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Diversifying funding, fostering interdisciplinarity and increasing public support: Can Grand Challenge research initiatives integrate and address these objectives for Public and Land Grant Universities?

Working Paper

November 13, 2019

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Introduction and Background

Many universities have engaged in developing large, strategic, often societally-relevant research projects funded internally to meet a variety of end goals:

- Diversify funding to include philanthropic and industrial sources.
- Increase public understanding, appreciation, and support for university research, critical for carrying out the public and land grant mission of APLU member universities.
- Foster greater levels of interdisciplinary research by focusing on important, complex problems, often referred to as grand challenges.

While these large and visible approaches to research and research development have been gaining momentum in recent years, there have historically been research efforts that clearly focus on societally-relevant issues. Most public and land grant universities would be able to offer many such examples: at the University of New Hampshire these include the Institute of Health Policy and Practice, the Crimes Against Children Research Center, the Center for Social Innovation and Enterprise, and at Indiana University the Public Humanities Project.

This report differentiates between what we will call “strategic” and “operational” research initiatives. Strategic initiatives refer to large, centralized initiatives such as grand challenge research programs that are typically university-wide and organized under the President, Provost or VPR. Operational research initiatives are defined here as those that may exist at smaller scale, typically not organized at the highest levels of the university, and can be thought of as research development that supports individual and small groups of faculty as they seek extramural funding.

Study Objectives

This paper addresses questions focused on strategic research initiatives:

- What are some of the trade-offs associated with strategic research initiatives?
- How important is the process by which strategic efforts like Grand Challenge topics are developed for a university?
- To what extent have Grand Challenge research initiatives changed the dialog with state and local partners, and is there evidence that greater public support is likely to result?
- Have these approaches diversified funding and/or brought about greater interdisciplinary research endeavors?

Study Methods

Interviews were conducted with faculty, staff, and administration at five different APLU member institutions during Spring 2018. This was not an exhaustive accounting of all of the types of experiences among institutions, but the approach looked closely at strategic research efforts at these five institutions and the experience of the faculty, staff, and administration

engaged in those efforts. A semi-structured interview protocol was used; questions can be found in Appendix 1.

Findings

Relationships with external constituents

There was strong evidence that some strategic research initiatives had changed relationships (e.g. with state government, with important business and political interests in a state) in a significant way. Very high profile research projects that directly engage those types of interests provided the opportunity for meaningful dialog that developed mutual understanding and, for the university, provided the opportunity for greater understanding of the value of university research. With this dialog, of course, there is the potential for misunderstanding if engagement is not given the close care and attention it requires. There is also the real possibility of the university signing up for, or being perceived as signing up for, making changes in society that may or may not happen given its limited ability and control over those outcomes. Challenges like addiction, overdoses, pollution and addressing climate change are immensely complex and subject to influence from many different forces that university researchers, and even the external partners, have little control over. Recognition of this and care in articulating the role of university research in these types of partnerships can ameliorate the risk associated with this. An entire university commitment to few, specific challenges and the power of the communications infrastructure clearly has the power to change the dialog within a state and with its important stakeholders.

Clarity of Goals and Purposes

Most strategic research initiatives have multiple goals: to affect some positive change in society, to communicate the value of university research to certain constituencies, to diversify funding opportunities, among others. At every university that was part of this study, there was some degree of disconnect between faculty/researcher understanding of the ultimate goals of a strategic research initiative and that of the administration. At one university, faculty leading strategic initiatives were insistent that it was simply a scheme for hiring more faculty. Upper administration had a much different view of the program: to spur interdisciplinary research, to diversify funding, etc. At another university, faculty leading strategic initiatives expressed a different set of goals and metrics than the Provost; both thought the issue of goals and metrics was clear, and yet they differed markedly. In part this was due to the perception that there were some goals that were obvious and understood, even though they were not being articulated by either party. Both parties were confident that the other party knew and agreed upon the goals and metrics upon which evaluation would be based. These examples highlight the importance of continuous, intentional communication between administration and faculty/staff leadership.

Staff integration

In many cases, professional staff were hired to facilitate and manage strategic research projects. We found examples of cases where this was successful and heard sentiment that it was critical to the success of the research program. There were also cases where integration of staff members with faculty was controversial with limited value (to date). There was a lack of

clarity of who reported to whom, and where authority lay. Perceptions around hierarchy seemed to be problematic in many cases. The most successful integration of professional staff were when the staff had a clear mandate from the administration and the faculty had opportunities to align with the projects being managed by the staff member. For example, staff members with knowledge and insight into specific types of funding opportunities or specific relationships present an opportunity for faculty to contribute to a team that is focused on addressing a societally-relevant issue. In this case, the staff member brings value (relationships, knowledge) and does useful work in organizing efforts and proposals. These type of staff were recognized by the faculty as bringing great value to the research initiative.

Time and attention needed for large, collective efforts

Strategic research initiatives can be developed using different processes with varying levels of faculty engagement and time commitment. In many cases, the administration solicited proposals from faculty and held competitions for the selection of one or two strategic initiatives. Most of these had multiple steps (e.g. letter of intent, pre-proposal, and full proposal). While this approach can lead to greater legitimacy of the selected initiatives, there are many faculty who may have put a tremendous effort towards proposals that were not selected. Those efforts may still lead to positive outcomes (such as social capital development and/or subsequent extramural submissions), but there can be a sense by faculty of a lot of investment for no payoff. Furthermore, for those initiatives that won the competition, there is a tremendous overhead associated with spinning up a large project. There is evidence that extramural applications decrease in the period after such efforts by the faculty involved in the winning initiatives: institutions need to expect a substantial temporary decrease in proposal submissions from a large initiative. Where large numbers of faculty will also be hired in a strategic area, that again represents a significant time commitment by those faculty involved in the initiative.

Your priorities aren't our priorities

In many instances, new hiring is associated with strategic research initiatives. Such strategic hiring is seen as important for developing a critical mass of research expertise to enable significant research development in the chosen strategic area. There were many instances in which individuals at the college or department level expressed dissatisfaction with having a new hire located in their department. While they may have agreed to such, there was still the feeling that there was some level of coercion or lack of a choice in the matter. In more than one case, Deans, Associate Deans, or Department Chairs expressed such a conflict in priorities and the feeling that the strategic plans developed by departments and colleges were being superseded by the university.

Because you value that, you don't value this. Or "put your money where your mouth is"

Any decision about a major, strategic direction for research investment in a university has the inevitable trade-off of communicating a difference in value between disciplines or research directions. Despite best intentions and significant efforts made to communicate the value in all research and creative activity, there was some level of dissatisfaction among faculty not engaged in the initiatives. This particular trade-off is very difficult to do much about. In some

cases, universities have added strategic initiatives after the fact (i.e. after the initial competition and selection process was complete) in order to attempt to ameliorate this issue.

Leadership Change

Major strategic research initiatives set the direction for a university for many years. Many of these come from the very top of the university, and changes in the President/Chancellor, Provost, Vice President for Research, and Deans can have dramatic impact on follow-through. It is important to recognize the ways in which these efforts represent an unwritten contract with society, and stalling or doing away with a commitment from the university could have very real and long-lasting loss of trust from some constituents. Leadership change and inheritance of major, strategic initiatives from previous administrations represent a real threat to the value of this type of investment.

Recommendations

- In any strategic research initiative, there should be an inclusive, bottom-up process to allow faculty to get organized, develop ideas they care deeply about and are bought into, and at the same time a process that respects the time and effort required. Time and effort is particularly large for interdisciplinary groups of faculty that are newly formed.
- There should be a transparent process and clear goals and expectations for any strategic research program. These need to be consistently communicated between involved parties.
- There should be alignment of goals, purpose, objectives, approach, and metrics from the newest faculty hired through to the President and communications team.
- Trying to engage in a large or in too many strategic initiatives is resource intensive; trying to do too much or too many could jeopardize the prospects of any one. Resources include time and effort of individuals (within communications, research development, staff, faculty).
- Alternative approaches to developing a new initiative that might become a grand challenge or significant university-wide effort should be considered. For example, start small with a strategic hire or hire a project director/manager who has industry experience. Set clear metrics for the performance of the new initiative, and be prepared to continue the investment when interim benchmarks are met, or pull the plug if they are not. A new hire in this model should know the landscape and have significant research intelligence so there is a pull for faculty involvement from the lure of proposals with good support and high chance of success to fund their research programs.
- There are many pitfalls for strategic research initiatives that are possible if the whole life cycle of the process has not been thought through. Pitfalls that were apparent in these interviews included leadership turn-over which led to lack of coherency over time; shifting priorities on a shorter time scale than was able to be accommodated; adding new initiatives to appease faculty who felt disenfranchised by the outcomes of the process; difficulty incorporating staff / power struggles between faculty and staff; lack of

clarity about the purpose of the initiative (is it really to solve a problem? To hire faculty? To improve relationships with the state?); lack of clarity about the metrics that would be used to judge effectiveness; lack of a vision for where the institution should be in 10 years (what does success look like?); decentralized institutions struggle with funding model; “we had to come up with \$100,000 for a position we didn’t think we needed.” “incentivizing Deans is a huge problem.”

Appendix 1

Diversifying funding, fostering interdisciplinarity and increasing public support: Can Grand Challenges research initiatives integrate and address these objectives for Public Land Grant Universities?

Interview Questions

1. What process was used to develop the grand challenge theme? How bottom up, how top down? (Describe the process used to solicit and select theme; how transparent, inclusive. Ask for faculty response to it – what were their perceptions)
2. What type of commitment was made for the GC ahead of choosing? (e.g. faculty hires, length of time, investment to be made).
3. Are the GC's university-wide, or limited to specific colleges or units?
4. What support has the President/Chancellor or similar given?
5. What are the units engaged in the GC beyond faculty? Research development? Foundation relations?
6. What are measures of success for the GC initiative? What was its purpose, and how do you quantitatively or qualitatively track its success?
 - a. Success for the GC itself (e.g. reduce GHG emissions or depression)?
 - b. Success for the institution?
 - i. more diverse funding streams;
 - ii. better public relations;
 - iii. better applicants for undergrad, grad, faculty;
 - iv. more funding;
 - v. greater interdisciplinarity;
 - vi. more competitive for large interdisciplinary grants;
 - vii. greater support for the research mission of the university).
 - c. Success for individual researchers (if different from university definitions of success)
 - i. more stable funding;
 - ii. more satisfaction in their work
 - iii. Other?
7. What are drawbacks or trade-offs you have found to implementing GC initiatives?
 - a. Questionable value proposition for the investment required.

- b. Reducing scope of comprehensive university to 2 or 3 themes.
- c. People feeling left out / disenfranchisement
- d. Effectiveness of the approach to achieving the stated goals.