

# Change and the Technology-Educational Continuum

Emily Sopensky of the RFID Educational Foundation, Inc believes that educating in technology is essential to meeting business and customer needs, as well as avoiding financial and management disasters

To the casual observer, the global economy has acted like a drunken sailor on a long-anticipated shore leave. Hints of the latest financial crisis had remnants in the dotcom days of the early 21st century. Both were deflating – literally.

The deep distrust that banks assumed in response to the bloated housing market in the US has had ramifications around the world. The breakdown of numerous financial institutions and national economies has been devastating for some. The need for restructuring seems obvious.

Just as when the tide goes out on a beautiful beach, exposing old tires, bottles and cans as well as dead fish and shell fragments, so too the veneer of financial derivatives and hedge fund investments is being stripped, to reveal what looks more and more like trash. Also exposed in the layered crises are the questions of how much was due to mismanagement or ethical lapses, or both. But the subtext is just as important. Look at how this crisis unfolded so quickly. It demonstrates just how interconnected our world is today.

Watching the world's leaders offer solutions to the financial crisis is simply a reminder that technology may overcome some barriers, but those in the way of trade still prevail. The US responds by lowering interest rates to almost zero and pooling government funds for bailouts of banks and the once mighty auto titans. France turns to policies and funding to protect French companies from foreign takeovers. China offers 'rebates' on exported products that critics characterise as 'subsidies'. Brazil, Argentina and Russia respond with increased tariffs on certain imports. Countries simply do not have the mechanisms in place for a uniform reaction to the global crises.

It is small wonder then that with a global financial crisis freezing businesses worldwide, prayer fires are being lit to find relief and break the cycle of false expectation and downward spirals.

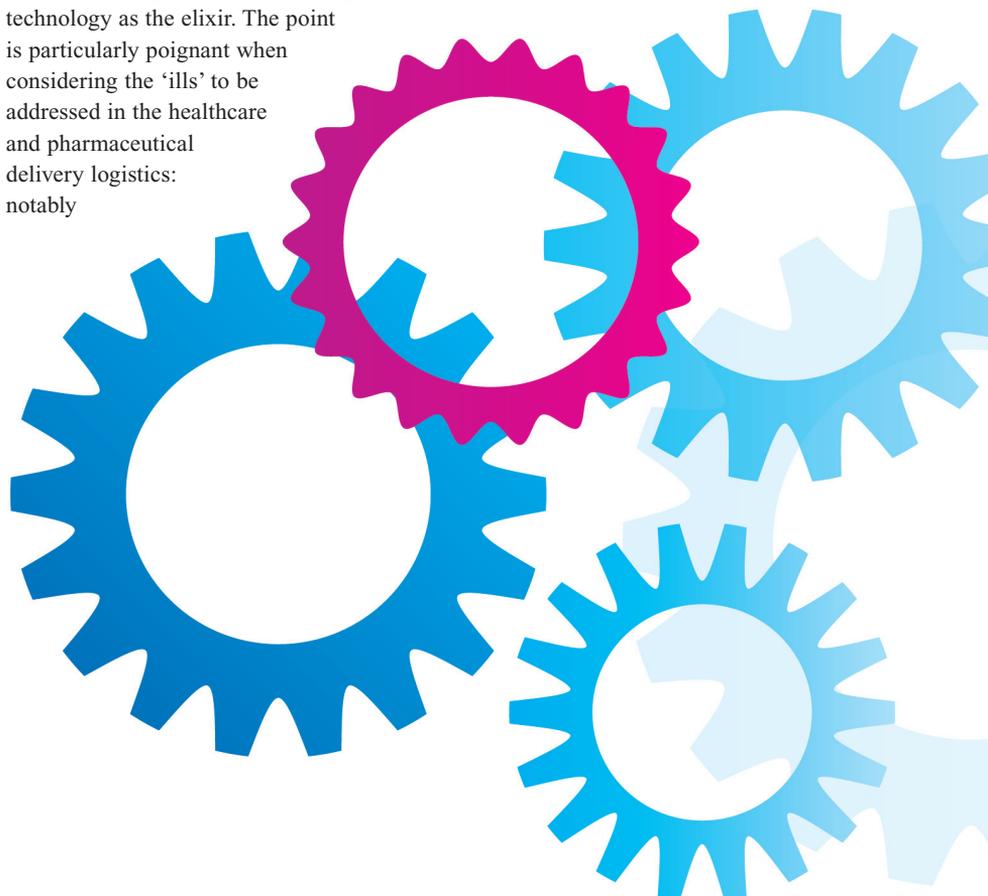
Some would argue that the same could be said of radio frequency (RF) technology in supply chain and manufacturing logistics. Hopes and expectations of real and quick return on investments are often the source of mistrust in technology roll out. Specifically, radio frequency identification (RFID) and its RF cousins have long been grouped as the technology that can put the world in order.

There is nothing new about offering technology as the elixir. The point is particularly poignant when considering the 'ills' to be addressed in the healthcare and pharmaceutical delivery logistics: notably

counterfeit drugs, temperature-sensitive products, with inventory control, or in avoiding biological disasters.

## EDUCATING IN TECHNOLOGY

Technology can, and does, solve some of these problems. Education comes in handy in order to discern the difference between the hype and the real solution. Knowing how a particular technology applies to your product can help you be prepared for almost any situation. Educating customers and clientele, customising products to meet their needs, and investigating how innovation can really solve their problems →



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is fundamental. When technology is used to smooth distribution with a major supplier and vendor, a company may well think it is on its way to nirvana. But, if the same solution does not work with all the remaining suppliers and vendors, then the company is right back where it started – depending on its weakest link to ensure distribution, as well as authentication.

It is, therefore, essential to incorporate client education into the sales process in order to truly benefit from wholesale education, and to enable multiple departments to be involved with the client. For example, when selling track-and-trace technology to counteract diversion, a company could train the marketing team to use this same technology to promote customer loyalty, and educate the operation department to improve logistics. In this way, the entire company benefits. RFID training seminars can help to streamline the process of educating clients more easily and quickly. Education allows the end user to make a valid decision, and so the expense and disruption are easily justified because of the benefits gained corporate-wide. But, the time lag to recognising benefits and return on investment is frustrating. A financial community that typically seeks justification in every quarter is hard-pressed to prolong investments that may not be realised for years – especially when pitched within a shorter window of opportunity.

Could it be that pharmaceutical supply chain logistics will never benefit from the productivity promises of RFID? Should the manufacturing managers who are trumpeting the use of more technology and RFID consider life in a cold, cramped environment before going into debt over technological promises? Will IT managers desist from projecting returns on investment in RFID? These are tough questions that should be answered.

### BARCODES

If we are to only witness and not learn from history, then the answer to these questions is undoubtedly ‘yes’. But as witnesses to history, barcodes give hope. Some date the idea for barcodes back to 1948, when a graduate student quit university and sold some stock in order to develop a barcode system. He and a friend filed a patent application in 1949. However, it was not until the universal product code was developed, combined with some technological breakthroughs such as affordable optical scanners, that barcodes could take hold and become an inherent part of just about every goods transaction now known to mankind.

Sixty years later, barcodes are so prevalent in global logistics that the stripes can almost be considered a force of nature. What fueled the change? Why did it take so long? The answers to these questions are complex. Essentially,

#### About the author



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innovation, new technologies and business procedures all had to converge. Similarly to RFID, neither science, culture or country dominated. Instead, business people, policy makers, and governments all worked on small improvements that led to the current global commercial system. RFID is just the next step in this development process.

### CONCLUSION

Given the global transformative moment we are in the midst of, it is an opportune time to recognise and acknowledge the continuum of change. Education is rudimentary to avoiding crises. Knowing what technology can and can't do helps in determining what to invest in, what to trust and when to wait.

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Technology and education are in a continuum that yields what I call the ‘wheel of change’. One without the other does not change the world. Like the chicken and the egg, the question is not ‘which comes first’, but ‘how in the world can one exist without the other?’

Engineers tend to be team-oriented, recognising that no one individual has all the solutions for building a system that works. Education, innovation, and technology go hand in hand. No country can avoid investing in educating in science and technology, which are commerce generators. Why should businesses be any less attune to the importance of education in science and technology, especially in RFID?