

DIVERSIFY FUNDING AND ALIGN INVESTMENTS TO SUSTAIN ACADEMIC RESEARCH

By Rick Rohrbach

Stagnant federal funding, erosion of clinical margins and rising operational costs continue to challenge the research mission at academic institutions. The symptoms of these financial pressures manifest in several ways including aging infrastructure, delayed investment and perhaps most critically, challenges recruiting and retaining talent.

This has become particularly acute for postdoctoral researchers. As institutions award more science and engineering doctorates, the number of tenure track positions has not kept pace. Faced with the long odds of earning tenure track faculty positions, many doctorate degree holders no longer believe the benefits of academic freedom outweigh the financial upside of the private sector. In fact, the percentage of Ph.D. holders employed by private industries is now [almost equal](#) to the percentage employed by higher education institutions, with [half of academic scientists](#) leaving the field within five years.

Attracting and retaining top talent, especially when there are stark compensation differences, depends on providing strong mentorship programs, efficient and service-oriented research administration, and access to collaborators and

facilities that might not be available in a corporate setting — factors made possible by a reliable stream of funding.

To nurture current and future employees, and ensure the long-term viability of their research enterprise, institutions should begin diversifying their funding sources and redefining their approach to resource allocation.

Strengthen Non-Governmental Alliances

While federal dollars still account for [more than half](#) of university research funds, the government's investment in academic research remained relatively flat in nominal dollars from [2011 to 2017](#). Combined with more investigators applying for federal funding and lower purchasing power due to inflation, this creates a potent formula for intensified competition and lower [award success rates](#). In this environment, investigators are forced to spend more time writing and submitting grants to sustain their labs, detracting from other activities such as mentoring their teams.

In response, some research institutions are borrowing from the startup incubator model, designing teams responsible for guiding investigators as they raise money to fund new research and building a network of external partners that can support future studies. For example, in 2018, Cornell University created

[GateWay to Partnership](#), an effort within its Office of Sponsored Programs to encourage greater industry collaboration and streamline negotiations for sponsored research agreements. Other institutions, such as the University of Michigan and Thomas Jefferson University, are establishing innovation centers to manage the commercialization of intellectual property and forge stronger industry and investor relationships.

As research leaders work to strengthen relationships with industry and philanthropic partners, it's important to consider the following questions:

- **What research strengths and assets differentiate our institution?** When approaching partnership negotiations, research teams should be able to clearly articulate the mutual benefits of an alliance. Research institutions need to demonstrate the value they bring, such as direct access to a critical patient population, renowned scientists or cutting-edge equipment, to different types of partners.
- **Are there opportunities to partner with local organizations?** To forge strong partnerships, academic research institutions might start by considering nonprofit and for-profit entities in their immediate region. For example, [Indiana University](#) researchers are working with Franciscan Health, a local health system, to improve opioid addiction treatment strategies. The opportunity to support a local investigator's research efforts could be an incentive for organizations looking to make a greater impact in the community.
- **What unique community needs can research partnerships serve?** Research leaders may also consider how their studies can address regional needs, from enhancing the local economy to making breakthrough discoveries around a community health or social issue. The [University of South Carolina](#), for instance, is partnering with IBM, Siemens and Samsung on research labs focused on internet of things innovation — a field that stands to shape the future of the state's already strong manufacturing sector.

Formalize an Approach to Resource Allocation

For some research institutions, a review of research spend can feel like opening a time capsule, with investment in new programs, centers and infrastructure mixed with some prominent legacy investments. Given the magnitude of institutional support for research, small changes to resource allocation can make a large impact. U.S. medical schools, for example, [invest an average of \\$0.53](#) for each dollar of sponsored funding received.

Without the right data and an effective process for evaluating how institutional research support is invested, programs that should be right-sized or sunset will continue to receive funding that could fuel programs and infrastructure that are better aligned with strategic priorities.

Institutions should develop reporting tools that consider the full cost of research programs to improve decision making. This means evaluating salary support and indirect costs such as space in addition to the direct costs of research. It might also necessitate considering new research business models, such as outsourcing functions typically provided in house.

Empower Today's Research Teams to Nurture Future Talent

Institutions that strengthen and stabilize their research funding mix and align investments with their research strategies will be better positioned to sustain excellence and support growth. Moreover, these institutions will earn an advantage when competing for talent. Having prominent investigators on staff is one way to attract the next generation of researchers, but institutions need to create an environment where senior talent has the time and resources to devote to mentorship.

By implementing processes to evaluate strategic partnerships, identify viable funding sources and monitor research spending, research leaders can reinvest in their most valuable asset: people.

Key Takeaways

Maintaining a mission-oriented research function depends on institutions developing a pipeline of future talent. To do this:

Think differently.

Understand how insufficient funding and ineffective resource allocation can impact researcher growth and retention.

Plan differently.

Empower research leaders to regularly review the allocation of institutional research support and validate that investments are focused on strategic priorities.

Act differently.

Diversify research funding by building relationships with corporate and nonprofit organizations and equip investigators with tools to secure relevant partnerships.



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19-1102