

## › Joining Forces to Advance Emerging Technologies in the Electroindustry

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In the mid-1800s, English physicist Michael Faraday, who established many of the key principles of electromagnetism on which our industries are

based, said, “The five essential business skills for success are concentration, discrimination, organization, innovation, and communication.”

Today, the same guiding principles still apply. We need to concentrate and define the needs of the end user, organize ourselves to address those needs, and develop technology or leverage technologies from other industries to meet those needs. We need to use every means possible to ensure there are partnerships working on emerging technologies in order to deliver what our customers need.

Think about recent technical opportunities like Smart Grid, high efficiency lighting, and hybrid/electric vehicles; or environmental challenges like reducing volatile organic compounds, greenhouse gas emissions, and improving the quality of the water in lakes and rivers. All of these provide us, as business leaders, with a call to action and a challenge to meet the needs defined by these opportunities.

We all know, however, that none of us can succeed alone. Unfortunately, in our currently challenging economic times, it would be easy for us to focus only on projects with an immediate payback for our own organizations. Investment in innovation and emerging technologies can be risky. Nevertheless, now is exactly the time when we need to commit to the future of our industry. Electrical manufacturers need to collaborate to

transform emerging technologies into viable commercial products.

Emerging technologies may be defined as contemporary advances and innovation in any field. They represent progressive developments for competitive advantage. Examples of emerging technologies may be the creation of new chemistries providing the same insulation properties using water instead of traditional petroleum-based solvents or using nanoparticles in insulating materials to enhance abrasion- and moisture-resistance properties.

Emerging technologies are not always new. Sometimes there are technologies, process equipment, or packaging options that are common to one industry but create new opportunities in another.

These new (and new to the industry) systems only qualify as emerging technologies if our customers and the end users find value (competitive advantage) in the product. The days of research and development for its own sake are gone. Today, the real opportunity is to join with partners who serve our industries to develop products and services that differentiate themselves in the market.

Our focus needs to be on what brings value to the end user. To do that, we need to understand our customer base, as well as the needs of the end user. For example, we need to focus on more than just the electric motor, and acknowledge automobile buyers who consider high-efficiency combustion engines over hybrid or electric engines.

The opportunities for collaboration and learning from one another are limited only by our ability to imagine, define, and communicate the needs of our industry. We need to expand our horizons and work together to

anticipate the technologies developing in our industry and related industries that might change the way we do future business. We need to focus on applicability.

For a long time, many in the automotive, communication, and imaging industries enjoyed a great source of new technology because of such government initiatives as crop developments to provide new feedstocks, or technology developed for military applications being adapted for widespread mobile communication devices. But as governments tighten their belts financially, there may be a greater responsibility in the private sector to innovate and develop.

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Private sector collaboration can be challenging as we figure out how to work together, but the results will be focused on the end user and will lead to the greatest successes.

The NEMA sections are a terrific forum for this kind of collaboration as there are many examples of new innovation opportunities being addressed and emerging technologies being evaluated. The results from the section work and other industry collaboration will help define the direction of this industry for many years to come.

As the fifteenth century English playwright John Heywood said, “Many hands make light work.” If we join forces for the advancement of our industry, the electrical manufacturers will thrive. ☺