Fifty years ago, Malcom McLean’s innovation, the Ideal X, sailed from Newark, N.J., for Houston, launching the container era. In the intervening years, the container has literally changed the world. Today, advanced electronics — consumer and otherwise — and low-cost global sourcing are taken for granted. The fulfillment of Moore’s Law (predicting the microprocessor revolution) has delivered constantly improving technology at significantly lower cost than its predecessors.

But engineering is one thing, and manufacturing and delivery are something else. Texas Instruments, one of the early e-goods manufacturers, first wanted to manufacture in the Caribbean, but the “Yankee Go Home” attitude prevalent at the time of the Vietnam War, persuaded the company to opt for Asia — considered at the time to be more receptive to American business. The subsequent e-goods revolution in Asia could only have occurred with a reliable and cost-effective transportation solution. Containerization was an integral component of the subsequent Asian economic miracle. Fifty years may represent two generations to demographers, but those watching the growth of containerization have seen it pass through seven distinct phases.

**Prelude:** Early on, containers had to compete with traditional, breakbulk transportation. Transportation from Hong Kong to New York took upward of 60 days as vessels transited the Panama Canal and called at a plethora of ports.

**Act One (The Beginning)** took place in the late 1960s and early 1970s as Sea-Land established regular trans-Atlantic and -Pacific services. Other carriers entered the trade as consortia. Schedules adopted the passenger liner convention of fixed-day service. Two factors drove the service. First, the concept of time-definite transit was well-known to the trucking industry, and there were many truckers who had followed McLean into the shipping business.

Second was the need to develop a completely integrated network. To convince customers of service viability, carriers had to offer complete capabilities to shippers. Vertical integration became the industry model. Not only did carriers have to acquire vessels solely intended to carry containers, but they required a network of company-owned terminals equipped with cranes to load and unload these unique entities. This required a great deal of capital, so only well-established lines could participate.

**Act Two (Liners and Consolidation)** occurred in the early 1980s. Because of high interest rates, the cost of inventory became the focus of companies, and logistics was born. Just-in-time delivery was established, and the ability of containers to transit large distances in a cost-effective and reliable method became attractive. This ability coincided with the birth of global sourcing. As trade expanded, vessels grew to 2,000 TEUs.

The 1985 Plaza Accord on currency supercharged the U.S. import appetite, and trans-Pacific imports surged. Sophisticated liner companies expanded their vertical integration into consolidation companies to handle overseas requirements for U.S. companies. Sales capabilities were paramount.

**Act Three (Deregulation, Independence and Intermodal)** occurred in the mid-1980s. To combat rampant inflation, the U.S. initiated a program of transportation deregulation. Railroads were totally deregulated in 1980, and liner shipping was partially deregulated in 1984. These policies, concurrent with the explosion of international trade, allowed railroads and steamship lines to grow together.

Although labeled “deregulation,” the Shipping Act of 1984 was not comprehensive. However, it permitted steamship lines to set rates without regulatory review and approval. Lines could offer intermodal service anywhere. As volumes increased, vessel size grew to 3,000 TEUs. Steamship lines were able to fill these vessels using their own, independent service. The development of the double-stack train represented a breakthrough that provided faster transit with reduced transportation expense.

The market developed into two segments. Conference lines commanded premium prices for their perceived service levels — specifically, the ability to offer inland intermodal. However, independent, non-conference lines also entered the trade.

**Act Four (The Rise of Vessel Sharing)** began in the early 1990s. The growing scope of trade increased the number of vessel calls. As ship size reached 4,000 TEUs, ocean carriers needed help...
filling vessels. They formed vessel-sharing agreements to share space on each other’s vessels. Most lines viewed this as a temporary means to accommodate the rapid expansion of capacity and network scope.

Most vessel-sharing agreements made no effort to significantly coordinate liner operations beyond scheduling. Since competition with agreement “partners” was rife, the role of sales organizations was critical. Many lines severed agency ties in favor of their own organization – and dedicated sales force.

**Act Five (OSRA, Expansion and Alliances)** started in 1997 with the passage of the Ocean Shipping Reform Act, which completed the deregulation begun in 1984. The introduction of confidential contracting destroyed the conferences. By now, many independents offered better services than traditional conference carriers.

The introduction of 5,000- to 6,000-TEU vessels forced lines to address the shortcomings of vessel-sharing agreements, which had failed to rationalize assets or achieve significant cost savings. The result was the creation of four alliances in which much closer integration was sought. Individually owned assets no longer mattered as much as service reliability and value.

**Today, globalization and infrastructure** define the industry. Lines have had to accommodate the changing patterns of global sourcing, and adjust to the vagaries of how the supply chain is managed. The rise of China’s economy has been a large factor.

Global competition resulted in mergers and financial re-engineering to obtain results that were otherwise unobtainable. Even though vessel size now exceeds 8,000 TEUs, the value of assets is obscured by the need to provide sophisticated information technology. As customer supply-chain needs increased in complexity, some lines developed logistics capabilities to fulfill these needs – with varying degrees of success.

As trade grows, the question of infrastructure adequacy looms large. Consideration starts with port and terminal capacity, but landside access, intermodal connectivity and sufficient personnel are all essential ingredients. Given up for dead in the age of intermodal, all-water service is now the fastest-growing market segment. Concern about the U.S. West Coast and railroad capacity has forced customers to explore routing alternatives.

It is difficult to imagine what the next 50 years will bring our industry, but it is fair to assume that change will continue to follow market requirements. Our industry will continue to be the transport mechanism for the world economy; we will have to continue to adapt to meet the needs of an ever-changing world.