The romantic notion of Thomas Edison tinkering away in his lab is just that—a romantic notion. Edison's real talent was in making new products commercially viable, a process known as innovation. As in Edison's time, innovation today is the primary driver for success in technology industries.

Making a discovery or technology breakthrough is no longer sufficient; the question moving forward is not who invented it, but rather, who brought it to market and to it focused on what the customer needs? And no longer is big versus small the answer to how to win in the marketplace. It is now fast-to-market companies with useful products that become leaders in market share. Companies lacking the innovation mindset are more likely going the way of the dinosaur.

Increasingly important, too, is that governments, institutions, and taxpayers are demanding to see a return on their investment in research. Commercially viable products and services are the best argument for continued funding, which will further the cycle of development.

Optics and photonics entrepreneurs will take technology advances and match them to the needs and wants of society. These innovations will help light-based technologies continue to prove their immense benefits in terms of positive impacts on sustainability, healthcare, standards of living, jobs, economies, and the environment.

---

**Invention + Commercialization = Innovation**

Promoting an innovation focus is not to say that basic research has no value to an organization. Indeed, many companies—corporations and academic institutions—generate basic and applied science. R&D. science and engineering—both ends of the research and development spectrum—receive equal attention from a successful organization. Research and innovation thrive in different environments with differing creative and programmatic people. Managing the tension between the two ends of the research spectrum—fundamental discovery and market-focused innovation—is key to the ongoing health of any thriving organization.

---

“**Innovation is the specific tool of entrepreneurship, the means by which they exploit change as an opportunity for a different business or a different service. It is capable of being prescriptive or descriptive, capable of being learned, capable of being practiced. Entrepreneurship needs to search persistently for the sources of innovation, the changes and the symptoms that indicate opportunities for successful innovation. And they need to know and to apply the principles of successful innovation.**”

—Peter Drucker, *Innovation and Entrepreneurship*, 1985

**“Innovation...is a multi-dimensional concept, which goes beyond technological innovation to encompass new ways of distributing, marketing or designing. Innovation is thus not only limited to high tech sectors of the economy, but is rather an omnipresent driver for growth.”**

—Erkki Liikanen, EU Commissioner

“**If you believe that next big idea is likely to come from any one of a large number of areas, then you have allowed yourself to believe that you are able to monitor a variety of research sources and to respond quickly to research discoveries when and if they arise.**”

—Henry Chesbrough, *Open Innovation*, 2003

---

**Moving Technology to Market**

---

*Photons Society.org  
SPIE  
SPIE.org*