

## Mark Senti: Think big with advances

**BY MARK SENTI • President of Advanced Magnet Lab in Palm Bay • April 30, 2010**

At the Advanced Magnet Lab, we define innovation as something much more than just a great idea or invention.

In a world of intense global competition and rapid technology developments, incremental improvements do not provide the longevity required for a sustainable business and economy. For AML and, we suggest, for Brevard County, innovative solutions must be disruptive, revolutionary or enabling and must provide transformational impacts to the global marketplace.

Every day, people are continually creating something new, something intriguing or something novel. Many ideas and inventions, while “innovative,” did not result in commercial success. One example is the Stirling engine. Invented by Roger Stirling in 1816, the engine promised efficiency, quiet operation and safety.

Theoretically, these remain the most efficient engines, but they were eclipsed by a later invention, the internal combustion engine. (Many years after the original invention, however, the engine is finding commercial success in emerging industries such as renewable energy.)

The best innovations are simple and elegant and possess the business elements required for monetization. Ideally, innovation also provides long term sustainability, has a global impact and addresses societal issues such as the economy and environment.

From time to time, industries migrate to new technology platforms which forever alter the ways that products are manufactured or services are delivered. We believe one example is AML’s breakthrough magnet technology.

AML’s Double-Helix is being introduced into the field of large-scale wind generation, where it stands to dramatically alter the cost/performance frontier of the next-generation of wind power.

The innovative electro-magnet technology, when applied to large wind turbines, can deliver systems which are 25 percent of the weight and 50 percent of the size of those being used today.

The result is very large wind turbines, 10 megawatts and beyond, that cost less, are more reliable and ultimately will deliver clean energy at costs lower than conventional and other renewable sources.

For Brevard County, the development and manufacturing of emerging technologies that will be long-lasting is essential for a robust economy. Innovation is the nucleus for growing and prospering such an economy.

Uniquely positioned, Brevard has enormous potential, with a rich portfolio of intellectual assets — a full complement of resources stemming from the diverse competencies in aerospace, advanced electronics, maritime, academia, etc.

Today, the potential exists to create many new, multi-billion dollar industries with global reach that can create thousands of high-skilled jobs based on innovative ideas and collaborative execution.