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Case Study:

Facilitating the University-wide Research Response to Disasters: The Role of a University Research Office

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ABSTRACT

On occasion, colleges and universities are confronted with natural or technological disasters that affect their communities or their constituents throughout the state. While these situations demand a coordinated institutional research response, administration and management of these endeavors are extremely complex. In this paper we discuss the case of Louisiana State University and the measures implemented by its Office of Research and Economic Development in response to the Deepwater Horizon drilling disaster of 2010. Challenges that surfaced and lessons learned are described, too.

INTRODUCTION

By their very definition, natural and man-made/technological disasters are not expected. Sometimes the disaster is of such magnitude that the research community of a nearby college or university is not only interested in mobilizing their research expertise, but clearly has an implied obligation to do so as a service to the citizens of the community or state—especially in the case of public institutions.

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For example, when Hurricane Katrina led to failing levees, the well-known flooding of New Orleans, and the evacuation of the entire city, Louisiana State University (LSU) responded swiftly and aggressively with research expertise from all segments of campus. As the Flagship public institution in the state and a Land, Sea and Space grant institution, LSU has a comprehensive academic and research mission and therefore a very wide spectrum of expertise to contribute in the event of natural disasters.

More recently, the catastrophic Deepwater Horizon Oil Spill about 50 miles off the coast of Louisiana has for the second time in five years elicited such a response. This paper delineates a series of steps the Office of Research and Economic Development (ORED) at LSU took to mobilize and coordinate research expertise on the LSU campus, and discusses challenges and caveats that might be useful for other institutions to consider when their research communities are faced with a crisis situation.

Facilitating an Efficient and Effective Response

The Deepwater Horizon drilling rig caught fire April 20, 2010, and sank on April 22, 2010. Given prior experience with coordinating a response to Hurricane Katrina in 2005, the ORED staff anticipated the need for a quick response. On April 30, 2010, one week after the rig sank into the Gulf of Mexico, ORED administrators announced a campus-wide research forum. The goal of this forum, held on May 4, 2010, was to evaluate research interest and facilitate the development of cross-disciplinary collaborations. The meeting was held in an auditorium capable of seating more than 200 people and was standing room only, packed with faculty representing departments as diverse as mechanical engineering, environmental and biological sciences, oceanography and coastal sciences, English, agricultural economics, sociology, and veterinary medicine, just to name a few. That single meeting resulted in approximately 40 research proposals and projects and served the additional purpose of facilitating the development of a list of faculty experts.

At the same time, ORED developed its own Deepwater Horizon Oil Spill informational web page. This page became

a repository for lists of faculty experts, funding opportunities, and announcements of every type. It also provided links to other oil spill-related websites as they emerged. Over the following months it received significant usage.

LSU operates on a sprawling campus, making it difficult for faculty to naturally associate and collaborate across disciplines. Although it is true that information technology has in some ways greatly reduced the limiting impact of geographic distance, the establishment of collaborative scientific research is very much a social process. Realistically, it is sometimes difficult for scholars to establish the trust and comfort necessary for effective collaboration from remote locations. Particularly in the early stages, scientific collaboration frequently requires a good deal of face-to-face interaction. To facilitate this, ORED joined with the Dean's office from the College of Arts and Sciences and on May 12, 2010 sponsored a workshop for scholars in the humanities and social sciences, highlighting scholarly work relevant to the oil spill.

In June, ORED organized and held three additional research workshops, conducted by subject matter experts and focusing on three distinct scholarly research areas: the impact of the oil spill on coastal human communities; the Gulf of Mexico deepwater environment as the focal point of the spill; and coastal zone shallow water impacts and remediation. ORED then also organized another research forum focusing solely on the arts and humanities. By the end of June, the oil was still flowing freely and hundreds of LSU researchers were now actively engaged in research projects related to the spill, many of which were multi-disciplinary in nature.

In addition to measures fostering collaborative scholarship, coordination was needed. In order to ensure that the campus remained on the same page from the top down, two committees at the upper administrative level were formed. The first was chaired by the Vice Chancellor of ORED and was a large group featuring vice chancellors, deans, and other senior leaders.

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This group met on a weekly basis throughout the summer of 2010 to share information relevant to key stakeholders. Each representative brought to the table collective intelligence from his/her unit to

ensure that each issue facing the university could be understood from all pertinent angles. Academic units discussed current and potential avenues of research and funding, while administrative units shared guidelines for conduct, current public relations initiatives, and communication pointers. Since previous large oil spills resulted in significant legal action, lawsuits were a major concern—all involved wanted to make sure that all matters were handled appropriately.

On June 12, 2010, in large part due to the efforts of the Dean of the School of the Coast and Environment, BP forwarded a funding contract immediately committing $5 million in research dollars to LSU, with the promise of an additional $5 million over the next 10 years. The contractual restrictions were minimal: 20%–40% of the money was to be committed by the end of 2010 to research consistent with the BP Gulf Research Initiative program; proposals were to be peer-reviewed by appropriate experts; resulting data, measurements, and findings were to be made openly available as soon as practical in accordance with the standard practice applicable to this type of work; and reports and papers were to be published in the tradition of peer-reviewed academic science. In other words, BP was essentially giving LSU a great deal of autonomy to use these funds for scientific study of this spill, and in no way tried to exert claims to intellectual property or to the use of the company's name in press releases.

In response to this award, LSU formed the Oil Spill Steering Committee, or OSSC, to serve as steward and help chart the direction of the University research program on this topic. This effort would become known as the LSU BP Gulf Research Initiative, or the BP GRI program for short. The OSSC had only four members, each appointed by the Vice Chancellor of ORED based on recommendations from the deans of the four major colleges on the LSU campus most heavily involved with responding to the spill at that point: Coast and Environment, Science, Engineering, and Humanities & Social Sciences (formerly Arts and Sciences). The four members were well respected and highly qualified scholars in their own right, and had the legitimacy needed for an undertaking of this magnitude.

The OSSC was immediately charged with vetting the first bundle of proposals that emerged in the negotiation process, developing a more broadly based Request for Proposals (RFP), and managing a series of internal competitions to distribute the funds rapidly but fairly to the LSU faculty. Thirteen days after its formation, the committee completed a final draft of an RFP that was approved by the Vice Chancellor of ORED. A competition was held immediately and managed through ORED, and award letters were issued in August.

Another competition was held through ORED in the ensuing months, and the remainder of the initial $5 million award was almost completely committed to 31 different projects by late April 2011. In light of the efficient and effective commitment of these research dollars, BP allocated a second block grant with the remaining $5 million to LSU in the summer of 2011, with a requirement to commit the money to relevant research projects by the end of 2011.

During this time, other administrative efforts were underway to continue facilitating cross-campus coordination. The chancellors and presidents of four major universities in Louisiana—Louisiana State University, University of New Orleans, University of Louisiana at Lafayette, and Tulane University—asked their Vice Chancellors or Vice Presidents for Research to form a multi-institutional collaboration in response to the spill. The deans of all university colleges were then asked to compile information about various forms of research—both active and proposed—from their areas for the development of a white paper. The goal was to be prepared in the event of a federal grant allocation, which was rumored to be forthcoming but never materialized. This resulted in the drafting of a major funding request and laid the groundwork for the establishment of an official Memorandum of Understanding among the four universities, called the Louisiana Universities Gulf Research Collaborative, which remains in effect to this day as a mechanism to steer the long-term research collaborations among these schools. One lesson here is that even though the establishment of this consortium did not lead to immediate research funding, it did foster relationships and lines of communication that are likely to yield important research collaborations in the near future.

In addition, ORED worked with the Office of Communications & University Relations to adapt a Moodle site, typically used as software or web support for teaching in the classroom, to allow researchers from across campus to virtually discuss their research projects, coordinate campus resources, and identify potential collaborators. Since the site was password-protected and limited only to members of the LSU community, it facilitated additional unhindered dialogue among faculty members.

Lessons Learned

In response to this crisis, the LSU Office of Research and Economic Development learned a number of lessons that might be useful to other institutions faced with similar challenges. In the interest of shoring up our own ability to respond to crisis in the future and as a good faith effort to help our colleagues at other institutions prepare to mobilize on behalf of their own

constituencies, we offer the following thoughts, in no particular order.

1. Formally adopt emergency-based research response procedures

Most universities have an emergency response plan in the event of a tornado, flood, chemical spill, or some other unanticipated disaster. These response plans typically revolve around campus evacuation, securing residence halls for students living on campus, facility integrity evaluation, and the like. What most universities do not have, however, is an emergency response plan focusing on the intellectual- or research-based response. LSU may be unique in this respect, in the sense that our prior history with research in response to hurricanes in particular has (unfortunately or not) given us more experience with rapid mobilization than most other schools.

Nevertheless, colleges and universities, which are critical to the research response, would do well to develop research response plans centering on communication and coordination. In the throes of a disaster, communication efforts can easily become clumsy, and trying to coordinate hundreds of eager researchers so that they are not unnecessarily duplicating research efforts, missing important collaborative opportunities, or missing out on opportunities to secure funding for their work is critical to success. Designation of key points of contact for state and federal entities, funding agencies, and relevant business and industry entities is desirable. Web pages (both internal and open access), email lists, and faculty expert listings are necessary as well. The list could go on, but from our perspective the point is to get a structure in place where information itself flows freely and transparently, keeping all relevant parties in the loop in a non-intrusive way.

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2. Maintain an accounting of institutional assets and a research capability database

Different institutions have different research strengths and capabilities. Some institutional assets—for example, certain centers and institutes or specific data collection or analytical instrumentation—will be relevant in some emergencies but not others. Identifying these assets prior to a crisis will facilitate the capacity of the institution to insert itself into response efforts. A well-articulated plan would

discern the relevance of assets and capabilities by type of anticipated crisis, and have protocols in place to 'free up' or reassign assets should they be needed.

3. Formally designate an associate dean of research in each college

Colleges are the primary administrative sub-unit in most universities. They typically have a dean and frequently one or more associate deans. Our experience with regard to the research response to a crisis or disaster is that having an associate dean for research within each college is critical. Associate deans occupy a unique position because they typically have a very strong feel for the research strengths, activities, and personnel within their units, something that is difficult for university-wide administrative units like Offices of Research to get a handle on. They serve as an intimate and familiar point of contact for their own faculty, and can provide important contextual information that cannot be provided by those more distant from the college. This might include what personalities are likely to collaborate well together and which are likely to clash, who has discretionary self-funding capability at their disposal, and who is already so overburdened that they are unlikely to be able to take on any additional work.

4. Define an administrative 'strike force' rather than a cumbersome administrative team

A centrally located emergency response group, or a 'strike force', is usually going to be preferable to a large, cumbersome administrative team. Large response committees tend to become mired in going around the room getting input from everyone, which is inevitably influenced by their own units' interests. What is needed is fast and decisive leadership that is not over-reactive but not so risk-averse that it becomes paralyzed into inaction. Crisis response involves calculated action; realistically, these situations are fluid and lead decision makers never have all the information germane to any specific issue. Even if they did, some disaster situations change so quickly that some information rapidly becomes irrelevant. Thus, smaller decisive teams that can act quickly are usually going to be preferable in these situations. This group can then funnel information out rapidly to associate research deans who can keep faculty informed.

5. Have the foresight to set aside bridge or rapid response funds

For those universities that are likely to be involved with disasters or crises with any regularity (e.g., those in states with regular hurricane activity), a bridge fund or rapid response account to jump-start the research response is a good idea. Research takes money, and a rapid response funding program can get faculty projects started while they wait for slower moving

evaluations of proposals from federal, state, foundation, or industrial entities. A standard rapid response RFP can be articulated and made ready for release upon establishment of such an account. This will often be a good investment and point of leverage for universities because it will allow immediate baseline data collection that researchers can use to inform and enhance future funding applications. It also allows the institution a means to quickly mobilize on behalf of the citizens of the community and state.

6. Establish a facility for live TV feeds

In contemporary America, disasters are media-intensive events. Print and radio press are typically not difficult to accommodate, but live television feeds are more cumbersome. A designated facility for live TV feeds is a must for a disaster with any level of television media interest. A handsome and well-functioning facility allows faculty experts to put their best foot forward in a relaxed and comfortable sub-setting of an otherwise stressful atmosphere, while also minimizing the time needed to conduct such an interview. A designated live TV interview facility will also make the queuing of journalists more efficient and will project a positive image of the university to both the general public and the media community.

7. Don't let faculty scholars get too overwhelmed with the media

A common problem when responding to disasters is that a small number of highly proficient faculty scholars will agree to a few initial interviews and then rapidly commit to a long line of media requests. This can lead to a balancing act that may become problematic when it causes scientists to put off their scientific work. It is the responsibility of the university leadership, in conjunction with relevant faculty scholars, to know 'when to say when', so to speak, and not let their faculty be too overwhelmed with responses to media inquiries. A good rule of thumb is to work closely with your university's media relations office, which can assist faculty in evaluating and responding to media queries. Media officials can also divert the flow of calls to multiple researchers, thereby taking the brunt of response off a single individual.

8. Understand what it is you do very well, and play to your strengths

Even comprehensive research universities have certain strengths that set them apart from their local or inter-state peers. Understanding what these strengths are, and being prepared to make decisions that involve resource allocations and hence may generate conflict, is an unpleasant but necessary task.

9. Prepare for the bad times

Responding to an emotional and controversial crisis such as the BP oil spill naturally opens the door for negative impact, fallout, and even litigation. Being prepared for the inevitability of such issues is key. Reminding faculty and administrators about protocols relating to an impending lawsuit, investigation, or public records and information requests is key. While these eventualities are certainly not pleasant, they also do not have to linger. Quick, efficient responses will dispel rumors and return the focus where it belongs—on solid research.

10. Don't be naïve

One of the most powerful lessons to be gleaned from this entire experience is that no one, neither a multi-billion dollar private company nor a major research university, is fully prepared to deal with something of this magnitude, mostly because of a lack of experience with such crises. In this case, the cultures of higher education and industry are very different, and getting them synchronized quickly to launch a large-scale rapid research response is extremely difficult. Hence even when both parties want a relationship to evolve quickly, we caution that it may not happen. Patience and solid communication are therefore necessary, despite the sense of immediacy that tends to accompany the unfolding of crisis situations.

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