INTRODUCTION:

This report summarizes the activities and recommendations of the 2017-2018 Information Technology Policy Committee (ITPC). The ITPC received the following charges from the Senate Agenda Committee (the boldfaced initial topics for each charge were added by the ITPC in this report for clarity of reading):

2017-2018 Charges:

1. Communication: The ITPC shall work with the incoming ITS Vice President to enhance the effectiveness of communication between ITS and faculty, with a focus on sharing knowledge of available ITS resources and addressing unmet faculty need.

2. Grants Management Software: In collaboration with RPOC, NU ITS and ORAF, ITPC shall review existing IT post-award reporting tools within units at Northeastern and at other universities, and recommend a grant management system that will be implemented, expanded, or developed, and adopted University wide by September 2018. The grant management working group shall include principal investigators from each College.

3. Research data / backup software: In collaboration with RPOC, LPOC, the Provost's Office, NU ITS, and the NU Library, ITPC shall identify and/or recommend a full suite of integrated services supporting the research data lifecycle. This group will consider protocols for data management and related data curation activities, including the option of systematic back-up of university computers. The data management working group shall include principal investigators from each College.

4. Other: Other priorities, to be determined by the Senate Agenda Committee, may be charged as they arise.

2016-2017 ITPC resolutions: To add context, we also include the ITPC resolutions from last year's ITPC in this report. All of them were passed (with no negative votes) by last year's Senate, and all were approved by the Provost. The full text of these resolutions are in the Appendix to this report; we summarize the topics for clarity here:

1. Improve communication between ITS and faculty.
2. Work on Improved grants management software.
3. Develop comprehensive backup plan for faculty and research computing.

ITPC Structure and Activities:

<u>Membership</u>:

Nicholas Beauchamp, CCSH
Dana Brooks, COE, co-chair
David Kaeli, COE, co-chair
Amy Lu, Bouve and CAMD
Karen McCarthy, ITS
Mark Nardone, ITS
Mirek Riedewald, CCIS
Paul Whitford, COS
John Wihbey, CAMD

In addition to broad cross-college representation, which also characterized ITPC last year, a key change in the ITPC makeup this year has been the membership of the two interim CIOs, Karen McCarthy, and Mark Nardone. This has resulted in significantly improved communication between ITS and ITPC. All ITPC activities were carried out in close coordination with ITS, and several ITS activities and initiatives were brought to ITPC attention that resulted in follow-up responses.

<u>Specific activities carried out by ITPC this year include</u>:

1. We contacted faculty and/or administrators in all nine colleges to help facilitate visits by the ITS CIOs to College faculty or Council of Chair's meetings. This effort is a direct response to reports / resolutions from ITPC over the past two years, and informal feedback suggests it has been successful so far. The goal is to allow ITS leadership to provide a summary of current and upcoming ITS activities and initiatives and to hear ITS-related input/feedback directly from faculty.

2. We met with Dana Carroll (twice), Theresa Waggett, and Joan Cyr from ORAF, and with Rajiv Shridhar and Steve Duncan from ITS. We also met with Sarah Hooke Lee, Chair of LPOC , and have been in contact with Sanjiv Mukherjee, Chair of RPOC, regarding our third charge.

3. We participated in and/or helped to recruit faculty for a number of ITS-related activities including candidate interviews for the CIO and Director of Research Computing searches, the newly-formed Learning Management Environment Steering Committee, ITS's cloud consultant activity, testing upcoming improvements to the myNortheastern

portal, use of an Application Programming Interface (API) currently under development by ITS, and ITS facilities for HIPAA-compliant disk storage.

4. We reviewed and discussed a number of current ITS capabilities and pending changes, including changes to security / data management, support for research computing, support for research-oriented advanced web capabilities, organization of help requests, and the API development project.

Primary Outcomes:

The primary outcome of this year's ITPC is the dramatically enhanced level of communication, cooperation, and faculty involvement in ITS planning and activities. The ITPC believes that all of the activities listed above were positively impacted by this change in ITPC structure and the enhanced level of communication because of the high level of commitment and engagement of the CIOs. There are still significant areas of concern and room for further improvement in communication and in ITS support for faculty, both across the breadth of faculty activity and in particular with regards to research computing. Although continued communication at this level will certainly help, ITPC has on-going concerns about the need for structural reform and increased resources, especially with regards to research computing. These concerns, along with our appreciation for the positive impact of the level of involvement of ITS with ITPC, has informed our proposed resolutions.

Specific activity on our charges:

Charge 1: Communication: As mentioned above, we worked with the ITS members of ITPC, their scheduler, and faculty and administrators in all nine Northeastern Colleges to arrange visits of CIOs McCarthy and Nardone to either College faculty meetings or Council of Chairs meetings during the spring 2018 semester. This activity is ongoing as of the writing of this report and, as far as we can assess at this point, appears to be successful at increasing both visibility and communication between ITS and faculty, improving faculty awareness of ITS services and initiatives, and improving ITS awareness of faculty concerns and needs. In addition, as also noted, we have jointly helped to bring faculty into several recent and ongoing ITS activities. Since the new CIO has not yet been announced, we could not fulfill the letter of our charge, but we believe that we have made significant steps forward on the critical, indeed primary, need for improved faculty-ITS communication.

Charge 2: Grants Management Software: Initiatives coming directly from the Administration outstripped the specifics of this charge. In particular, by the time this year's ITPC was formed, ORAF and an associated I-Team had already chosen Priority One as the interim grants management software solution and embarked on the ePaws project with an external vendor. We continued to advocate for more faculty involvement in both projects. In the case of Priority One we had little success, as there was very limited space for faculty input. In the case of ePaws it is too early to tell, although based on AVP Dana Carroll's presentation / discussion with ITPC, as well as the contents excerpted from her email as included in the Appendix, there

is still opportunity for this project to be carried out with effective collaboration and input from faculty.

Charge 3: Research data / backup software: Here too, the pace of ITS / Provost initiatives somewhat outstripped this charge. In particular ITS has engaged an outside consultant, Gartner, to take a comprehensive look at the University's standing and future strategy with respect to cloud computing, and this charge cannot effectively be pursued until that activity is completed. Nonetheless, the ITPC discussed needs and progress being made on data backup for research and education at Northeastern. The ongoing cloud strategy assessment being conducted by ITS, and led by Gartner consulting, involves significant input from ITPC and additional faculty who are part of the Cloud Strategy Focus Group. We anticipate that cloud strategy will provide the University with a cost-effective long-term solution for data backup for research and education. ITPC did consult with both LPOC and RPOC but not much progress was made for the reason explained above.

Current situation / recommendation going forward:

Despite the significant progress in the last year, ITPC believes that the University still needs major improvement in the involvement of faculty in IT planning and decisions; this needs attention at level of the Provost's office and beyond, including both sides of ORAF, and is not just a matter for ITS and ITPC. However we strongly recommend that high-level ITS leaders continue to be appointed as ITPC members, and that ITS continues to leverage this engagement, bringing ITPC into earlier stages of their initiative-planning process in the future, as well as continuing to involve ITPC in ongoing initiatives.

ITPC also believes that we need significantly enhanced investment in IT in the short term, especially with regards to personnel. The need for more personnel to support research computing is especially acute. Research computing support needs major improvements across the board: not only more staff, but also support for increased breadth of activities, better mechanisms of communication and interaction, and greater involvement of faculty in planning and decisions.

Although the backup / data plan is currently awaiting the Gartner cloud computing report, the ITPC urges ITS to pursue both a short-term and long-term strategy, given that many tenure-track faculty with shorter deadlines have immediate needs in terms of data backup. We also strongly recommend that this topic should be pursued by next year's ITPC, in collaboration with LPOC and RPOC.

APPENDICES

A1. 2016-2017 Resolutions:

I. WHEREAS the Faculty Senate Committee for Information Technology (ITPC) recognizes that Information Technology Services (ITS) has many services and licensed software available for faculty use that most faculty are unaware of, and that both ITPC and ITS recognize that there is a need for significantly more effective communication between ITS and faculty, BE IT RESOLVED that Northeastern ITS visit a faculty meeting in each college at least once per year to ascertain faculty concerns; to offer to visit faculty meetings of any individual units within each college that request such a meeting; to apprise faculty of the range of ITS software, services and activities related to faculty research and teaching; to solicit suggestions for both software and services; and to identify unmet faculty IT needs. ITS shall also provide all faculty with an organization chart and directory of contacts within ITS, organized in cooperation with ITPC so as to align categories with faculty needs. BE IT ALSO RESOLVED that Northeastern ITS meet with the ITPC at least twice per year. BE IT ALSO RESOLVED that Northeastern ITS, the Provost's Office, and Human Resources work together so that ITS has a formal role in new faculty orientation to apprise new faculty of the range of ITS software, services and activities related to faculty research and teaching.

II. WHEREAS the ITPC and the Senate Committee for Research Policy Oversight (RPOC) recognize that long-term efforts are underway to upgrade the University's financial management systems, but also that faculty and College research support office face ongoing difficulty managing current and near-term grant expenditures that requires a near-term solution, BE IT RESOLVED that the Senate Agenda Committee and the Provost's Office establish a University-wide grant management working group, with membership drawn from principal investigators from each College, along with representatives from Information Technology Services (ITS) and the Office of Research Administration and Finance (ORAF). The committee shall be charged with identifying best practices and existing IT reporting tools within units at Northeastern and at other universities that will be implemented, expanded, or developed, and adopted University wide by September 2018.

III. WHEREAS many faculty research computers, data, and research results, are not backed up in a systematic way, BE IT RESOLVED that the Senate Agenda Committee be urged to work with the Provost's Office to establish a University-wide faculty computer backup working group with membership drawn from faculty from each College and with representatives from ITS. The committee shall be charged with developing a comprehensive backup plan to ensure that all faculty computers are backed up, providing cost estimates for the plan, and making recommendations for how the backup service should be paid for.

A2. Summary of email from Dana Carroll regarding EPAWS development:

After Dana Carroll's presentation to ITPC and subsequent discussion, ITPC co-chair Dana Brooks requested a written summary of the status and plans for the development of EPaws, which is intended to provide a comprehensive, integrated, software-based system to manage all administrative aspects of research. The main content of that email exchange, with a few small excerpts, is below:

Email request from Prof. Brooks:

as you may recall, one of ITPC"s charges from the Agenda committee was as follows:

In collaboration with RPOC, NU ITS and ORAF, ITPC shall review existing IT post-award reporting tools within units at Northeastern and at other universities, and recommend a grant management system that will be implemented, expanded, or developed, and adopted University wide by September 2018. The grant management working group shall include principal investigators from each College.

To some extent this charge was superseded by the pace of events, specifically developments with both Priority One and EPAWS, but as far as we know there is still minimal faculty involvement with either of these projects.

….

We need to write our report and make recommendations to the Agenda committee and, before we go ahead, we wanted to ask you for your input in terms of this charge and how it has / has not been implemented.

We are looking forward to hearing your thoughts on this.

Response from AVP Carroll:

… The build will be done in phases (pre award, then post award and then possibly research compliance, eg IRB, IACUC). The I-team got the funding authorization in mid December 2017.

 We anticipate that a pilot of Phase I (what most people here at NU refer to as pre award) will be on desktops by early Fall 2018.

EPAM -- the developer for the expanded ePAWS application -- is here on campus (their team got here today and is staying through next Friday, 3/23).

We'll be hosting multiple sessions for faculty and college administrators next Tuesday 3/20 and Thursday 3/22 -- I'll be sending out invitations tomorrow -- it will be an open call.   I waited because we're juggling lots of constituencies/schedules and our near final schedule only firmed up today.   With the invite will be the brief outline of Phase I and an opportunity to provide input. http://www.northeastern.edu/research/raf/files/ePAWS-Phase-I-v2018-0214.pdf

This is just the initial discovery phase that will allow EPAM to tell us what they can build given the time and money constraints. We're asking all functional stake holders to use this meet and greet as an opportunity for "blue sky thinking" and share with the vendor their ideas for what an useful application would look like.

To the extent we can we also need to manage expectations because at its core the Phase I (pre award) of ePAWS is pretty basic software application designed to automate the workflow of the non-financial transactional activities that require University review/approval.   During the build we will also be inviting end users to go into a test environment

and "play" with the application. I don't expect there will be anything to test until the summer.

We've already started a web page -- http://www.northeastern.edu/research/raf/2018/02/epaws-feedback/ -- to provide a feedback loop.   Although until there's something to respond to I don't anticipate we'll get many comments.

My biggest fear is not that we will not achieve the Phase I aims -- those are pretty straightforward -- but that faculty will be disappointed because what faculty desperately need/want is an award management tool -- an application that combines the non-financial data with the Banner financial award data.   That is Phase II (post award).

The interim post award solution -- Priority One -- is being implemented this Spring. …..

It is anticipated that as the vendor is building Phase I of ePAWS, we will be gathering detailed requirements for Phase II -- Phase II is also intended to replace Priority One.   So there will be multiple opportunities for input from end users, including faculty.   But I don't expect that to begin in earnest until May/June. Phase II build is schedule to start Jan 2019.

I hope this information is helpful. ….