Although we don’t always notice it, we rely on technology in almost every part of our lives. Throughout our homes, schools, businesses, means of transportation, etc., it’s everywhere. So, what happens when taken-for-granted and/or invisible technologies go rogue? It happens routinely…

For example, in June 2011, one manufacturer found itself recalling 300,000 toasters. The reason: Consumers reported the products could remain “on” indefinitely, igniting the contents and posing fire hazards. Be careful out there. We’ve also begun seeing new failures in some of the simplest technologies in the workplace!

The truth about toasters
My own research has revealed that toaster problems aren’t new. In 1999, one brand-name supplier in the U.S. was fined $575,000 for failing to report toaster defects that led to burns and property damage. Since 2002, nearly 3.4 million toasters sold in the U.S. have been recalled for similar problems. These recalled units included products from 12 well-known manufacturers. In fact, almost every major brand of toaster sold in the U.S. since 2002 has had a recall.

It’s shocking! The Consumer Product Safety Com-mission (CPSC) reports that from 2002 through 2007, “appliances” caused the largest number of electrocutions of the 24 product categories over which the agency keeps watch. Small appliances (mostly toasters and blenders) electrocuted 27 people. But, that’s not what really captured my attention: The huge increase in electrocutions did.

In three years, from 2002 through 2004, we averaged two electrocutions per year in the U.S. Then, from 2005 through 2007, we averaged seven per year. That’s a significant change by any measure—*more than a 300% increase in deaths in three years from small appliances.*

Interestingly, almost 10 times more men were electrocuted than women. The CSPC notes the most common of these deadly scenarios involved a small appliance and a consumer attempting to repair it. Sound familiar? “Don’t worry, honey, I can fix it. Stand back.”

Where there’s smoke, there’s fire. The National Fire Protection Association (NFPA) report on “Home Fires Involving Portable Cooking or Warming Devices” details a significant increase in fires, deaths and injuries since 1999. The report also states that toasters and toaster ovens were the largest cause of home fires from 2002 through 2005 (to the tune of more than $34 million in property damage).

The business cost
In less than 10 years, U.S. consumers spent over $271 million on toasters that were later recalled for “potential fire hazard, burns and electric shock” according to the CPSC. Imagine if you were in the business of making or selling toasters in America. What would be your business cost for the recalls?

First, you would have the cost of notifying all con-sumers by snail-mail, email and advertising. Don’t forget the expense of making replacement toasters (let’s hope they would be better than the original products), plus shipping, distributing, increased product liability insurance rates, etc. And what about the cost to recover from negative publicity? It really does go on and on…

Back to the question: Who pays for all of this unexpected increase in the cost of goods sold? Probably the consumer, through a price increase for the new toasters. (Aren’t you glad you’re NOT in the toaster business?)

Made in America
While toasters are one of the most common small household appliances in America, try to find a toaster that’s actually made in the USA. Where have all the toasters gone? Gone to China, every one!

All of the 12 major brand-name toasters sold in the U.S. then recalled since 2002 were made in China. Why? Manufacturers report that making small appliances in China has saved tons of money in labor costs. The real picture is quite different: nearly 3.4 million recalled toasters and millions of dollars of lost profits.

Where’s the money actually being saved by making our toasters offshore? Beats me.

Let’s make ‘em in America again

Why can’t we make toasters here anymore? We can. Then, why don’t we? The reasons are many and the problem complex. Let me generalize my answers based on experience in hundreds of plants over the years. The overarching issues goes well beyond toasters that are no longer made in America. Here are eight points to ponder:

#1. We became complacent… This complacency started after World War II, when most of the world’s industrial capacity was bombed out of existence. U.S. manufacturing was still strong. Our products were in demand world-wide. We had very little competition. Complacency set in and really began hurting American manufacturers when England, Japan and Germany regained and strengthened their industrial capacity.

#2. Attitudes of “entitlement” spread far and wide… They spread through some of our large company workforces, labor unions and company managers that began to feel entitled to high-paying jobs and all the benefits and perks, while actual “work” became a low priority.

#3. Investors demanded faster, stronger returns on corporate profits and stock dividends… The almighty dollar became the goal of businesses. Down-sizing and right-sizing followed.

#4. Customers wanted better value for their purchasing dollar… That included better quality, better service, better (faster) delivery and better (lower) pricing.
This was followed by an explosion in corporate improvement “programs” in the 1980s and 1990s. A veritable “program-of-the month” syndrome settled in to America’s businesses.

#5. New manufacturing technologies, fueled largely by microprocessors, computers and PLCs, entered our plants in the 1980s and 1990s… Many of the big companies responded with significant employee training for the operation and maintenance of these new “smart machines.” Productivity increased.

#6. We ran head-long into a skills shortage… Fewer young people pursued jobs in maintenance, manufacturing and utilities. The 1980s and 1990s saw rapidly declining vocational-technical and career education programs in our schools. This movement was accelerated by the obsessing over “college degrees” and “higher test scores” by our politicians and educators. Meanwhile, businesses were noting a decline in basic employability skills among high-school graduates. The “forgotten half” of non-college-bound students found themselves entering the job market totally unprepared.

#7. "Smart machines" came down in price… This meant they were readily available to most manufacturers. In the 2000s, these new technologies began invading mid-sized companies and then moved into smaller operations. One of the big differences this time was the small degree of employee training that was needed to master the newer technologies. Training, spare parts and documentation were additional costs that some companies "could not afford" (at least that's what they told me).

#8. Labor costs continued marching onward and upward… Wages, salaries and benefits (healthcare, retirement, vacations and other paid time off) increased the overall cost-of-goods-sold balance sheet.

Turning things around

Complacency, entitlement, bigger ROI, programs-of-the-month, advancing technologies, obsessions with a college education and test scores, lack of employee training and increasing labor costs came together and made manufacturing in America appear to be a virtually insurmountable challenge. That misperception wasn't too much of a stretch.

Third-world countries flaunted insanely low labor costs, which, in theory meant more profits. U.S. companies started off-shoring manufacturing to the Caribbean, Central America, Mexico, Taiwan, Korea and then China. Companies operating in high-wage countries like ours found these emerging, low-wage industrial economies hard to resist *(conveniently overlooking the fact that low-wage environments often translate into low productivity).*

I maintain our bleak manufacturing situation can be turned around if we want it bad enough! To quote the late U.S. industrialist Henry J. Kaiser (1882-1967), "Problems are just opportunities in work clothes." Permit me to explain…

What many businesses did NOT expect were the "hidden costs" of offshore manufacturing: longer lead times, increased and different quality problems, goods damaged in shipping, increasing costs of transportation as fuel prices climbed, larger finished-goods inventories in the marketplace and slower response to updates and market changes. In the end—*truth be told*—overall costs of offshore manufacturing actually increased over what they would have been here.

Lessons learned

What can we learn from the toaster example? “Rogue technologies” similar to those that caused nearly 3.4 million toasters to be recalled in the U.S. are quietly entrenching themselves in our plants and facilities. We’re seeing fresh failure modes in our newer equipment systems—*and recurring failures that we thought had been eliminated years ago.*
We’re also seeing differences in the quality, workmanship and compositions of some of even the simplest hardware that we have come to trust over the years.

Look around your operations—*including your parts rooms*. You’ll probably see many examples of machinery, components and parts that used to be made in America and are now being produced elsewhere. In many cases, what you’re running are brand-name equipment systems incorporating major components and parts that were out-sourced to low-wage countries to save money. Be vigilant. Pay close attention to early warning signs of failure.

Borrowing from another great American, the following Bob Dylan lyrics would seem to be truer today than when they were written in 1965: “The line it is drawn, the curse it is cast, the slow one now, will later be fast, as the present now, will later be past. The order is rapidly fadin’, and the first one now will later be last. For the times they are a-changin’.” To that, I might add, “but chickens always come home to roost.” **MT**

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