AGENDA

NIU Board of Trustees
LEGISLATIVE AFFAIRS, RESEARCH AND INNOVATION
9:00 a.m. - Thursday - August 25, 2016
Board of Trustees Room
315 Altgeld Hall

1. Call to Order and Roll Call
2. Verification of Appropriate Notification of Public Meeting
3. Meeting Agenda Approval ................................................................. Action........... i
4. Review and Approval of May 19, 2016 minutes ............................................. Action........... 1
5. Chair’s Comments/Announcements
6. Public Comment*
7. University Report
   a. State Legislative Update ................................................................. Information........... 9
   b. Federal Legislative Report ................................................................. Information........... 12
   c. Sponsored Programs Administration FY16 Report ................................. Information........... 13
   d. Division Wide Initiatives ................................................................ Information........... 14
8. Other Matters
9. Next Meeting Date
10. Adjournment
*Individuals wishing to make an appearance before the Board should consult the Bylaws of the Board of Trustees of Northern Illinois University, Article II, Section 4 – Appearances before the Board. Appearance request forms will be available in the Board Room the day of the meeting. For more information contact Kathleen Carey, (kjahns@niu.edu) Recording Secretary to the Board of Trustees, Altgeld Hall 300, DeKalb, IL 60115, 815-756-1273.

Anyone needing special accommodations to participate in the NIU Board of Trustees meetings should contact Ellen Andersen, Director of Special Events, at (815)753-1999, as soon as possible.
CALL TO ORDER AND ROLL CALL

The meeting was called to order at 12:31 p.m. by Chair Cherilyn Murer in the Board of Trustees Room, 315 Altgeld Hall. Recording Secretary Cathy Cradduck conducted a roll call. Members present were Trustees Robert Boey, John Butler, Wheeler Coleman, Robert Marshall, Tim Struthers, Marc Strauss, James Zanayed and Cherilyn Murer. Also present were President Doug Baker, Interim Vice President for Research Dr. Gerald C. Blazey, Dr. Mansour Tahernezhadi, Dr. Gregory Long, Dr. Daniel Gebo, and by SKYPE Drs. Anna Quider and Federico Sciammarella.

VERIFICATION OF QUORUM AND APPROPRIATE NOTICE OF PUBLIC MEETING

Board parliamentarian Greg Brady indicated the appropriate notification of the meeting has been provided pursuant to the Illinois Open Meetings Act. Mr. Brady also advised that a quorum was present.

MEETING AGENDA APPROVAL

Chair Murer asked for a motion to approve the meeting agenda. Trustee John Butler moved and Trustee Robert Boey seconded. The motion was approved.

REVIEW AND APPROVAL OF MINUTES

Chair Murer asked for a motion to approve the minutes of the February 18, 2016 meeting. Trustee Wheeler Coleman moved and Trustee John Butler seconded. The motion passed.

CHAIR’S COMMENTS/ANNOUNCEMENTS

Chair Murer welcomed University Advisory Committee representative Dr. Greg Long. Dr. Long had two comments starting with the budget impasse, and said he would just reiterate the impact that has on graduate assistant support and faculty productivity on faculty research agendas. Faculty are doing their best with the limited resources but it does present a challenge. The other more specific issue I just wanted to bring to your attention is the Faculty Senate of NIU did pass a resolution at our last meeting to express our concerns to Governor Rauner and the Illinois State Senate regarding the appoint of John Babineck as the faculty representative to the Illinois Board of Higher Ed with a comment that he doesn't represent the will of the faculty and would not represent the intent of the faculty, wishes of the faculty, or the public institutions in Illinois. He has no higher ed background from the standpoint of being a tenured track faculty member so we as our senate, University of Illinois has raised the same concern that to have someone in this position who has not been one of us is disrespectful and does not acknowledge the issues that we deal with as tenured track faculty. Chair Murer thanked Dr. Long for taking such as stand if the issues are as substantive as you've identified.

PUBLIC COMMENT

Board parliamentarian indicated that there were no requests for public comment.
Chair Murer gave an introduction re: information items – We’re going to try and do two things today, we’re going to try and give this committee the time that it needs to deal with the issues that are really important not only to the committee but to the university, but we are also going to try and be respectful of time and see if we can almost get back on track. Our agenda today includes, as we usually do, state and federal reports. What I’m very interested in is the quarterly report on sponsored activities and I think that Dr. Blazey is going to also address prospectively the impact of sponsored activities and where this may be taking us in a trend, so I look forward to that comment. As you know, we try and highlight a program at each of our committee meetings and today we want to look at the research being conducted in the College of Engineering and Engineering Technology.

**Agenda Item 7.a. State Budget Update**

CM introduced Mike Mann and asked him to give the state budget update. Thank you, Chairwoman Murer, members of the Board, and President Baker. If I could turn your attention to page 10, Table 1, I will start out with some good news. You’ll recognize this table as a budget development table that I’ve shared with you in previous meetings. This table walks us through the FY15 appropriation and the revised appropriation and the various proposals. The last column is what the General Assembly approved and the governor signed as an emergency stop-gap budget for higher education a few weeks ago. You’ll see in that final column the FY16 emergency budget provided us with $26.4 million. Not a substantial amount of money; it represents approximately 29% of the last funding level we received in FY15. In other words, our base appropriation for FY15 was the $91.7 million. A few weeks ago we received 29% percent of that, about $26.4 million. The reason that bill moved forward and had bipartisan support is because a specific funding source was identified for that partial budget, the Education Assistance Fund. We have received that money, and then subsequently you’ll note on the table also at the bottom line that the Monetary Award Program from ISAC also received $169 million in that emergency bill. That provided enough funding for ISAC to process first term MAP grants for our students, for students statewide, and we recently received those funds as well, which amounted to $9.8 million.

Unfortunately, continued Mr. Mann, this is where the good news stops. If you notice in the far right column you’ll see that for most of the institutions the emergency budget reflects a 71% reduction from last time we received money. You’ll notice Chicago State is at a -44%. The stop-gap for them provided them with about 55% of their last budget. As a result, a second proposal came out, a stop-gap budget number 2. It’s like most sequels; it’s not as good as the first. It’s not reflected on this table, but the stop-gap 2 would provide the universities, with the exception of Chicago State, with funding to get us up to that approximate 55% level that Chicago State was at. For us that would be another $24.8 million. The stop-gap 2 has stalled though the Senate passed it by an overwhelming majority of 55–2. It has gone to the House where it was referred to the assignments committee and the rules committee and now it has become a shell bill. We are keeping our fingers crossed that that’s a sign that there may be something – the working groups are working on some sort of possible K12 higher education budget for ’16, hopefully ’17 that may go into this shell. We’ll see. That’s one of the things we’re keeping an eye on. Another thing I would like to bring your attention to is that the House has passed another bill, House Bill 4167, which provides the monetary award program with an additional $227 million. That amount of funding combined with the $169 million in your table would bring MAP up to a full funding level. If that bill were to make its way through the General Assembly and be signed the governor that would close out FY16 MAP awards for all of our students. Those are the two things we’re keeping track of right now that are in specific pieces of legislation that we can track, we can support, we can monitor. The grand bargain or the big deal that the bipartisan working groups are working on, we know some of the framework. The details have not been hammered out yet and there are ten session days left until adjournment date, so we are hopeful that despite the rhetoric that continues from both the speaker and the governor, we think that behind the scenes the working groups are working together to forge some sort of solution to help but together some sort of ’16 and ’17 deal. Trustee Butler asked Mr. Mann if the session alters the voting threshold, such as a veto session, or would the voting threshold still be 51% passes legislation? Mr. Mann responded that after May 31st it becomes a super
majority required, three-fifths. Finally, he added, there’s a substantive bill that would prohibit colleges and universities from asking prospective students about their prior arrest and criminal conviction history. Despite NIU’s opposition to this bill, it moved out of the house committee and passed by strong numbers in the House. That kind of woke up the other colleges and universities and so in the Senate, this bill has stalled in the Higher Education Committee because there are universities, law enforcement agencies and officials, general counsels’ groups working with the Senate Committee to explain to them how this would impact our campuses and our attempts to maintain the safety and security.

**Agenda Item 7.b. Federal Update**

CM introduced Anna Quider, who gave her report by beginning, thank you all for the opportunity to be here today. I look forward to being there in person for the August meeting. As with last quarter, congressional attention has been largely directed to the federal budget and fiscal year 2017 appropriations. While the majority leadership in both chambers has been very interested in getting back to regular order and passing all 12 appropriations bills through the House and the Senate and getting them to the President’s desk, I hate to say I don’t have a lot of great news. Partisanship and a number of the challenges related to the presidential election year and the condensed congressional calendar are making it increasingly likely that a continuing resolution will be needed to keep the federal government open in the beginning of FY17, which is October 1st. What I am hearing right now is that it’s going to be a short Continuing Resolution and that we should be getting an omnibus spending bill probably in December, which is also what we saw last year. Including the week of May 16th, so this week, the Senate has only 59 working days and the U.S. House of Representatives has only 46 working days remaining before the elections on November 8th. This creates a very practical constraint on what Congress can actually accomplish in the rest of this calendar year. Despite these challenges to progress in the appropriations process, NIU has been very active weighing in with our congressional delegation on our priorities for fiscal year 2017. We worked across campus to submit 15 different appropriations requests to our congressional delegation this year. Those requests covered nine agencies, the National Science Foundation, the National Endowment for the Humanities, the National Endowment for the Arts, and the Departments of Commerce, Defense, Education, Energy, and Health and Human Services. Unfortunately the currents that are working against the appropriations process are also working against the authorization process.

We don’t expect to see much legislation that affects policy for NIU’s equities passed out of congress this year and unfortunately that includes passing the Higher Education Act through authorization. So we’re hopeful that we’ll – that a lot of work has been done so far on reauthorizing the Higher Education Act which controls student and financial aid and other types of equities that NIU has. We’re hopeful that a lot of that work will carry over and be picked up by the new congress in calendar year 2017. Switching gears, the Obama administration remains quite active despite entering the last six months of its tenure.

Some examples of that are that the U.S. Department of Labor just this week issued a final rule regarding overtime compensation for salaried employees. The main change that they made in this new rule is that it raised the overtime qualifying income threshold for full-year salaried employees. They doubled it from the previous threshold so the current threshold is $47,476 and that goes into effect December 1st. Another example is just last week the Justice Department Civil Rights Division and the Department of Education’s Office of Civil Rights released guidance that advised schools, including universities, of the application of the Title IX rights to transgender students. I think that we should continue to expect the administration to really be leaning in their policy priorities even as they close out the administration. Finally, Federal Relations continues to work closely with our federal agencies and the congressional delegation building relationships and showcasing NIU’s leadership in education, research, artistry, and service. You’ll see in your briefing book an entire page outlining the various visits that we’ve had here to D.C. in the past quarter. In summary, for the two months from the end of February to the end of April, Federal Relations hosted a campus visitor in Washington D.C. on average once every ten calendar days. Visitors included Dean Chris McCord, five faculty, and about 85 NIU or NIU-hosted students. In total, the visitors met with officials from three federal agencies, three members of congress, as well as staff from eight congressional offices. In addition to hosting folks from campus and building relationships and getting our message...
through on an individual basis, Federal Relations has also recently facilitated two high visibility national opportunities for NIU. The first in March saw NIU students and faculty participating in the Super Science Tuesday National Video Campaign which answered the question, “Why should science matter to our presidential candidates?” This video, along with an accompanying op-ed co-authored by Vice President Gerald Blazey, was viewed at least 50,000 times across the country. In April, Professor Mike Papka from Computer Science presented on Capitol Hill at the Coalition for National Science Funding annual exhibition and reception. Over 200 attendees from congressional offices, federal agencies and the science and higher-education community were present, and that includes NSF director France Cordova. I’m always happy to discuss federal issues or please consider me a strong resource for you in navigating the increasingly stormy federal currents that we’re facing nowadays. Thank you, concluded Dr. Quider.

Chair Murer thanked Anna and inquired, I would anticipate that you and your colleagues are thinking about strategies to implement depending upon who is elected president, but I guess even more importantly not only who is elected president, but what party is going to be elected on the coattails of a president. I take it I would hope that you’re giving some thoughts and contingency plans from a strategic perspective regarding the transition that we’ll have in November. Dr. Quider replied, yes in fact I serve on the Board of Directors of a national non-profit called The Science Coalition, a group of 65 research universities across the country. Through The Science Coalition I will be meeting with representatives from the Trump campaign as well as the Clinton campaign to talk about the equities for higher education and specifically, scientific research for the next administration.

Chair Murer asked Dr. Phillips a question about the federal minimum wage and the impact on NIU asking if his office has done an analysis. Dr. Al Phillips responded that their estimates are for 300 positions that would be roughly $2.8 million and if it impacts - for supportive professional staff, which is 302, that's $2.8 million; for civil service it’s an additional 201, for a total of roughly 500 employees for total cost of roughly $5 million. His office will continue to look at the situation in detail as they get more information.

Dr. Quider added, we have been active in advocacy with our congressional delegation as well as through our associations, particularly the Association of Public and Land Grant Universities, regarding the impact of this rule on NIU. I know that the administration as well as the Department of Education is well aware of the challenges facing higher education with this rule. Unfortunately, it’s an irresistible messaging point in this politically charged environment with the elections. While we were engaging, I think that the currents were just really strongly against us in being able to get some relief from this.

Agenda Item 7.c. Sponsored Programs Administration

CM introduced Jerry Blazey to give SPA report, who started by thanking Dara Little for putting together the written report. Besides providing recent quarterly sponsored activity, the report presents information on sponsored activities since 2011. Before I get into that I just want to mention that for this quarter, the January through March quarter, faculty received 45 awards totally $2.1 million. The cumulative funding through the third quarter is $17.2 million, and a conservative estimate for the full FY16 is $25 million. On the longer time scale, due to appropriations and the American Recovery Act, sponsored funding hit an all-time high in fiscal year 11 but with the termination of these programs funding has settled down to a new base level of around $30 million since FY12. FY16 will be down a bit to the estimated $25 million and that’s what I wanted to speak to. We don’t fully understand the reduction and are working to better diagnose and respond to this. We do have data; we just need some time to analyze it.

In general two large grants have been completed and there has been a 25% reduction in applications. Some of the strong ties Dr.Quider referred to are at play here. There's a reduction in the face of federal sequestration caps. Of course there’s a poor fiscal climate here in Illinois and in response to that we are seeing reductions in faculty numbers. Within the division we’re working on a number of ideas to strengthen the university research mission. This includes increased training, preparation of our faculty, a search to reduce unnecessary impediments, finding mechanisms to increase faculty time for scholarship, and
developing strategic plans with each college. We’re trying to diagnose it and at least stabilize it, hopefully turn it around. Thank you.

Thank you, Dr. Blazey, replied Chair Murer and before we have our presentation, I would like to make a comment in regards to your report. I think that we all know all the reasons why things are difficult and we’ve certainly iterated that all morning long. We understand and we’ve spoken of this climate in Illinois. We’ve spoken of the climate and the turmoil in the country, but regardless, we are a research institution and that’s who we are and that’s our mark and that’s what we need to continue to protect and promote. Understanding that in order to achieve this goal the path is much more difficult than it was in 2010 and 2011, but again, regardless of this we have to stay committed to the fact that we are not a technical school in our focus. We are a research institution in terms of our primary focus. That takes the support of every dean. That takes the support of every faculty member. That takes into account the interest of our students. That takes into account the leadership that Dr. Blazey provides and the work that you do with your advisory committee which represents the colleges. I would ask this, maybe a culture change and I’ve used that word this morning, a culture change. Rather than talking about the difficulties, let’s try and identify the opportunities. Because every single university, every single research university, is facing the same thing. And that is whether we’re talking about Stanford and MIT or we’re talking about NIU. It doesn’t matter. The same topics are probably expressed in San Francisco, Palo Alto or Boston. We have to stop repeating the difficulties. We all know the difficulties and perhaps this is an opportunity for greater creativity and collaboration; collaboration in the identification of, if not government sponsorship, private sector sponsorship which is often easier for the private sector to support whatever type of research is relevant to their company as opposed to a philanthropic gift. For us that may of greater value and longevity than a grant. We really need to coordinate with our foundation. We need to coordinate through the president’s office, the provost’s office. We need to have the leadership of our Faculty Senate. We need to continue to identify not all the reasons why it’s hard. We’ll stipulate to that. We want to be the ones who figured this out. But we cannot lose sight of the fact that we are a research institution. That is critical. That’s the whole nature of this committee. Thank you for allowing me the time to make comments.

Dr. Blazey asked Chair Murer if he could make a comment or two, and continued by saying thank you for that endorsement and we certainly agree with you. I just want to point out at this time with the Program Prioritization we are in an excellent position to respond to your suggestions. We’re looking hard at many opportunities. We’re looking for in the colleges and interdisciplinary opportunities. Those two documents have almost made it easy to pick out some of those things and we will start pursuing that. On the commercial side, we are actively engaged in conversations with a number of industries both locally and internationally in trying to build that portfolio as well. Thank you.

**Agenda Item 7.d. - Advanced Manufacturing, CEET**

Chair Murer introduced Dr. Mansour Tahernezhadi stating we have today the opportunity to hear what is occurring at the College of Engineering. Dr. Tahernezhadi will give us a presentation and Professor Federico Sciammarella will talk about advanced manufacturing and we’ll hopefully have technology working for us in this regard. Dr. Tahernezhadi began an overview of the CEET research portfolio, saying I would like to express my sincere thanks to the Board as well as the Senior Cabinet for giving College of Engineering and Engineering Technology an opportunity to provide you with a brief overview of its research endeavors and programs that we have been advancing since 2005 when we emerged from mostly teaching now into research. We have gained considerable traction since 2010 in terms of quadrupling our research productivity. We used to produce about $800,000 to $1,000,000 now we are closer to a $4,000,000 a year research enterprise.

Of course a question that comes to mind, how do we turn challenges into opportunities, as Trustee Murer indicated? We have to always mindful of the opportunities and challenges that are there and we have to basically work as a team both in the college as well as across departments, and with RIPS and provost office to gain more and more traction on the research front because at the end of the day, the institution is known for its research excellence. This is how we can bring more and more productive students
and highly accomplished students to the institution. I’ve been trying to establish within the college in terms of teamwork mentality both within the institution as well as across other institutions such as Northwestern in our back yard, and University of Illinois, to make sure that we are submitting collaborative proposals and that would increase our chances of bringing external funding and also I welcome your emphasis with respect to industrial partnership. That’s one thing that we’ve been doing within the college for the past five years. We, in particular, we established an engineering residence program. Our department of Industrial and Systems Engineering has been very successful in taking traction and I think to date they have in excess of 80 contracts with major as well as small to medium size enterprises for the engineering residence program.

The College of Engineering and Engineering Technology has been very responsive to the mission of the institution in terms of advancing its research, partnership and innovation. In particular we have excelled in three major clusters of research. One is Advanced Manufacturing, which Dr. Federico Sciammarella is going to talk about in his presentation. Another one is engineering education. I remember that last year Dr. Brianno Coller did a presentation for the Board and he was also part of the presenters for the winter Olympic team that was sponsored by NSF. The remote laboratory access is extremely important in terms of us providing a synchronous mode of modality for our students to learn. We’ve been very active with respect to active noise and vibration control. We had a couple of patents in that area with respect to electronic pillows. Also mitigating noise within infant incubators because research has shown that if the noise levels are so high in the incubators because of the closed enclosure that’s within the incubator would cause resonant frequencies that are damaging and undermining infant hearing. We’ve been working with Invictus and as a result we submitted a phase one SCTR to NSF and together we received $240,000 and they’re now embarking on the second phase and there’s a pending application.

In terms of our research productivity from 2012 to 2015 we have produced about $317.7 million and that basically represents 11% of the total NIU production. To put it in perspective with the College of LA& S, we’re about 29% of that total. The College has also been very active in terms of providing and identifying resources for its faculty to advance its research. We’ve been working closely with RIPS to provide our faculty members with laboratory development that they need in order to secure more capability to advance their research. In particular, four years ago we received about $320,000 when Provost Freeman was the VP of Research and that basically enabled us to receive a major grant to the tune of $2.4 million in partnership with Northwestern. We were one of the two institutions nationwide that received that grant. That shows that NIU has the capability and intellectual power to become more and more research productive and that’s something we are extremely cognizant of, although we have the big elephant in the room with respect to sequestration, but those things should not be a daunting task. Dr. Blazey has been extremely helpful in providing us with resources going forward. We’re trying to put together a strategic research plan in terms of our hiring. In the past our hiring has been exclusive to what in terms of meeting our needs for teaching. What we’re trying to do now is to turn the table and making it ‘how we can we advance research?’ Which areas are most conducive in producing external funding and bringing faculty members that can not only work within their own discipline but also work across other disciplines especially with sciences, biology, chemistry and so forth. We are mindful of those things and we will push those agendas forward. I would now like to give you to Dr. Sciammarella to talk about his research initiative in advanced manufacturing. Dr. Sciammarella began, I want to thank Mansour and the Board for giving me this opportunity to present. I want to talk about what we’re doing in additive manufacturing. We’ve been very active with things like the STEM café and ASM regional chapter talking about additive and working on training and development and as well as the NIST program that Mansour mentioned. What I want to do now with this presentation is give you a little bit of the motivation behind the choices we have made in our R&D efforts at the college and where we plan on going from this point so that hopefully in the future we’ll have your support. So if you go to slide two, there’s no surprise that additive is the hot topic and people are talking about it all the time. There’s a lot of investment in this technology, not just in the U.S. but internationally.

Metal additive manufacturing is really where the most of the growth has been going. It’s actually doubled in the last few years and they’re really feeling that the sky’s the limit and the example there - this titanium bike frame that was printed in one machine - shows where you can have a basically mass customization so
that if people are trying to create something, they can mass produce it but also customize it at the same time. And by the way there's an instructional video later if anyone wants to look at it that we put together for the NIST project that talks more about the basics of 3D printing. So if we move on to the next slide, it brings me to where I wanted to just compare traditional manufacturing and why it's such a game changer when we talk about additive. The first thing is you really don't require expensive tooling to make these parts. If you have the printer and you have the good knowledge base, you can pretty much make whatever you want. The other interesting thing is you're not limited to traditional materials and in fact, you can make new materials that are even better than what's currently available. You may have heard this is the news; GE has spent the last five years developing this. These are for their lean engine which hold 19 of these 3D printed fuel nozzles. They're going into the 737 Boeing and the Airbus A320. This was specifically designed for additives so they went down from 20 parts to one single part. They've reduced their part count, but not only that they've improved the performance and efficiency of these parts. They're giving it a 5X increase in lifetime. They are going to ramp up to producing more than 40,000 of these by the year 2020. I imagine this is just one part for one engine. What will be happening once other companies like Airbus, which I think today was quoted as in the next two to three years, going to be producing about 30 tons of metal in additive manufacturing parts. Going to slide six, this is why we've made additive in metal the focus at our lab because we see and saw the potential where the university could position itself for creating value and wealth. What you see here is the image on the left of the prototype that was donated to us. This is a direct energy deposition system. It's about 12 years old and honestly, thanks to the support of RIPS when Lisa was there at the time and the college and their vision with some support as Mansour mentioned on the right you'll see and it doesn't look very different, but those upgrades I think that the support was about 70K really made a difference because I wouldn't be here today talking to you about these programs had it not been for that support. Obviously that being said, I wouldn't be a professor if I didn't say this, it's on its last legs and if we wish to push forward at some point we're going to need to invest in new equipment to potentially replace this system. I want to provide some examples of some of the cutting edge research that we've done and the impact it's had not only for the college, but the university as a whole. This current slide shows our 3D printing efforts in copper, just straight copper and tool steel on copper and if you click the slide you'll see there's a 3D printed part there and then it's machined down. This was actually something we made for a project that was funded by OSU. They had a larger Department of Energy project. They did not have anyone that could make this part for them and then they heard about us through our contacts at Optimech and so we managed to secure this contract and successfully produce this part for them without having any in between material and technically it doesn't matter, but what you need to know we're one of the only institutions that are able to do this kind of work and so this hasn't gone further as of yet, but we have definitely plans continue to market this capability. In the next slide just to kind of show we've been doing work on Tungsten, this is also a very difficult material to work with. Not many people can do it. We're one of the few that can do it. We've got about $140,000 in funding from DOD. This brings me to my next slide, this is the NIST MSAM project. There at least 12 to 15 undergraduates that have worked or are working through this program and getting experience. We've put that on hold due to the current economic environment, but we will continue to pursue and work out all the details so that when we're ready to go we'll have that information ready. The next slide is another great outcome of this project. We've designed this project and workshop that's actually occurring next week, May 23 and 24. It will be a bit more technical but the great thing is NIST is going to be there and some of the head decision makers from NIST are going to be there because they're really happy with the outcome of our project. We have over 60 participants including companies like Caterpillar, GE, also Northwestern is co-hosting this with us, but we think this is going to be a great opportunity because on the following day NIST is holding their workshop on direct energy deposition which is what we do and the future R&D needs in that area. This gives us a voice to lead where other potential funding opportunities might happen, at the same time showcase our skillset and capabilities. Oxergy is another small company from Alaska that heard about us through NIST that wants to build that part that you see on the right and it can only be done through additives so they reached out to us.

Chair Murer asked, Dr. Sciammarella what strikes me is that this is such an extraordinarily fascinating and important topic for us and it is very pragmatic in terms of how we're taking research and we're translating that into service to country and community. I'd like you to have a discussion with Dr. Blazey and perhaps
even the provost and the dean to talk about how this 3D manufacturing has impactful opportunities here at the university. What came to my mind is you could take different schools and colleges and talk about additive manufacturing. What is that impact from an anthropological or sociological perspective? What is the impact from an economic standpoint in terms of positive and negative? Lowers cost but does it cause in any way unemployment? What is all the transfer of this and looking forward I think from an educational institution we can also start to be predictive in terms of the consequences both positive and negative as this become really a mainstay. But I want to thank you very much for accommodating us today.

OTHER MATTERS

No other matters were discussed.

NEXT MEETING DATE

The next meeting of the LARI Committee will be August 25, 2106 at 9:00 a.m.

ADJOURNMENT

Chair Murer a motion to adjourn. Trustee Wheeler Coleman so moved and Trustee Marc Strauss seconded. The motion was approved. Meeting adjourned at 1:32 p.m.

Respectfully submitted,

Cathy J. Cradduck
Recording Secretary

In compliance with Illinois Open Meetings Act 5 ILCS 120/1, et seq, a verbatim record of all Northern Illinois University Board of Trustees meetings is maintained by the Board Recording Secretary and is available for review upon request. The minutes contained herein represent a true and accurate summary of the Board proceedings.
STATE BUDGET UPDATE

Summary:
On June 30, 2016, the Illinois General Assembly approved a short-term spending measure to ensure the continuity of state government operations in FY 2017 and the on-time opening of K-12 schools in the fall. Senate Bill 2047 House Amendment 5 provided full-year funding for K-12 education and partial-year funding for corrections, transportation, human services and higher education. The measure stipulated that while the appropriation is for FY2017, the funds may be used for FY 2016 expenses. The Governor promptly signed the spending measure into law, and Public Act 99-0524 provides Northern Illinois University with $48.3 million in operating funds, $15.5 million in capital re-appropriations for the Stevens Building construction and renovation project, and $151.0 million in funding for ISAC and the Monetary Award Program, which will fund spring 2016 MAP awards at NIU.

Figure 1:
FY17 State Appropriations for NIU Operations, Capital & Financial Aid

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<tr>
<th>Operations</th>
<th>$48.3 million</th>
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<tbody>
<tr>
<td>Capital/Stevens</td>
<td>$15.5 million</td>
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<tr>
<td>MAP Program</td>
<td>$18.3 million*</td>
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*Includes $8.5 million from Public Act 99-0524 for Spring 2016 awards, and $9.8 million from the FY16 stop gap budget for Fall 2015 awards. No MAP funding provided for FY17.

When combined with the $26.4 million NIU received in the FY2016 stop-gap budget last April, this partial-year budget provides NIU with about 82 percent of the FY 2015 final appropriation for the 18-month period that includes FY2016 and the first 6 months of FY2017. Stated another way, NIU received a 29% budget in FY 2016 and has now received a 53% budget for FY 2017. Most other Universities also received 18 months of funding that equaled 82 percent of their previous 12 month appropriation (see Table 1), with the exception of three schools that received 90 percent.

Figure 2: NIU State Appropriations for Operations

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<thead>
<tr>
<th>FY 2015 Final Appropriation</th>
<th>$91.1 million</th>
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<tr>
<td>FY 2016 Stop Gap Budget</td>
<td>$26.4 million (29% budget)</td>
</tr>
<tr>
<td>FY 2017 Partial Year Budget</td>
<td>$48.3 million (53% budget)</td>
</tr>
</tbody>
</table>

*The “82%” funding figure that has been widely reported is arrived at by adding the appropriation for 18 months (FY16 Stop Gap plus FY17 Partial Year), and dividing the sum by the FY 2015 appropriation – the last full year, 12 month appropriation received.
Regarding the State of Illinois’ fiscal picture, state Comptroller Leslie Munger announced earlier this summer that the state’s backlog of unpaid bills will likely reach $10 billion by December. However, Comptroller’s staff have indicated Universities would likely start receiving state funding in November or December. The receipt of MAP funds and the resumption of construction on Stevens is expected sooner.

With regards to substantive legislation, two legislative proposals that have been followed closely by the University were not approved by the General Assembly by the June 30th adjournment. Senate Bill 2196, which was supported by the University, passed the Senate and passed out of House Committee, but is currently in House rules committee. This bill permits undocumented students - that meet the Illinois residency requirements needed to qualify for in-state tuition - to become eligible for state and university financial aid programs, except MAP. A bill opposed by the University, House Bill 4446, prohibits universities from asking prospective students about their criminal backgrounds during the admissions process. Specifically, the bill “provides that a college may not make any inquiry or consider information about an individual’s past criminal conviction or convictions at any time during the admission decision-making process.” The bill passed the House easily, but has not been heard in Senate Committee yet; it has been re-referred to the Senate assignments committee.

On July 29th the Governor signed HB 5729, the Postsecondary and Workforce Readiness Act (PWR), into law. Public Act 99-0674 establishes new initiatives to smooth the transition for students from high school to college or career. The Act declares that Illinois should deploy a number of strategies to prepare more students for meaningful career opportunities by supporting postsecondary and career planning, promoting and incentivizing competency-based learning programs, reducing remedial education rates, increasing alignment between K-12 and postsecondary education systems, and implementing college and career pathway systems. By July 1, 2017, the Illinois State Board of Education (ISBE), Illinois Community College Board (ICCB), Illinois Board of Higher Education (IBHE) and Illinois Student Assistance Commission (ISAC) shall jointly adopt and publicize model postsecondary and career expectations for public school students in grades 8-12. In addition, ISBE shall establish and administer a competency-based, high school graduation requirements pilot program.

On July 29th, the Governor also signed SB 2174, which amends the IBHE Act and requires university Board of Trustees members to undergo leadership training. Public Act 99-0695 requires every voting member of the governing Board of a public university appointed for a term beginning after January 1, 2016 to complete a minimum of 4 hours of professional development leadership training. The training topics to be covered shall include, but are not limited to public university and labor law, contract law, ethics, sexual violence on campus, financial oversight and accountability, audits, and fiduciary responsibilities of a member of a governing board within 2 years after beginning service and within every 2 years of service thereafter. The training may be provided by the IBHE, or an entity approved by the IBHE. Universities are required to provide training completion information for individual trustees on their website, and University board chairs are required to certify to the IBHE by July 31st of each year, the successful completion of training by any of its members during the preceding year.

One final note, the Liquor Control Act of 1934 has been amended to allow public universities and community colleges the authority to serve or sell alcohol at facilities controlled by the institution. Public Act 99-0550 provides that public universities may serve or sell alcohol on campus facilities as long as the events are public events and are not specifically student-related activities. The University of Illinois and NIU – since 2011 – already have this authority.
### Illinois Higher Education Budget

**FY 2016 and FY 2017 Higher Education Budget Development**

**GRF and EAF Appropriations for Public Universities and MAP**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>PUBLIC UNIVERSITIES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chicago State University</td>
<td>$36,330.5</td>
<td>$25,459.4</td>
<td>$34,000.9</td>
<td>$20,107.3</td>
<td>$32,697.3</td>
<td>$(3,633.2)</td>
<td>-10.00%</td>
</tr>
<tr>
<td>Eastern Illinois University</td>
<td>$42,975.7</td>
<td>$30,116.1</td>
<td>$40,182.2</td>
<td>$26,222.0</td>
<td>$38,678.5</td>
<td>$(4,297.2)</td>
<td>-10.00%</td>
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<tr>
<td>Governors State University</td>
<td>$24,062.1</td>
<td>$16,862.0</td>
<td>$22,498.0</td>
<td>$12,757.0</td>
<td>$19,731.4</td>
<td>$(4,330.7)</td>
<td>-18.00%</td>
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<tr>
<td>Illinois State University</td>
<td>$72,226.7</td>
<td>$50,614.5</td>
<td>$67,532.0</td>
<td>$38,291.0</td>
<td>$59,225.9</td>
<td>$(13,000.8)</td>
<td>-18.00%</td>
</tr>
<tr>
<td>Northeastern Illinois University</td>
<td>$36,898.8</td>
<td>$25,857.7</td>
<td>$34,500.3</td>
<td>$19,562.0</td>
<td>$30,257.1</td>
<td>$(6,641.7)</td>
<td>-18.00%</td>
</tr>
<tr>
<td>Northern Illinois University</td>
<td>$91,092.7</td>
<td>$63,835.3</td>
<td>$85,171.7</td>
<td>$48,293.0</td>
<td>$74,696.2</td>
<td>$(16,396.5)</td>
<td>-18.00%</td>
</tr>
<tr>
<td>Western Illinois University</td>
<td>$51,445.2</td>
<td>$36,051.4</td>
<td>$48,101.3</td>
<td>$30,257.1</td>
<td>$40,257.1</td>
<td>$(10,000.8)</td>
<td>-18.00%</td>
</tr>
<tr>
<td>Southern Illinois System</td>
<td>$199,558.5</td>
<td>$139,845.1</td>
<td>$186,599.5</td>
<td>$106,156.0</td>
<td>$163,638.2</td>
<td>$(35,920.3)</td>
<td>-18.00%</td>
</tr>
<tr>
<td>University of Illinois System</td>
<td>$647,186.4</td>
<td>$453,530.7</td>
<td>$605,119.2</td>
<td>$330,599.0</td>
<td>$530,693.1</td>
<td>$(116,493.3)</td>
<td>-18.00%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$1,201,776.6</td>
<td>$842,172.2</td>
<td>$1,123,705.1</td>
<td>$350,059.1</td>
<td>$995,918.1</td>
<td>$(205,858.5)</td>
<td>-17.13%</td>
</tr>
</tbody>
</table>

| ISAC/Monetary Award Program | $364,856.3 | $373,254.5 | $397,073.1 | $169,798.7 | $320,798.7 | $(44,057.6) | -12.08% |

* SB 2047 passed by the General Assembly and signed by the Governor on June 30, 2016.
FEDERAL REPORT

Congress

Fiscal Year (FY) 2017 is expected to arrive on October 1, 2016 with a continuing resolution that extends FY2016 funding levels and priorities into at least the first quarter of FY2017. Some members of Congress are calling for a continuing resolution that extends into the second quarter of FY2017, i.e. the first 100 days of the next president's term. This is a dynamic situation and the decision on the length of the continuing resolution is unlikely to be made until the end of September.

It is difficult to predict what a comprehensive FY2017 appropriations package will look like. The twelve required appropriations bills have reached varying stages of completion in both the House and Senate and veto threats abound. The outcome of a disagreement amongst congressional leaders and the Administration regarding the top-line budget spending levels for FY2017 could substantially alter the contours of the eventual FY2017 appropriations package.

Beyond the appropriations process, Congress is expected to make little headway on passing authorizing legislation pertinent to NIU.

2016 Presidential Race

Donald Trump is the Republican candidate and Hillary Clinton is the Democratic candidate for president. NIU Federal Relations has met with policy advisors for the Clinton campaign to discuss science and technology priority issues for higher education. A similar meeting is in the works with the Trump campaign.

The Supreme Court

The Supreme Court ruled in Fisher vs. University of Texas at Austin that the University’s use of race in their admissions policy passes the constitutional muster.

Federal Engagement with NIU

President Doug Baker and Marilyn Bellert, head of the P-20 Network at NIU, visited Washington, D.C. on June 20, 2016. Their meetings included Senate Education staff, the Director of the National College Access Network, and six Senior Policy Advisors from the Department of Education’s higher education division in three separate meetings. They discussed NIU’s leadership in taking a systems approach to education from cradle to careers.
SPONSORED PROGRAMS ADMINISTRATION FY16 REPORT

Sponsored Programs Administration (SPA) will provide the Board with its annual sponsored programs report. The presentation will review the university’s sponsored award and proposal activities for FY 2016 and highlight actions that SPA has taken over the last year to facilitate research and external funding. These actions include streamlining internal business processes, collaborating with the NIU Foundation, negotiating the Facilities & Administrative (F&A) rate and updating distribution of these funds to incentivize research, and working with the Provost’s Office and Human Resource Services to streamline the hiring of postdoctoral scholars.
DIVISION WIDE INITIATIVES

The Division of Research and Innovation Partnerships (RIPS) promotes research, scholarship, and artistry and innovation and entrepreneurship (hereafter abbreviated as “scholarship and innovation”). Scholarship and innovation are essential for student and faculty recruitment and retention. Both undergraduate and graduate students are attracted to cutting-edge and relevant scholarship. The same can be said for faculty – an acknowledged climate of support for scholarship and innovation will improve recruitment and retention. As competition for students and faculty grows, research and innovation are key characteristics distinguishing NIU from our regional university neighbors.

Student participation in research is a high impact practice that significantly enhances persistence and degree attainment. To quote from the NIU Committee on Academic Equity and Inclusive Excellence July 2016 report on Engaging Underrepresented Undergraduate Students in Research: “Immediate and sustained interactions with faculty improve learning and matriculation outcomes for all undergraduate students, regardless of race or ethnicity ... undergraduate research experiences, which include student support structures like mentoring, academic, financial and psychosocial support, and professional development create an environment whereby students can effectively transition into the role of scholar and have benefits for both retention and graduation outcomes. Beyond the first-year, sustained engagement in undergraduate research experiences have the greatest benefit for student’s long-term success and growth; this trend has been evident in data collected at NIU as well as elsewhere.” (For brevity, references to the literature have been omitted.)

As shown in Fig. 1, since the re-definition of sponsored funding to exclude student financial aid (removed after FY2010) and since the termination of stimulus funding and earmarks, sponsored funding at NIU averages ~ $30M annually. With the exception of a one large state grant in FY14, there has been a general five-year decline with the FY2016 funding level at $28M. In FY2016, research funding was about one-third the total at $9M. The downward trend has occurred as pressure on federal and state funding for scholarship and service has increased, resulting in stronger competition for fewer dollars at a time when NIU faculty numbers have declined.

![Figure 1: Level and types of sponsored funding since FY2007](image-url)
The Carnegie Classification of Institutions of Higher Education places NIU in the category of Research Universities (with high research activity). A number of factors contribute to the Carnegie ranking with research and development expenditures and the number of terminal degrees among the most important. A proactive program is required to maintain NIU’s research and innovation programs and their positive impact on the University’s reputation and retention and recruitment of students and faculty.

Over the past year, RIPS has taken a two pronged approach to promoting research and innovation. First, at little cost, we are working with the Provost’s Office and Administration and Finance to reduce policy and procedural impediments to research. Second, we are assuring direct support is available for faculty to maintain and initiate new scholarship and innovation.

Table I shows the highest ranked policy research impediments listed by the recently chartered Research and Innovation Advisory Council RIAC. (A number of impediments involving procurement were addressed prior to formation of the RIAC.) The ultimate aim is to eliminate or mitigate all policy impediments, improving institutional efficiency, and assuring faculty their scholarship is vital to the mission of the university.

<table>
<thead>
<tr>
<th>Policy Impediment</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No return of F&amp;A to PI directly</td>
<td>Currently implementing a new F&amp;A distribution which invests more in the PI, Department, and College</td>
</tr>
<tr>
<td>2. High cost and long lead-time for hiring postdocs</td>
<td>Working with Human Resources on a waiver for staff supported by external grants</td>
</tr>
<tr>
<td>3. Difficult to confirm matching funds from university for grant proposals</td>
<td>SPA updating practices</td>
</tr>
<tr>
<td>4. More formal mentoring with quality feedback on proposals or research plans</td>
<td>Further developing PI Academy professional development series</td>
</tr>
<tr>
<td>5. Difficult to get travel advance rather than reimburse</td>
<td>Developing expanded P-Card capabilities to accommodate travel</td>
</tr>
</tbody>
</table>

Table I: Research and Innovation Advisory Council’s highest priority impediments.

In terms of direct support for scholarship and innovation, RIPS hosts a comprehensive set of programs:

- Sponsored Programs Administration (SPA), which provides the administrative support required to secure and manage sponsored funding;
- Office of Innovation (OI), which assists faculty and staff with development and protection of intellectual property;
- Office of Research Compliance, Integrity, and Safety (ORCIS), which ensures the University maintains ethical principles; compliance with federal, state, and university regulations governing research; and safe laboratory practice;
- Office of Federal Relations (OFR), which represents Northern Illinois University in interactions with members of Congress and executive branch officials; and,
- Faculty Research and Development Support program (FR&DS).

SPA, OI, ORCIS and OFR constitute an essentially obligatory framework for institutional scholarship and innovation by ensuring regulatory and compliance requirements are met.
FR&DS provides direct resources for faculty to maintain and initiate scholarship and comprises four components:

- Competitive Programs offers new faculty a comprehensive introduction to resources and grantsmanship; program and travel funds for faculty to initiate, conduct, and complete research and scholarly work; and recognition for our most accomplished researchers, scholars, and artists.
- Core Facilities ensure instrumentation, analytic capabilities, and high performance computing are available for research and scholarship.
- Research Centers offer resources and personnel for research efforts to expand their influence and mission.
- Finally, all faculty require startup and cost sharing, provided by Faculty Development to initiate and maintain their research and scholarly activities.

The availability of these programs and resources increases NIU’s capacity for research, scholarship, and external support, which builds and maintains institutional reputation and assists with faculty recruitment and retention. All four of these programs are supported in any budget scenario, with their magnitude and reach adjusted to yearly conditions. Over the past year emphasis has been placed on professional development through updating and extension of the Principal Investigator Academy and broadening of the instrumentation program through an industry partnership.

Setting aside the impact on reputation, recruitment and retention, and acknowledging that precise attribution is difficult, the financial return on investments for the FR&DS program is excellent. For example, in FY15 NIU received $30M in sponsored funding of which $4M in indirect costs was recovered, which should be compared to an FR&DS investment of around $1.5M. The indirect costs were allocated for operation of RIPS and reinvestment in research and scholarship. Increased investment in FR&DS increases research and, again, indirect costs. The external grants and reinvestment of F&A establishes a “virtuous circle” that accelerates NIU’s research and scholarship.

An excellent example of the virtuous circle has been the Accelerator Research Concentration of Excellence (CRE) initiated in 2014 in collaboration with Fermilab. External funding attracted by the CRE has generated more funding than currently invested in the center. At a cost of ~$1M to date, the accelerator science CRE has already guaranteed about $3M in collaborative funding with Fermi National Accelerator Laboratory and $2.7M in external funding through the National Science Foundation and the Department of Homeland Security. Through the CRE, NIU has one of the largest accelerator science programs in the country and international recognition. The university has a number of areas of research and scholarship that could develop into strong CREs with immediate impact on institutional research intensity.

The Program Prioritization Task Force recommendations strongly endorsed expanding University scholarship and innovation. Specific recommendations for RIPS included enhancement of FR&DS, SPA, and OI which would ensure faculty have the resources and institutional support to conduct and expand their scholarship and pursue innovation. In response to the recommendations, RIPS has presented a Program Prioritization plan to President Baker which features expansion of FR&DS (including additional CREs), SPA, and OI such that the total RIPS budget would equal 2% of the full university budget.

In summary, RIPS continues to provide infrastructure for supporting research and innovation and, as resources are available, directly supports research and innovation. Over the past year, considerable progress has been made reducing impediments to research. Expansion of key programs, recommended by the Program Prioritization Taskforces, would significantly enhance the university research and innovation mission.