

## Industry Outlook: Education: It's Our True Long-Term Crisis

Written by Marc Marini, General Manager, IOtech  
Friday, 01 August 2008 00:00

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The exploding commodities market—*led by oil*—is surely a leading candidate for the crisis of the year. As a country, we will weather this storm. While it won't be easy, conservation of resources from existing sources and investment in the expansion of others will see us through.

Conservation can come in many forms, with the most obvious being a cutback on use, be it opening the windows and turning off the air conditioner, working from home one day a week or parking the SUV in favor of a more efficient vehicle. A less obvious and longer-term form of conservation takes root in process improvement.

Our business, data acquisition for measurement and control, allows people to measure their processes and improve them. One example of this is Internet-based machine vibration monitoring, allowing remote predictive, rather than on-site preventive, maintenance. By bringing the data to the expert, unnecessary travel to the source of the data can be avoided. Travel only occurs when the expert is needed. In addition, moving from preventive maintenance (fixing it if it needs it or not) to predictive maintenance (fixing it just-in-time) reduces or eliminates unnecessary downtime and repair.

Crises like rapidly rising oil prices have frontpage status because of their immediate impact on our everyday life. Unfortunately, the true longterm crisis we face doesn't always show up on the front page—*nor does it elicit the same emotional or political response*. That potentially more significant catastrophe is the United States becoming irrelevant on the world stage by losing our leadership in innovation and technology.

How do we avert such a disaster? What strategies should we employ to forestall what could become the end of the American age? The answer is more technical, engineering and scientific

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education.

This is not about spending more money on education, but rather about many of us sharing the passion that drove us to become engineers and scientists. We need to help more of our children to find the same excitement and joy in science and engineering that many of us have. The minds of our future are important and should not be wasted.

What is greater, the probability of a child becoming a sports superstar or scientist? I can only wonder which career occupies more childhood dreams?

Programs like [FIRST Lego League](#) can plant dreams of becoming an engineer in our children, much like the Apollo missions did for countless of today's adults decades ago. Through robotics, FIRST introduces youngsters to mechanical, electrical and structural engineering. Our company supports these types of initiatives enthusiastically—  
*other companies need to make a similar effort to introduce the young to the excitement of technology*

Conservation certainly can help in husbanding our resources, and many argue for the expanded use of our natural resources, from biofuels to wind, as a solution to our insatiable appetite for energy. As we clamor for the augmentation of oil, though, we should demand and readily participate in the development of future engineers and scientists. After all, our nation's future intellect is our most abundant and precious resource. The true solution to our short-term problem lies in solving this long-term challenge, for who else will innovate us out of our dilemma?

Get involved today. Support programs like FIRST. Encourage learning. Share your passion. **MT**

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*This article is part of Maintenance Technology's 2008 Industry Outlook, the annual executive roundtable. Columns from each of the 14 thought leaders who participated can be found at the following link: <http://www.mt-online.com/article/0808-industry-outlook>*

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