably with tips, comments and articles written by practicing professionals.

VOLUME 16 • NUMBER 7 • JUNE 2001

Ten Propositions For Mid-Century Warehousing

By George A. Gecowets

Editor's Note: Our guest author needs no introduction for most of our readers. They know that he spent more than three decades as chief operating officer for a 14,000 member professional association, the Council of Logistics Management. He retired from this position in mid-May. George began his career as a writer and editor, and he has been our writing mentor and friendly critic. Much of the writing done by George Gecowets has not carried any byline. Now as he starts a new career, George develops a stimulating and potentially controversial view of the future. Since very few of us will be here to criticize his projections in 2050, we must assume that his crystal ball is still working perfectly. KBA

For several years near the end of the 20th century, writers and soothsayers were knocking their socks off with predictions for the 21st century. Those who predicted that information systems would all crash on January 1, 2000 were dead wrong. Now that we are into the 21st century, few have bothered to look further ahead. And yet it is reasonable to speculate on the future world of warehousing. We know enough about technological advancements today to predict those things that are most likely to be part of the life of warehouse managers in 2050.

Here are ten propositions for mid-century:

- ① Performance will be judged by systems and flows.
- ② Most of the personal judgment calls made today will be "managed" by artificial intelligence.
- ③ Firms will brand and market supply chain skills.
- ④ Pricing and liability for transportation and warehousing will merge into a common logistics structure.
- ⑤ Fulfillment fees will be based on a schedule similar to that used by catalog retailers.
- ⑥ We will work toward a goal of laborless warehouses.
- ⑦ Warehouse workers will need greater intellect and higher education than those we see today.
- ⑧ Corporations will assume greater responsibility for training the labor force.
- ⑨ A stable of "last mile" carriers will team with line haul carriers to handle residential deliveries.
- ⑩ Railroad rights-of-way and related infrastructure will be nationalized by the Federal Government.

A New Way Of Managing

While the turn-of-the-century manager may still retain the 20th century focus on transactions and number of units in inventory, tomorrow's manager will understand that performance and success should be judged primarily by the ease and speed of the flow of material from the original source to the consumer. A goal of tomorrow's warehouse manager will be twofold:

- Do nothing to impede the flow
- Discover ways in which that flow can be accelerated

Warehouses can be bottlenecks, and today many have this unfortunate position. The bottlenecks will not survive the 21st century push for ever shorter cycle times. As warehousing moves from a regional to national, and eventually to a global function, the opportunities for bottlenecks may increase. To combat this, the supply chain manager in mid-century will concentrate on measurement of the flow, and that flow will be the cash-to-cash cycle that begins when somebody buys the raw material, and ends when the final consumer's payment is deposited in the bank. The warehousing function is only one small wheel in a giant vehicle, and the warehouse manager must be sure that his wheel does not squeak.

Artificial intelligence is the use of the computer to cover many cognitive skills, including the ability to solve problems. This includes applications such as computer aided instruction, voice recognition, robotics and expert systems. Voice recognition is used in warehouses today to facilitate the process of picking orders, but the systems used in mid-century will make today's product primitive by comparison.

Putting Expert Systems to Work in Logistics, a 1990 book written by Mary Kay Allen and Omar Keith Helferich provides a good view of things that the intelligent computer might do in tomorrow's warehouse. They include these tasks:

- Design the warehouse layout
- Assess alternate warehouse site locations
- Design specifications for material handling systems
- Plan, control and schedule the receiving operation
- Do the same for the shipping operation
- Monitor warehouse performance
- Prescribe actions to improve performance

Of course all of these things are done today, but usually by people rather than computers.

Marketing and Pricing

Supply chain capabilities will be branded, and the leading edge companies will promote their brands as aggressively as consumer product companies do today. Many of these leaders will offer to sell their capabilities to other firms, even competitors. Within the world of warehousing, the best systems will be developed and marketed by operators, not just by software specialists.

Individual prices for warehousing and transportation services will be de-emphasized. Instead, third-party service providers will promote a bundled price for all logistics services, including warehousing. The mid-century buyer will be far more interested in the total logistics cost than the price for any individual piece of the function.

The legal liability differences between transportation and warehousing that exist today, will be long buried by 2050. Liability insurance policies will be designed to provide simple and total coverage of every aspect of logistics services, including cross docking. The English common-law distinctions between the warehousing and transportation functions will be adjusted to deal with the reality of global supply chain management in the 21st century.

Fulfillment services will be used more widely than today, and the fees for those services will be simplified and bundled. Just as today's catalog buyer can quickly determine the cost of handling and shipping for a new sweater, the mid-century logistics buyer will find published fulfillment schedules that are accurate and readily understood.

Overcoming Labor Pains

The serious shortage of skilled labor that occurred in the past few years will not go away, particularly in the warehouse. The need for good people will continue to exceed the supply, particularly in the more developed nations of the world. The root cause is the shrinking of population in many nations, together with the growing demand for warehousing, and especially for the value added services that accompany this function.

Today we talk about paperless warehouses, but by mid-century the conversation will turn to laborless warehouses. But 100 percent paperless or laborless is not a realistic goal. Robotic materials handling equipment should allow many, if not most materials handling vehicles, to operate without a driver. The building and stripping of pallets by humans will be virtually unknown. Many packaging functions now performed in warehouses will be heavily mechanized. The majority of order picking tasks will be accomplished with machinery rather than people.

The labor that we do use in the warehouse will be very different from the workers that are seen there today. The precision jobs will require greater intellect and more education, since these people will be needed in order to interrupt, diagnose, repair and facilitate mechanized systems. At the other extreme, some routine warehousing tasks will be so simplified that they can be performed by people with significant mental or physical handicaps.

Corporations will recognize that training is the only way to assure a high-quality labor force in a time when la-

bor is scarce. Therefore, businesses will assume responsibility for fine-tuned training of a labor force that is capable of working in an environment that requires a higher level of education. Facing a rapidly changing business climate, companies will also recognize the critical importance of continuing education and training to utilize the new business tools that were not in existence when the older workers went to school. Many new hires will be retained as "student workers," and they might be paid about 80 percent of the normal salary. The student workers will spend one day of each week in formal training to acquire reading, writing, math or other basic skills that they will need to eventually qualify as experienced workers.

Adjusting To Changes In Transport

The dot-com explosion of the past few years has reminded us that our delivery systems are particularly weak in coverage of "the last mile" between a freight terminal and a consumer's home. Furthermore, that weakness is even more pronounced in the less developed countries. By 2050, there will be a growing stable of "last mile" specialists. Most of these will collaborate with line haul carriers to fill this critical function.

Within the next few decades, the public and even the government will recognize the logic of treating concrete highways and steel highways in the same fashion. When the federal government takes title to railroad rights-of-way, a variety of carriers will use the same rails and pay for them with user taxes. Portions of the steel and concrete highways may be leased for the exclusive use of freight transportation companies.

The distinctions between transportation modes that exist today will become blurred or even non-existent. We will see freight companies that handle shipments moving over several transport modes with no transfer of liability or responsibility.

To summarize, I believe that changes in information systems will change warehousing far more than mechanical innovations. Significant changes in our transportation structure will force alterations in the way warehousing is performed. The task of developing and using skilled labor may be the greatest challenge of all for tomorrow's warehouse manager.

George Gecowets has managed Council of Logistics Management for over three decades. The Council had only 625 members then and could barely afford to have full time management. After serving in the Army, George earned his MBA at Michigan State. He joined the Kroger Company as a distribution center trainee. He then moved to Penton Corp. in Cleveland as a journalist before becoming an editor for Traffic Service Corp. in Washington. In the mid 1960s, he served the Secretary of Transportation as a "loaned executive" to set up DOT's public affairs section.

KEN'S COMMENTS

No Wonder The Highway Seems So Crowded



If you are like most motorists, it seems as if the 18-wheelers are dominating our highways and leaving far less space for automobiles. This feeling is confirmed by the Pocket Guide to Transportation, a publication of the U.S. Department of Transportation. Over the last 29 years, truck traffic has increased by 225 percent. In contrast, automobile mileage has only increased by 71 percent. The implications are serious for those warehouse operators who either operate or depend upon trucking services, and that includes virtually everybody. While we haven't seen any statistics, it is fairly obvious that we do not have 225 percent more highways than we did a few decades ago. When the road building falls behind the road usage, the obvious result is increased congestion. With that congestion we get two bad consequences. First, the trucker who is paid by the mile earns less money per hour because there is no pay given for sitting in traffic. Second, congestion causes growing uncertainty about time of arrival and therefore truckers miss appointments for reasons beyond their control. In turn, the warehouse operator who is trying to run a scheduled truck dock finds that scheduling is impossible because truckers cannot be relied on to maintain their appointments.

Is there any light at the end of the tunnel? The increased use of TOFC (piggyback) services could move more

trucks to the rails. Some have suggested highways that are exclusively dedicated to truck traffic, but no one has suggested a way to pay for this. Too many trucks are empty or half empty, and some of the new Internet based traffic information services promise to reduce empty miles in the trucking industry. Hopefully one of these solutions will start to offer some relief before we enter total gridlock.



Never Confuse Satisfaction With Loyalty!

We believe that many third-party warehouse operators spend too much time looking for the next customer and not enough time visiting with the good customers they have right now. The relationship may seem great today – the customer service reps in each office get along beautifully with each other. But tomorrow your customer may merge with another company, and the people you have dealt with for years may be replaced by strangers. That is when a failure to establish and maintain contacts at every level can cause serious trouble.

Marketing consultant Dave Swaddling has studied the problem of customer loyalty. The American Consumer Satisfaction Index is a survey conducted at the University of Michigan through telephone interviews with consumers. The Cadillac motor car division always receives very high ratings from its customers – in the most recent results it was second only to Mercedes-Benz. Yet the market share for Cadillac declined by 15 percent during the last four years. The problem is that the survey describes *present satisfaction*, not *future purchasing plans*. The happy Cadillac owners grow old and die, and the younger generation buys a different brand of car.

How much loyalty do your customers have? If you aren't sure, it's not too late to try to find out.

WAREHOUSING TIPS

Adapting To Changing User Needs

Whether you are planning a new warehouse for your own use or for leasing to others, it is vital to remember that the "state-of-the-art" a few years ago may not be adequate for the new century. Consider the many external changes that influence building design.

A growing number of businesses are operating on a 24/7 schedule, and they cannot afford to have any downtime. This means that communications capabilities must be very extensive, including backup or redundant services in the event that one communications medium fails. In some communities, this may mean service from two telephone companies rather than one. The conduits for communications and electric power must be far larger than ever before. Eliminating downtime may also mean that you need auxiliary generators to operate in the event of a utility failure. The building must be designed for safe access around the clock.

Quantity and quality of illumination become far more critical when half of warehouse operations take place after dark. Furthermore, accurate reading of barcodes requires good lighting.

Amenities are important, and some of them need to be made available on a 24/7 basis. In addition to attractive eating facilities, some businesses provide lockers, a fitness center, and day-care for children.

Because motor freight services may not be available at all hours, a large parking area for trailers may be required to support a "drop and hook" loading operation.

While relatively few of today's warehouses include all of these features, those that do have them will have an advantage in a competitive marketplace.



Turmoil In Trucking

Last year, 3670 trucking companies went out of business. According to the May issue of Traffic News Summary, this is the largest number in a single year. In a possibly related development, Bohman reports that there are 72,000 surplus heavy-duty trucks on the market.

Web without Wires

By Merrill Douglas, *Inbound Logistics*, February 2001, pg. 45. www.inboundlogistics.com.

This unusual article describes wireless data devices that may be used in logistics operations in the future. Overnight delivery companies such as FedEx and UPS were early players in the wireless scanning field. Fleet managers use wireless devices for real-time dispatching and vehicle tracking. The article describes several hardware and software products that allow access to Web based communications.



Managers Guide to Freight Loss and Damage Claims

By Colin Barrett, hardcover, 304 pp., \$60, available from Loft Press, Fort Valley Virginia

This is the second edition of a book which first appeared years ago. With 42 chapters in five sections, the book reviews the law of carrier liability, the extent of economic damages, and claims process. A complex and difficult subject is handled in plain English with an attractive layout. The author promises to answer the questions that managers ask, in terms that they can understand without consulting a lawyer. At the same time, for the benefit of lawyers, it includes a six page table of cases. The book should be a useful tool for every manager who is responsible for handling loss and damage claims.



The Open Road

By Etta Walsh, *Logistics Management*, March 2001, pg. 45.

This article does much to explain why there is a continuing shortage of truck drivers. Keeping good drivers is a perennial problem for carriers. 80,000 of them quit every year and must be replaced by new drivers. The average independent driver is away from home 250 nights a year, drives 110,000 miles annually, and clocks 60 to 80 hours of work each week. His earnings, about \$35,000 per year, are approximately the same as 20 years ago, and if he averages 70 hours per week, this is just \$10 per hour. Long haul truckers have lost 30 percent of their earning power in the last 20 years.

Complicating the problem is a drastic fall in the value of used equipment. A glut of used trucks has caused prices to plummet, and this encourages truckers to hold onto their vehicles longer and suffer more breakdowns because they have unreliable equipment. Delays in pickups and deliveries are the result of ever-increasing traffic congestion. Some carriers refuse loads moving to the crowded northeast and others are adding a "congestion fee" to each load going to metropolitan New York.

Managers Beat Inventory Challenges

Inventory Reduction Report, September 2000, pg. 4.

Several inventory managers shared successful strategies in reducing inventory. The most commonly reported challenge is lack of accountability. When no individual is responsible for inventory, the result can be blaming and finger-pointing. Maintenance of "dead" inventory is another common challenge. Some managers obtain permission to write off and dispose of products that have not moved for some time. Others move very slow-moving inventory to another location where the product is not subject to inventory tax. A frequent challenge is that portion of inventory categorized as "slow-moving and off spec." One solution is to develop a joint plan to sell, discount, rework or dispose of this inventory.



Who's Who In E-Commerce Fulfillment? Second Edition

By Richard B. Armstrong, Armstrong and Associates Inc., 167 pp., soft cover. For more information, see www.3PLogistics.com.

This guide explores those third-party logistics providers who claimed to make a specialty of e-commerce fulfillment. Many of those firms included are branches or divisions of larger companies that offer traditional third-party logistics services. The second edition includes a service capabilities checklist that allows a comparison of services offered by each of the listed companies. In some cases, the respondents apparently had difficulty separating their fulfillment business from the remainder of their operations.



Level 5 Leadership

By Jim Collins, *Harvard Business Review*, January 2001, pg. 67.

This article will appeal to those warehousing executives who are concerned about developing superior management. The author operates a research laboratory, and the article is the product of a research project. Eleven companies were studied during this period, and the article has many case examples. The author observes that great leaders have attended to people first, and strategies second. First they get the right people on the bus, then they move the wrong people off, then they usher the right people to the right seats, and finally they figure out where to drive that bus. All of them have maintained a culture of discipline. When you have disciplined people, you don't need hierarchy. When you have disciplined thought, you don't need bureaucracy. When you have disciplined action, you don't need excessive controls. Great corporate performance combines a culture of discipline with an ethic of entrepreneurship.