EDITORIAL

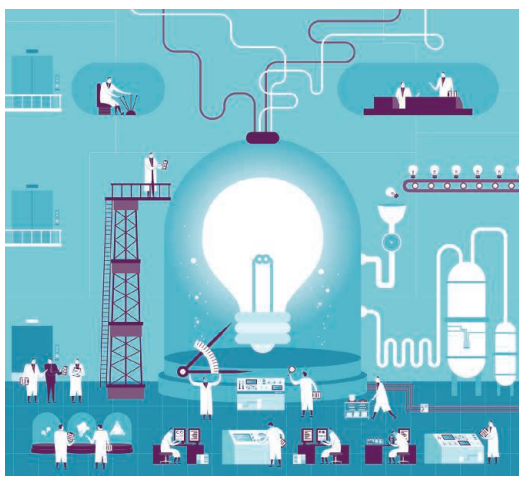
Business backs the basics

Earlier this year, a number of leaders from major U.S. corporations gathered at Sunnylands in California to discuss the critical importance of basic scientific research. For decades, the private sector has withdrawn from some areas of basic research, as accelerating market pressures, the speed of innovation, and the need to protect intellectual property in a global marketplace made a Bell Labs–style, in-house model of discovery and development hard to sustain. However, the leaders who gathered for the "CEOs and Leaders for Science" retreat* (which we convened) agreed that basic research will make or break corporations in the long term. Why?

Long-term basic research, substantially funded by the U.S. government, underlies some of industry's most profitable innovations. Global positioning system technology, now a staple in every mobile phone, emerged from Cold War Defense Department research and decades of National Science Foundation explorations. As well, long-term public–private partnerships in basic research have driven U.S. leadership, from information technology to drug development and medical advancement. For example, the Human Genome Project combined $14.5 billion in federal investment with a private-sector initiative, generating nearly $1 trillion in jobs, personal wealth for entrepreneurs, and taxes by 2013. Such endeavors created a science ecosystem that in turn generated the talent pipeline upon which it depended.

Although for-profit corporations still invest in proprietary product development and expensive clinical trials, industry finds itself unable to invest in basic research the way it once did. The need for increased corporate secrecy, market force–driven short-term decision-making, and narrowing windows to monetize new technologies have whittled away industry's willingness and ability to conduct basic research. This change threatens U.S. preeminence in research. For instance, the nation may lose its ability to attract and retain the finest talent from around the world. A good fraction of the students who earn advanced degrees in science and technology in the United States come from abroad because of the nation's scientific excellence. For decades, American companies could attract and retain the finest talent from around the world. But if the U.S. loses its edge in research, it may also lose this vital resource of expertise and innovation.

Consequently, business leaders assembled at Sunnylands resolved to use their individual and collective credibility, and their stature as heads of enterprises that fuel the economy, to advocate for greater government support for basic scientific research to revitalize the science ecosystem. However, they will need to lift sagging public opinion because many Americans now see basic research as a luxury rather than a necessity. A 2015 Pew poll found that Americans who view publically funded basic research as "not worth it" rose from 18 to 24% between 2009 and 2014. At the same time, those who believe private investment is enough to ensure scientific progress also increased from 29 to 34%.



"...basic research will make or break corporations in the long term."

With that in mind, the CEOs will partner with academic leaders to educate the public about the importance of basic research. Together, they will advocate for this in meetings with federal officials, through various media channels, and by asking presidents in the Association of American Universities to identify corporate leaders in their respective communities to join the effort. The hope is that this concerted action positions basic research atop the next U.S. president's agenda.

History has shown that investments in basic research are the primary engine by which humanity has advanced, and major economic gains—often unanticipated when the research was initially funded—have been realized. In the United States, that will require a long-term commitment from the government, complementing the ongoing investment of risk capital and key industry sectors.

America's leadership role in scientific innovation is an inherited responsibility and an economic imperative. It must not be neglected.

–Subra Suresh and Robert A. Bradway

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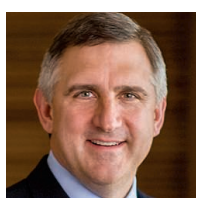

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*www.annenbergpublicpolicycenter.org/business-leaders-agree-u-s-funding-of-basic-research-advances-prosperity-security-well-being/

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