NC STATE UNIVERSITY

College of Sciences
North Carolina State University
Organization Design
Assessment Report
March 2017

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EXECUTIVE SUMMARY

In October 2016, Organization Design Solutions (ODS) received a request from Nikki Price, Assistant Dean for Culture, Talent, and Human Resources and Dean William Ditto in the College of Sciences (COS) to conduct an assessment of the operational activities in the college's operational infrastructure. A well-designed organization ensures that the infrastructure operates effectively and efficiently in terms of workflows, procedures, processes, and systems. The goal of an organizational design assessment is to present a point of view that finds the best "fit" between these elements and align them to create a streamlined and effective organizational design. An assessment of this nature would identify barriers and recommend strategies for removal of those barriers.

The effectiveness and efficiency of operations in the college infrastructure appear to have been impacted by factors such as the following:

- The need for a sufficient infrastructure to support a college of the size, complexity, dynamics and scope of the College of Sciences when it was created
- The residual and unresolved challenges of the previous centralized business model
- Budget deficiencies, budget restrictions, and budget reductions.

The full Organization Design Assessment Report documents the specifics of the assessment. However, this Executive Summary provides highlights for each of the four operational functions identified as priority by the Dean and Assistant Dean: Information Technology, Research Administration, Finance, and Human Resources.

Research Administration: The pre-award and post-award functions were merged into one unit supervised and managed by a recently created Director for Research Administration. The intent of the merger was to eliminate the silos and to create one operation that encompasses the full cycle of research administration activities. However, a challenge for the organization now is that the Director has seven direct reports and the span of control is not easily maintained or sustainable. Also because certain tasks for research administration have been delegated to accounting technicians, a well-developed training plan/process and standard operations procedures are needed.

Clarification of roles, new job expectations and efficiency are challenges for the operation. Therefore, it is necessary to retool and identify the skills set needed for each individual involved in the research administration process at each level. Furthermore since the Director position is now vacant, it is strongly recommended that the position is filled by an incumbent with an accounting degree and/or professional accounting experience. One other challenge in the research administration area is the backlog of closeouts. It is recommended that addressing this backlog become a priority. A suggested plan for accomplishing this task is documented in the full report. **(See details in full report)**

Information Technology (IT): An effective and strong IT support function is critical to the college's operational infrastructure, its academic mission, and its commitment to research. Only three (Chemistry, Math, and Statistics) of the six departments have dedicated IT support. A broad set of technical skills and knowledge is needed at different levels to adequately provide and support the complex IT needs of the college. The recommendation from the assessment is that IT resources be centralized through a direct reporting relationship to the IT Director. Centralization would allow the college to:

- build a core knowledge base with the needed information technology specialties and skills
- distribute the IT support more equitably
- provide backup IT support.

If the IT function is not centralized, another option is for the college to create a "shared services" model for which the IT Director coordinates resources through a dotted line relationship with the IT staff in departments and has the flexibility to deploy the resources as needed. **(See details in full report)**

Human Resources: The Human Resources function was also restructured and included the creation of HR Partner roles in the departments. The HR Partners perform some HR transactions and tasks and report to the Business Officers in the departments. HR Partners have different skill levels and often require assistance and guidance from the college HR Office to handle day-to-day HR matters for their departments. The recommendation from the assessment is to centralize the HR function with the HR Partners directly reporting to the Assistant Dean for Culture, Talent, and Human Resources. Regardless of the decision regarding the business model, it is recommended that work

expectations are better defined and/or clarified and that business officers attend the training that is provided for the HR Partners. As HR SOPs are developed, they should be the ones by which all HR Partners operate to ensure consistency and timeliness in HR processes and procedures. A follow up action step could be to create a working group which would develop and review HR SOPs. **(See details in full report for details)**

Finance Administration: The college has experienced challenges in the finance administration and budget management functions. The recent restructuring created a standard business model that assigned a business officer, accounting technician for non-ledger 5 accounts and an accounting technician for ledger-5 in each department. Due to the college's budget challenges, departments have been operating from a proposed budget perspective for the FY 2016-2017. As in other areas, a climate of consistent training is necessary because of the varying skill levels in the departments throughout the college. The Director for Business Operations has developed some tools to assist with monitoring budgets; however, given the current fiscal climate, establishing SOPs should be a priority for the college. **(See details in full report for details)**

Summary Comments:

As a part of this assessment, the College of Sciences business model and organizational structure was compared to other colleges on campus. One notable difference was that the human resources and finance functions in other colleges report directly to the Dean. These functions are pivotal to the effectiveness and efficiency of the college's operations and the overall mission. An advantage of the Assistant Dean for Culture, Talent, and Human Resources and the Assistant Dean for Business reporting directly to Dean Ditto is that he may directly benefit from their knowledge and guidance as subject matter experts for their areas. They could be helpful in strategic planning for the college and provide assistance to Department Heads in their strategic planning also.

The College of Sciences began an internal assessment of its operations that resulted in a restructuring to decentralize some tasks, create a standard business model in the department and initiate the practice of developing standard operating procedures. Throughout the College of Sciences there are consistent challenges and patterns that will require specific actions steps toward improving the effectiveness and efficiency. These action steps should take into consideration the following aspects:

- Well-defined work roles with corresponding standards of expectations
- Training and skills development
- Accountability measures
- Clear standard operating procedures
- A culture of continuous improvement
- Customer centric culture (specific to internal customer)
- Communication
- Change management strategies that shifts the culture from the past paradigm to one that recognizes the significance of change

It is to be noted that this organization design assessment identifies research administration and information technology (IT) as areas recommended for priority follow up.

COLLEGE OF SCIENCES

ORGANIZATION DESIGN ASSESSMENT REPORT

MARCH 2017

INTRODUCTION and OBJECTIVES

In September 2016, Nikki Price, Assistant Dean for Culture, Talent, and Human Resources in the College of Sciences (COS) consulted with Deborah Wright, Director of Organization Design Solutions (ODS) regarding the organizational assessment service provided by ODS. The Assistant Dean's initial inquiry was regarding an assessment for process improvement in COS' human resources function; however, after a discussion with the Dean of the College (Dean William Ditto), consideration was given to expanding the assessment to include other operational areas in the college.

On October 5, the ODS team made a presentation to the COS Leadership Team. This presentation introduced ODS and its service components of consultation, organizational assessment, and organizational design. As a follow up to that meeting and presentation, it was requested that ODS assess the college operations, processes, and procedures as they relate to the following four functional areas:

- Information Technology Support
- Research Administration
- Finance/Business Administration
- Human Resources

A start date for the initiative was set by the college for January 2017. A Statement of Work (SOW) was developed by ODS and submitted to the Dean and the Assistant Dean on December 14, 2016. The SOW included the goals of the organizational assessment project, the process, and projected outcomes. The overall goal of the project was to assess effectiveness, efficiencies, and optimization of college resources. ODS focused on the alignment of people, processes, workflow, communication, and technology. The intended outcome was to identify and create opportunities for enhanced operational efficiency and effectiveness in the college's infrastructure.

HISTORICAL FRAMEWORK AND NEW CONTEXT

North Carolina State University previously had a College of Physical and Mathematical Sciences (PAMS). In 2012-2013, a decision by the university's administration to create a college that incorporated all of the related science disciplines/academic departments into one college rather than have them housed in two colleges (PAMS and College of Agricultural and Life Science/CALS). As a result, four academic departments were reassigned from CALS to PAMS. These academic departments were Biology, Microbiology, Genetics, and Toxicology. This reassignment resulted in the creation of the College of Sciences (COS) in July 2013.

The ODS assessment has determined that the effectiveness and efficiency of the college's operational activities have been impacted by factors such as the following:

- The need for a sufficient infrastructure (e.g. appropriate staffing complement, effective business workflow, efficient processes and procedures) to support a college of the size, complexity, dynamics, and scope of the College of Sciences when it was created

- The residual and unresolved challenges of the previous centralized business model

- Vacancies in key positions (e.g. Director of IT position being vacant for one and one-half years) and staff turnover. (NOTE: Thirty positions total were vacated in FY 2014-2015 and FY 2015-2016 for various of reasons)

- Budget deficiencies, budget restrictions, and budget reductions

- Restructuring of the college's business model to decentralize and delegate certain financial, research administration, and human resources tasks to positions in the department Also, this restructuring implemented a uniform framework for financial and human resources operations in the six departments. The model now consists of a business officer, an HR partner, a ledger 5 (research) accounting technician, and a non-ledger 5 accountant in each department. The success of the restructuring requires well-defined roles, documented training plans, and a paradigm or culture shift in the college

- An organizational culture that been stagnant in terms of its operational and administrative infrastructure

ORGANIZATION DESIGN SOLUTIONS (ODS) ASSESSMENT PROCESS

The ODS Project was initiated by conducting four informational sessions on January 5, 2017 and January 6, 2017 for those who would be involved in the project. These sessions were attended by staff, supervisors, managers, department heads, and college administrators. The assessment involved interviewing 70+ individuals over a four-week period, analyzing the workflow, processes and procedures from information obtained in the interviews, reviewing job descriptions, and then synthesizing the data.

The content of this report documents the observations, conclusions, and recommendations resulting from the assessment project.

College of Sciences Research Administration

General Overview and Background Information

As stated, the COS' Research Administration function was examined in the organizational design assessment. The Associate Dean for Research Administration has oversight for this function. Reporting to the Associate Dean is a Director for Research Administration who supervises and manages the pre-award and post-award operational activities. Reporting to the Director are seven positions/employees. These positions are three research proposal processors (two University Program Associates at the Journal level and one University Program Associate at the advanced level) and three post- award accountants (all at the journal level) and a post-award accountant technician (journal level).

During the assessment, concerns were expressed regarding the effectiveness and efficiency of the research administration operation. These concerns included "long delays", a perceived "bottleneck'" as the college level, and ineffective communication. In 2016 when the current Associate Dean was appointed, an internal review of processes and procedures was conducted over a six-week period. As a result, process changes and a restructuring were implemented.

Prior to the college's internal review, there existed a centralized operational model/structure consisting of two Director positions: one Director for pre-award activities and another Director for the post-award activities. The supporting staff for the pre-award and post-award activities reported to their respective Director.

After the college's internal review, the research administration established a more decentralized model by delegating related tasks to post-award accounting technicians assigned to the departments. A new Director for Research Administration was created to oversee both pre-ward and post-award activities. The pre-award and post-award units were merged into one unit after the elimination of the two previous Director positions. This new structure was implemented November 1, 2016 with the new Director assuming the responsibility for supervising the entire research administration staff and managing entire research administration operation.

<u>Roles and Responsibilities of Research Administration Staff</u>
Before the restructuring, the pre-award processors and the post-award accountants operated in silos. The processors assisted (and still do) the faculty and principal investigators (PI) with the development, completion, and submission of grant proposals. Separate from the college Research Administration Office, there is also a dedicated position in the Statistics Department that assists faculty in proposal development. There is another separate position reporting to the Associate Dean for Research Administration that also provides guidance to faculty in pre-award activities and proposal processing. Proposals are routed in PINS and typically assigned to a processor; however, sometimes the processors may "self-assign" if familiar with the sponsor. The role and function of the proposal processors has basically remained the same in the new structure.

In the previous model, the accountants' post-award responsibilities included oversight of contract and grants budgets, transactions for/from the grants, reporting, modifications, and close outs. As in the prior structure, each post-award accountant is still assigned to work with two departments and one or two research centers.

Once the organizational restructuring is fully implemented, the accountants will be expected to conduct high level oversight of contracts and grants. Their primary responsibility will no longer involve the transactional activity for grants. Instead, their focus will be grant administration and management of a higher caliber. Their roles and responsibilities will include the following:

- developing budget projections for grants
- producing quarterly reconciliation reports
- auditing grant accounts and final review of transactions
- reviewing and approving budget modifications initiated in the departments
- effort reporting
- managing the summer salary process and activity
- finalizing grant close outs

The post-award accounting technicians in the departments and research centers have been delegated the responsibility of monitoring the grant accounts of the faculty in their respective departments or centers and performing the financial transactions associated with their grants. Their responsibility is to maintain up-to-date financial data for each account in the grant to ensure the availability of funds for vouchers, invoices, P-card transactions, marketplace orders, travel, and salaries. As noted, many of these tasks were performed by the accountants at the college level prior to the restructuring. Based on

information gathered from this assessment, the decentralized model appears to have enhanced timeliness.

Conclusions and Recommendations

The effectiveness and efficiency of the research administration function has been improved since the implementation of the new structure, the revision of processes and procedures, and the training for the post-award accounting technicians in the departments. It is to be noted, however, that the culture that has existed over the years and the work styles of the research administration staff are a major factor in being able to shift effectively and completely to the decentralized model. The following are conclusions and recommendations from this organization design assessment:

1. The merger of the pre award and post award functions should result in an efficient and effective research administration office with continued clarification of roles and workflow processing. It eliminated the silos in the organizational structure and will minimize the barriers that have existed. The merger provides the opportunity for each group to develop a knowledge of the full cycle of research administration and benefit from opportunity for more collaboration between pre-award and post-activities. This creates a climate where there are fewer errors in the pre-award work that would potentially impact post-award administration of a grant.

   Recommendation: Continue conducting training and having joint meetings with the pre-award and post-award staff to facilitate a broader knowledge base of research administration function. The proposed "new award" meetings with the Principle Investigator is a practice that will be helpful in the developing a team approach in the research administration area.

   Additional training and accountability was identified at different levels in the following areas: *(NOTE:* Some of these areas may have already been addressed.)

   - Chartfield request processing
   - Stipulations for international travel
   - Requirements and best practices for back up documentation throughout the life cycle of the grant and improved ease in reconciliation
   - Cash balance management for unpaid invoices
   - Burn rate expenditures

- Expectations (and accountability) for the rules, terms, and conditions for individual types of grants (e.g. cooperative agreements, federal assistance grants) and the various agencies)
- Management of grants funded by multiple programs or sponsors (For example, basic spreadsheets are not effective for this task)
- Timely notification of account numbers
- Timely planning and notifications for close outs

Furthermore, it is also recommended that less formal opportunities be created for pre-award staff and post-award staff to interact with each other. Doing so may help to reduce barriers in communication and establish stronger working relationships. The informal settings can also include the any staff performing pre- and post-award tasks in the departments.

Recommendation: Develop standard operational procedures for the research administration function to promote clarity and consistency throughout the College.

2. The merger of the two units has created a span of control that cannot be managed reasonably or easily sustained by the newly created Director position. Unfortunately by necessity, this Director becomes quite involved in the day-to-day operations of the seven direct reports.

   Recommendation: First it is recommended that an individual with more of an accounting or financial background be hired in the Director of Research Administration position. The Director should assume a stronger leadership role in the development of strategic goals, strategic planning, and collaboration with associated University offices (e.g. Contracts and Grants, Controllers Office, and Budget Office). In addition, the organization would be better served if a mid-level manager position or a lead role is created and placed in the organizational structure between the Director and the current seven direct reports. The responsibility of this role will be to oversee the day-to-day operations and provide guidance when needed for problem resolution purposes.

3. Because there are a number of people within the college's organization structure who are involved in the pre-award process and who function somewhat independently, the effectiveness of the pre-award workflow is impacted. The overall process involves the three proposal processor positions in the college office, the position in Statistics Department, occasionally the accounting technician position in the Mathematics Department, the administrative support specialist reporting to the Associate Dean for Research Administration, and the "grant writer"

position who also reports to the Associate Dean. Although there is a coordinative role with the proposal processors at the college level, some positions function independently of the college level and the new Director. Even at some points in the process, a PI or a representative external to the college's office will communicate and make agreement with the University office. If such communications are not shared and/or coordinated with the college office, inaccuracies and rework has to occur later in the process without proper documentation.

Recommendation: Ensure that a SOP is developed to specifically and effectively address the need for improved communication between all parties involved and ensure a more fluid workflow throughout the college for research administration activities. For example, notifications about awards and reminders about closeout or annual activity would be helpful to the PIs. In addition, PIs could benefit from receiving monthly breakdown reports.

4. It was noted that there is a backlog of close outs that need completion. Some progress has been made in the past several months; however, it is imperative that this task becomes a priority in order to establish and maintain a solid foundation for the new structure.

   Recommendation: Identify the close outs which have not been completed and develop a plan of action with a timeline and a projected target date for the project's completion. One strategy for accomplishing this is to make this task a special project for one of the accountants and temporarily assigning the workload of that individual to the other two accountants and/or the new accounting. Once this project is completed, the research administration office should be able to progress in the new organizational structure absent of past restraints.

5. It is to be noted that there are communication challenges that exist at all levels of the college. The effectiveness of communication is impacted by several factors:

   - The silo effect
   - The perpetuation of a culture that that may not address the current needs of the college's research administration function
   - Different skill levels of those involved in the process
   - Training gaps
   - Need for a more customer centric environment
   - Need for documented and established procedures for workflow and processing(e.g. sometimes departmental employees and faculty will

interact directly with University Contracts and Grants without following up with the college office)

- Inconsistency and independent tracking methods for contract and grant data and activity

Recommendation: Develop SOPS around the new structure and the changes in the processes and procedures. Ensure that roles are accurately defined and understood at every level in the college. Effectively communicate standards and expectations and address issues directly with employees as needed. Assess gaps and/or breakdowns in communication with the assistance of an external trainer and/or consultant. It is also recommended that the staff receive training in *Effective Communication* and *Customer Service.*

6. Based on the observations in this assessment, there could be potential liability risks if the proper attention is not given to the challenges faced by research administration operations.

Recommendation: Establish and/or improve expectations and standards for all staff involved in research administration tasks. This would decrease errors and facilitate efficiencies. Also examine whether research assistants reporting to the PIs should be performing any post award tasks.

INFORMATION TECHNOLOGY

General Overview and Background Information

The Information Technology function was examined while conducting the organizational assessment for the College of Sciences. At the college level there is a Director of Information Technology (IT). The Director of IT directly supervises one Systems Programmer Specialist and a Technology Support Specialist. In addition to the two direct reports, the Director consults and advises IT staff in the departments and centers (Appendix A). The college's IT support is decentralized, yet, not evenly distributed amongst the departments. Prior to the new Director of IT being hired in June, 2016, the position remained vacant for one and one-half years. The IT Director is responsible for facilitating the effective use of IT in the college; exploring new and emerging technologies in support of public science initiatives; working closely with faculty and administration for supporting the teaching and research missions as well as ensuring that administration functions well. As part of a self-initiated orientation to the college, the Director met with each IT employee and each department head.

The College of Sciences owns and maintains multiple servers but there are challenges in facilitating effective IT support throughout the college. For example in 2016, a server crashed and with the assistance from the Office of Information Technology (OIT) data that was known to have been stored on the server (Chemistry's Grad Tracker) was received within a number of months. Unfortunately, what was stored on the server prior to it crashing was unknown; therefore, retrieving all preexisting data on the server will be impossible.

Of the six departments, only three have IT staff supporting the faculty and staff in the department. The Math department previously had an IT Operations Analyst that position was reclassified to a Systems Programmer/Analyst and has been posted for recruitment. Presently, Physics and Marine, Earth, and Atmospheric Sciences (MEAS) do not have full time IT support and are not planning reestablish those positions. The following data is detailed in nature and intended to highlight the need to address the lack of sufficient IT support in the college.

Roles and Responsibilities of Information Technology (IT) Staff

The Biological Sciences department has a Technology Support Technician providing IT services for faculty and staff in the departments as well as servicing numerous computer labs covering multiple buildings. Approximately half of the departments commuters are on a managed system (able to virtually push out system updates) the other half of computers require individual, manual software updates. Additionally, the department has some computers on a Linux system. Previously, when the Technology Support Technician was out on leave, there was limited support from the college level regarding Linux. The college has recently hired a Systems Programmer Specialist who is able to assist with the departments Linux needs.

The Chemistry department has two Electronics Specialists providing support for the department's faculty and staff. One of the Electronics Specialist's (Advanced) primary responsibilities is to provide IT support for the faculty, staff and computer labs. In one of the computer labs (Fox), none of the computers are on a managed system (able to virtually push out system updates) and each computer requires individual, manual software updates. The equipment used by faculty in the department are older and often outdated. The older equipment is not compatible with the software on newer computers and therefore, the Electronics Specialist often goes to University surplus, collects old commuters and refurbishes them. The department was using the College's server to house the Grad tracker data. The server crashed and the process to retrieve data took a number of months to recover.

The Math Department currently has a Systems Programmer/Analyst vacant position and a nine month Teaching Technician (EHRA). The Systems Programmer/Analyst will provide IT support to the department's faculty, staff and graduate students, as well as install and manage the department's servers. The Teaching Technician serves as the first point of contact for IT related issues and solving them when able. More complex IT issues will be resolved by the Systems Programmer/Analyst. The Teaching Technician is primarily responsible for managing the Multimedia Lab.

Due to budget constraints, the MEAS department recently abolished the Technology Support Specialist who provided full time IT support to the department. Similar to the Physics department, MEAS plans to hire students to address the IT needs as well as utilizing OIT for more complex concerns. The department has a Support Services Associate whose primary responsibility is to coordinate preventative maintenance and maintain the inventory of vehicles, tools and equipment for the department and provides basic hardware support (e.g. swapping out cables and computer screens).

The Physics department utilizes a number of students to address the IT needs along with some help from OIT. Additionally, the Physics department has made arrangements with the Bioinformatics Research Center to have a Technology

Support Specialist available in the department the first half of the day until the fiscal years ends in June 2017.

The Statistics department has an IT Manager and a Systems Program Analyst providing IT support for faculty, staff, graduate students, and computer labs. The department's computers are all on a managed system that is not part of OITs or the College of Sciences'. A managed system like the ones under OIT, allow system updates to be virtually pushed out resulting in time saved for the departmental IT staff. The department's IT staff also maintains a server (server rooms in Poe and Cox) a Linux computer cluster, and a windows computer cluster. The Statistics' IT staff felt strongly that independent and autonomous management of the department's IT operations was essential due to the perceived lack of support from OIT and the significant amount of data used in the daily work of faculty and students.

The Bioinformatics Research Center has a Technology Support Specialist providing IT support for the center's faculty, staff, graduate students, and post docs. Currently, the Technology Support Specialist is providing part time IT support services to the Physics department until the end of the physical year. The center has a Research Bioinformatician who provides assistance to faculty/investigators when using the center's computer cluster as well as writes code for website creation. The Research Bioinformatician skill sets are often written in research grants and this provides assistance in an investigator's research.

The State Climate Office has recently been absorbed by the MEAS Department. The State Climate Office has a Technology Support Specialist providing IT support to faculty and staff, one computer lab, a network of weather towers, and at times servers (approximately 48 throughout the state). The Technology Support Specialist is a grant-funded position primarily assisting with projects, and package development mostly in Linux. The Technology Support Specialist desires more support from the College's IT department regarding Linux needs.

Conclusions and Recommendations
The following are conclusions and recommendations from the organization design assessment:

1. An effective and solid IT function support function is critical to the college's operational infrastructure, its academic mission, and it commitment to research. It is necessary to strengthen the IT function in terms of staffing, diversity of IT skills and interrelated resources. As noted, the IT support is not consistent throughout the college and IT employees in the departments typically do not have oversight from individuals who have the technical knowledge and expertise to supervise them. In addition, graduate students and postdocs are often hired to fill voids in IT support. There is little to no documentation regarding the IT

services or solutions the students have provided. The Director of IT has recently assumed supervision of the Physics and MEAS students who provide IT support to their respective departments. The Technology Support (who reports to the Director) will provide day-to-day of these students providing IT support to Physics and MEAS.

Recommendation: Centralize the reporting relationship of all IT employees to the college level, reporting to the Director of IT. If a department currently has a designated IT employee, then designate that employee as the primary IT contact for that department. Based on the department's needs and skills set of the IT staff, an additional IT employee can be designated as a secondary department support for that department. Utilize the IT Manager (currently in the Statistics departments and who has strong IT skills set) as an IT lead who is responsible for the day-to-day operations and provide guidance when needed for problem resolutions. Centralization will allow the College of Sciences to grow a core knowledge base with different specialties, balance workloads, and provide backup support. This will also provide for a more balanced distribution of IT resources in the departments until additional financial resources become available to increase the IT staff.

OR

Recommendation: Formalize a dotted-line relationship between the Director of IT and the IT staff in the departments and centers. If centralization of IT resources does not occur, this model would allow for a "shared services" model of IT support. The IT Director could maintain general oversight of the needs in each department and serve as a liaison for technical solutions and/or special IT projects that may require collaboration and the sharing of technical skills and knowledge.

Recommendation: To facilitate IT support for the faculty and staff, identify a faculty liaison in each department who would assume the responsibility of coordinating the needs of that respective department with the designated IT employee at the centralized college level.

2. The IT staff in the college have varying levels of skills and experiences related to providing IT support. Additional training is needed to expand the skills sets of the IT staff to meet the needs (e.g. Casper, Active Directory, Linux and security) of the college.

    Recommendation: In order to determine the skill sets of IT staff in the college, the Director should conduct a skills gap analysis (Appendix G). Based on the skills analysis and the identified business needs of COS as a whole, develop/assign areas of specialty and invest in training to develop those areas of expertise further. For example, there is an

apparent need in the college for IT support in Linux. A plan could be developed for continued training and certification of designated IT staff.

3. The Director has begun increase communication by disseminating important and relevant communications to the IT employees in the departments and centers. These communications have been well received and appreciated. Additionally, the Director, IT staff at the college level as well as IT staff from the departments are beginning to meet regularly as a group

   Recommendation: If the decision is made to centralize the IT function with the IT staff reporting to the IT Director, then the flow of services and communication will be more fluid. Information should be provided directly to the staff resulting in a well informed and included IT staff, which will further assess in the recommended organizational structure of a centralized IT department. If the decision is made to not centralize, continue to develop a consistent communication channel to IT staff in the departments/centers.

4. Each department and center establishes their own replacement cycle policy for computers and devices. New technology purchases and distribution often exceed the desired cycle life for computers and devices (e.g. Biological Sciences 5-8 years, Chemistry approaching 8 -9 years). This variance in the replacement cycle policy has led to severe inefficiency and discrepancies among departments.

   Recommendation: If possible, identify funds that could be centralized and used for life cycle replacement in labs and classrooms. This effort could be a part of a phased approach in the development and standardization of a replacement cycle for computers in the college. The college IT department could be responsible for coordinating a replacement cycle across all departments and centers as guided by the Dean's leadership team.

5. The Teaching Technician in the Math department has created online forms related to teaching requests for fall/spring and summer, textbook requests, hiring of TA's, reimbursements, evaluations and Faculty Activity reports.

   Recommendation: Evaluate the usefulness of the online forms and the value they would have to other departments if they shared/and or duplicated.

6. Currently there no records being kept on how many students have been helped via tutorial services provided in the Math department's Multimedia Lab.

Recommendation: The Teaching Technician who manages the Multimedia Lab should determine a best practice for capturing the volume of students assisted through the Math department's Multimedia Lab.

7. It is the perception of some of the IT staff in the college that the customer service provided by OIT is limited in scope and lacks the level of customer service that is desired.

    Recommendation: There is an opportunity for the Director of IT to strategically establish a stronger customer relationship with OIT and assess the customer service provided to the college, establishing a formal service level agreement with OIT.

8. The Systems Program Specialist in the Statistics department has created an online form for faculty to complete the University Faculty Activity Report. The online form requires approximately two weeks each year to update and pulls data sources from multiple places (e.g. NC State Library). The report pre populates with data for each faculty member and thus reduces the time allocated by faculty to complete the report.

    Recommendation: Evaluate the level of effort and the value added for the Systems Program Specialist to update the online Faculty Activity Report. If the level of effort is lower than the value added, then considering providing the online form to other departments.

9. The Statistics department's computers are all on a managed system that is not part of OITs. A managed system like the ones under OIT, allows system updates to be virtually pushed out resulting in time saved for the departmental IT Staff.

    Recommendation: Conduct an IT risk analysis to determine if any risk are associated with the Statistics' department creating and managing their own managed system and other IT services. If centralization is elected, Statistics should start moving toward the managed system supported by OIT. This will ensure effective long-term management and integration of Statistics' systems if turnover should occur.

HUMAN RESOURCES

General Overview and Background Information

The Human Resources (HR) function was examined in the organizational assessment for the College of Sciences. The college's HR function is managed by the Assistant Dean for Culture, Talent and Human Resources. The Assistant Dean was hired in May 2015 and reports to the Sr. Dean Associate Dean for Administration. The Assistant Dean's staff is comprised of two Human Resources Specialists and an Administrative Support Specialist. In addition to the three direct reports, the Assistant Dean advises and consults with the HR Partners in the 6 departments and 5 centers. Each HR Partner in the department reports to the Business Officers in those respective departments. As part of a self-initiated orientation to the college, the Assistant Dean met with each employee functioning in an HR role and each department head.

The college's HR office initiates and approves all PeopleSoft personnel actions for EHRA, SHRA, faculty and post docs. The HR Partners (classified as Administrative Support Specialists) in the departments and centers initiate PA7 actions then send to the college HR office for approval. The HR Partners also initiate student worker and temporary employee actions in Peoplesoft. In the past few months, changes have been made and now the HR partners approve graduate teaching assistant and research assistant actions in the Next Gen system.

Roles and Responsibilities of Human Resources (HR) Staff

The Biological Sciences department's HR function is administered by three 3 employees. An HR Partner (Administrative Support Specialist) is responsible for SHRA, EHRA and post doc HR actions. The Executive Assistant is responsible for faculty HR actions and an Administrative Support Associate is responsible for temporary/bi-weekly employees and bi-weekly student employees.

The Chemistry department's HR function is managed by the HR Partner (an Administrative Support Specialist) who serves as the primary contact for all HR related actions. Previously the Executive Assistant was the primary contact for all tenure track faculty; however, the Executive Assistant has recently retired and the HR partner and Business Officer will assume the responsibility for the faculty HR actions.

The Math department department's HR function is administered by an HR Partner (Administrative Support Specialist) who serves as the primary contact for all HR related actions.

The Marine, Earth, and Atmospheric Sciences Department (MEAS) has recently absorbed the State Climate Office and an Administrative Support Associate. The University Program Associate from the State Climate office will now function as a departmental HR Partner and serve as the primary contact for all HR related actions.

The Physics department's HR function is administered by an Administrative Support Specialist who serves primarily as the Graduate services coordinator for the department and only spends approximately 25% of time performing HR responsibilities. The Graduate services role occupies approximately 75% of the Administrative Support Specialist work time resulting in most of the HR responsibilities being managed by the Business Officer.

Until recently, a temporary employee was responsible for the HR function for the Statistics department. An Administrative Support Specialist was recently hired and will administer all HR activity for the department.

The Bioinformatics Research Center's HR function is administered by an Accounting Technician who reports to the Director of the center. The Accounting Technician only spends approximately 15% of the time performing HR related work including some position control, summer salary, and preparation of documentation needed for new positions.

The Science House's HR function is administered by an Administrative Support Specialist. The Administrative Support Specialist serves as the primary contact for the office and all HR and financial related actions (including ledger 5for the center. The Administrative Support Specialist also provides assistance to the various programs that operate out of the Science House. The function of this position is essential to the overall operational and programmatic needs of the Science House.

Conclusions and Recommendations

The following are conclusions and recommendations from the organization design assessment:

1. Each HR Partner in the department reports to the Business Officers in those respective departments. HR Partners and Business Officers have varying skill levels in their HR functional knowledge and experience. This results in the Assistant Dean and the college HR staff spending a considerable amount of time training, addressing day-to-day HR matters in the departments and/or resolving issues for the departments.

   Recommendation: In order to clearly determine the training needs of the HR Partners and Business Officers, the Assistant Dean should clearly outline the knowledge expectations, specific tasks, a Standard Operation Procedure (SOP) for each task and the standard of performance. A clearly

defined development and training plan would assist the Assistant Dean in identifying skill gaps and assessing proficiency. Assessments could include input from the Business Officer to whom the HR partner reports and any internal or external contacts/customers. It is to be noted, however, that the COS HR team and the HR Partners have begun the practice of meeting for updates and in-house training. Due to recent turn over within the college HR office, meetings have been infrequent.

Recommendation: After training needs are determined for the HR partners and Business Officers, the Assistant Dean can partner with the central University HR office to provide training. When the college's newly HR Specialists are well-trained, they could assist be utilized to provide one-on-one training for an HR Partner if needed.

2. Each department functions autonomously and creates its own methods for processing HR actions. Many departments have developed and/or are working on HR Standard Operating Procedures (SOPs) and submitting them to the college HR Office. Currently there are a number of SOPs at the college HR office that are in the process of being developed and finalized reviewed.

   Recommendation: Establish a working group to review and develop college wide SOPs related to HR processes and procedures. This will address issues pertaining to inconsistencies and concerns as it relates to the timeliness to process and complete HR actions.

3. Most HR partners have customized and implemented practices in their departments that allow for their work be processed efficiently. These practices consist of creating checklists for hiring, on boarding, and separating employees, creating templates for faculty requesting an HR actions, and utilizing excel spreadsheets or Google docs to prioritize and track their work.

   Recommendation: Any useful streamlining and/or best practices developed in the departments by the HR partners should be shared.

4. The University's HR office provides communications via email regarding current HR process and procedure changes. Some communications are filtered through the Business Officer before reaching the HR partner. Some of the communications are informative in nature but some are requests for information. When information is to be disseminated to the faculty and staff in a department, each HR Partner and Business Officer create their own department format for communications purposes.

   Recommendation: To ensure communications regarding HR practices and procedures are consistent, the Assistant Dean should create a draft email template for the HR partners that includes the necessary and relevant information for the recipients in the departments and centers.

5. Challenges exist pertaining to hiring student workers by PIs. When proper channels or processes are not followed, there is a potential liability for the college. Under these circumstances a student could work for a month or more before HR Partners are notified, receives the paperwork, and can process the transaction for a student's pay.

   Recommendation: Establish and document an SOP for hiring student workers and temporary employees. The SOP should include a time period (e.g. five business days) within which the faculty member notifies the HR Partner and submits the paperwork.

6. Centralization could result in a more effective and efficient HR operation. This would result in well-trained HR partners, consistent emphasis on process improvement that includes accurate and complete customer service emphasis, and accurate and complete HR products being submitted to the college and university central offices. This centralized structure could be accomplished by establishing a direct reporting relationship between the HR Partners and the Assistant Dean.

   Recommendation: The work assignments for the HR partners would be by department and/or groups (e.g. faculty, EHRA non-faculty, SHRA, temps, etc.). Each HR partner and department would have a backup HR partner to provide continued service in the event the primary partner is out or that position becomes vacant. Since some HR partners have split roles this structure could also include centralization of graduate student HR transactions for the departments. HR Partners who have a split role are not as effective in their responsibilities as those who are solely dedicated to the HR function. Therefore, it might be beneficial to have their HR tasks administered in the college's HR office.

   If centralization is implemented, the establishment of a lead HR role is recommended to address day-to-day operational matters and respond to questions from the HR partners in the departments.

   If a centralized model is not adopted, continued training is needed to address basic skill gaps and ensure that the HR partners have the appropriate skills set for their positions. It is anticipated that the training will improve the quality of the HR work performed throughout the college. Also, the establishment of standard work expectations for the HR Partners would facilitate effectiveness and efficiency in the HR function.

   If the Business Officers continue to be the direct supervisors of the HR partners, it should also be required of them to be trained and knowledgeable of the HR function. This would enable them to be effective in their supervision of their respective HR Partner.

   In addition, it recommended to have discussion with the university's central HR office regarding the classification of the HR partners

(administrative support specialist vs. human resources specialist/contributing). If central HR concurs with a change in the official classification title, the pool of candidates for a vacant HR Partner position might possibly include applicants who have a HR career focus and some basic HR experience.

FINANCE ADMINISTRATION

General Overview and Background Information
The Finance function was also examined while conducting the organizational assessment for the College of Sciences. At the college level there is an Assistant Dean for Business Operations who currently reports to the Sr. Associate Dean of Administration. The Assistant Dean directly supervises an Accountant, who was recently hired. The Assistant Dean also consults and advises finance staff in the departments and centers. The college's financial function is decentralized with employees at varying levels of skills and abilities performing delegated financial support duties in the departments. .

Prior to the Assistant Dean for Business Operation being established and hired, a Director position was responsible for managing and overseeing the college's financial and budgetary functions. As stated earlier, the college has been restructured in an effort to establish a uniform or similar business model which ensured a dedicated Business Officer role in each department. The Business Officers have direct supervision of the accounting technicians that perform financial transactions and monitor ledger 5 (contracts & contracts), the accounting technicians/support specialist for non-ledger 5 accounts (ledgers 2, 3, 4, 6, & 7) and the HR Partners. As stated previously, the Business Officers have varying levels of knowledge and expertise. The strongest skills set for most is in budget management and financial oversight of the non-ledger 5 accounts.

When hired in July 2015, as part of a self-initiated orientation to the college, the Assistant Dean met with each employee functioning in a financial role (excluding ledger 5), and met with each department head. Additionally, the Assistant Dean reviewed current processes and assessed that Standard Operating Procedures (SOPs) were needed. The Assistant Dean created SOPs to address noticeable challenges.

Each department has an Accounting Technician or an Administrative Support Specialist who monitors ledger 2,3,4,6 and 7 accounts and processes financial transactions related to these accounts. Previously, the Accounting Technicians in the departments did not get together with other Accounting Technicians. All of the Accounting Technicians throughout the college have begun attending meetings but they have not been consistent.

Due to the budget deficit, the 2016-2017 fiscal year operational budgets have not recently been determined and provided to the departments. Departmental Accounting Technicians and Administrative Support Specialists have been functioning without a finalized budget during the fall 2016 semester.

Roles and Responsibilities of Finance Staff

The Biological Sciences Department's financial function (excluding ledger 5 accounts) is managed by an Accounting Technician. The accounting technician maintains a Google sheet for each PI/faculty member. The Business Officer as well as the other Accounting Technicians (who manages ledger 5 accounts) to serve as each other's back up is one is out of the office.

The Bioinformatics Research Center's financial function is managed by an accounting technician which reports to the Director of the center. The Director of the center has startup money under the Statistics and Biological Sciences departments. The Assistant Dean for Business Administration plans to reassign the startup money from those departments to the center so the Accounting Technician can better manage those funds and process purchases directly to those accounts.

The Chemistry Department's financial function (excluding ledger 5) is managed by an Accounting Technician, and two Administrative Support positions. One of the Administrative Support Specialists assists four research faculty members and oversees approximately 15 grant, 12 State Appropriated, and 14 exempt accounts. The research faculty members require a high volume of Pcard transactions per month. The other Administrative Support Specialist assists one research faculty member and oversees grants awarded to the Principle Investigator who has approximately 12 graduate students working for him. The Accounting Technician creates bi-monthly budget reports for a faculty member's account(s) and submits the reports to the business officer who then provides them to the PI.

The Math Department's financial function (excluding ledger 5) is managed by an Accounting Technician who has been functioning in the position for less than one year. The Accounting Technician maintains and excel spread sheet for each faculty member who has an account.

The Marine, Earth, and Atmospheric Sciences Department's (MEAS) financial function (excluding ledger 5) is managed by an Accounting Technician. The Accounting Technician will assume the online billing and some PCard reconciliation for the State Climate Office that was recently absorbed by the department. Currently, monthly budget reports are not being developed and provided.

The Science House's financial function is managed by an Administrative Support Specialist who reports to the Director of the Science House. The Administrative Support Specialist manages grants and state appropriated funds. In addition to the financial functional responsibilities, the Administrative Support Specialist also manages the HR transactions and is the first point of contact for the center.

The Physics Department's financial function (excluding ledger 5) is managed by an Accounting Technician and an Administrative Support Associate. The Accounting Technician oversees all ledger 2 accounts except start up accounts which are currently being managed by the ledger 5 Accounting Technician. Going forward, all new start up accounts will be assigned to the ledger 2 Accounting Technician which require weekly monitoring.

The Statistics Department's financial function (excluding ledger 5) is managed by an Administrative Support Specialist. The Administrative Support Specialist provided monthly reports to faculty who have accounts other than grants (e.g. startup money).

Conclusions and Recommendations

The following are conclusions and recommendations from the organization design assessment:

1. In order to ensure, sound financial management for the college, it is necessary that the Business Officers adhered to consistent best practices throughout the college. Each department functions autonomously and customizes methods for processing financial actions. Many departments have developed and/or are working on financial Standard Operating Procedures (SOPs). It is a good business practice to establish SOPs; however, SOP's should be established and standardized as much as possible to facilitate consistency in financial operations through the college. Doing so could address issues related to errors in transactions and accountability concerns. For example if an inaccurate account code is used, the records will reflect a misclassification of expenses.

   Recommendation: Establish a work group to review and develop college-wide SOPs related to the financial processes and procedures. The Assistant Dean should be delegated the autonomy to define and establish the business operations procedures and processes to ensure that all Business Officers are accountable for operating under the same guidelines.

2. The workflow for approving travel vouchers and reimbursements should be assessed to determine if streamlining the process is possible.

   Recommendation: Establish a working group to include Accounting Technicians and Business Officers to evaluate the current steps in the travel reimbursements process and determine the process can be streamlined in any way.

3. In some departments the Accounting Technicians balance accounts each month.

Recommendation: Every department should establish and implement a a best practice to balance accounts at least on a bi-monthly basis.

4. The Accounting Technicians or an Administrative Support Specialists are not always notified when a faculty member is traveling. Most Accounting Technician or Administrative Support Specialists find it difficult to be proactive in collecting needed documentation for travel reimbursements.

   Recommendation: Establish clear SOPs and communicating these to faculty. The SOPs should include a time period (e.g. five business days) within which the faculty member notifies the Accounting Technician or Administrative Support Specialist and submits required paperwork.

ASSESSMENT CONCLUSION

The College of Sciences has committed to and already initiated efforts to facilitate process improvement throughout the college. However, this assessment concludes that the IT function and research administration are areas for which priority should be given. Specific action plans with projected timelines should be developed to address the challenges in these areas.

As stated in the Executive Summary, the College of Sciences there are consistent challenges and patterns that will require specific actions steps toward improving the effectiveness and efficiency. These action steps should take into consideration the following aspects:

- Well-defined work roles with corresponding standards of expectations
- Training and skills development
- Accountability measures
- Clear standard operating procedures
- A culture of continuous improvement
- Customer centric culture (specific to internal customer)
- Communication
- Change management strategies that shifts the culture from the past paradigm to one that recognizes the significance of change

APPENDICES

APPENDIX A

COLLEGE of SCIENCES INFORMATION TECHNOLOGY RELATED POSITIONS

Department or Center	Position Classification
Biological Sciences	Technology Support Technician- Journey
Chemistry	Electronics Specialist- Advanced
Chemistry	Electronics Specialist- Journey
Mathematics	Teaching Technician-EHRA
Mathematics	Vacant – Systems Programmer/ Analyst
Marine, Earth, & Atmospheric Sciences	N/A
Physics	N/A
Statistics	Information Technology Manager- Journey
Statistics	Systems Programmer/Analyst- Journey
College of Sciences	Director
College of Sciences	Systems Programmer Specialist-Journey
College of Sciences	Technology Support Specialist-Journey
Bioinformatics Research Center	Technology Support Specialist- Journey
Bioinformatics Research Center	Research Bioinformatician (EHRA)
State Climate Office	Technology Support Specialist- Journey

APPENDIX B

COLLEGE OF SCIENCES FACULTY and STAFF

	Biological Sciences	Chemistry	MEAS	Mathematics	Physics	Statistics	College of Sciences	
	Gerald Leblanc	Edward Bowden	Jay Levine	Alina Chertock	Paul Huffman	Len Stefansi	William Ditto	**Total**
Access Only - No Pay	20	28	15	33	45	22	11	174
EHRA Faculty	27	46	38	71	50	42	54	328
EHRA Non-Faculty	18	10	4	4	5	3	42	86
EHRA SAAO Tier 1							1	1
EHRA SAAO Tier 2							9	9
Graduate Assistants	95	121	56	123	96	126	3	620
Post Doc	16	16	13	8	21	10	2	86
SHRA Employee	19	9	10	9	5	11	43	106
Student Workers	101	38	26	30	52	17	59	323
Temp - Exempt from FLSA						1		1
Temp- Subject to FLSA	7	2	5				15	29
Unpaid Faculty	19	27	100	65	30	45	3	317
Unpaid Non-Faculty	1	7	6	3	1	1	4	23
Total	**351**	**304**	**273**	**346**	**306**	**277**	**246**	**2103**

Research Centers
Bioinformatics Research Center
The W.M. Keck Center for Behavioral Biology
Center for High Performance Simulations
Center for Quantitative Sciences in Biomedicine
Center for Research in Scientific Computation
The State Climate Office
Center for Molecular Spintronics
SAMSI
Southeast Climate Science Center

APPENDIX C

COMPARATIVE DATA of HR ACTIONS/TRANSACTIONS by COLLEGE

FY 2014-2015

College	Access Only - No Pay	County Oper. Supp	CVM House Officers	EHRA County Extension	EHRA Fac.	EHRA Non-Fac.	EHRA SAAO Tier 1	EHRA SAAO Tier 2	Grad Asst	Post Doc	SHRA Emp	Student Workers	Temp - Exempt from FLSA	Temp- Subject to FLSA	Unpaid Faculty	Unpaid Non-Fac	Total
College of Textiles	20				168	77	2	15	373	62	104	322	4	106	4	59	1316
College of Design	62				231	44	2	19	360	4	51	384	148	69	25	5	1404
College of Management	56				316	84	2	19	400		43	278	37	155	8	18	1416
College of Education	52				406	165	3		275	3	89	407	17	80	18	7	1532
College of Natural Resources	124				423	153	2	19	346	38	95	513	32	255	76	31	2107
College of Veterinary Medicine*	339		91		334	134		30	78	33	718	496	37	237	24		2553
College of Humanities & Social Sciences	254				1640	122	3	16	831	17	127	1015	72	246	44	7	4394
College of Sciences*	491				1136	197	2	26	1756	141	218	1509	30	477	61	7	6051
College of Agriculture & Life Sciences	297	558		1162	862	681	2	59	891	123	876	2576	424	1906	57	258	10732
College of Engineering*	611				882	450	3	35	4625	141	436	3024	13	610	111	207	11148

* HR transactions are initiated in the departments in a decentralized model and transitioned to the College's central business office.

FY 2015-2016

College	Access Only - No Pay	County Oper. Supp	CVM House Officers	EHRA County Extension	EHRA Fac.	EHRA Non-Fac.	EHRA SAAO Tier 1	EHRA SAAO Tier 2	Grad Asst	Post Doc	SHRA Emp	Student Workers	Temp - Exempt from FLSA	Temp- Subject to FLSA	Unpaid Faculty	Unpaid Non-Fac	Total
College of Management	51				231	60	2	11	417		18	339	24	99	8	8	1268
College of Textiles	40				113	41	3	15	425	42	63	356	11	106	5	71	1291
College of Design	59				169	22	2	15	319	1	33	297	278	53	51	4	1303
College of Education	95				330	123	1	12	347	2	53	325	38	52	47	12	1437
College of Veterinary Medicine*	263		78		194	75	1	12	66	43	426	338	32	160	40	24	1752
College of Natural Resources	126				173	82	1	10	344	42	57	605	11	176	101	37	1765
College of Humanities & Social Sciences	233				1161	68	1	15	910	24	85	981	9	270	81	7	3845
College of Sciences*	475				766	148	4	31	1941	116	202	1400	18	351	69	6	5527
College of Agriculture & Life Sciences	278	256		814	479	470	1	50	910	133	506	2202	370	1507	47	295	8318
College of Engineering*	626				677	300	1	23	4393	145	328	2723	15	360	116	196	9903

The College of Sciences is the third highest college of HR transactions

APPENDIX D

COMPARATIVE DATA for CONTRACTS and GRANTS ADMINISTRATION by DEPARTMENT and CENTER

Department/Center	07/01/2016 through 03/01/2017	
	Research Dollars*	Number of Grants*
Bioinformatics Research-Grants	$0	1
Marine, Earth & Atmospheric Sci. C&G	$0	2
Mathematics	$2,618.39	34
COS Dean's Office & Staff	$185,000	3
State Climate Office	$663,905	17
The Science House	$743,395	6
Chemistry	$2,465,461	23
Statistics	$2,879,901	34
Marine, Earth and Atmospheric Sciences	$3,664,111	53
Physics	$4,402,824	44
Biological Sciences	$4,924,341	45
College of Sciences	$22,547,332	262

* Research Dollars and Number of Grants data obtained from NC State's Sponsored Programs + Regulatory Compliance site 3/1/2017 (de-obligations suppressed; pre-awards suppressed; internal projects suppressed)

APPENDIX E

COMPARATIVE DATA for CONTRACTS and GRANTS ADMINISTRATION by COLLEGE

Department/Center	07/01/2016 through 03/01/2017	
	Research Dollars*	Number of Grants*
College of Design	$823,525	38
College of Management	$867,218	11
College of Humanities & Social Sciences	$5,209,133	46
College of Natural Resources	$7,233,281	159
College of Veterinary Medicine	$7,309,551	127
College of Textiles	$12,005,707	168
College of Education	$17,187,286	54
College of Sciences	$22,547,332	262
College of Engineering	$98,080,576	629
College of Agriculture & Life Sciences	$98,523,002	591

* Research Dollars and Number of Grants data obtained from NC State's Sponsored Programs +
  Regulatory Compliance site 3/1/2017 (de-obligations suppressed; pre-awards suppressed; internal
  projects suppressed)

APPENDIX F

COMPARATIVE DATA of LEDGER 5 HR TRANSACTIONS by DEPARTMENT and CENTER

Department/Center	FY 2014-2015 Transactions*	FY 2015-2016 Transactions*
Bioinformatics Research Center	12	12
Biological Sciences	863	911
Chemistry	834	922
Marine, Earth and Atmospheric Sciences	516	552
Mathematics	824	763
Physics	636	603
State Climate Office	31	37
Statistics	487	555
The Science House	167	133

* Inclusive of Graduate and Temporary Transactions

APPENDIX G

SAMPLE TEMPLATE SKILLS GAPS ANALYSIS

Employee Name	Skill 1	Skill 2	Skill 3	Skill 4	Skill 5	Skill 6	Skill 7	Skill 8
Employee 1	●	●	●	●	◔	◔		
Employee 2	●	●	●	◔			◔	◔
Employee 3	●	●	●	◑				◔
Employee 4	●	●	●	◑	◔			
Employee 5	●	●	●	●	◔	◔		