

# Can we get back to the way we were?

written by Jack Lifton | May 21, 2023

The lack of understanding of the total supply chains for the complex, unseen components, that underlie and enable the operations of the technologies we now take for granted in our daily lives, is the main reason that we have given away our competitive advantage in so many of the technologies we invented. In fact it's a prime example of the old excuse, "I didn't know the gun was loaded." Most of us only see, and are only interested in, the outer face of of a device

The financialization of American industry over the last 50 years has completely eroded the engineering and experiential skills that used to be de rigeur in the management suites of America's manufacturing giants. The decline of understanding of the sourcing and sources of the components necessary to assemble an automobile is glaringly apparent.

The limits of American chemical manufacturing engineering, critical for the downstream processing of non-fuel minerals into end user products, versus the unrestrained limits of the imagination of policy makers and their academic and bureaucratic advisors have now reached a crisis point. Policy makers think that a skilled workforce and legacy engineering competence can simply be brought into immediate existence by funding amorphous programs with the appropriate names and with the correct distribution of money to bureaucratically approved recipients who do not need to demonstrate any prior competence in the production, on-time delivery, at the agreed price, of products meeting the customer's specification. These recipients of the other-people's money (a/k/a taxes), rather, need to demonstrate

the proper cronyism and have the necessary lobbying in Washington.

American manufacturers driven solely by quarterly reports have given up on supporting internal corporate R&D, which in the form of GE Schenectady, Bell Labs, Park Xerox, Ford Scientific, GM Engineering, and many, many more gave us not just the twentieth century's rapid expansion of technologically based consumer and military goods, but Nobel Prize winners, medical advances, and most of all, our contemporary lifestyle and standard of living. President Nixon's decision to shut down the Space Shuttle Program in 1972 began the rapid decline of the major funding of corporate R&D by government agencies that fueled all technological development up to that time. That foolish, short-sighted, decision was made to try to save money due to the enormous expense of the (successful) moon program and the war in Vietnam. The long-term benefits of the moon and space shuttle programs for the general economy were ignored in favor of the short term financial needs.

**Fast forward to 2023.** The greatest generation of manufacturing engineers and research scientists are long gone from the management suites of American industry. The font of technology that was the private corporate R&D labs in the United States is not even a memory.

I volunteered in the evenings as a graduate student at the Ford Scientific Laboratory in Dearborn, Michigan, in the early 1960s. I worked on a sodium-sulfur battery(!) project. My reward was to work with and meet scientists and engineers who were world class researchers. The library was open 24 hours a day, and the librarian would get me any paper or book I wanted, published anywhere in the world. Harold Urey, the Nobel Prize winning discoverer of deuterium, who was a friend of the Laboratory's director, Dr, Jacob (Jack) Goldman came in one afternoon to hold

a seminar on current developments in science, and I well remember not wanting to wash my hands after he shook mine and asked me about my work. A brash friend of mine who was the (Ford) Engineering Department's budget analyst recommended in 1972 that the lab be defunded to save money. Henry Ford II (the "deuce" as he was affectionately called), came around to my friend's office, surprising all of the peons, and asked who had made the recommendation. My friend piped up that he had done that. The deuce looked at him and said, "The lab is an integral part of my vision for the company. You are not. Rewrite that proposal to conform to my views, or leave." (OK, he really didn't talk like that. He was much more colorful in his language, but you get the point)

To paraphrase Mark Anthony speaking at Caesar's funeral: Such was Henry Ford II, when comes such another?

Reviving that focus and bringing back C-suite engineer-managers and innovative R&D based on results, not credentials is the sole hope for reviving America's technological security and excellence.