TO: Joel Bloom, President

FROM: Fadi Deek, Provost, and Senior Executive Vice President

 Chair, *2020 Vision* Steering Committee

Date: December 31, 2018

SUBJECT: ***2020 Vision Steering Committee Report***

**Summary of Progress—Year Three**

**Section 1---Narrative Overview**

**I. Introduction**

Over the past year, the *2020 Vision* Steering Committee has contributed toward developing the strategic plan to follow *2020 Vision*. The June implementation report identified opportunities for NJIT based on assessments of *2020 Vision* and the efforts to implement it. It thereby set the strategy, themes, and tone for the ongoing planning renewal process. During the past six months, the Steering Committee has contributed significantly to the renewal of strategic planning following the lines described in June.

In addition to drawing lessons for strategic planning, the June *2020 Vision* report guided a more inclusive approach to community input with a greater emphasis on listening to the community and addressing overarching sentiment. The Steering Committee has contributed extensively to the development of the Community Planning Survey and the interpretation of survey results. It also offered recommendations for focus groups. These robust consultations with the university community helped identify new areas for investment in infrastructure and strategies to address needs perceived across the university community.

The ongoing assessment of *2020 Vision* implementationoffers an important understanding of NJIT’s opportunities. The astounding over-performance in the following areas shows NJIT’s extraordinary potential:

* retention rates
* graduation rates
* recruitment of first-year students
* student participation in milestone experiences
* hiring of faculty
* publications
* intellectual property
* faculty awards
* international research collaborations

Additionally, the university saw notable growth in research, facilities development, alumni participation, fundraising, and university visibility show how the university has untapped reservoirs of potential in these areas.

The next strategic plan, in addition to responding to community sentiment and university needs, will build on the strong foundations laid by the 2020 plan to achieve even more ambitious targets and goals, particularly concerning:

* graduate applications
* quality of student campus life
* student educational value of courses
* diversity of women students, underrepresented faculty and administrators
* student and faculty satisfaction with instructional facilities.

This December implementation report also includes the most recent assessment of progress toward achieving the targets set out in 2020 Vision. In short, the report shows the remarkable achievements of *2020 Vision* and the diligent effort by departments and individuals across the university as they implement and assess strategies to achieve the goals set forth in *2020 Vision.*

As always, plan implementation seeks continuous improvement through self-assessment and the consequent adjustment of implementation strategies. In addition to work on the next strategic plan, the *2020 Vision* Steering committee has conducted a comprehensive review of implementation strategies. Initially, this was undertaken in preparation for the Mid-cycle report, but the effort has been ongoing and continues to pay dividends through the adjustment and improvement of implementation strategies. As a result, the priority committees have made changes to strategies and reviewed the assessment protocols for each strategy. Section two of this report provides an overview of these efforts through a fully updated compilation of strategies and associated assessments for each strategic priority. The detail of the Section 2 strategies report underscores the uniquely action-oriented nature of the *2020 Vision* strategic plan, while vision is grand, implementation requires specifics.

We thank you for all of your input, critical review and hard work!

II Planning Activities

A) Spring Implementation Committee Objectives

As the 2020 priority implementation committees enter the final 18 months of the strategic plan, the overwhelming success of the plan stands out. KPI performances show clearly that the overwhelming majority of plan objectives have been met or exceeded. In only a few cases were our targets too ambitious. For those there remains the potential for committees to make adjustments and launch small initiatives, but they have largely completed the major tasks of implementation.

The regular assessment of progress through KPIs and the assessment of strategies sets an excellent example, but we can move further toward continuous assessment and improvement. part of good management and the accreditation process, it is incumbent on NJIT to develop a framework for assessing the implementation of institutional goals throughout the university. The existing KPIs provide that framework at the highest level, but they do not reflect assessment at the level of operational units. Each committee has therefore been charged, for the remaining three semesters, with providing some assessment of the strategies but again not at the level of the operational units, departments or divisions.

Beginning in the spring semester, and continuing through June 2020, the priority committees will work with the Assessment review Working Group to develop Divisional/Departmental Performance Indicators (DPIs) related to each of the strategies and objectives. In many cases, these DPIs will reflect existing strategy assessment metrics and will only be tied to specific operational units responsible for the implementation of that strategy. In some cases, where no strategy assessment metric exists, the DPIs will be component elements of a KPI. For example, the Priority 1 Committee might identify the percentage of new students advised through the Student Success Collaborative and the persistence rates of students at each class level as DPIs that roll up to the graduation rate KPI.

The diagram below shows, conceptually, how the DPIs will support each of the KPIs.

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Introducing DPIs will assist in assuring ongoing assessment guided by institutional goals and supporting the university mission. DPIs will offer both accountability in plan implementation and the opportunity to document continuous improvement as the committees adjust the implementation of strategies. Where we do not meet DPI targets, accountable offices will adjust strategies as needed. Through this process, changes implemented to improve DPIs through strategic planning will demonstrate compellingly, how NJIT closes the loop on continuous improvement.

In addition to improving organizational management, developing DPIs will also serve a critical role in demonstrating effective organizational management to make a compelling case for the comprehensive assessment of institutional effectiveness in chapter 5 of the 2021-22 Middle States Self-Study.

B) Beyond 2020

Using surveys, interviews, and focus groups committee members of the Needs Analysis Working Group took the pulse of the NJIT community to inform the next strategic plan. Students, faculty, alumni, staff, and administrators participated in this process. Based on the collected material, an outline of tentatively identified priorities and objectives was crafted. This preliminary outline will be used in the spring semester to guide four plan development committees as they prepare the strategies and propose KPIs for the strategic plan set to begin in July 2020.

The tentatively identified priority committees will cover the following areas (Chairs and topics are subject to change as discussions continue.):

• Students (Ziavras Sotirios, Chair)

• Faculty (Atam Dhawan, Chair)

• Visibility (Matthew Golden, Chair)

• Infrastructure (Andrew Christ, Chair)

Each new priority committee will include area specialists drawn from, or recommended by, the existing 2020 priority implementation committees. These new appointments will be supplemented by members of the Needs Analysis Working Group which is now winding down their activities.

**III. KPI Report June 30, 2018**

The following KPI report reflects the most current information available as of the close of Fiscal Year 2018. The 2018 fiscal year information is not final and will be revised through the final audit approval in October 2019. Similarly, all fall 2018 enrollment and application information will continue to change through the final freeze date on the 10th day of the fall 2018 semester.

The KPI report for December 31, 2018, will reflect final FY 2018 numbers and final fall 2018 enrollment information.







**IV. Analysis of Progress on KPI’s**

**Priority 1**

The Admissions KPIs tell a compelling and positive story about the opportunities facing NJIT. The number of freshmen applications has increased far beyond the original expectations, reaching 8,123 for fall 2018, compared to a baseline of 4,777 in fall 2014. The number of freshmen applications far exceeds the anticipated 2020 target of 6,000. The academic profile of admitted freshmen has, correspondingly, exceeded expectations, rising to 1286 (1223 by the 2014 SAT standard) despite significantly increasing the size of the entering class. This compares to a fall 2014 SAT average of 1252 (1192, by the 2014 SAT standard). Our performance on these metrics should both surprise and please us.

Despite the shrinking pool of students and stable test scores in the population of high school graduates, prudent enrollment management and the appeal of a strong STEM university have allowed NJIT to defy national undergraduate enrollment trends. According to *Statista*, a leading provider of market and consumer data, total enrollment for US colleges peaked in 2010 and remains below the 2014 level even today. We should appreciate our achievement of growing in number and quality despite adversity in the enrollment environment. Joining the common App in 2015 made a significant contribution to the increase in applications initially. Now pursuing strategies such as strategic partnerships with international recruiters and additional outreach to high-performing high school sophomores and freshman offset that effect. Other initiatives also contributed, including growing the undergraduate pool by expanding the recruitment of out-of-state students and cultivating the pool of high achieving minority candidates through dual admissions programs with selected high schools.

At the graduate level, the challenge has proven greater than at the undergraduate level. The number of applicants for masters programs, both international applications and domestic, has declined to 6,010 from 6,305 in fall 2014. To increase the graduate student population, we continue to pursue a strategy of expanding domestic student enrollment by increasing our online presence and developing new master’s degree and certificate programs.

The KPI target for transfer students in 2020 has already been met in fall 2018. This was achieved despite a steadily shrinking community college population in NJ. NJIT has been able to counter the downward trend by growing our transfer programs through articulation and dual admission agreements with key community colleges. We anticipate a continued growth of transfer student applicant pool as NJIT expand into non-NJ and international markets.

The changing entering class profile contributes to improving retention and graduation rates. The retention rate was 88% for fall 2018 having been only 84% in fall 2014. The graduation rate has also increased to 65% from 59% in 2014 and is projected to continue rising. Certainly, teaching, curriculum reform, and student support and advising have improved over the past few years because, for the first time, the NJIT graduation rate now significantly exceeds the US News ‘expected graduation rate’ for entering students.

The areas of concern in Priority 1 are the total enrollment and the quality of campus life. Despite challenges, enrollment remains roughly on track to reach the *2020 Vision* target of 12,200 by fall 2020. The other area of concern in Priority 1, quality of campus life, is assessed through a KPI based on the Student Satisfaction Survey. As with all surveys, it is difficult to use student satisfaction as a direct measure of performance. The rising expectation of respondents may not reflect actual improvement in conditions. As conditions and experiences improve, satisfaction does not increase in direct proportion because students expect more and may report the same level of satisfaction despite significantly improved conditions. There is every reason to believe the quality of campus life has improved more than the average value of 3.22 would suggest. The subjective survey metric is not a strong indicator of objective conditions.

**Priority 2**

Overall, NJIT has made remarkable progress toward achieving the objectives set in the learning priority.

The assessment of academics, as mandated by Middle States requirements, continues apace. We are moving slightly ahead of our five-year cycle and expect to complete a review of all graduate and undergraduate programs within the next 6 to 12 months. To date, we have reviewed 85% of the programs and noticed an increase of 25% from last year. The *2020 Vision* target of 100% completion will be achieved well within NJIT’s 5-year cycle of program assessment.

Although our measure of the ‘educational value of the course’ KPI did not change from 2014 to 2017 (3.07), the new value in AY 2017-18 is 3.10. Based on this increase, the 2020 target of 3.25 may not be attained. Questions remain as to the significance of this KPI. However, there is still a practical benefit in looking at how the value changes as individual student cohorts mature academically year after year.

There is increasing use of converged/online/hybrid course delivery modes. These alternate modes of course delivery included 18% of all courses in the baseline year of 2014. During FY2018, they included 22% of all courses. This KPI is slightly behind the target for this year, likely because of the decline in MS students including those enrolled in online programs.

Professional MS program development has produced mixed results. Five programs have been approved in the last three years, one more than the 2020 target. Total enrollment for the professional programs has been low, and as of December 2018, the decision was made to sunset one of the programs. Limited enrollment is largely the result of new programs that received very little advanced marketing in an, especially challenging environment for recruiting new MS students. The objective of developing more applied masters programs is what NJIT needs to increase the recruitment of domestic students.

Milestone experiences for undergraduates and the job placement of bachelors’ recipients have both already exceeded targets for 2020. The 2018 KPI actual results are 54% compared to a 2020 target of 50%. This reflects strong growth in co-ops, internships, and community engagement projects. The 73% job placement rate this year also exceeds the 2020 target of 65%. Our success on these metrics reflects strong efforts in the Center for Career Services, but we must also acknowledge the significant impact of economic growth for these KPIs. With unemployment running under 4% nationwide, the demand for our students in co-ops, internships, and full-time employment reflects the relevance of NJIT programs and the strength of the educational offerings.

During the 2016-17 academic year, NJIT made significant changes to the test preparation process to meet, and even surpass, the 2020 goal of 80% passing rate. The NJIT FE results for the period 1/2018-6/2018 show a rate of 56%. This number varies from 0% to 92% for individual programs. Note that in Mechanical Engineering, the passing rate is 92% compared with a national average of 80%. A comprehensive assessment is necessary to help understand the effects of these initial efforts.

**Priority 3**

NJIT continues a record of remarkable success at efforts to raise our national and international reputation in research. The combined success of academic and technology and business development externally funded research and projects reached $107 million, closing in rapidly on *2020 Vision*’s 2020 target of $108 million. We have 36 externally funded projects of interdisciplinary research with PIs from multiple departments, which greatly surpasses the 2020 target of 20. The strategic tactics to enhance multidisciplinary research has been followed by the establishment of two new research institutes and one research center in 2018. This brings the total number of research institutes, centers, and specialized laboratories to 93 as of November 2018.

The decline in externally funded educational and service grants is the one area of concern among the KPIs for Priority 3. From a 6 million dollar baseline in 2014, we are down to $4 million, which is half of our 2020 target.

The remaining KPIs for Priority 3 remain at or above annual targets. There are currently 485 doctoral students; our 2020 target is 500 students. The total number of IP assets, 415, has surpassed the 2020 target of 380. The number of faculty awards, 11, has already exceeded the 2020 target. Refereed publications per faculty member stand at 2.6, which approaches 50% above the 2020 target. Finally, the total number of books published by members of the NJIT community stands at nearly twice the 2020 target.

The overwhelming success with many of the KPIs for Priority 3 is a result of the combined and concerted efforts of NJIT’s administration, faculty, and staff. Concerning the strategic tactics on enhancing the research infrastructure, support software systems have been developed, customized and nearly completed. The research infrastructure support now includes Streamlyne online proposal submission and approval, research compliance (RCR certification and IRB approval), pre-award monitoring, expense (burn rate) reports to PI, chairs and deans, and online billing and invoicing. Some of the above support services are expected to be fully implemented by the end of FY2019 ahead of 2020 Vision goals. Our success is an example of what can be achieved when the community determines a clear set of goals and converges on methods and processes necessary to achieve them.

**Priority 4**

NJIT has sown good results in this area also. The university continues to develop its international profile. The number of international researchers collaborating with NJIT has increased beyond our expectations to 63 from a 2014 baseline of 24 and well beyond the 2020 target of 50. The number of international exchange and dual degree students at, or from, NJIT has also more than doubled from the baseline of 43 to 88, nearing the 2020 target of 96 students.

Increasing diversity at NJIT presents a more varied challenge. The percentage of women faculty at NJIT has increased from 16% in 2014 to 20% in 2018, approaching the 2020 target of 21%. The percent of women students at NJIT remains steady at 26% and should reach 28% in fall 2019. This goal becomes more difficult with the decrease in the percentage of graduate students, historically the more gender-diverse demographic group at NJIT and the reduction of non-matriculated female students. In contrast, the current percentage of women administrators has the same as the 2014 base of 37%. In part, this percentage reflects a smaller pool of administrative leaders, due to attrition.

Advancing the percentage of underrepresented minority members among the administrative leadership and serving on the faculty has met with similarly mixed results. The percentage of URMs among the administrative leadership decreased to 19 %, primarily due to attrition, i.e., retirements. The percentage of underrepresented minorities on the faculty is unchanged from the last update and remains at 5%.

Finally, the KPI for alumni engagement remains largely unchanged from the previous year. Undergraduate alumni giving, for the first four months of FY2019, is 2.83%, with a fiscal year goal of 10.3%. The rate of growth is a matter of some concern, as at the current giving rate the goal will not be met.

**Priority 5**

NJIT has made excellent progress on strategic investments, particularly in the area of faculty renewal. The total faculty number has risen to more than 300 as of September 2018. Now more than 42% of all faculty have been hired in the past ten years, compared to 33% in fall 2014. The number of faculty hired in the past ten years approaches the 2020 target of 43%. Recently hired faculty have already made an impact through research and scholarly productivity.

Investments in students have made a notable impact on the average time to degree which has fallen to 4.96, only slightly above the 2020 target of 4.90. Progress in student satisfaction with instruction has declined to 3.46 from the 2014 baseline of 3.52 although this is not a significant drop. The use of this KPI in the investments priority is proving to be inconclusive. Since the investment in new faculty does not necessarily have a significant impact on teaching due to their research responsibilities, the investment does not necessarily correlate to improvements in instruction. The committee recommends that the Steering Committee examine other priorities and tactics that have more impact in this area outside of investments.

The Student satisfaction KPIs for technology and facilities tell a contradictory story outlining the difficulty in using survey data. Student satisfaction with facilities continued an upward trend and is now likely to reach the 2020 target of 3.20. Technology satisfaction continued its decline below the 2014 baseline. Faculty satisfaction with facilities has declined from the baseline of 2014 but showed slight improvement from 2017. Faculty satisfaction with technology reversed the previously positive trend and is now below the baseline.

In response to these inconclusive KPI results, the Steering Committee introduced a more objective measure for the condition of facilities called the Facilities Condition Index (FCI), a national standard for facilities measure recognized by the APPA, IFMA, and BOMA facilities organizations. The baseline was established in fall of 2016 at 0.11 (poor). The 2018 update showed a significant improvement in the FCI to 0.08 (fair), outpacing the original target set at 0.09. The 2020 target will be revised upward to 0.06 to move closer to the “good” category.

**Section 2--Description of Strategies and Tactics**

**Priority 1 – Students**

Objective: 1.1 Admissions

**Objective 1.1.1: Expand Communication and Information Channels**

1.1.1.1 Implement focused, data-driven marketing and recruitment strategies for all programs including those offered fully online. This will help identify prospective students and those who influence their decisions:

Implemented focused, data-driven marketing and recruitment strategies for undergraduate admissions by working closely with ‘Spark 451’ (a vendor to assist with communications with prospective fall 2017 students) for targeted marketing. The KPI for freshmen application was set for 6,000. R The KPI for transfer applications was set for 2,150. Transfer applications have expanded from 1,793 (Fall 2015) to 2,214 (Fall 2017), an increase of 421 applications. The next phase will focus on tracking effectiveness of Open Houses and on-campus recruitment events and continue to use predictive analytics to predict and monitor enrollment and matrix spending. *(100% Complete for undergraduate programs)*

The KPI for Masters application was set for 8,197. Masters applications have dropped from 6,305 (Fall 2015) to 5,924 (Fall 2017), a decrease in applications of 381. NJIT established standard marketing campaign tracking practices by tracking generated website traffic via Google Analytics (GA). The next phase will be signing a comprehensive marketing contract with “Spark 451” for targeted marketing. (*50% Complete for graduate programs)*

1.1.1.2 Communicate the benefits of an NJIT degree more effectively. This will create awareness of the academic community and articulate the opportunities of the NJIT curriculum:

The Offices of Admissions and Strategic Communication have developed key marketing points that all marketing materials are based on, including academic reputation, research, location, cost, and student life. Also, comprehensive marketing strategies which include print ads, digital ads, and social media marketing have been developed. NJIT is scheduled to implement a new communication software called “Slate” to help track and analyze the recruitment efforts. This tactic will be assessed by analyzing communication outcomes. (*50% Complete)*

1.1.1.3 Expand the pipeline programs, including pre-college activities and outreach. This will increase the application pool:

Efforts have been undertaken to increase and expand outreach to students, teachers, and school administrators throughout New Jersey. We have reviewed, updated and expanded offerings and services to attract targeted groups by ensuring that offerings and services reflect cutting-edge STEM concepts, curricula, practice, and learning experiences through programs such as Early College Preparatory Programs, ExxonMobil Bernard Harris Summer Science Camps, Robotics Exploration Program and Academy College Courses for High School students. This tactic will be assessed by the pool of students who apply and enroll. (*50% Complete*)

1.1.1.4 Refine articulation agreements and increase the number of joint programs with community colleges. This will strengthen NJIT’s historical relationship with community colleges in the state and region:

We have signed the dual admission agreement with community colleges across NJ, with the more recent addition to be Essex County Community College. Also, NJIT will be part of the State-wide reverse transfer agreement through National Students Clearing House. The number of partnership formalized will be used to assess the success of this articulation. *(60% Complete)*

1.1.1.5 Centralize applicant information using digital technology. This will facilitate analytics to identify characteristics of successful NJIT students, target recruitment toward students with that profile and support academic advising:

Admissions implemented Common App and Document Manager, a digital document manager, started in fall 2014. (100% Complete)

**1.1.2. Strengthen Graduate Student Recruitment**

1.1.2.1 Recruit graduate students at the department level, with emphasis on the following: student point of contact, peer outreach, and individual faculty outreach. This will personalize and increase the effectiveness of recruitment efforts:

The offices of Admissions, Strategic Communication, and Graduate Studies have developed department specific marketing materials and communications for prospective students. In October 2016, NJIT enabled Google Adwords to specified NJIT Google app users - enabling direct purchase of Google Adwords advertisements via a credit card provided by Strategic Communications. A program-focused shopping cart has been developed which allows the students to select and compare different programs and majors. This tactic will be assessed by the number of graduate applications and enrollment. *(60% Completed)*

1.1.2.2 Admit graduate students using competitive practices, including an earlier application deadline, timely offer letters, and attractive graduate stipends. This will increase the number of applicants and produce a better yield for admitted students:

Graduate Studies and Admissions have implemented new admission processes which have resulted in an earlier application deadline and timelier offer letters. Graduate Studies and the Office of the Provost have allocated funds to provide more attractive graduate stipends. Admissions will greatly expand its prospective pool for graduate students for fall 2017. This tactic will be assessed by the number of graduate applications and enrollment.  *(100% Complete)*

1.1.2.3 Enter into partnerships with international recruiters. This will result in an increase in applications and an improved yield:

NJIT has signed agreements with international recruiters to promote international enrollment starting in fall 2016. We have total of 15 agents and one super agent. For Fall 2017 semester, EduCo generated approximately 150 enrolled students. This tactic will be assessed by the number of corporate partnership agreements and the number of students enrolled. *(75% Complete)*

1.1.2.4 Analyze graduate student success by departments and programs. This will result in a graduate student success profile to inform and guide future admissions:

Analyze graduate students’ success by departments and programs to develop a graduate student success profile informing future admissions. Graduate Studies will work with the Office of Institutional Effectiveness to create the profile. This tactic will be assessed by a review of future graduate admissions. *(Planned)*

**1.1.3. Improve Web and Social Media Presence**

1.1.3.1 Create a high-impact website. This will improve recruitment, promote an NJIT identity and better serve the needs of the NJIT community through increased communication and functionality:

All academic websites have been updated. A New Enrollment Management website is expected to be implemented by June 2018. Admissions started to incorporate webinars as part of its recruitment strategies. This tactic will be assessed by completion of the website. *(75% Complete)*

1.1.3.2 Enhance NJIT’s social network presence. This will increase awareness of NJIT, highlight accomplishments and help in student recruitment:

Enhance NJIT’s social network presence to highlight accomplishments and help student recruitment. Undergraduate Admissions had started to communicate to students via texting, auto calls, Facebook, and Twitter in 2015 and 2016; Blogger started in Fall 2016. The graduate certificate programs have been promoted through Google Adwords and other digital media platforms. For the upcoming year, social media will be used to do outreach to domestic graduate students through NJIT’s partnership with “Spark 451”. The committee will assess this tactic by monitoring social media activity. *(75% Complete)*

**Objective 1.2.1: Persistence and Retention**

**1.2.1 Design a Connected Academic Community**

1.2.1.1 Use college- or discipline-specific approaches to form effective Learning Communities for all incoming freshman students. This will help undergraduate students receive consistent academic support as part of a cohort of student with similar curricular interests.

We have implemented a comprehensive and engaging freshmen seminar by offering a course that allows students to receive credit for the course and gives them a firm grasp on all areas of the college experience. Currently, the re-designed first-year seminar curriculum is being utilized, which includes specific and measurable learning outcomes. *(100% Complete)*

1.2.1.2 Connect the student community through increased personal interactions and appropriate technology to create a stronger NJIT identity among students.

NJIT has been utilizing the use of social media, specifically Instagram, Facebook, and Snapchat to connect with students on campus and informing them about various academic and social events. Staff and faculty have been notified as well and encouraged to attend events so that they may interact with students on a personal level. This tactic will be assessed by tracking the number of students attending academic and social events on campus. *(100% Complete and ongoing)*

**1.2.2 Intensify Academic Advisement**

1.2.2.1 Develop consistent university guidelines for advisement across academic departments to achieve more timely graduation.

The Office of the Provost is leading this initiative. The committee is working on a draft report for the Provost’s Office and the academic deans. The goal is to improve accountability on advisement standards through the use of the Student Success Collaborative (SSC). This tactic will be assessed through the advisor usage of SSC and designated reports to be run by each undergraduate advisor through the SSC in spring 2017 and on-going. *(100% Complete)*

Academic advisors will meet monthly with constituents in the Office of the Provost to review policies and procedures to ensure that they are consistent across departments, discuss activities for professional development, and focus on practices in advisement for the student population as set forth by the National Academic Advising Association. This tactic will be assessed through the advisor usage of the calendar/appointment system and designated reports to be run by each undergraduate advisor through the SSC in spring 2017 and ongoing. *(100% complete)*

The Advisor – Liaison committee was created in spring 2018 to begin to establish university guidelines across academic departments. The Advisor – Liaison committee consists of one academic advisor representative from each of the NJIT colleges, as well as advising representatives from our EOP, Advising Success Center, and Athletic offices. The chair of the committee the Vice Provost of Undergraduate Studies. The committee is working on a university-wide advising manual as well as an academic advisor training for the summer terms. The Advisor-Liaisons are also reviewing lists of graduating students, one year before their graduation, so they can be advised for the year to ensure they will graduate with all course requirements completed. Double the amount of advisors that were utilizing SSC in its onset (Spring 2017) are now using it in Fall 2018. *(75% Complete)*

1.2.2.2 Increase the use of software tools and analysis in advising. This will assist in tracking students and offering more effective advising by advisors and faculty, followed by appropriate academic and student support.

Utilize an intense online tracking system for students – SSC. Using SSC assists in tracking and managing at-risk students. The system was implemented for the Spring 17 term, and all academic advisors have been requested to use the system for scheduling student appointments and maintaining copious notes of those meetings. It will also offer students information needed to make better educational decisions. *(75% Complete)*

These tools will be utilized by all academic advisors to establish regular reporting systems to monitor student retention and progress toward graduation to facilitate timely intervention. The technical foundations and strategies will be implemented in spring 2017*.* This tactic will be assessed through the advisor usage of the calendar/appointment system and designated reports to be run by each undergraduate advisor through the SSC in spring 2017 and ongoing. *(75% Complete)*

Double the amount of advisors that were utilizing SSC in its onset (Spring 2017) are now using it in Fall 2018. *(75% Complete)*

1.2.2.3 Admit NJIT students to a college or school of their choice with the option of indicating a provisional major that may be officially declared at the end of the first year. This will improve retention and graduation.

Beginning with NCE, incoming students should apply and designate the major they are looking to pursue. Research on other institution’s models for accepting students into colleges rather than specific majors is complete. The method of assessment will be developed when full implementation is closer. *(50% Complete)*

1.2.2.4 Intensify advisement for first year and sophomore students. This will offer students the support and resources to improve retention and foster academic success.

NJIT will have undergraduate students complete a short feedback survey on their advisement to review and make changes as needed. Information on the undergraduate academic advisors on campus was presented to the Provost. This tactic will be assessed through the review of the survey results. *(50% Complete)*

**1.2.3 Improve Tutoring, Mentoring, and Student Support**

1.2.3.1 Coordinate tutoring, mentoring, computer-facilitated learning and student support across campus. This will improve the management and effectiveness of these programs.

Physics, Chemistry, and the Math departments provide tutoring for their subject areas. Other academic departments will also begin offering these support services. This tactic will be assessed through the student evaluations and final grades in key courses for students who have completed the supplemental instruction in those courses.  *(100% Complete)*

1.2.3.2 Provide faculty, instructors and academic advisers with resources and best practices to improve their role as mentors. This will ensure that retention is strengthened through uniform approaches to learning experiences, policies, and procedures.

**Objective 1.3: Graduation**

**1.3.1 Implement Curriculum-Guided Course Scheduling**

1.3.1.1 Allocate instructional resources by offering courses in the semesters when they are needed and avoiding scheduling conflicts for required classes. This will promote timely graduation.

The Registrar will also provide a university calendar of four-year, projected course offerings by building a multi-year academic and course calendar. Students will be able to predict their full four years by knowing when courses are offered within their degree. *(0% Complete)*

1.3.1.2 Expand the scope of winter and summer sessions by offering additional sections, particularly online. This will also facilitate timely graduation and enhance tuition revenues.

More courses will be offered in the winter and summer. This will help expedite graduation. The target for completion is April 2017; however, it will be ongoing due to changes each term of courses needed to be offered for winter and summer. This tactic will be assessed by tracking the number of sessions offered and the number of students on the waitlist. *(50% Complete)*

1.3.1.3 Coordinate course scheduling and registration and reduce administrative obstacles for cross-registration with Rutgers-Newark, Rutgers Biomedical and Health Sciences and Essex County College. This tactic will increase the opportunity for students to fulfill their graduation requirements. A meeting with stakeholders is planned for Spring 2017. This tactic will be assessed by more course offerings through cross-registration. *(25% Complete)*

**1.3.2 Streamline the Graduation Process**

1.3.2.1 Notify students when they are nearing graduation, alerting them to their remaining academic requirements. This will reduce barriers to graduation.

Notify students that they are close to the completion of their degree requirements by having the Registrar send out early alerts to students nearing graduation (35-40) credits allowing the student to be aware of potential obstacles. The first letter was sent out in November 2016. Student Success Collaborative goes live in January 2017 and will help with this initiative. This tactic will be assessed by graduation rates. *(100% Complete)*

1.3.2.2 Eliminate the student-initiated application for graduation of qualified students. This will prevent administrative delays.

Create a process to proactively certify students for graduation. Any student who has completed the requirements toward their degree will be awarded their degree. This tactic was completed in November 2016 for the May 2017 class. *(100% Complete)*

1.3.2.3 Expand advising and financial support for senior students. This will increase their chances of completing the final steps toward their degree.

Utilize the functions of SSC to promote timely graduation. Using SSC, students will be notified through their advisors, faculty, and administrators each term keeping them on track toward graduation. SSC goes live January 8, 2017. This tactic will be assessed by graduation rates. *(80% Complete)*

 **Objective 1.4: Campus Quality of Life**

**1.4.1 Build a Supportive Environment**

1.4.1.1 Cultivate a courteous, welcoming and supportive campus climate. This will enhance student satisfaction and success.

Collaborate with Office of Institutional Effectiveness to better identify areas of student satisfaction and dissatisfaction. Additionally, several customer service trainings have been conducted for members in multiple office in Academic and Student Affairs and the Department of Public Safety. *(100% Complete)*

Developed and implemented an online student complaint form so that student concerns can be immediately addressed. This tactic will be assessed by the number of responses to student concerns submitted online *(100% Complete)*

1.4.1.2 Develop a service-focused philosophy for all faculty and staff after a systematic examination of current practices. This will ensure a consistent student-centered message across the campus.

A philosophy statement that contains “Tenets of Service” is being refined for broad distribution after approval by the new Dean of Students. This tactic will be assessed by measuring student satisfaction. (0% Complete)

**1.4.2 Improve Administrative Processes and Practices**

1.4.2.1 Examine and modify university academic and non-academic administrative policies, practices, and procedures. This will lend consistency and fairness to the continuing process of improving the quality of campus life.

Conduct a systematic examination and regular ongoing review of the effect of current policies by an “owner” review of every policy. The university web page should be the most updated version policies, and each department will be responsible for ensuring their pages are updated. This tactic will be assessed by regular review of policies. *(20%*)

1.4.2.2 Develop a service center to promptly address student questions and direct students to appropriate offices as needed. This will streamline and track efforts to meet student needs.

Develop virtual and in-person service centers to better meet student needs by utilizing web managers to create a better search engine with multiple, intuitive search words, increase ease of navigation, remove outdated material, and update software changes. In-person student service is expected of all university personnel and training should be expanded to offer all employees customer service training. This tactic will be assessed by the results of the student satisfaction survey. *(50% Complete)*

**1.4.3 Support Student Activities**

1.4.3.1 Facilitate sustainable and supported campus events and experiences such as intramural athletics and academically oriented teams, like debating and chess. This will engage the entire university community and enhance campus life.

Facilitate sustainable and supported campus events, including competitive academic teams and experiences by adopting a Signature Events Model for students to support major student-focused events and to build academically competitive teams. The Student Senate revised their financial bylaws and modified the funding processes to an annual request system, to support academically competitive teams, such as the chess team, and student organizations to plan for campus events, conference attendance, and tournament participation. This tactic will be assessed by student participation in events and the success of academic teams. *(100% Complete)*

1.4.3.2 Develop an “Events Center” that will provide space and support for student activities and offer venues for NJIT community assemblies.

Construction of the Wellness and Events Center (WEC) is complete.

*(100% Complete)*

**Objective: 1.5 Institutional Effectiveness**

**1.5.1 Improve Institutional Effectiveness through Continuous Assessment**

1.5.1.1 Deploy key metrics for university performance, particularly retention and graduation rates by colleges, schools, and departments. This will help identify obstacles to student achievement.

Deploy key metrics for university performance, particularly retention and graduation rates by creating a systematic schedule for data analysis that will facilitate reporting on outcomes and help to build dashboards to support decision-making. Enrollment and admissions dashboards have been created. This tactic will be assessed by the ability to analyze data and fulfill reporting obligations accurately and on time. *(50% complete)*

1.5.1.2 Use student satisfaction as an indicator of student success by transforming the Student Satisfaction Survey process to better gauge levels of student satisfaction. This tactic will be assessed by results of the student satisfaction survey. *(100% Complete and Ongoing)*

1.5.1.3 Develop assessment plans with learning goals for all programs. This will set clear standards and measures for success and improvement.

Develop Assessment plans with learning goals for all programs by aligning them with Council for the Advancement of Standards in Higher Education (CAS) standards. This tactic will be measured by development of, and compliance with, assessment plans. (*20% complete)*

**1.5.2 Make Evaluation Effective**

1.5.2.1 Implement independent evaluations for student support programs. This will improve the reliability of the assessment and make the results more useful in guiding resource allocation.

Implement independent evaluations for student support programs by using CAS to provide the mechanism for this independent evaluation as guided by nationally accepted norms. This tactic will be assessed by the results of evaluations. (*See 1.5.1.3 20% complete)*

1.5.2.2 Communicate assessment results to instructional and support personnel. This will make assessment a more effective tool for management and continuous improvement.

Communicate assessment results to instructional and support personnel by using a range of tools including dashboards to make information available to decision makers. Survey results will also be communicated to decision-makers and the NJIT community to convey confidence in operations. This tactic will be assessed by tracking administrators’ satisfaction with the information available for decisions. (*20% complete)*

**Priority 2 - Learning**

**Objective: 2.1 Curricular Assessment**

 *2.1.1 Evaluate the Curriculum*

2.1.1.1 Continuously assess the curriculum by using the program review process to promote curricular assessment across the university. This tactic includes an external review component conducted by experts in each degree discipline to assess the nature, content, delivery and student progress in the core requirements for each degree. A systematic study will be undertaken to determine the course(s) causing delays in the graduation of students. Some degree programs are assessed by the following accrediting agencies on a 5-year cycle: ABET (Accreditation Board for Engineering and Technology), AACSB (Association to Advance Collegiate Schools of Business), NAAB (National Architectural Accrediting Board), CIDA (Council for Interior Design Accreditation), and NASAD National Association of Schools of Art and Design). Those programs, not assessed by one of the above mentioned accrediting organizations, are assessed by a rigorous program review regime according to a set 5-year schedule and detailed in the Program Review section of the OIE website. Review of all NJIT degree programs will have been done by 2020. In 2018, the 5-year cycle is 85% complete. Progress on this tactic will be assessed by the completion of the aforementioned study as well as by the number of degree programs that have sought input from external reviews. *(Ongoing)*

2.1.1.2 Use assessment to guide curricular reform through the review of individual programs. This activity in the Physics program has been led by an external consultant’s review. The delivery of introductory courses in Physics and Chemistry is being modified through participation in the Gateway to Completion (G2C) program. The Departments of Physics and Chemistry have applied the results of the G2C study to modifications in their curricula and course delivery. OIE has also conducted a study of the mathematics curriculum, and findings and recommendations are now being reviewed for possible modifications of the curriculum. This tactic will be first assessed by the analyzing the impact of the G2C program.Relevant also is a study of math placement methods which will be conducted after final grades for the fall 18 semester have been recorded. *(Ongoing)*

 *2.1.2 Raise the Prominence of Academic Assessment*

2.1.2.1 Establish yearly program assessments and cyclical program reviews using the recently implemented program review template. All colleges, departments, and academic programs are aware of the cyclical program review process and cooperating with its continuing implementation. This tactic will be assessed by the number of programs undergoing satisfactory review as per the determined cycle. To date, 85% of the NJIT programs have satisfactorily gone through the review process. (*Ongoing)*

2.1.2.2 Highlight the importance of curricular assessment and its impact on learning by rigorously applying the current process for curricular review. During the 2015-2016 academic year, NCE began program review of its graduate degree programs. During the 2016-2017 academic year, NCE involved the advisory boards of all its departments in assessing the undergraduate curricula for their fitness in preparing students for the current job environment. This tactic will be assessed by the number of programs that have completed the curricular assessment process. See 2.1.2.1. During 2018, Engineering Technology programs successfully underwent ABET accreditation.*(Ongoing)*

**Objective: 2.2 Curricular Reform**

 *2.2.1 Improve Undergraduate Education*

2.2.1.1 Update the GUR by establishing a subcommittee of CUE charged to review/update GUR. After detailed deliberations and receiving input from various constituencies, the committee proposed a new structure for the General Education Requirements (GER) in March 2017. The proposal was approved by CUE, and when it reached the Faculty Senate, it was approved with a modification regarding the structure of requirements in the liberal arts area. The proposal was endorsed by the Provost and was implemented in September 2017. The new GER requirements are eight credits fewer than the prior GUR. It is expected that the credit requirements for most undergraduate degrees will be reduced by eight credits. On March 15, 2018, the Chair of the GER CUE subcommittee re-iterated the charge of the sub-committee as stated in the March 2017 document “Motion to revise General Education Requirements at NJIT”: “Using the learning outcomes of the current GUR courses as a guide, we can develop a systematic cataloging and presentation of the set of learning outcomes for each thematic area. The set of learning outcomes for each thematic area can then be used in the management of the general education program including the addition or elimination of courses.” On November 15, 2018, the Faculty Senate approved the definition of literacies for GER. Learning outcomes for all approved GER courses have been completed and approved by the GER CUE subcommittee. A process is in place for approval of any additional GER courses. This tactic can be viewed as complete, but it will be monitored in the future to ensure its successful implementation. *(100% Complete and Ongoing)*

2.2.1.2 Modify credit requirements and semester load to facilitate retention and graduation and reduce the costs of attending NJIT. Curriculum review and the approved new GER are expected to lead to new curricula. All undergraduate programs need to submit new curricula grids for approval by CUE and Faculty Senate by the end of the fall 2017 semester. Progress on this tactic will be assessed by the number of curricula that have completed modifications. The CUE was charged with this task. The subcommittee has already processed a number of curricula which reflect the changes dictated by the new GER policy. The new curricula were submitted for the 2018-2019 catalog. Most of the program curricula have been modified. *(Ongoing)*

2.2.1.3 Implement a 4X4 curriculum in which students take four courses at four credits across four years of undergraduate study. Due to anticipated complications with transfer students and current MOUs with Community Colleges, this tactic has been abandoned, with the approval of the 2020 Vision Steering Committee. *(Abandoned)*

2.2.1.4 Train students in the competencies of current digital technology related to their majors and integrate this into the GER. The new GER require a three-credit course in computing literacy, and all undergraduate curricula include aspects of computing in various courses. The GER subcommittee is developing a set of GER computing literacy student learning outcomes.

This tactic will be assessed from data on assessment of both the GER computing literacy course as well as of least one discipline-specific course in each undergraduate curriculum. *(Ongoing)*

2.2.1.5 Establish learning outcomes for all degree programs and the GER by making the definition of learning outcomes a part of the comprehensive program review process. *(Completed)*

*2.2.2 Innovate Graduate Education*

2.2.2.1 Create Professional Science Master’s (PSM) options in MS degree programs. Five professional options were created in the last three years. In the YWCC, the Cyber Defense option (affiliated with the PSM National Office) in the MS in Cyber Security and Privacy, the Professional Management option (affiliated with the PSM National Office) in the MS in Information Systems, and the Professional Management option in the MS in Information Technology Administration and Security (the application for affiliation of this option with the PSM National Office was submitted in December 2018). In the CSLA, the Biotechnology option (affiliated with the PSM National Office) in the MS in Pharmaceutical Chemistry and the Applied Quantitative Finance option in the MS in Mathematical and Computational Finance. As of 4 December 2018, 129 applications had been received for these professional options, and 47 of these applicants had received admission. Unfortunately, CSLA decided on December 19, 2018, to sunset the MS in Mathematical and Computational Finance program due to low enrolment and this implies discontinuance of its professional Applied Quantitative Finance option effective in Fall 2019. This tactic will be assessed by the number of degree programs that will have the PSM designation. *(Ongoing)*

2.2.2.2 Create applied master’s programs. An MS degree program in Data Science, offered jointly by the Departments of Computer Science and Mathematical Sciences, has been available since Fall 2017. The number of applications has been increasing drastically, from 71 for spring 2018 to more than 304 for fall of 2018; 200 applicants were admitted for 2018 fall. This tactic will be assessed by the number of new MS programs of an applied nature. *(Ongoing)*

2.2.2.3 Enhance doctoral financial support by increasing stipends. The stipend was increased last year to $22,000 and will be increased to $24,000 in spring 2019. This tactic will be assessed by comparing the stipends NJIT offers with those offered by peer institutions. *(Ongoing)*

2.2.2.4 A doctoral program in Business Data Science (in MTSM) was approved in AY 2015-2016 and has been offered since fall 2016. This innovative program, blending business applications and big data processing, has attracted substantial interest. It consistently receives the second highest number of applications across all PhD programs at NJIT; 14 of the 78 applicants for 2018 fall were admitted. *(100% Complete)*

 *2.2.3 Update the Curriculum Continuously*

2.2.3.1 Incorporate feedback from professional organizations and accrediting agencies. The BArch and ET programs have recently introduced curriculum changes to ensure compliance with their accrediting bodies. There have not been any recent visits by accreditation agencies. This tactic will be assessed by the success of accreditation visits. (*Ongoing)*

2.2.3.2 Incorporate feedback from industry advisory boards (IABs) and employers. NCE has started a systematic process of seeking input from IABs regarding all undergraduate curricula. The following NCE programs received IAB feedback: Biomedical, Chemical, Civil, Computer, Electrical, Industrial, Mechanical, Engineering Technology - Electrical and Computer Engineering Technology, Engineering Technology - Construction Engineering Technology, Engineering Technology - Mechanical Engineering Technology and Engineering Technology - Surveying Engineering Technology, and Bachelor of Science in Business. The following undergraduate CSLA degree programs have sought and obtained input from IABs: B.S. in Forensic Science (recently approved program); and B.S. in Mathematical Sciences: Mathematics of Finance & Actuarial Science. Each PSM degree option has its own IAB as per the requirements for national PSM affiliation; these IABs provide input for curriculum revisions. This tactic will be assessed by the number of degree programs that have sought and gotten IAB input. *(Ongoing)*

**Objective: 2.3 Convergence through Digital Technology**

 *2.3.1 Create an Instructional Culture of Digital Technology*

2.3.1.1 Converge the face-to-face and online modes of course delivery by pilot testing the idea of convergence. This pilot study, overseen by the Teaching Learning and Technology (TLT) Committee of the Faculty Senate, is underway. The TLT Committee worked with the Office of Institutional Effectiveness (OIE) to test the hypothesis that “There is no difference in student learning between converged and non-converged modalities.” To test the hypothesis, faculty teaching multiple sections of the same course participated. One section was taught in a traditional face-to-face format, and the other used converged learning technology. The OIE found no difference in the pass rates, quiz, or final exam scores between the converged and non-converged sections. In 2018, the Office of Digital Learning conducted a qualitative case study on the student experience in HyFlex (please define HyFlex) courses. The research from this study found that participants found the flexibility of the format to be the main benefit of HyFlex. They also preferred HyFlex courses in comparison to online or other hybrid course formats. The main drawback of HyFlex was the difficulty in communicating with students that were not physically present. Over the past year, the TLT Committee and the Faculty Senate defined five modes of instructional delivery to clarify how courses are delivered at NJIT, namely Face-to-Face, Hybrid, Converged Learning, HyFlex, and Online. This clarification will beneficial to students and will also allow accuracy in data tracking for course delivery. During FY2018, 22% of lecture courses were offered in the Hybrid, Converged Learning, Hyflex, or Online format. This tactic will be assessed by the number of courses offered in the Hybrid, Converged Learning, Hyflex, and Online mode.*(Ongoing)*

2.3.1.2 Increase the use of digital technology in the classroom by developing online programs based fully on internal NJIT capabilities. The MS degree programs in Industrial Engineering, Power and Energy Systems, and Applied Science (many of its concentrations) were added to the suite of online programs developed in-house, bringing the total number of available online programs to fifteen. The MS in Electrical Engineering and the MS in Computer Science migrated from Pearson to NJIT in the summer, bringing the total NJIT-housed online programs to thirteen. A previously approved incentives program, based on enrollment in revised programs, is in the process of being revisited. Finding adequate incentives is important to further increase out online offerings. To further strengthen NJIT’s online offerings, the TLT Committee, and Faculty Senate passed a motion stating that effective in the beginning of the fall 2019 semester, students registered for a fully online course section must be given the option to take their exam in a completely online format with appropriate proctoring. With an endorsement from the TLT Committee and Faculty Senate, the Office of Digital Learning also ran a pilot in the fall 2018 semester to evaluate the Canvas Learning Management System as an alternative to Moodle. Fifteen courses, twelve faculty, and 403 students participated in the pilot. The pilot will be evaluated based on feedback received from students and faculty, and the results will be presented to the TLT Committee and Faculty Senate in the Spring of 2019. This tactic will be assessed by the number of fully online degree programs developed and offered based exclusively on NJIT capabilities. *(Ongoing)*

2.3.1.3 Deploy adaptive learning systems to provide at-risk students personalized digitally based instruction. This tactic has been changed to helping students with a new approach using the centralized Math and Science Tutoring Center established in January 2017. This tactic was assessed by a satisfaction survey sent in fall 2018 to students using the Tutoring Center. 46% of the students working in the tutoring center rated it a perfect 10 in positively affecting their math grades. 96% rated it 7 or above. Of those surveyed in class, 89% rated it a 7 or above. (1-10 scale) *(Completed)*

 *2.3.2 Assure Academic Rigor*

2.3.2.1 Achieve uniformity of academic standards, regardless of delivery mode. A sub-committee of TLT developed a guidelines document for the development of online courses*.* The document has been endorsed by the CUE, CGE, and Faculty Senate and is being applied as new online courses are being developed. The TLT subcommittee collaborates with the Institute for Teaching Excellence in overseeing implementation of the guidelines. Achieving uniformity of academic standards regardless of delivery mode remains a priority. The TLT Committee and the Faculty Senate passed a resolution that all instructional staff teaching a digital learning course for the first time must receive training through the Office of Digital Learning. This was implemented in the fall of 2018 and will help ensure that instructors teaching in a digital format are prepared. The Office of Digital Learning continues to promote the Quality Assurance in eLearning rubric. Any new courses developed that are part of any incentive program must pass the rubric. This year several online courses have been reviewed including four new online courses and twelve courses that are part of the MS in Industrial Engineering and the MS in Engineering Management programs, with feedback provided to the departments. Over the summer of 2018, this rubric was used to provide feedback for the programs that transitioned from Pearson to NJIT (Electrical Engineering and Computer Science). The rubric remains a recommendation and is not mandatory. This tactic will be assessed by the number of courses successfully using the NJIT Quality Assurance in eLearning Rubric. *(Ongoing)*

2.3.2.2 Create a digital repository for learning artifacts. There are three separate efforts that support digital repositories. Kaltura Digital Media Repository: In 2016 Kaltura was introduced as a digital repository that stores and archives learning artifacts created by faculty and students. Kaltura allows NJIT users to upload, create, and share media through Moodle and NJIT Mediaspace. Since 2016, Kaltura use has increased in the following ways: Kaltura CaptureSpace has replaced TechSmith Relay for all recorded learning objects and is used extensively to host course learning objects; the Van Houten Library has setup a streaming media channel using Kaltura to host streaming media approved by the library, and all WebEx recordings will be stored in Kaltura. Currently, there are more than 13,000 media files uploaded to Kaltura. Digital Commons @ NJIT Institutional Repository: In the summer of 2017 The Library introduced an institutional repository using Bepress’s Digital Commons software. Digital Commons @ NJIT initially launched with two collections, “Theses and Dissertations” and the “Library Special Collections.”  For the fall 2018, the Office for Institutional Effectiveness launched a collection that publishes and curates NJIT syllabi. Collections are web-based and can

be either public or private. There are plans for Digital Commons @ NJIT to include planning and accreditation documents and faculty research. The Digital Commons repository for course syllabi is approximately 50% complete. The Kepler Digital Platform for Curricular Management and Assessment has been in continuous service since its inception in 2005. It provides a means to collect, review, and share all student work products and represents a pioneering effort for closing the education loop between teaching, learning, and assessing outcomes. Developed initially for use in the College of Architecture and Design, it is capable of wide application across the campus. The current system was built on a Microsoft SharePoint chassis and, in 2010, Banner course provisioning was added. The original system pioneered the open sharing of course information and student work within the CoAD community and to three different external professional accreditation bodies starting in 2008. It is now showing its age and is becoming less stable and more costly to maintain with each passing year. A new purpose-built app-based platform is proposed to put Kepler on a firm and cost effective footing, to improve permissions management and to provide a host of more robust data extraction and reporting capabilities. The curricular management platform can link to NJIT's course management systems and its modular structure will allow for regular and less expensive updates. The new interface will improve student and faculty user experience. Exploration is ongoing between OIE and CoAD about the possibility of using a revised Kepler system to include learning artifacts beyond those generated by CoAD courses. (Ongoing)

**Objective: 2.4 Milestone Experiences**

 *2.4.1 Integrate Milestone Experiences into Undergraduate Programs*

2.4.1.1 Expand the Undergraduate Research and Innovation (URI) program. The program has been expanded and now involves URI Phase-1 and Phase-2 Seed Grants, TechQuest Innovation Competition, Newark Innovation Acceleration Challenge, NSF Research Experience for Undergraduates (REU), and Provost Summer Fellowship programs. These programs are supported by NSF, PSE&G, several foundations, and internal funds. During the 2015 – 2016 Academic Year and summer 2016 over 120 undergraduate students participated, and $400 K went to student stipends and project support. During AY2017-2018, 312 undergraduate students participated, and about $565 K went to student stipends and project support. Overall, 54% of undergraduate students participated in at least one milestone experience, up 9% from the previous year. Progress with this tactic will be assessed by the number of undergraduate students participating in the URI program. *(Ongoing)*

2.4.1.2 Increase the number of curricular-based co-ops and internships. NCE has implemented a new, structured co-op option for its students and potential employers. Utilizing a five-year strategy, students can begin after their sophomore year to work in alternating periods of classroom study and co-op work experiences. In support of this effort, Career Development Services staff members have met with NCE faculty co-op advisors to review program components, developed and begun implementation of a comprehensive marketing plan, updated its website to link to NCE’s co-op page, advised students on the new option, and informed employers who may be interested in the five year plan. This collaboration with NCE will continue and expand into the next academic year. This tactic will be assessed by the number of students selecting the co-op option for their engineering degree. This past summer – 2018, CDS upgraded their career center information management system by converting to Handshake, a comprehensive client relationship management system. The platform sits on top of a shareware system, and NJIT will now have access to the nearly 200,000 employers who use the system to manage their campus recruiting efforts. Employers wishing to engage with us can easily do so by broadcasting a job posting for many schools at once with no additional charge. CDS has already experienced a sharp uptick in job postings, which will lead to stronger outcomes for our graduates. The Handshake platform is one of several strategic marketing initiatives conducted by CDS to prospective employers, which has already produced significant results. More than 100 new co-op and 1,200 internship opportunities have been posted since September 2018. Additionally, the posted positions have drawn robust NJIT student applicant activity. *(Ongoing)*

2.4.1.3 Develop a robust study abroad program to increase the number of students that will have international experiences before graduating from NJIT. Inventory will be made of current MOUs with foreign universities to identify study abroad opportunities for our students. NJIT signed in the AY2017-18 six MOUs for dual degrees with overseas universities, and 21 students from the University of Parma studied at NJIT in spring 2018. Fifteen students from Istanbul Technical University studied at NJIT in AY 2018-19. Additional opportunities are to be identified by the departments, colleges and the Office of Global Initiatives which, in coordination with academic departments, will also start creating a course equivalency inventory. During the AY2017-2018, thirty NJIT students went abroad, and 31 students from foreign universities came to NJIT. During the AY2018-2019, including summer 2018, thirty-nine NJIT students studied abroad, and 22 students from foreign universities came to NJIT as exchange students from partner universities and Global E3. This tactic will be assessed by the number of MOUs and the number of NJIT students going for study abroad. *(Ongoing)*

2.4.1.4. Integrate service-learning projects in the Newark community, and beyond, into the curriculum. As the unit responsible for assisting civic engagement implementation at NJIT, CDS continues to enhance existing initiatives as well as develop new opportunities for faculty and students. Continued presentations, to the Deans and Administrative Councils, have strengthened existing efforts to prepare students for civic responsibility. CDS works in collaboration with several academic units to support and in many cases enhance the service learning experience. Overall, university-wide, we have increased our number of students engaged in Survive Learning – community service connected to curriculum to 170. Following is a distribution of affiliations and student participant numbers:

* IS350: Integrated Service learning component - 25
* HHS Honors: Integrated Service learning - 25
* COAD: various sections through community-based studio - 60
* CCS Capstone: students at Non-Profit sites – 30
* Global Brigades – premed students – service in South America – 30

This tactic will be assessed by the number of students enrolled in courses that include a service-learning component. (*Ongoing*)

 *2.4.2 Develop Milestone Experiences for Graduate Programs*

2.4.2.1 Foster research, industrial, service, and international learning experiences by increasing the number of destinations and majors available for graduate students through MOUs. NJIT signed in AY2017-18 six MOUs for joint/dual degrees with overseas universities and 21 students from the University of Parma enrolled at NJIT in spring 2018. See tactic 2.4.1.3 as the MOUs with foreign universities cover graduate students as well. *(Ongoing)*

2.4.2.2 Expand research and service, including civic engagement opportunities for graduate students. Students in PSM program options (e.g., Biotechnology) may have the opportunity to pursue (for credit) research as well as service or civic engagement projects. This tactic will be assessed by the number of MS students pursuing research and service projects. *(Ongoing)*

2.4.2.3 Continue to offer cooperative education opportunities to graduate students seeking to gain related work experience. This is particularly important for our international students who currently utilize their CPT to qualify for US Work Authorization. The current political climate and proposed legislation have adversely impacted our progress in recruiting employers and placing international graduate students in co-op positions. We will continue to explore methods for assisting our graduate students. *(Ongoing)*

 *2.4.3 Support Personal Milestone Experiences*

2.4.3.1 Provide a framework allowing students to pursue personal milestone experiences by developing an extracurricular NJIT music program. A wind ensemble, a string ensemble, and a jazz band have been formed. Conductors have been hired and equipment has been purchased. The Music Initiative is in its 4th year with student participation growing from 30 in 2014 to over 200 in 2018. In addition to the Wind, String, and Jazz Ensembles, a pep band has been formed to play at Highlander athletic events. The Society of Musical Arts (SOMA), the student music organization, has worked to bring all music groups under the SOMA umbrella and has formed smaller groups to play at university events as requested. The Student Senate, through the SFARB, has provided the Music Initiative with funds to purchase a number of instruments and basic supplies for the ensembles. 2018 is the fourth year of the NJIT Music Initiative. Starting with 20 student musicians, in the fall of 2018 over 200 students participated in the wind, string, and jazz ensembles. A newly formed pep band now has 30 student performances, and in coordination with the Athletics Department, is now playing for at all home games, which are nationally televised. This tactic will be assessed by the number of students pursuing personal milestone experiences at NJIT. *(Ongoing)*

2.4.3.2 Coordinate additional joint milestone initiatives between NJIT and Rutgers-Newark. The Music Initiative has actively recruited students from Rutgers-Newark to join the ensembles. During 2017-2018, three students from Rutgers participated in the wind ensemble. The joint NJIT-Rutgers-Newark Theatre Program brings many Rutgers-Newark Students to the NJIT campus to perform in five yearly theatrical productions. Through the Student Senate, NJIT student organizations have been encouraged to reach out to similar organizations at Rutgers-Newark for jointly sponsored events. (Ongoing)

**Objective: 2.5 Professional Success**

 *2.5.1 Promote Paths to Professional Success*

2.5.1.1 Prepare students to attain their first-choice destination upon degree completion. Employment outcomes for this year’s graduates continued to increase from previous years with 65% of our baccalaureate degree recipients reporting full-time employment within four months of graduation. It’s important to note that 17% of our BS/BA graduates reported that they have enrolled in full-time graduate study this fall (see below). Taken together, 82% of our graduates have attained their degree completion objective of full-time employment or graduate study within four months of graduation. 75% of our master’s degree graduates reported full-time employment within four months of graduation.  While this percentage is inclusive of graduate students who have remained in a previously attained position, it is important to note that for the majority of graduates this was a newly attained job. While the national starting salary average for all U. S. college graduates declined by 2% this year to $50,516, NJIT graduates received a raise even before their first day of work. The average starting salary for all reporting 2018 NJIT BS/BA graduates is $63,741; an increase of 5.4% from last year’s class and 26% higher than the national average. The highest paid undergraduate majors this year are degree recipients in Human-Computer Interaction ($81,000) and Computer Science ($73,742). Chemical Engineering, Computer Engineering, and Computer Technology majors all earned starting salaries of just under $70,000 per year. NJIT Master’s degree recipients also fared extremely well with the average starting salaries for ten different majors exceeding $70,000, and four different majors whose graduates all exceeded $83,000 per year. The first choice destination of most of our new degree holders relates to full-time employment. This year, 17% of our bachelor’s degree and 1% of our master’s degree recipients indicated that they will enroll in full-time graduate or professional school during the fall 2018 term. This is 4% higher than last year’s class and surprising given the strength of the labor market for STEM graduates. The NJIT degree serves as excellent preparation for advanced study. As in past years, NJIT graduates have been accepted to some of the most prestigious graduate degree programs. The primary source of student career development and job attainment assistance is facilitated through CDS. This is accomplished through one-on-one sessions with career advisors, design and facilitation of workshops to teach and hone job search and marketing skills, assisting students to gain a clear understanding of their career options and workplace requirements, exposing them to experiential education opportunities, and helping them obtain meaningful employment in a specialty consistent with their education, experience, and personal goals upon graduation. Paths to professional success occur throughout the university. For example, by changing doctoral degree credit requirements to require earlier and more substantive input from dissertation committees. Ph.D. students now complete important program milestones much earlier. They all present their dissertation proposals before the end of their third year in the program and graduate earlier on the average. Additionally, the PSM program options and applied MS degrees can help students meet their professional objectives faster. This tactic will be assessed by the average reduction in time to complete doctoral NJIT degrees. *(Ongoing)*

2.5.1.2 Provide professional development workshops. The Department of Civil and Environmental Engineering offered every senior a workshop on review and preparation for the FE exam during the 2015-2016 Academic Year. In AY2016-2017, the department purchased a 68-hour online course comprised of modules with assessment tests to monitor preparation and made it available to all students planning to take the FE exam. Also, the department sponsors the FE exam registration fee for all students who successfully pass it. The NJIT FE results for the period 1/2018-6/2018 are given below. Fifty-one students in Civil Engineering, six students in Electrical and Computer Engineering, 12 students in Mechanical Engineering, one student in Industrial Engineering and two students in Chemical Engineering took the FE exam. The passing rates were 53%, 17%, 92%, 0% and 50%, respectively. This tactic will be assessed by the percent of junior and senior CE and ME students passing the exam and will be compared to the national average success rate. *(Ongoing)*

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2.5.1.3 CDS will launch on July 1, 2018, a comprehensive client relationship management system entitled Handshake. The platform sits on top of a shareware system, and NJIT will now have access to the nearly 200,000 employers who use the system to manage their campus recruiting efforts. Employers wishing to engage with us can easily do so by broadcasting a job posting for many schools at once with no additional charge. We expect job postings to dramatically increase as the average career center switching to Handshake sees a 60% increase in Employer Engagement. With this transition, we hope to see more interest from new employers, increased interest in recruiting options such as Career Fairs and On-Campus Interviewing, and overall stronger outcomes for our graduates. Also, we need to reactivate the career development course. In the past, CDS hosted a career development course for sophomore students. Reaching beyond job search skills such as resume weiting and interviewingng techniques, a newly constructed career development course will include all elements of designing and implementing a comprehensive career development plan that encompasses soft and hard skills development, effective techniques for job searching, giving students effective tools and instill confidence in future graduates that they can manage their careers beyond graduation. Students should receive career advisement consistent with their majors. The primary source of student career development and job attainment assistance is facilitated through CDS. This is accomplished through one-on-one sessions with career advisors, design and facilitation of workshops to teach and hone job search and marketing skills, assisting students to gain a clear understanding of their career options and workplace requirements, exposing them to experiential education opportunities, and helping them obtain meaningful employment in a specialty consistent with their education, experience, and personal goals upon graduation. (*Ongoing*)

 *2.5.2 Promote Engagement with Intended Professions*

2.5.2.1 Promote and support student engagement with professional societies on campus. Various student chapters of professional societies (especially in engineering) get financial support from the corresponding department and the NCE Dean’s discretionary funds for on-campus meetings or the support of students participating in regional and national competitions. There are approximately 40 student organizations on campus with academic/pre-professional focus. 2-5 of them are not recognized by the student senate (e.g., ASCE and ASME student chapters). Almost half of them are affiliated with the NCE. The membership of these organizations ranges from 50 to 350. 1-3 organizations participate in competitions. Members have presented papers and posters at conferences and workshops. Several organizations host on-campus events with companies for the benefit of the students (e.g., resume workshops, networking, interview sessions). As of fall 2018, there are five competitive teams, 23 professional societies, and 136 registered student organizations.  Of the latter, 23 are social Greek Fraternities and Sororities, and the rest are a combination of cultural/spiritual, academic/professional, advocacy/service, and recreational/arts organizations. We currently do not have the numbers of students involved, but with new software currently in its implementation phase, we will be able to gather that data quite easily.  Each organization typically has four E-board positions (President, Vice President, Secretary, Treasurer), so at the very least organizations have four members, but most have many more.  A rough estimate is that at least 1,000 students are involved in student organizations and fall 2018 appeared to be an especially strong semester of recruitment. This tactic will be assessed by the number of student members of the on-campus professional societies and the placement of student teams in competitions. *(Ongoing)*

2.5.2.2 See 2.5.1.2. In 2017, 131 NCE students across all majors took the exam and the passing rate was 54.96%. This tactic will be assessed by the number of students opting to take the exam while still at NJIT as well as the average passing rate for those attempting the exam. *(Ongoing)*

2.5.2.3 Connect students with employers to enhance their job opportunities and broaden their networks. CDS is in a unique position to facilitate interaction between students and employers. Annual fall and spring career fairs are signature events where over 2,000 students and 200 employers exchange information and network. Similar opportunities occur in reverse career fairs, on-campus interviewing of students by employers, resume day and practice interviews conducted by employers on campus, and company-led information sessions. At the annual employer awards recognition event, student organizations honor those organizations that have had the most impact on the student members. Employers meet with students and offer their business expertise during the annual diversity and networking dinner. Students are also represented on the CDS Advisory Board. CDS facilitated record numbers of employer information sessions this year; more than 50 organizations visited campus to meet with our students. (*Ongoing*)

2.5.2.4 Connect students with alumni through networking and recruitment. Students have expressed their interest in more contact with NJIT alumni. CDS yearly partners with Alumni Relations for Speed Networking, where alumni come back to coach students on networking skills and share industry insights. CDS established the Campus Champions program, where alumni act as a conduit from their companies to full-time candidates from NJIT graduates. Alumni are also given special recognition at CDS career fairs so that students can readily identify them. (*Ongoing*)

 *2.5.3 Assess Student Professional Success*

2.5.3.1 Track alumni to periodically assess their success and satisfaction in their professional careers by initiating a comprehensive survey with an outside vendor. Career Development Services in collaboration with the Office of Institutional Effectiveness annually conducts a First-Destination Survey for our entire graduating class.  For the Class of 2018, data collection began as early as October 2017.  To increase our knowledge rate, multiple data sources and tactics were employed beyond the traditional direct email surveying methods and the results provided directly by our students and employers. As of September 30th, we collected information on the post-graduation plans of 1,191 of our 1609 BS/BA graduates for a knowledge rate of 74%. Similarly, among our Masters’ recipients, we have collected information from 717 of our 1,059 graduates, a 67.7% knowledge rate. Alumni surveys are administered every two years for graduates with Bachelor’s degrees who graduated 2, 4, and six years prior, and graduates with MS and Ph.D. degrees who graduated 2, 4, and six years prior. The most recent surveys were done at the end of the 2016-2017 academic year and go back to 2005. In response to Q18 on the 2016-2017 undergraduate survey, “How satisfied are you with your current job?,” 33.53% answered satisfied and 42.53% answered very satisfied (total of 76.06%). In response to the same question on the 2016-2017 graduate survey, 46.4% answered satisfied, and 32.8% answered very satisfied (total of 79.2%). For 2017-2018, Q3 of the survey asked: “Overall, how satisfied are you with your undergraduate education at NJIT?” 44.85% answered Satisfied, and 29.9% answered Very Satisfied (total of 74.75%. This tactic will be assessed by the continuing to track response to the periodic undergraduate alumni survey *(Ongoing)*

2.5.3.2 Effectively survey alumni to determine their satisfaction with their experiences at NJIT through a review and revision of the annual alumni survey process. The responses to Q.3, “Overall, how satisfied are you with your education at NJIT?,” on the same surveys mentioned in 2.5.3.1, 48.65% of alumni who had received a graduate degree answered satisfied, and 27.7% answered very satisfied (total of 76.35). Alumni who had been awarded an undergraduate degree answered 44.85% satisfied and 29.9% answered very satisfied (total of 74.75%). For 2017-2018 the responses were 43.01% and 27.98% (total 70.99). *(Ongoing)*

v

**Priority 3 - Scholarly Research**

**Objective: 3.1 Faculty Roles in Research**

 *3.1.1 Increase Participation of Current Faculty in Research*

3.1.1.1 Develop policies to encourage research by sharing indirect income among primary investigators and academic units and assuring start-up funds for new faculty. The policy of indirect cost (overhead) return was developed and implemented. A part of the indirect costs has been shared with principal investigators, departments, centers, and colleges. This tactic will be assessed by growth in external funding and the number of faculty with active funding *(100% Complete).*

3.1.1.2 Increase efforts to fully recover associated research expenditures with a policy on Indirect Costs Return (Overhead) developed through the Faculty Research Advisory Board (FRAB), faculty senate and administration. In FY19, more than $590,000 in overhead return is being provided to about 140 eligible faculty, chairs and deans to re-invest into the research support. Progress on this tactic will be assessed by an increase in number of faculty with active funding. *(100% Complete)*

3.1.1.3 Establish a competitive internal seed-funding program for innovative and exploratory research. From FY15 to FY19, 105 Faculty Seed Grants have been awarded involving 156 faculty members. Progress will be assessed by the number of external grants received by the recipient of faculty seed grants. More than 80% faculty who received Faculty Seed Grants in FY15 and FY16 received external grants. All NJIT faculty receiving NSF CAREER awards in FY17 and FY18 received Faculty Seed Grants in earlier years. *(100% Complete)*

3.1.1.4 Re-engage faculty not currently active in scholarly research by integrating them into existing or emerging projects by setting up faculty seed grants and undergraduate student seed grants. Many faculty who have not been active in research have started projects alone or with undergraduate students through faculty seed grants. Progress will be measured by the number of new proposals submitted and grants received by faculty who have not been active in past 3 or more years. *(Ongoing)*

 *3.1.2 Integrate Research into the Curriculum*

3.1.2.1 Advance faculty research in conjunction with academic curriculum content by encouraging research-active faculty to offer opportunities for team-based research with other faculty, graduate students, and undergraduate students. MS and Ph.D. programs in Business Data Science were approved this year. They will enable the Martin Tuchman SOM faculty to advance their research objectives while also educating graduate students. Assessment of this tactic will include the number integrated programs. *(Ongoing)*

3.1.2.2 Develop a faculty research lecture series open to all students by supporting departments that have established research lecture series linked with graduate-level seminar requirements. Seven institutional showcase, presidential forums and numerous distinguished lectures at the college and department levels were organized in AY17. Progress on this tactic will be measured by the number of institutional and college/departmental seminars and showcase events. *(Ongoing)*

**Objective: 3.2 Academic Research Enterprise**

 *3.2.1 Foster Regional, National, and International Collaboration*

3.2.1.1 Strengthen collaboration among researchers at NJIT and other universities in the region by establishing more collaborative research centers, adding significantly to the existing group of NJIT research centers which involve faculty from other universities. More than 60 collaborative projects have been funded in FY18 involving other institutions and organizations. Assessment of this tactic will be based on the increase of number of proposals involving two or more institutions/universities. *(Ongoing)*

3.2.1.2 Support international collaborative research and exchange programs by developing a streamlined process and protocol to facilitate establishing MOUs, contractual agreements policies, and protocols for international visiting research scholars and students. This activity has been implemented. Sixty one (61) international collaborative projects, contracts, and exchange program MoUs are active in FY19. Measurement of progress will be based on the number of international collaborative projects and its growth. *(Completed)*

 *3.2.2 Improve Communication with Faculty on Research Opportunities*

3.2.2.1 Disseminate grant and fellowship opportunities by distributing a description of grant opportunities to members of the university community. Program Directors from funding agencies have been invited to provide information on current and future funding programs to NJIT faculty and staff. Assessment of this tactic will be based on the increase of external funding. *(Completed)*

3.2.2.2 Communicate NJIT researcher accomplishments through a weekly newsletter sent to all faculty featuring recent grants, events, and grant opportunities. Assessment will be based on the increase of external funding. *(100% Complete)*

 *3.2.3 Support Research Activities and Infrastructure*

3.2.3.1 Refine and streamline the administrative infrastructure for research support by integrating grant management and accounting operations. Sponsored Research Administration and Grant & Contract Accounting offices have been merged into the Office of Research to provide seamless support from the identification of grant opportunities to grant closing. Streamlining of purchase requisitions and personnel requisition processes have been planned. The proposal submission module is fully operational and being used since January 2017 for all proposal submissions. Grant award reporting module has been implemented. Reporting dashboards of proposal submission and award are being provided to deans on a regular basis with real-time access. These dashboards are being customized for chairs and faculty. The IRB module is implemented and available to faculty. Other research compliance modules including IBC are being implemented and will be available shortly. Assessment of progress will be based on the efficiency of the tasks including purchase requisitions, personnel requisitions, budget transfer and timely billing. *(Ongoing)*

3.2.3.2 Offer training and support in grant-proposal preparation by providing workshops and grant writing assistance. Open House events are being offered to address and answer questions related to all functions of proposal submission and grant management. The Faculty Research Advisory Board (FRAB) meets to discuss grant management at multiple events organized by the Office of Research every semester. Faculty Development Workshops are offered covering research proposal preparation and submission training, scholarly research publications and professional development over six weeks to new faculty. Specific workshops on target funding opportunities such as NSF CAREER funding program have been offered to faculty with follow-up mentoring with senior faculty at the department and college levels. Assessment will be based on the increase of external funding *(100% Complete)*

3.2.3.3 Develop searchable databases of all records of research awards by purchasing and implementing Streamlyne to improve quality of the research database. The Streamlyne research proposal submission system has been implemented and is being used by faculty for proposal submissions. Research expense and burn rate reporting has been implemented. Since Fall 2017, monthly research expense reports on all grants are sent out to all PIs, chairs, and deans. Assessment will be based on the increase of external funding and efficiency of approval and monitoring processes. *(100% Complete and Being Updated)*

3.2.3.4 Improve the NJIT research grant management and accounting information by developing and delivering training sessions to faculty and staff on the use of Streamlyne Grant Management Software system for proposal submission and online grant billing. A Banner Finance module will expedite grant invoicing and the collection of grant receivables, improving the university’s ‘grant-related’ cash-flow. A protocol is being developed to manage proactively and follow-up on grants and contracts expenditures versus elapsed duration of the awards to ensure optimal grant management. Streamlyne-Banner integration is being implemented and expected to be completed by Spring 2019. Assessment will be based on the efficiency of proactively following up on the the grant billing and monitoring. *(Ongoing*)

3.2.3.5 Reserve the “center” designation for consistently successful research initiatives and develop productive labs into centers by implementing a policy and protocol for the establishment of new research centers and the review and renewal of existing research centers. Five new research centers and three new research institutes (Institute of Brain and Neuroscience Research, Leir Research Institute of Business, technology, and Society, and Institute of Space Weather Sciences) have been established. Assessment will be based on the increase of external funding*. (100% Complete)*

**Objective: 3.3 Multidisciplinary Research**

 *3.3.1 Adopt Multidisciplinary Academic Research Approaches*

3.3.1.1 Promote multidisciplinary research through internal meetings to foster building collaborative research teams. Several meetings have been conducted with faculty internally as well externally to promote core and multidisciplinary research as well as multi-institutional collaborations. Assessment will be based on the increase and number of multi-disciplinary and multi-institutional proposals. *(Ongoing)*

3.3.1.2 Assure recognition and reward for faculty engaged in multidisciplinary research using Streamlyne to provide a database, which makes possible recognition and reward for collaborative research. The collaborative research through research centers and institutes is being rewarded by increased overhead return and operating budgets for increased infrastructure support. Letters to faculty, chairs and deans are sent when a grant award is received. Assessment will be based on the research satisfaction surveys. *(Ongoing)*

3.3.1.3 Integrate research into academic experience at all levels encouraging doctoral students into multidisciplinary research efforts, provide teaching assistants across departments, and developing interdisciplinary and multidisciplinary curricula. The doctoral dissertation committees require members from different departments and other institutions. Teaching assistants are assigned to colleges to be reallocated to department and interdisciplinary programs. Number of courses across different academic programs and number of interdisciplinary academic programs such as programs in data science have been increased. Assessment will be based on the number and percentage of students involved in research. *(Ongoing).*

**Objective: 3.4 Economy and Technology Development Partnerships**

*3.4.1 Economy and Technology Development Partnerships*

3.4.1.1 Engage the private sector through the university’s nonprofit corporation, NJII. NJII now has launched 12 industry-facing business units (iLabs and core labs), each of which is generating program activity in partnership with the private sector and government. Since NJII launched in 2014, it has helped more than double the impact of NJIT’s economic and technology development mission as measured by economic and technology-related (NJII and NJII@NJIT) expenditures, which have increased from roughly $30M in its first year of operation to nearly $70M in FY 2018. This increase in impact has been accomplished with significant productivity increases in the use of institutional funds, with NJII now leveraging over $20 in contracts and sponsored awards for every dollar invested by NJIT, a significant increase from NJII’s beginning. Its growing portfolio offers Innovation as a Service, which spans a robust innovation model ranging from 1) ideation and agile strategy to 2) demonstration and prototyping platforms to 3) education and training, and 4) innovation commercialization and enterprise development.

NJII’s work with NJIT academic units continues to expand as its relationships and assets grow. Highlights include continued collaboration with the College of Science and Liberal Studies to launch a graduate certificate program in biotechnology, embedding its chief data analytics scientist in the Ying Wu College of Computing to advance industrial partnerships, and continued partnership with chemical engineering around building an NJ remediation agenda. NJII’s Defense and Homeland Security iLab continues to bring funding from Picatinny Arsenal to fund NJIT researchers around projects such as additive manufacturing and technical assessments of IP. Some of the notable private sector partners include Hackensack University Medical Center, AtlantiCare, Lockheed Martin, Prudential, Panasonic, the US Air Force, Nokia, IBM, Bell Labs, Celgene, Novartis, Merck, Johnson & Johnson, Pall Pharma, GE Life Sciences, Lutron, and the State of New Jersey to name a few. The NJIT/NJII Business Engagement Team and University Development partnered to inaugurate a “Corporate Engagement Strategy” process and document to integrate university-wide strategies for targeted corporate partners. As the metrics reported above suggest, assessment will be based on the number of external partnerships and the amount of funding. (Ongoing)

3.4.1.2 Faculty members have also been encouraged to engage in entrepreneurial activities on behalf of the university. NJIT was designated an NSF I-Corps site in 2015 and, to date, 126 mini-grant awards have been provided to NJIT student and faculty inventor teams to explore commercialization of technologies. Several faculty members have obtained approval to participate in startup activities related to technology that they have developed at NJIT, including microfluidic chips for diagnostic testing, thin films, membranes, biomaterials, advanced vision therapy, vacuum technology, and data mining to name a few. Also, several teams have gone to national I-Corps projects with funding of $50K per team. Teams have also obtained funding from Federal SBIR, the Philadelphia Science Center, Keck Foundation and the New Jersey Health Foundation to further advance commercialization activity. NJIT has also received a supplement to the I-Corps site grant to focus on support for life sciences female PhDs and post docs from across the state. Assessment will be based on the number of teams in translational/entrepreneurial phase. (Ongoing))

3.4.1.3 Reorganize the patent application structure to move it into the Research Office. The patent application process has been moved to the Office of Research with joint reporting to the Office of General Counsel. The IP Committee has been re-organized with the additional of 8 faculty members representing all colleges and research areas. The IP processing protocols for assessment of invention disclosures for submission of provisional and non-provisional patents have been established and posted on the Research website. Till date (5/14/2018), NJIT has obtained a total of 415 IP assets including all acquired patents, and provisional and no-provisional pending patents. *(Ongoing)*

 *3.4.2 Serve as a Catalyst for Regional and Economic Growth*

3.4.2.1 Capitalize on state and federal funding to develop large-scale technology projects through the NJIT Business Engagement Team (BET), which includes interested academic deans. The BET again evaluated NJIT’s best partnership opportunities and identified more than a dozen high priority companies with whom to engage and deepen relationships with NJIT. As mentioned above, to better integrate and coordinate university-wide efforts, BET and University Development partnered to inaugurate a “Corporate Engagement Strategy” process and document to advance coherent university-wide strategies for targeted corporate partners. Broad-scale partnering meetings and company engagements have occurred or are imminent with Stryker, Bell Labs, Lutron, AECOM, Celgene, the City of Newark, Intersection/Sidewalk Labs (Google companies) among other concerted efforts stemming from this collaborative structure. Assessment will be based on the number of technology projects. (Ongoing)

3.4.2.2 Expand the university’s presence in state, regional, and national economic development activities by inviting faculty members and students to participate in economic and technology development programs. NJIT hosts three NJ Talent Network programs, including advanced manufacturing. NJIT continued to lead the NJ MarketShift program with its focus on diversifying NJ’s aerospace and defense companies. NJII Healthcare Delivery Systems iLab’s work ($15M+/yr., including nearly $2M in revenues from private sources) now includes assisting physicians to transform their practices by using electronic medical records. NJII hosts the NJ Unmanned Aerial Systems Test Site and the JP Morgan Chase-funded Healthcare IT cluster development program. As well, it also launched its Smart City Test Bed partnership with Newark and a dozen or more companies formally launched its activities during the fall of 2016.

As reported previously, NJII led a major effort to win a NIST-funded U.S. Institute for Manufacturing Innovation in biopharmaceuticals that represent a broad set of NJ partnering companies/organizations, government, research universities (including NJIT), and industry organizations. While the NJ proposal did not receive funding, Rutgers and NJII press forward to develop industry-facing centers in continuous pharmaceutical manufacturing and cell therapies. NJII has also formed statewide frameworks for partnering. In addition to the NJ biopharmaceuticals and remediation efforts mentioned above, NJII has convened a set of statewide leaders to focus on marketing and strengthening the NJ aerospace and defense sector in partnership with NJ state economic development organizations. Assessment of this tactic will be based on the number of economic development programs and funding. (Ongoing)

3.4.2.3 Evolve the NJIT and NJII Innovation Commercialization product and service functions and products targeted toward large companies and small, medium enterprises. NJII led the effort to evolve the traditional EDC programs that support entrepreneurs into a new framework that leverages the assets of the university and the programs of NJII to create a sustainable model for technology business growth. NJII’s iLabs feature sector specific scale-up, integration and demonstration projects such as a statewide Healthcare Information Exchange, the Newark Smart City testbed, Biopharmaceutical pilot manufacturing labs, and UAV flight center. The centers serve as a magnet to cluster related companies in a micro-ecosystem that EDC has already proven to be advantageous to business growth, and access to real-world demonstration sites further enhances growth rates. NJII assets and capabilities combine with NJIT’s traditional EDC incubation program to a new framework for NJIT/NJII innovation commercialization with far greater potential than the EDC alone. Capabilities are offered in the areas of Technology Adoption (focused on large companies), Technology Acceleration (focused on smaller entities), an enhanced EDC Space+ program (focused on early-stage companies that require a location) and a set of investment fund management service (focused on angel, VC and PE firms).

**Objective: 3.5 Facilities and Administrative Planning**

*3.5.1 Optimize Start-up Processes and Resources*

3.5.1.1 Provide flexibility of start-up funds usage for all new hires throughout their pre-tenure period by insisting that start-up packages provide access to funds for three years and may be extended in special circumstances. Progress on this tactic will be measured by the investment in start-up packages and successful completion of third-year and tenure reviews. *(100% Complete)*

3.5.1.2 Ensure that new faculty have fully functional research laboratory space upon appointment by assigning lab space at the time or right after the offer of acceptance. Additionally, new faculty hired in FY15-19 have had their laboratories set-up and ready in early September for Fall, and in the first week of January for Spring semester. In Fall FY19 lab renovations for most new faculty hired in Fall were completed by November. Assessment will be based on the number of renovations labs ready within two-three months of the start of the semester when new faculty is hired. *(Completed).*

 *3.5.2 Assess and Prioritize infrastructure*

3.5.2.1 Assess infrastructure and document capacity to determine ability to support scholarly research through the assessment and systematic evaluation of research labs and center spaces. Specific lab spaces have also been upgraded to meet research needs. Assessment will be based on research satisfaction surveys.  *(Ongoing)*

3.5.2.2 Optimize existing infrastructure use and the prioritizing of needs for new facilities, equipment, and institutional infrastructure. By assessing research lab space, research needs and faculty hiring plan, specific research lab/center spaces will be identified and prioritized to meet high priority needs. Assessment will be based on research satisfaction surveys *(Complete; protocol is implemented and ongoing on yearly basis)*

 *3.5.3 Share Facilities with Council for Higher Education in Newark (CHEN)*

3.5.3.1 Expand shared-use facilities, equipment, and institutional support infrastructure, by expanding the University Heights Science and technology park. NJIT is also pursuing a “High Technology Incubator” to promote collaboration between the universities. Progress will be measured by the number of companies in the incubator and total funding. *(100% Complete)*

* + - 1. Collaborate with industry to offer faculty and student access to equipment not otherwise available on campus, by arranging for the first piece of equipment, courtesy the Stryker Corporation, to be shared through the NJIT Makerspace. The Makerspace at NJIT will continue to foster relations with industry to provide shared-use equipment. Assessment of this tactic will be based on the number of users and projects associated with Makerspace. *(100% Complete)*

**Objective: 3.6 Improve External Recognition on Scholarly Research (New objective)**

*3.6.1 Enhance Professional Recognition*

3.6.1.1 Encourage and increase the number of faculty activities such as service on editorial boards, conference organizing committees, review panels and chairing teams/groups of professional experts on-site visit teams and recognize and reward these activities in a variety of ways. A new faculty Committee on International Programs Promotion Committee has been established. In FY19, 63 international projects, collaborations and exchange program MoUs are active. Progress on this tactic is based on the increase and number of faculty serving on conference committees, editorial boards and review panels. *((100% Complete and ongoing protocol for faculty nominations)*

3.6.1.2 Recognize and reward professional awards and honors. Help identify faculty and assist in submitting their nomination packages for state and national honors, such as National Academy of Inventors, NJ Hall of Fame of Inventors. Progress on this tactic will be measured by the increase and number of faculty receiving professional awards and honors. In FY19, there are 6 Fallows of the National Academy of Inventors at NJIT. A new Director of Special Projects-Faculty Awards has been hired to help submission of faculty nominations to prestigious professional awards. *(100% Complete and ongoing protocol for faculty nominations)*

3.6.1.3 Encourage initiatives that organize and promote conferences at NJIT. Several international conferences with IEEE, American Physics Society, American Mathematical Society, and Amazon have been organized at the campus. Progress will be measured by the number of professional conferences and events at NJIT. *((100% Complete and ongoing protocol for faculty nominations)*

**Priority 4 – Community**

Objective: 4.1 Global Community

4.1.1 Value Diversity

4.1.1.1 Adopt an NJIT definition for diversity that includes: race, sex, sexual orientation, gender identity and expression, marital status, age, religion, national origin, ancestry, citizenship, disability, and veteran status. A Diversity Plan Framework—which includes an NJIT definition of diversity—has been completed and was submitted, in May 2017. The document is now under review by the current vice president for human resources. See also section 4.3.1.2 below. (75% Complete)

4.1.1.2 Accept diversity as a core value of NJIT by focusing on the creation of visible activities in support of diversity and multi-cultural affairs on the campus. Over eighty-five campus student and staff diversity activities and programming have been held. A wide variety of multicultural awareness activities, including cuisine, dance, and religion have also been sponsored. Also, student staff host peer to peer dialogues that focus on deeper diversity topics such as racism, sexism, ageism and religious intolerance, including recent programs on issues facing the LGBTQ student population continue to be held. (50% Complete)

4.1.2 Support Student Diversity

4.1.2.1 Foster a safe university environment that respects differences and encourages inclusiveness. Mandatory sexual and other unlawful harassment training has now been completed by all NJIT employees. All NJIT students are also now required to complete on-line Title IX training (75% Complete)

4.1.2.2 Ensure that the university’s academic curriculum creates global awareness and promotes tolerance and understanding among students. Course syllabi being centralized in the new Digital Commons will allow for a comprehensive analysis, of diversity/multicultural course components across the curriculum. (25% Complete)

4.1.2.3 Train dedicated staff in departments, schools, and colleges to enhance understanding and communication with international students. C-CAPS hosted a workshop on Immigration Rights in April which had two speakers - an attorney from off-campus who specializes in immigration issues and a staff member from NJIT's Office of Global Initiatives. The Office of Global Initiatives has been actively engaged throughout the year in efforts to increase awareness of NJIT’s international student population and their needs. (50% Complete)

4.1.2.4 Increase the percentage of women students by supporting targeted activities that encourage accepted female students to matriculate. This will help NJIT better reflect the larger community it serves and will help maintain a stable undergraduate enrollment. This new tactic, incorporated into the *2020 Vision* strategic plan in January 2018, builds on ongoing efforts to covert accepts to matrics—e.g., the increasingly well-attended brunch programs the Murray Center hosts for women accepts and their families during Open Houses. In addition to the brunches, during AY2018-2019 personal telephone calls were made by current YWCC female students to accepted female freshmen, and yield postcard and emails were sent to all accepted female freshmen highlighting the Murray Women’s Center. These strategies are being assessed by monitoring enrollment and yield for female students. We will continue to develop additional strategies to positively impact the yield and enrollment of new female students.

4.1.3 Simplify the Process for International Collaboration and Exchanges

4.1.3.1 Establish larger-scale, long-term exchange programs with universities in other countries. Student exchange programs have been promoted with faculty. The Offices of the Provost and Global Initiatives have continued to spearhead the development of international partnerships to promote student exchange. NJIT currently has 33 valid MOUs for student exchange and joint degrees. The Office of Global Initiatives has continued to promote these opportunities to all students. This is being assessed by monitoring the number of MOUs. (100% Completed and ongoing)

4.1.3.2 Streamline the approval process and assign individual responsibility for international agreements. The policies and protocols for international agreements and visiting scholars have been established and posted on the website. To date, we have more than 59 international collaborators through projects, agreements and visiting scholars program.  The assessment will include the number and growth of international agreements. (100% Complete and ongoing)

4.1.3.3 Encourage and simplify visiting and courtesy appointments.

The policies and protocols for visiting scholars and courtesy appointments have been established and posted on the website. At present, NJIT has 25 international visiting scholar appointments. The assessment will include the number and growth of visiting scholars and courtesy appointments. (100% Complete and ongoing)

4.1.3.4 Promote significant research projects between NJIT and international researchers.

The Office of Research has been promoting international collaborative research through NJIT research centers. At present, NJIT has 23 international projects with executed agreements. The assessment will include the number and growth of international projects. (100% Complete and ongoing.)

4.1.4 Appoint NJIT Faculty as International Community Representatives

4.1.4.1 Leverage the globally diverse NJIT faculty as spokespersons on campus and abroad. The Office of Research has initiated an International Programs Support Committee with faculty representatives from each college and Director of the Office of Global Initiatives. The committee is working on developing a report and recommendations on enhancing international research collaborations, student-exchange, and visitor programs. (10% Complete)

4.1.4.2. Cultivate and communicate the global perspective of NJIT.

The International Programs Support Committee with faculty representatives from each college and Director of the Office of Global Initiatives is developing recommendations on enhancing international research collaborations, student-exchange, and visitor programs. The Committee is working to create a more robust communication between the Office of Global Initiatives and the Office of Strategic Communication. (10% Complete)

Objective: 4.2 University Governance

4.2.1 Facilitate the Integration of Shared Governance

4.2.1.1 Acknowledge the importance of the faculty’s role in the university community through the Faculty Senate. The faculty senate meets twice monthly and is represented on all shared governance standing committees and the University Senate. Assessment has taken place through faculty surveys about governance satisfaction. (100% Complete)

4.2.1.2 Recognize the importance of all other campus stakeholders and ensure their voice is heard through the University Senate. The Lecturers and Educators Congress, Administrators Council, and the Staff Council continue to represent their constituents within the framework of shared governance. A new policy on the Hiring and Promotion of University Lecturers has been approved by the Faculty Senate and by the Provost. Assessment has taken place through lecturer, staff, and other stakeholder surveys about satisfaction with shared governance. (100% Complete)

4.2.2 Cultivate an Atmosphere of Civility and Mutual Respect Across the University Community

4.2.2.1 Emphasize the dignity of all members of the university community and the respect they deserve. The on-line training program “Unlawful Harassment Prevention” was launched in October 2017 for all faculty, staff, and supervisors. All faculty and staff have completed the program. New staff and faculty are expected to complete the training within 30 days of hire. (100 Complete)

4.2.2.2 Acknowledge the importance of the voice of the student body.

The student senate president and graduate student association presidents are voting members of the University Senate and the standing committee for human resources. The student senate president also serves on the Executive Committee. Student representatives attend Faculty Senate meetings and often serve on university search committees. They also serve on the planning/Accreditation committee (100% Complete)

Objective: 4.3 Diverse Faculty Leadership

4.3.1 Support Diversity

4.3.1.1 Establish a baseline for diversity assessment. The Faculty Diversity Liaisons have reviewed longitudinal faculty diversity data, by academic unit, and discussed how best to use this data to increase faculty diversity. Faculty search committees have been provided with candidate diversity profiles and tools for analyzing candidate pools. Faculty search committees are charged with, and provided support for, being more intentional and strategic in their searches to broaden the candidate pool. (75% Complete)

4.3.1.2 Expand the NJIT Affirmative Action Plan to include a comprehensive Diversity Plan.

The completed Diversity Framework (4.1.1.1) and the university’s updated Affirmative Action Plan--available as of December 10, 2018—will form the basis of an expanded document that will included individualized diversity plans crafted by each academic unit in response to disciplinary pool data and strategic goals. (50% Complete)

4.3.2 Coordinate Recruitment and Retention

4.3.2.1 Engage college and school deans to develop plans for achieving faculty diversity. The Diversity Liaison Group has met, reviewed benchmark data, and discussed key parameters for School/College Diversity Plans in their units. (10% Complete)

4.3.2.2 Increase coordination of efforts to recruit and retain women and minority faculty by appointing a diversity liaison officer at college and university levels. A Diversity Liaison Group has been formed, headed by the university’s Faculty Diversity Liaison officer, with representatives from each school/college. The group met in the fall of 2018 with the VP, Human Resources and the Provost to review their charge and prioritize its activities in support of recruiting and retaining women and minority faculty. (75% Complete)

4.3.2.3 Coordinate resources and information to recruit diverse faculty at college, school and department levels. The Faculty Search and Selection Guidelines (2016) and the new Policy on the Hiring and Promotion of University Lecturers (2017) together constitute a rich resource of procedures and best practices now available to all departmental search committees. These documents, plus face-to-face search committee training sessions conducted by HR, and the newly approved GRA to provide candidate pool research are part of a coordinated effort to increase the recruitment of diverse faculty. (50% Complete)

4.3.2.4 Cultivate potential faculty through conferences and speaking engagements.

Preliminary results from a baseline study of outside speakers invited by academic departments in 2016 suggest that the university was not yet using this tactic to cultivate potential women and minority hires. A follow-up study will be conducted. (25% Complete)

4.3.2.5 Train search committees for accountability, especially in implicit bias awareness. Search committee chair training was conducted in the Fall of 2018 with a focus on recruiting and hiring best practices, including the potential use of social media and technology for identifying or targeting potential candidates. All faculty search committee members were required to complete the web-based training program, “Uncovering Unconscious Bias.” (75% Complete)

Objective: 4.4 Diverse Administrative Leadership

4.4.1 Analyze the Availability of Potential Candidates

4.4.1.1 Develop a hiring program to promote diversity among administrators.

While there is no formal hiring program to promote diversity among administrators, a human resources representative is assigned to every non-faculty search committee to ensure hiring best practices are implemented. (50% Complete.)

4.4.1.2 Improve utilization of university databases containing administrator rank and diversity data. Quarterly review of employee download implemented to ensure complete and accurate data. (75% Complete)

4.4.2 Develop and Sustain a Diverse Talent Pool

4.4.2.1 Establish a diverse administrative talent pool to yield opportunities and pathways for professional growth and advancement. We continue to establish a diverse talent pool of administrators, through targeted recruitment utilizing open-position advertising. Recruitment of women and underrepresented minority candidates through targeted open position advertising is ongoing. In addition, the launch of the Management and Staff Academy and its professional development programs is open to all staff. Since the beginning of FY2019, 13 programs with 190 employees participating,

 (75% Complete)

4.4.2.2 Build relationships with professional organizations to diversify participation on the university’s volunteer leadership boards and include a statement of commitment to diversity in all volunteer boards. A preliminary analysis of the gender composition of NJIT volunteer boards has been completed, establishing a baseline against which the tactic can be measured. Twenty-three percent of the Board of Trustees members are female, but women make up only 8.5% of the Board of Overseers. Overall, 21%, of NJIT Advisory Board members are female, but the data varies considerably by unit: MTSOM-34%; CSLA-29%; CoAD-13%; YWCC-11%; NCE-10%. (25% Complete)

Objective: 4.5 Alumni Engagement

4.5.1 Promote Alumni Engagement

4.5.1.1 Promote a culture of alumni engagement and satisfaction built on passion and pride for NJIT.

The total number of active alumni volunteers has increased 75% from last year (to 353 YTD from 201). Total number of active alumni regional clubs stands at 10, with 2 additional clubs in formation. The total number of active alumni corporate clubs stands at 8, with one additional club in formation (Turner). The mobile-optimized Highlander Monthly e-newsletter was launched in November 2017; open rates have increased since it was launched and now average roughly 14% in a typical month.

4.5.1.2 Engage alumni in student recruitment, campus life, and career services.

For Campus life, alumni basketball pre-games are now open to students. Highlander Chats – monthly webinars with prominent alumni – are promoted and open to students. The Alumni Office sponsored the Beer Tent at Homecoming 2018 to raise awareness among students. Two students groups, the AKPsi Business Fraternity, and Theta Tau are co-advised by staff in the Development and Alumni Relations office. (75% complete).

For Career Services in early 2019, Highlander Nation, an online networking and mentoring platform for alumni, will open to students. The launch of Highlander Nation was, in large measure, a response to the results of recent surveys of alumni, which showed that alumni are most interested in serving as mentors to current students and recent graduates. (50% complete).

In Admissions, a recruitment brochure was co-designed by Alumni Relations and Admissions and mailed to 21,000 likely alumni who want to return for advanced degrees. Six alumni volunteers, representing NJIT’s colleges and from various professional backgrounds, wrote letters that will be sent to prospective NJIT undergraduate students who have not yet committed to attend. In spring 2019, alumni who are high-school teachers and principals are convening a teleconference to review alumni recruitment efforts at the high-school level. (50% complete).

4.5.1.3 Develop a strategic plan for alumni relations that employs best practices from across higher education and at peer institutions.

The original alumni relations strategic plan, developed in 2015, has been revisited and is in the process of being updated and revised. (75% Complete)

* + 1. Continuous Improvement of Alumni Engagement

4.5.2.1 Set clear, measurable goals and objectives for the improvement of alumni engagement.

Number of unique alumni attending NJIT events has decreased slightly: from 807 FY18YTD to 641 FY19YTD. A quarterly progress report was instituted in FY19, which includes and tracks 5-6 “top-level” quantitative and qualitative annual goals for all departments in the Office of Development and Alumni Relations. (100% complete)

4.5.2.2 Create metrics and establish standard reports on alumni engagement.A

An “alumni engagement scoring” system was created in November 2017. It uses event attendance, giving history, volunteerism, and communications to create a numerical score. Alumni Relations updates these alumni engagement scores on a quarterly basis; increasing the percentage of alumni scoring a 4 or higher (as of 9/30/18, up to 15.7%, compared to 15.4% as of 6/30/18 and 14.3% as of 1/31/18) will serve as an annual goal and is one of the goals tracked in the aforementioned quarterly progress report. (100% Complete)

A)

4.5.2.3 Use social media to build a digital-alumni contact list.

The mobile-optimized Highlander Monthly e-newsletter includes, as of April 2017, a regular feature asking alumni to keep their contact information up-to-date. As noted above, in spring 2018, Alumni Relations launched HighlanderNation, an online directory, networking, and mentoring platform for alumni. In spring 2019, HighlanderNation will open to students for mentoring by and networking with alumni. (50% Complete)

**Priority Five – Investments**

**Objective 5.1 - Educational Investment**

*5.1.1 Promote Teaching Excellence*

5.1.1.1 Develop the Institute for Teaching Excellence which held its inaugural lecture in September. The Institute moved to its permanent home in the Central King Building in January 2017 and is actively providing resources and programs to develop faculty, lecturers, adjuncts, and graduate students. Completion of the permanent location of the Institute for Teaching Excellence will be the assessment for this tactic. *(100% Complete)*

5.1.1.2 Guide instructors in developing their course learning outcomes and syllabi, using the appropriate surveys and assessments, this will help monitor and guide curricular change. The issue of developing course outcomes and aligning them with the assessment tools for a course (quizzes, exams, etc.) is being addressed both at the “Lunch at ITE” weekly series as well as during the ITE Workshops held in January, May, and August. Non-tenure/tenure-track faculty have also become a focus of training through workshops with a specific focus on developing adjunct faculty teaching skills and providing support for university lecturers to attend teaching and learning conferences. As an assessment, the percentage of course syllabi that have course outcomes will be utilized. To date, 58% of the programs have successfully passed the review process and have learning outcomes. The open and affordable textbook initiative was also successfully launched this past year. This program provided support to faculty who would develop low cost or free alternatives to textbooks for their classes, impacting over 1700 students and saving students over $160,000 (estimated). *(Ongoing)*

5*.1.2 Improve Academic Support*

5.1.2.1 Develop a ‘university commons’ by constructing such a space in the Central King Building. This facility now provides an integrated learning space for collaboration and tutoring. This space opened in January 2017 and includes the writing center and the math emporium. Currently, the feasibility of relocating the Learning Center to the commons is being studied, and costs are being developed. Completion of the university commons will be the assessment for this tactic. *(100% Complete)*

5.1.2.2 Create spaces for student study and interaction, especially in proximity to large lecture halls and classrooms. New study spaces will promote student interaction and collaboration. Construction has begun on the Makerspace, which will allow hands-on collaboration for students in all disciplines. The Central King Building opening in January 2017 added 7,400 square feet of student study and interaction space. The Life Science and Engineering Center opened in September 2017 and added student study spaces in common areas outside the research laboratories. The Wellness and Events Center north corridor and arena concourse provide locations for student interaction, study, and collaboration. Additional spaces will be constructed in subsequent fiscal years. A $10 million grant from the state will support expansion of the makerspace, growing the facility to nearly 20,000 gsf, providing for collaborative, experiential learning. Completion of the Board approved capital projects related to this tactic will be the assessment tool. *(Ongoing)*

*5.1.3 Revise Non-Tenure Track Compensation and Career Tracks*

5.1.3.1 Revise the current compensation and advancement structure for non-tenure track instructors through the formation of the Subcommittee on Non-Tenure-Track Instruction of the Faculty Senate Committee on Faculty Rights and Responsibilities (CFRR) which addresses issues of hiring and promotion policy for lecturers is ongoing.  It does not address adjunct status nor does it discuss compensation levels for lecturers.  It does propose moving hiring and promotion policy to the Faculty Handbook and the Provost's Office, in line with how Faculty Promotion and Tenure are now handled. Compensation for adjuncts has also increased in the past year, with an increase to a per credit minimum pay of $1,550. *(Ongoing)*

5.1.3.2 Create a non-tenure track full-time Professor of Practice position and seek the position’s endorsement by the Faculty Senate. The Professor of Practice position engages individuals who possess contemporary expertise in fields such as business, industry, government, the arts, and the professions. Creation of the position will be the assessment for this tactic. *(100% Complete)*

**Objective 5.2 – Faculty Renewal**

*5.2.1 Engage in Strategic Hiring*

5.2.1.1 Develop five-year hiring plans for each department, college, and school.

A comprehensive hiring plan spanning FY17 – FY21 has been developed at the college/department level. This list further defines the number of Tenured/Tenured Track, Performance/Opportunities Hires, University Lecturers, Professors of Practice, and Research Professors. This tactic will be assessed based on the actual faculty hiring versus the plan for each year. *(Ongoing)*

5.2.1.2 Encourage joint academic appointments and the development of clear guidelines for rewarding faculty who engage in research and education in multiple departments. In the past two years, there have been four joint appointments. Also, the Associate Provost for Research has identified research clusters which foster interdisciplinary research: Center for Brain Imaging, Big Data Center, Cybersecurity Center, Center for Solar Research, Center for Heliophysics, Center for Natural Research Development and Protection, and Center for Building Knowledge. Progress on this tactic will be assessed based on the completion of the guidelines and number of joint appointments made per fiscal year. *(Ongoing)*

5.2.1.3 Develop a plan to hire tenure-tenure track and tenured faculty in interdisciplinary areas.

The current faculty recruitment process is competitive, and our faculty start-up packages are competitive given the STEM fields that we are recruiting for. Assessment will be completed by examining the tenure-tenure track faculty versus the established hiring plan per college. *(Ongoing)*

5.2.1.4 Maintain an appropriate balance between faculty ranks. The comprehensive faculty hiring plan (F17-F21) has been designed to achieve this balance. The faculty plan includes targets to assess progress. *(Ongoing)*

5.2.1.5 Enhance faculty diversity through targeted recruitment and retention, by setting up a pool of funds for targeted hires. NJIT has established a pool of funds for targeted hires and has been utilizing this incentive to attract and retain underrepresented minorities and women. The FY18 hiring plan has successfully recruited from these groups. Traditional diversity metrics, such as the number of underrepresented minority and women faculty hires, will be used to assess progress. *(Ongoing)*

5.2.1.6 Develop family-friendly hiring practices by becoming a member of the Higher Education Recruitment Consortium (HERC), which works to connect academic spouses and partners with employment. As a member of the New Jersey - Eastern Pennsylvania - Delaware Chapter of the Higher Education Recruitment Consortium (HERC), which supports the efforts of each of its member institutions to recruit and retain outstanding faculty, administrators, and staff through the sharing of information and resources. NJIT’s HERC membership allows us to facilitate connections with other local colleges and universities that can help with dual-career issues. HERC maintains its list of dual-career resources and provides a dual-career search engine as well. Faculty hiring outcomes will be examined to determine if academic spouses and partners were able to obtain employment if requested. *(100% Complete)*

5.2.1.7 Develop a mentoring plan for both faculty and instructional staff by setting up specific plans within each college. CSLA has developed a plan and implementation is in process. The balance of the Colleges continue to work on the development of their plans. This tactic will be assessed based on the completion of the mentoring plan in each of the Colleges. *(Ongoing)*

*5.2.2 Refine Metrics for Faculty Assessment*

5.2.2.1 Understand the key factors in faculty success by asking colleges to provide data needed to identify useful metrics by the end of the year. The Faculty Senate has a subcommittee examining metrics and methodologies for faculty assessment. *(Planned)*

5.2.2.2 Benchmark teaching load based on scholarly research and funding at comparable institutions by analyzing the national Delaware Faculty Load Study. *(100% Complete)*

5.2.2.3 Implement a transition-to-retirement program where faculty can reduce hours, responsibilities, and compensation by offering a Faculty Separation Incentive Program (FSIP). *(100% Complete)*

**Objective 5.3 – Research Investment**

*5.3.1 Automate Pre- and Post-Award Administration*

5.3.1.1 Achieve excellence in the delivery of services in sponsored research through automation by fully implementing the Streamlyne (Ekualiti KC) – Grant Management Software system which was purchased at the end of FY15. Training started February 2016. The proposal submission module is fully operational and being used since January 2017 for all proposal submissions. Grant award reporting module is being implemented now and will be available with a dashboard of proposal submission and award reporting to faculty, chairs and deans by September 2018. The IRB module is implemented and available to faculty. Other research compliance modules including IBC IACUC are being implemented and will be available in Fall. This tactic will be assessed based on the percentage of submissions being made through the system versus the total number of submissions. (100% Complete)

5.3.1.2 Streamline grants management by launching electronic processing of grant expenses. A Banner Finance module will expedite grant invoicing and the collection of grant receivables, improving the university’s ‘grant-related’ cash-flow. A protocol is being developed to manage proactively and follow-up on grants and contracts expenditures versus elapsed duration of the awards to ensure optimal grant management. Research expense and burn rate reporting has been implemented. Since Fall 2017, monthly research expense reports on all grants are sent out to all PIs, chairs, and deans. Streamlyne-Banner integration is being implemented and expected to be completed by Fall 2018. Percent complete progress on the implementation of the Banner Finance module will be the assessment for this tactic. (80% Complete)

*5.3.2 Improve Research Resources, Services, Equipment, and Facilities*

5.3.2.1 Strengthen research resources and services by submitting a proposal to the National Science Foundation for an S-STEM Scholar Program–Pathway to a STEM-educated workforce. Two Letters of Intent were filed with the National Science Foundation to be able to compete for the Inclusion across the Nation Communities of Learners of Undergraduate Underrepresented Discoveries in Engineering and Science. *(100% Complete)*

5.3.2.2 Collaborate with other universities for enhanced sharing of assets by initiating multi-institutional collaborations. These include the establishment of NJIT Institute of Brain and Neuroscience Research and its partnerships with Rutgers University, Robert Wood Johnson Medical School, NJ Medical School, and Princeton University. NJIT participates with RUN and RWJMC in the multi-institutional Faculty Seed Grant in Neuroscience. One grant was awarded to the NJIT and the NJ Medical School. *(100% Complete)*

5.3.2.3 Promote environmental health and safety programs by appointing a new Director of Environmental Health and Safety in March 2016. Health and Safety programs are being re-written as a part of an overall Environmental Management System for NJIT. *(100% Complete)*

5.3.2.4 Update existing common equipment through the Facilities Master Plan which is being re-examined and aligned with *2020 Vision*. The Facilities Master Plan update was approved by the Board of Trustees in April 2018. The expansion of research spaces was included in the updated plan, which examined need through 2030. Currently, common core equipment labs are under construction, including facilities for a Nuclear Magnetic Resonance unit, Scanning Electron Microscope, and Transmission Electron Microscope. Annual expenditures on common equipment versus the departmental requests for such equipment will be utilized to assess progress on this tactic. Completion of the updated Facilities Master Plan will be the metric used for assessment of this tactic. *(100% Complete)*

5.3.2.5 Develop a university policy on lab space by updating the Facilities Master Plan. Laboratory space metrics have been scrutinized during the space planning effort and reduced from national benchmarks due to the strategic direction toward common facilities and flexible, open labs. These will be the basis for future research space needs planning within the Facilities Master Plan. The progress on this tactic will be assessed based on the actual development of new and renovated labs versus the recommended space metric. *(Ongoing)*

* + 1. *Enhance Institutional Support for Non-faculty Research Staff*

5.3.3.1 Establish policies and guidelines for appointments of research professors. *(100% Complete)*

5.3.3.2 Develop a policy for professional growth and institutional support of post-doctoral fellows, research professors, and other non-faculty research staff by fully engaging them with the Research Office in promoting their research. They participated in the Faculty Research Showcase, and NJIT Research Center Showcase events. (Ongoing)

**Objective 5.4 – Infrastructure Support for Facilities and Technology**

*5.4.1 Update the Facilities Master Plan for Physical Planning Decisions*

5.4.1.1 Update the Facilities Master Plan, including the evaluation of space utilization for effective physical planning decisions process by aligning it with the *2020 Vision*. A new Facilities Master plan update was approved by the NJIT Board of Trustees in April 2018 after a collaborative process, utilizing shared governance. Completion of the Facilities Master Plan will be the metric to assess this tactic. *(100% Complete)*

5.4.1.2 Ensure facilities development includes considerations for digitally-enabled common, instructional and collaborative spaces; short-term major construction projects; construction of an event center, renewal of capital assets, and parking. Construction of the Wellness and Events Center was completed in January 2018, and the associated athletic field will be complete in summer 2019. There is also a financial plan for the renewal of capital assets which will provide for over $20M annually by 2020. Collaborative instructional spaces were constructed in the Life Science and Engineering Building and the Central King Building. A new parking garage opened in the summer of 2016 to provide safe, convenient parking for the NJIT community. A facilities condition assessment was completed in the spring of 2017 to assist in targeting life-sustaining repair and maintenance for campus system. Renovations to Faculty Memorial Hall began in the fall of 2017 and will be complete by spring 2019. The Facilities Condition Index, which was produced through the facilities condition assessment, will be the metric used to assess this tactic going forward and has already shown the positive impact of the Capital Renewal and Replacement plan on the existing NJIT facilities. *(Ongoing*)

*5.4.2 Use the Technology Plan for Campus Technology Decisions*

5.4.2.1 Update the Technology Plan for campus technology by establishing an IST Capital Replacement and Renewal Schedule with original funding sources. The IST Capital Replacement and Renewal schedule continues to be maintained and shared with the Finance division. Three major IT planning activities are underway: (i) A plan to cloud source enterprise computing services. This would address business continuity and disaster recovery concerns for such services and avoid large lifecycle replacement costs of IT infrastructure (servers, storage) and building critical infrastructure (HVAC, UPS, power distribution). Capital costs would be smoothed as smaller, more predictable, annual operating costs. (ii) The university has received a Technology Roadmap grant from IBM to help plan for an advanced cyberinfrastructure to support the university’s evolving research agenda. (iii) Strategic priorities for an overall IT service strategy are being discussed with committees of the Faculty Senate. A new IST structure is currently being implemented, and the interim CIO will be focusing on the completion of the Technology Plan update in the coming months. *(Ongoing)*

5.4.2.2 Additional capital funds have been allocated for technology renewal in the amounts of $575,000 (FY17), $500,000 (FY18) and $350,000 (FY19). The CFO and CIO are developing a FY20 capital lease purchase proposal for campus-based IT infrastructure (network, classroom technology, etc.). The consideration of technology equipment renewal will continue in subsequent fiscal years. *(Ongoing)*