How InfoReady Helped UMass Lowell Put Urgent COVID Research on Warp Speed and Safely Manage Lab and Campus Reentry

An InfoReady Case Study



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During a period when research-intensive institutions are struggling to re-start their research efforts and quickly ramp up COVID-related research – and virtually all traditional colleges and universities are challenged with campus reopening issues – UMass Lowell's Anne Maglia, Ph.D., Associate Vice Provost for Research Administration and Integrity, shares best practices from her institution's experiences.

Dr. Anne Maglia: It's been a really good exercise for me to reflect over the last seven months about our strategies and tactics, and how InfoReady helped maximize our actions while we experienced the same challenges many of our colleagues faced on their campuses due to COVID-19.

Much of our research at UMass Lowell focuses on issues related to our area's historic background in textile. So, a primary question was whether we could mobilize some of our topical expertise in responding to the public pandemic. Before our researchers could respond, though, the pandemic intervened.

Constantly shifting sands

In mid-March our Governor issued an executive order shutting down all Massachusetts campuses, leaving us about a week to convert on-site classes into being remote, have students leave the dorms, and close down the buildings. That left us only three days to get all of our labs shut down and determine ways to maintain animals, cell cultures, and equipment.

In mid- to late April we began a gradual opening, eventually getting our core facilities for urgent research back online by mid-May. A month later, we started slowly opening all of our labs again, with the anticipation of having 25% of our students back in classes by fall. But in July, we unfortunately had another COVID spike and reverted to plans for a reduced opening, planning for about 700 students and 25 classes on campus.

Using InfoReady to radically alter plans on the go

One of our more typical and ubiquitous uses for InfoReady is for internal grants, and we'd earlier launched our internal seed grant competition with proposals coming in the first week of March, right before we learned we had to close down.

As we hadn't begun reviewing them yet, we decided to pivot and utilize internal seed funds for COVID-related research. We felt there were folks on campus whose topical research could make an immediate difference in the pandemic, and we wanted to leverage opportunities being presented by the federal government in terms of COVID-related funds.

Moving faster demands more clarity

Because of the urgency, we wanted to launch that competition immediately and make it easy for researchers to understand what we were seeking. Essentially, we saw the process requiring four steps:

- 1. Launch competition ASAP
- 2. Make submission easy, requirements clear
- 3. Use a clear rubric for rapid evaluation and decision making
- 4. Get money distributed (and lab access granted) ASAP

Because the timeline was unusually tight – comprising only 10 days from announcement to the awarding of grants – InfoReady's automated processes were instrumental to achieving our objectives. Of the 13 proposals submitted, we funded three and each of those now has published results, with two of the teams submitting larger follow-up grant requests.

Over the course of the next two months, we sponsored an additional two rounds of funding for proposals. Even without an immediate impact, this took advantage of relevant pandemic data and promised a longer-term impact – for example, a diagnostic test that could take year moving from development to market versus something that could be of immediate use.

For that second round, we funded a further 12 grants working on COVID, with a number of those involving external partnerships and exploring issues such as using gold for treatment in an antiviral vaccine. It was very satisfying that we immediately pivoted and used our funding in relevant research, but we knew we needed to also start putting more researchers back into their labs.

Reopening a lab is one thing; safely reopening it is another

The original rubric we applied specified that proposals must offer an immediate improvement in public health and present a viable and actionable solution. Those are daunting requirements. Only three selected proposals really stepped up and met those criteria So, we began a second competition, one more intent on leveraging partnerships and involving work we're doing here at UMass Lowell. The key in that case, however, was to ensure that investigators could not only demonstrate urgency of purpose, but utilize lab access in a safe and prudent manner. To that end, consideration for our Lab Reentry for Urgent Research award submission included:

- Demonstrated critical need for access
- Safety training completed
- Researcher acknowledgement of guidelines
- Departmental review/input
 - Environmental Health and Safety (EHS)
 - Facilities Management
 - Housekeeping
 - Campus Police
 - Card Access and Parking
 - Research Associate Deans and AVC

Our perspective was that urgency could be demonstrated in ways best left up to the researchers themselves. We also felt we didn't want to have to prioritize one person's research over another. It was appropriate, we believed, for principal investigators to make the case why urgency was important for their research program.

No less importantly, we were adamant that COVID-related safety training was required for everyone. We were fortunate that a safety protocol had been developed on our campus though our participation in the New England Consortium. The bottom line was that researchers needed to acknowledge and accept responsibility for their understanding of the protocol and their compliance with it.

Campus-wide decisions require campus-wide stakeholder involvement

Finally, one of our major objectives was to have the largest possible group of stakeholders involved in the safety-related decision-making process. So in addition to having our office and the deans, we invited staff from the card access, campus police, housekeeping, facilities management, and Environmental Health and Safety offices to participate. Together, we began to reopen the buildings housing these labs. Some of the issues involved seemingly pedestrian yet critical tasks often ignored in lab research discussions. These were things like turning exhaust hoods back on, ensuring that HVAC

systems are up and running, making certain that housekeeping is available, determining which bathrooms need to be opened, and so on.

Make the rules transparent! Publish the rubric!

When the call for proposals went out, we decided to publish the rubric we were using for our review process. I think that that helped our researchers get a better sense of what specifically we were looking for. It also made us quicker in being able to give feedback to our reviewers It clarified to researchers who were not immediately approved what they hadn't done so that they might resubmit more successfully. So, publishing the rubric has become a best practice for us.

After about a month of keeping the competition focused on urgency, we started to relax the restrictions for who can be on campus. Our overall goal was to make certain we had no more than 25% occupancy in any lab floor or building, as this was part of the Governor's Guidelines.

That required applicants to provide a plan consistent with phase three priorities maximizing social distance and minimizing the number of individuals in the lab. What helped immensely in this process was having university card access data. This allowed us to track individuals and the time each individual spent in the lab or room.

With the assistance and support of campus police and the Environmental Health and Safety staff, we conducted between 204 and 500 lab inspections per week to ensure we were compliant.

We also added access slowly, offering morning or afternoon shifts and adding buildings little by little. This gave staff the time to reopen them while providing Environmental Health and Safety the opportunity to make certain we could get masks and cleaning kits distributed

One measure of success: No research lab COVID cases

Was the effort worthwhile? As of today, we've had no COVID cases on campus that relate to researchers or anyone conducting research, so we feel fairly confident that the strategy has worked well for us. We also feel the approach minimized the burden on our EHS, housekeeping, and facilities teams as much as possible, while also allowing for researcher access.

For faculty doing research in the College of Fine arts, Humanities, and Social Sciences, or the College of Engineering, we offered direct request access – one example being a faculty member who just needs to grab a couple books in his or her office even though the building may be closed. With direct request, they would be able to get card access just for the day.

InfoReady as a campus reopening tool

After successfully reopening our research enterprise, and as we were starting to ramp up for the fall, we decided to use InfoReady to examine our plans for opening up the campus and student facing activities. Those plans needed to include advising, residence halls, food service, and all of the activities that require people to be on campus – still, however, assuring less than 25% occupancy for any given office.

We tried to limit the extend of our significant financial losses. As with so many of our peers, this stemmed from unrealized revenue from residence halls and food service, our arena, our hotel, and our conference center. Wehad to balance the fiscal savings of keeping buildings closed against allowing the research enterprise and the academic enterprise to function safely. We organized the effort in terms of student-facing roles, with stipulations including:

- Activities that can only be performed on campus
- Minimizing the number of faculty and staff on campus
- Limiting # of buildings/floors open
- Seeking broad departmental review/input

That meant, again, we really needed a large stakeholder team so that everyone's opinions could be taken into account. To that end we involved not only deans, but executive cabinet members and functions. The actual list is extensive, but necessarily so:

- Deans
- Executive Cabinet
- Emergency Operations Committee

Health and Wellness

Environmental Health and Safety

Facilities Management

Housekeeping

Campus Police

Card Access and Parking

Student Affairs

Research and Innovation

InfoReady as a campus-wide tool for timely data and reporting

Utilizing InfoReady, we could essentially go anywhere from human resources to ROTC to the hockey team requesting their plans to get back to campus. InfoReady also enabled us to track approvals, both by a front-line supervisor and then by an executive cabinet member. Now, we will continue to use InfoReady to either adjust our current plans or perhaps relax those plans based on the COVID situation in the spring.

Learnings and evaluation

So, what did we learn from this entire experience? Unquestionably, we learned a lot! Specifically:

- Be open to embracing change
- Repurpose existing resources
- Be transparent/communicate expectations and rationale
- Include a broad stakeholder group (esp. when health/safety at risk)

Embracing change epitomized how we pivoted our research program to one that was urgency-driven and COVID- related. That put us in a strong position to leverage a lot of opportunities as well as do some good.

We learned that PDF-based research submission forms helped us administratively as well as helped researchers.

We learned, too, that transparency and ongoing communication was really critical. That was especially valuable in terms of communicating the rubrics and expectations and what the rationales were for the decisions we were making. We were \open about those. Where we fell down, though, was in reaching out to a larger group on campus. In that case I think we were less transparent about who gets to be on campus and when and why. This definitely caused some consternation, forcing us to pull back and explain how decisions were made. In retrospect, I believe we could have done a better job in providing a rubric for overall campus access, and that's a really important step for other institutions to consider.

The other really critical point is that we built a lot of really good relationships by having a broad stakeholder group – specifically, campus offices and team members that I would not have normally thought about working with. These included university card access staff, the chief of police, or housekeeping services. When it came to putting researchers back into the research labs, the breadth of our enrolled group made for a smooth transition. It also led to strong and ongoing relationships.

That makes us confident that we can bring InfoReady to lots of other things on campus. In addition to using it for centralized internal seed grants, college seed grants, soliciting abstracts for symposia, poster sessions, and much more, it's essentially an excellent and effective way of communicating among people and capturing information. I think we clearly demonstrated that in our COVID response activities.