

TO: Joel Bloom, President
FROM: Fadi Deek, Provost and Senior Executive Vice President
Chair, *2020 Vision* Steering Committee
Date: June 30, 2017

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

Section 1---Narrative Overview

I. Introduction

2020 Vision set ambitious goals for change and growth at NJIT. The remarkable progress shows commitment in approaching the objectives set forth by the plan. Externally funded research has exceeded expectations. Applications for admission, retention rates, and graduation rates have also matched targets. As we enter the middle year of the strategic plan, however, we must assiduously monitor those KPIs where progress has lagged and revisit tactics where implementation has not met expectations. The coming year will be one for assessment and adjustment, knowing that great progress has been made and much remains to be done. It will also mark the beginning of preparation for the next strategic plan.

The *2020 Vision* Steering Committee, chaired by Provost Deek and co-chaired by Professor Dan Bunker and Dr. Perry Deess, oversees the activities of the five priority committees. The priority committees have provided reports to the steering committee every semester describing activities, tasks, and the status of short-term objectives. In addition to the Key Performance Indicators (KPIs), the committees have expanded the assessment of plan implementation by evaluating specific strategies and tactics, in addition to reviewing KPIs.

This report offers an overview of activities and investments across the university during the past year. It includes a summary table of the KPIs, an assessment of the areas where the university is on target to achieve the goals set forth in the plan and identifies certain areas in need of additional focus. In section 2, the report also details the strategies and tactics adopted by each division to achieve the objectives described in *2020 Vision*, plus an update on the assessment of implementation.

While NJIT has made great strides through *2020 Vision*, the implementation process must now focus on the knotty problems confronting NJIT; especially, the adjustments needed to address challenges to enrollment, especially of international graduate students, with the corresponding budgetary implications. This was the only concern noted by the Middle States finance reviewer in response to the enrollment and financial information submitted through the 2017 Periodic Review Report.

II. Implementation Progress

Planned *2020 Vision* implementation has proceeded rapidly this year. Priority committees have implemented most key tactics, in whole or in part, except where the priority committees have recommended adjustments. For example, the Steering Committee, on the recommendation of the Priority Two Committee, eliminated the tactic to implement a 4x4 curriculum because faculty deemed it inconsistent with the diversity of NJIT student experiences. The Steering Committee has also responded to new challenges by revising the plan to address new concerns. In response to a decline in patent applications, the Priority Three Committee developed new tactics and, with the approval of the Steering Committee, implemented them. Similarly, Priority Committee One developed new tactics in response to student recruitment challenges such as a decline in international applications. These tactics were given tentative approval and will be fully reviewed by the Steering Committee in September 2017.

The second year of implementing *2020 Vision* also focused on developing the assessment of tactics and carefully monitoring progress toward achieving KPIs. Each priority committee has developed and deployed strategies to assess and monitor the effectiveness of tactics. The steering committee is also analyzing all KPIs and considering appropriate responses where the university has failed to meet targets. For example, the decline in the FE passing rate prompted academic departments in engineering to change the curriculum and the testing process. These changes will be articulated as tactics and fully implemented in the coming year. As a responsive plan, *2020 Vision* must respond to developing conditions and this year has set the committees on the path toward flexibility in achieving our ambitious goals.

Finally, the Steering Committee established two standing task forces to respond to budget challenges and develop strategies to address them. The *Task Force on Recruitment* was instrumental in guiding the Priority One Committee toward meeting the enrollment goals of NJIT, despite challenges international and domestic. The *Task Force on Budget* developed strategies for revenue enhancement and contingencies for responding to potential budget shortfalls. At the end of the spring semester, the Steering Committee reviewed the activities of both groups and unanimously decided to retain them as standing bodies to address ongoing needs and assist in the development of *2020 Vision*.

As *2020 Vision* concludes its second year, the Steering Committee has set five key goals to advance plan success and to underscore the dynamic nature of the plan:

- 1) Monitor and address developments in KPIs;
- 2) Assess the outcomes of implemented strategies;
- 3) Continuously improve strategies through assessment;
- 4) Develop new strategies to respond to enrollment and budget challenges;
- 5) Link the investment of university resources directly to the plan and do so in a manner responding to assessment.

III. Key Performance Indicators (KPIs)

The KPIs presented in *2020 Vision* set ambitious targets for NJIT. It is against these metrics that we measure the overall success of plan implementation. To provide the most current evaluation of plan progress, this report includes metrics updated since December 2016, whenever possible. Many of the metrics are projected based on the most recent information available. Final numbers reported in December 2017 may differ slightly. Only faculty scholarship productivity and retention rates have not been updated because no new information will be available until the fall semester.

For *2020 Vision* to be a living document, the KPIs cannot be immutable. As required by circumstance, the Steering Committee has made changes to the KPIs since the December 2016 report. The intellectual property metrics have been altered to reflect revisions in the patent and invention disclosure data systems. The satisfaction with facilities and technology survey database was also adjusted, and this prompted revisions of the baselines and targets. Finally, efforts have been made to calculate more accurately and retrospectively the number of international exchange students to establish consistency for all years.

The assessment of KPIs shows how much the university has achieved through pursuing goals set out in the plan. Metrics in green indicate we made good progress toward the 2020 targets. Yellow indicates areas of concern and red shows metrics where we are not on track to achieve targets. Section V. offers analyses of metrics, particularly those where we have not achieved sufficient progress.

Note: Baseline KPIs have been recalculated, in several cases, for consistency with 2017 formulas.

2020 Vision-- Key Performance Indicators (KPIs)							
Strategic Priorities	Objectives		Metrics	2014 Baseline	Projected 2017	2020 Target	Notes
Students	Admissions	1	Freshmen applications	4,777	7,250	6,000	l,p
		2	Graduate applications	6,305	6,500	8,197	p
		3	Transfer applications	1,793	2,155	2,150	p
		4	Average composite SAT (M and CR combined)	1252* (1192)	1282* (1218)	1284* (1220)	c,p
		5	High school GPA	3.50	3.57	3.65	c,p
		6	Average GRE (quantitative) MS (FTFT)	155	159	160	c,p
		7	Total enrollment	10,646	11,522	12,200	c,k
	Retention	8	Retention rate	84%	88%	90%	c
	Graduation	9	Graduation rate (6 year)	59%	63%	65%	c,p
	Campus Quality of Life	10	Student satisfaction with campus life (UG survey)	3.10	3.24	3.40	b,j
Learning	Curricula Assessment	11	% programs with learning outcomes assessment	20%	60%	100%	b
	Curricular Reform	12	Educational value of the course, average	3.07	3.07	3.25	b
		13	Professional MS programs (# of programs/ total # students)	0/0	4/20	4/150	b,d,p
	Online/converged	14	% Courses online/converged	18%	21%	25%	b
	Milestones	15	% of undergraduate students with milestone experiences	20%	45%	50%	b,e
	Professional Success	16	Job placement of bachelors recipients (6 months)	54%	66%	65%	b
		17	Student FE passing rate	69%	45%	80%	b,f

2020 Vision-- Key Performance Indicators (KPIs)							
Strategic Priorities	Objectives		Metrics	2014 Baseline	Projected 2017	2020 Target	Notes
Scholarly Research	Increase Research	18	Externally funded academic research (millions) (FY)	\$24M	\$36M	\$40M	c,p
		19	Externally funded educational and service grants	\$6M	\$4M	\$8M	c
		20	Externally funded technology and business development	\$33M	\$60M	\$60M	c
		21	Total externally funded research and development	\$63M	\$100M	\$108M	c
		22	External academic research/faculty (FY)	\$80,000	\$118,000	\$100,000	c
	Multidisciplinary Research	23	Externally funded research with PIs from multiple departments	5	25	20	c
	Doctoral	24	Total enrolled doctoral students	381	440	500	p
	Intellectual Property	25	Total patents/invention disclosures	310/45	319/49	380/60	c,m
	Publications	26	Refereed publications/faculty (FY)	1.54	1.73	1.75	b,g,n
		27	Total books published by NJIT community (FY)	14	15	20	b,h,n
	Faculty Recognition	28	Faculty award	2	4	10	b,i,n
	Community	Global Community	29	% Women students	25%	26%	30%
30			# International researchers collaborating with NJIT (FY)	24	55	50	c
31			# International exchange students at NJIT (FY)	43	66	96	b
Diverse Faculty		32	% Women faculty	16%	19%	21%	a
		33	% Underrepresented minority faculty	8%	7%	10%	a
Diverse Administration		34	% Women administrative leadership	37%	36%	43%	a
		35	% Underrepresented minority administrative leadership	20%	21%	23%	a
Alumni		36	Alumni giving rate	8%	9%	11%	b

2020 Vision-- Key Performance Indicators (KPIs)							
Strategic Priorities	Objectives		Metrics	2014 Baseline	Projected 2017	2020 Target	Notes
Investments	Faculty Renewal	37	% Faculty hired in past 10 years	34%	40%	43%	b
		38	# Total T/TT faculty	269	306	345	c
	Educational Investment	39	Student satisfaction with instruction (UG survey)	3.52	3.39	3.80	b,j
		40	Average undergraduate time to degree (Years)	5.13	4.96	4.90	b
	Research Investment	41	Faculty satisfaction with research support	3.00	3.20	3.40	b,n
	Infrastructure	42	Faculty facilities satisfaction	2.76	2.49	3.00	b
		43	Student facilities satisfaction	3.00	3.17	3.20	b
		44	Faculty technology satisfaction	3.15	3.30	3.35	b
		45	Student technology satisfaction	3.48	3.45	3.68	b

Notes:

* Beginning in fall 2017 all SAT scores are being reported on the new SAT scale. The old SAT equivalent is reported here in parentheses.

a- As of June 30, 2017

b- Reported in academic year 2016-17

c- Fiscal year 2017

d- In 3-5 new Professional Science Masters (PSM) programs

e- Metric includes undergraduate research experiences, co-ops, internship, learning abroad, and service learning experiences

f- NJIT passing rate for the FE exam (unweighted average of CE and ME; national unweighted average CE and ME 78%) target 80% of national average

g- This includes only academic articles

h- This includes scholarly books, poetry, and monographs

i- Faculty awards using Center standards plus nationally recognized fellowships and non-STEM awards

k- Reporting standard changed - enrollment reduced by 129 students due to this change

l- the target was returned to the original 7,000

m-revised KPI

n-no update available for 2017

p-projected

IV. 2020 Vision Implementation Objectives for Fiscal Year 2018

1. Respond to enrollment and budget challenges;
2. Ensure flexibility in the implementation of *2020 Vision*;
3. Adjust targets and strategies as needed;
4. Issue a revised, mid-term *2020 Vision* which incorporates changes in strategies, tactics, and targets;
5. Prepare for the next planning cycle.

V. KPI Analysis

Priority 1—Students

Most Priority 1 KPIs remain on track to meet or exceed 2020 targets. Progress on the undergraduate metrics, including the number of applications, the average SAT and GPA, even the number of transfer applicants, and the retention and graduation rates have all shown remarkable progress. In numerous cases, we have already achieved or surpassed 2020 objectives. The number of freshmen applications has far exceeded the 2020 target. In fall 2016 only the graduate applications KPI fell slightly below targets for the year. Fall 2017 projections, however, suggest graduate applications will fall further. Even at current levels, the KPIs would not cause concern were it not for trends looming ahead. As the Middle States PRR reviewer noted, NJIT depends on student tuition, particularly international graduate students. The fall graduate applications, particularly from international students, have not kept pace with projections and the potential for reduced yield for admitted students could have an additional impact on fall tuition revenue. In particular, it may have an impact on the percent of graduate students in the total population, even if the total enrollment remains on target.

The KPI for the quality of campus life also currently tracks below the target set in *2020 Vision*. The university intentionally set an ambitious target for improvement and the challenge of improving campus life warrants determined action.

Priority 2—Learning

NJIT has always set ambitious goals for learning and learning experiences. The KPIs for milestone experiences, job placement, and learning outcomes assessment all track above the 2020 targets. The three underperforming KPIs in the Learning Priority underscore the different challenges responding to KPIs can present. Some require immediate responses, and others require ongoing effort over a long period. In the area of curriculum, the KPI shows no increase in the educational value of courses and this underscores evidence from student satisfaction surveys showing declining satisfaction with the quality of instruction. Curriculum redesign and course enhancement will be a key undertaking requiring a carefully crafted university-wide response in coming years, even beyond the 2020 horizon. The sudden decline in the KPI for FE passing rates, in contrast, can be addressed promptly. In conjunction with academic departments in engineering, plans have already been developed to improve the FE passing rate for next year.

These include providing preparatory courses and creating incentives to succeed on the exams. Students lacking a commitment to pass will be discouraged from taking the exam. While four professional MS degrees are now in place, the KPI has not achieved targets because the strategies to recruit students are in progress. Additional programs will also be created and the Office of Graduate Studies will fully market professional MS programs for the next admission cycle.

Priority 3—Scholarly Research

Scholarly research at NJIT has shown remarkable results since the beginning of *2020 Vision*. Externally funded academic research and externally funded technology and business development have already approached or achieved the 2020 targets. By the research per faculty metric, the target has been exceeded by more than 20%. Externally funded research with PIs from multiple departments has even exceeded the target by 25%. Consistent with the increase in externally funded research, the number of enrolled doctoral students has also tracked the KPI target. The only research KPI that has significantly underperformed the targets is externally funded educational and service grants. The Office of Research is working with the Center for Pre-College to put in place measures that will reverse this recent trend.

The intellectual property KPI has been modified this year to reflect corrected patent and invention disclosure information. The updated KPI shows NJIT has underperformed the target; however, since last year there has been a significant improvement. Because of the increase this year the KPI is assessed as yellow rather than red.

Finally, the remaining four KPIs related to scholarly productivity have not been updated since December because the faculty only update scholarly productivity reports during the fall semester, and no available data affords the basis for a preliminary projection. Through fall 2016, the scholarly productivity of NJIT faculty was reasonably consistent with the 2020 target.

Priority 4—Community

Four of the eight of the KPI's are meeting or exceeding their targets, and the current tactics and strategies for these will continue. Significant progress was made this year with the hiring of women; 11 of the incoming 20 faculty will be women.

The four lagging areas are the percentage of women in administrative leadership roles, the percentage of underrepresented minority faculty, the percentage of female students, and alumni giving. We have systematically developed recruiting strategies to promote diversity, but this will take time to have an effect. Policies on hiring and employment must also be developed to promote hiring and retention of underrepresented groups. The optional reporting of ethnicity by applicants complicates efforts to recruit underrepresented minority candidates. About students, increasing the percentage of total women has challenged Admissions in a period of declining graduate enrollment because, historically, a higher percentage of graduate students are women and the changing proportion undercuts progress in the percentage women among the undergraduate population. Finally, we should note, the decline in alumni giving from last year reflects an accounting change.

Priority 5—Investment

Overall the key performance indicators for Strategic Priority 5 – Investments show positive progress. Highlights include the growth in tenured/tenure track faculty, which is attributable to the strategies and tactics outlined in Objective 5.2 – Faculty Renewal. Also, the average undergraduate time to degree has been reduced significantly from the baseline of 5.13 years to 4.96 years. Investments in facilities, common equipment, and streamlined administrative systems have resulted in a positive increase in faculty satisfaction with research support.

Challenges remain in several areas as we enter the second half of 2017. Progress on the overall percentage of faculty hired in the past ten years has been slow with a limited number of faculty taking advantage of the separation incentive program.

Two areas of concern are the KPIs for instruction and infrastructure. The decline in student satisfaction with instruction echoes the static student evaluation of satisfaction with the educational value of the course. The survey-based decrease in student satisfaction with technology and declining faculty satisfaction with facilities do not admit of easy explanation. These may reflect a perception of declining investment compared with other areas not related to instruction and technology. It may also, or alternatively, reflect higher expectations among students and faculty as the university attracts a more demanding category of students and faculty.

In addition to surveys, the Priority 5 committee proposed adding the Facilities Condition Index (FCI) as a more rigorously quantitative KPI. The FCI is used in facilities management to provide a benchmark to compare the relative condition of facilities. The $FCI = (\text{Maintenance, repair, and replacement deficiencies}) / (\text{Current total replacement value of those facilities})$. External consultants determined the NJIT baseline in the 2015 Facilities Condition Assessment, which examined the existing NJIT academic, research, and administrative facilities to determine current condition. Based on this, the consultants calculated the FCI for NJIT facilities as 0.11, a score regarded as poor, despite generally well-maintained facilities. A good FCI falls in the 0.0-0.5 range. The average range of .05 to .10 would be a new target for 2020. Using the FCI as a metric will introduce an assessment that is quantitative in nature, providing a less subjective assessment of condition. This metric will provide an ideal means of assessing the success of NJIT investments in facilities maintenance and renewal.

VI. Planning Renewal

This report marks the end of the second year of *2020 Vision* and the middle of the planning process. Therefore consideration of the next strategic planning cycle must soon begin. In late 2013, *2020 Vision* began as a roadmap to strategic planning. It set out a framework of priorities and proposed a committee process to articulate strategies and tactics. Developing the plan took about two years from inception to final product. To develop a plan capable of building on the successes of *2020 Vision*, work on the next roadmap for planning renewal will begin in the coming year, and the Steering Committee will post the ‘*Roadmap to 2030*’ by June 2018.

VII. Conclusion

NJIT has made remarkable progress toward achieving the KPI targets set forward in *2020 Vision*. From scholarly research to students, learning, global community, and investments; NJIT is on the move. Externally funded research, private partnerships, graduation and retention rates, even the undergraduate student profile, and undergraduate enrollment have all exceeded expectations. These successes speak to the dedicated effort of many people as they pursue the common goals articulated in *2020 Vision*.

The Steering Committee's management objective for the past year was to focus on two kinds of assessment. The KPIs now serve as key metrics to guide the investment of university resources, and the individual assessment of tactics helps the university improve the effectiveness of these specific investments.

This emphasis on assessment also develops *2020 Vision* as a flexible document responding to new conditions and adjusting strategies as needed. The Steering Committee's implementation of separate task forces focused on the twin challenges of enrollment and budget demonstrates this commitment and moves the plan toward effectively responding to these emerging concerns. Finally, by linking planning to assessment, *2020 Vision* guides a coherent assessment plan for the university as a whole. Plan-guided assessment helps NJIT meet an imperative of the redesigned Middle States accreditation process and provides documentation needed for a successful accreditation review in spring 2022.

Because planning does not end in 2020, the process moves on, and during this next year, we will take steps toward developing a plan integrating the Middle States self-study process. The Steering Committee will also work toward establishing long-term goals in critical areas, and building a consistent and comprehensive model integrating the strategic plan, the facilities/technology plan, and long-term budgeting. Plan renewal will begin with a '*Roadmap to 2030*' which will propose a *2020 Vision* plan extension aligning the NJIT planning cycle with the Middle States self-study. The ultimate goal of the roadmap will be to design a comprehensive planning process to integrate the university strategic plan, accreditation, budget planning, and the facilities/technology master plan into a coherent whole.

Section 2--Description of Strategies and Tactics

Priority 1—Students

Objective: 1.1 Admissions

1.1.1 Expand Communication and Information Channels

1.1.1.1 Implement focused, data-driven marketing and recruitment strategies for admissions by working closely with ‘Spark’ (a vendor to assist with communications with prospective fall 2017 students) for targeted marketing. The KPI for freshmen application was set for 6,000. Freshmen applications have expanded from 4,769 (Fall 2015) to 7,223 (Fall 2016), an increase in applications of 2,454. The KPI for transfer applications was set for 2,150. Transfer applications have expanded from 1,793 (Fall 2015) to 1,889 (Fall 2016), an increase of 93 applications. The next phase will be to focus on tracking effectiveness of Open Houses and on-campus recruitment events and to continue to use predictive analytics to predict and monitor enrollment. *(100% Complete)*

1.1.1.2 Communicate the benefits of an NJIT degree more effectively, creating awareness of the academic community and articulating the rigor of the NJIT curriculum. The Offices of Admissions and Strategic Communication have develop a identified key marketing points that all marketing materials are based on, including academic reputation, research, location, cost, and student life and a comprehensive marketing strategies which included print ads, digital ads, and social media marketing. This tactic will be assessed by analyzing communication outcomes. *(30% Complete)*

1.1.1.3 Expand pipeline programs, including pre-college activities and outreach, to increase the application pool by centralizing pre-college records in Banner so they can be analyzed and followed. Expand targeted recruitment programs. 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. This tactic will be assessed by the pool of students who apply and enroll. *(20% Complete)*

1.1.1.4 Refine articulation agreements and increase the number of joint programs with community colleges by strengthening NJIT’s historical relationship with community colleges in the state and region. We have signed the dual admission agreement with community colleges across NJ. The number of partnership formalized will be used to assess the success of this articulation. *(50% Complete)*

1.1.1.5 Centralize applicant information using digital technology to analyze and 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 more effectively through student-point-of-contact, peer outreach, and individual faculty outreach. The offices of Admissions, Strategic Communication, and Graduate Studies, there developed department specific marketing materials and communications for prospective students. The individual academic websites have been updated as of spring 2016. This tactic will be assessed by the number of graduate applications and enrollment. *(50% Completed)*

1.1.2.2 Admit graduate students using competitive practices, including an earlier application deadline, timely offer letters, and attractive graduate stipends. Graduate Studies and Admissions have implemented new admission processes which resulted in an earlier application deadline, and timelier offer letters. Graduate Studies and the Provost's Office have also 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 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)*

1.1.2.3 Recruit online and graduate certificate students and recruit PSM students. *(New Tactic)*

There has been developed an online and graduate certificate focused communication plan and marketing strategy. This tactic will be assessed by the number of graduate applications and enrollment. *(50% Complete)*

1.1.2.4 Enter into agreements to increase partnership with corporate partners. *(New Tactic)*

We have signed agreements with corporations to promote domestic graduate enrollment, EdAssist (2016), Prudential Center (2017) and GP Strategies (2017). Tactic will be assessed by the number of corporate partnership agreements. *(50% Complete)*

1.1.3 Improve Web and Social Media Presence

1.1.3.1 Create a high-impact website to improve recruitment 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 Fall 2017. Admissions started to incorporate webinars as part of its recruitment strategies. This tactic will be assessed by completion of the website. *(30% Complete)*

1.1.3.2 Enhance NJIT's social network presence to highlight accomplishments and help student recruitment. Admissions had started to communicate to students via texting, auto calls, Facebook, and Twitter in 2015 and 2016; Blogger started in Fall 2016. There has been outreach to Fall 2017 freshmen using PURL. There has also been implemented a Guidebook App for Freshmen Open House that was started in fall 2016. For the upcoming year, we hope to start using social media to do outreach to international students. The committee will assess this tactic by monitoring social media activity. *(75% Complete)*

1.1.4 International Partnerships (New Strategy)

1.1.4.1 Enter into partnerships with international recruitment agents preferably outside of NJIT's primary feeder countries. NJIT has signed partnership contracts with 15 recruitment agents in 2016. This tactic will be assessed by the number of partnerships with international recruitment agents. *(50% Complete)*

1.1.4.2 Enter into partnerships with super agents to provide high-quality customer services to prospective students and focus on degrees with under capacity. NJIT has signed a partnership contract with EduCo in early October 2016. The contract has yielded twenty graduate applications for the Spring 2017 semester. At its full capacity by Fall 2017, it is expected that the agent will bring in upward of one hundred highly qualified undergraduate and graduate students per semester. We are also working closely with EduCo to explore new markets such as pathway program and 2+2 programs. This tactic will be assessed by the number of partnerships with super agents signed and the number of undergraduates and graduates brought in by the super agents. *(50% Complete)*

Objective: 1.2 Persistence and Retention

1.2.1 Designing a Comprehensive and Engaging First Year Experience

1.2.1.1 Implement 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. A proposal is being drafted for credit to be awarded to the first-year seminar, and support is being generated from Faculty Senate to bring the proposal to CUE in fall 2017. This tactic will be assessed through student course evaluations of first-year seminar and through the ability to implement freshmen seminar as a one credit course. *(50% 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 regarding the various academic and social events. Staff and faculty have been notified

as well and encouraged to attend events so they may interact with the students on a personal level. *(100% Complete and ongoing)*

1.2.1.3 Utilize an intense online tracking system for students – Student Success Collaborative (SSC). SSC will assist in tracking students by better management and identification of the at-risk student population. The system was implemented for the Spring 17 term, and academic advisors have all been asked to use the system for scheduling appointments with students and to keep copious notes on student meetings. This tactic will be assessed by tracking student success after more timely identification of the at-risk student population. *(50% Complete)*

1.2.2 Intensify and Create Consistent Academic Advisement

1.2.2.1 Develop consistent university guidelines for advisement across academic departments to achieve more timely graduation. The Provost's Office will take the lead in this. The committee is working on a draft report for the Provost's Office and the academic deans. There should be more accountability on advisement standards through the use of the 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. *(50% Complete)*

Academic advisors will meet monthly with the Provost's Office regarding policies and procedures that should be consistent across departments, along with discussion on best practices in advisement for the student population set forth by the National Academic Advising Association and professional development activities. 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. *(80% Complete)*

1.2.2.2 Increase the use of software tools in advising through SSC. 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. *(85% Complete)*

1.2.2.3 Admit NJIT students to a college or school of their choice with the option of indicating a provisional major. 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 first-year advisement by centralizing advising. 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 prepared for the Provost's Office. This tactic will be assessed through the review of the survey results. *(50% Complete)*

1.2.2.5 & 6 & 7 & 8 Enhance student advising by utilizing an online tracking system for our students – SSC. SSC will improve identification and management of our at-risk student population. It will also offer students information needed to make better educational decisions. 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 (75% Complete)

1.2.3 Enhancing Tutoring, Mentoring, and Student Support

1.2.3.1 Coordinate tutoring, mentoring, adaptive learning and student support through academic departments and a structure created for this purpose. Physics, Chemistry, and the Math departments already provide tutoring for their subject areas. Other academic departments will also begin offering these support services. SSC is also being used to coordinate and assess tutoring. This tactic will be assessed through the student evaluation and final grades in key courses for students who completed the supplemental instruction in those courses. (100% Complete)

1.2.4 Continuous Assessment of Persistence Efforts

1.2.4.1 Create a system of accountability to monitor the academic progress, retention and persistence efforts of the university; this will be assisted by the university-wide utilization of the SSC. A report is being drafted for the Provost's Office emphasizing the need for one oversight body for retention and persistence efforts put forth by the university. This tactic will be assessed by reviewing methods used for each strategy and compiling and reviewing them annually. (50% Complete)

1.2.5 Continuing to Market and Redesign Co-Op

1.2.5.1 Market a redesigned co-op program. Committee will assess the results of the NCE pilot for co-op by surveying students, companies and academic department leads as well as other assessment strategies envisioned, such as following up with students to determine if they are retained and graduated from the university. This tactic will be assessed by the report provided by NCE on the model used, which NCE is looking to implement with the incoming fall 2017 FTFTF students. (50% Complete)

1.2.6 Establishing a Flexible Bachelor of General Sciences

1.2.6.1 Create a comprehensive Bachelor of General Sciences degree proposal that will be brought to the Committee on Undergraduate Education (CUE) and then all other governing education bodies. The proposal includes specific degree requirements and was reviewed by the Bachelor of General Studies advisor who will present it to the Provost's Office. This tactic will be assessed through the number of students earning the degree. (Complete)

1.2.7 Create a Smoother Transition for Transfer Students

1.2.7.1 Survey transfer students to identify obstacles to completion at NJIT. These assessments should be run through the academic department of their current transfer student population. A survey has been created by the Retention and Persistence Sub-Committee, and transfer students are completing it; preliminary results show that students seem to have a smooth transition overall but once at NJIT, seem not to feel connected. This tactic will be assessed by reviewing the transfer student survey completed in fall 2016 and spring 2017. *(80% Complete)*

1.2.7.2 Create and implement a seminar series that meets the needs of transfer students based on the survey referred to in 1.2.7.1, which will assist in connecting transfer students to NJIT. The Advising Success Center offers three workshops for transfer students to attend in their first semester at NJIT. Expansion is being considered, and ways to get more transfer students to attend are being reviewed. This tactic will be assessed by reviewing the transfer student survey completed in fall 2016 and spring 2017. *(80% Complete)*

1.2.7.3 Continue to build effective in-person working relationships with the community colleges in New Jersey to update articulation agreements and provide accurate, updated course information to faculty, staff, and students of the community colleges. The Advising Success Center, in conjunction with the Office of Admissions, is working to visit community colleges monthly to discuss program coordination and articulation agreements. This tactic will be assessed through the number of articulation agreements executed. *(70% Complete)*

1.2.8 Improving Performances in Gateway Courses through Diverse Teaching Techniques

1.2.8.1 Create a thorough assessment of the Gardner Institute Gateway program through the Physics courses piloted in the program from the Fall 2015 term, to include the courses, number of students involved, new teaching techniques used, how the students performed at the end of the term, and any other pertinent information. CSLA and specifically professors in Physics and Chemistry has been working with the Gardner Institute to gather data on NJIT and its students to assist with new teaching initiatives to help academically at-risk students. This tactic will be assessed by a review of students' final grades in Gateway courses, as well as discussion with students and faculty of the new techniques implemented. Preliminary data in Physics 111 courses shows that students who are given multiple teaching initiatives, along with exams created by their professor, which include moderate to difficult questions on material they were taught, will complete the course successfully *(90% Complete)*

1.2.8.2 Create a comprehensive steering committee to assist with the further assessment and utilization of the Gardner Institute Gateway program through the academic departments. CSLA was able to create a steering committee. This tactic will be assessed through discussion with students and faculty about the new techniques implemented *(90% Complete)*

1.2.9 Summer Bridge Program for Entering First-Time Full-Time Freshmen

1.2.9.1 Complete a SWOT review of the Educational Opportunity Program Summer Program and the pilot Pre-Calculus Summer Boot Camp. Being considered is a review of other bridge programs at the university to learn how to best proceed with one for all incoming first-year students. This tactic will be assessed by a review of the current EOP and Math Boot Camps to identify what works, and through the first term GPAs, specifically Math grades, of the first time full-time first year students. *(60% Complete)*

1.2.9.2 Create a committee to work on how to fund a program that can look into diverse grants available, possibly through the National Science Foundation. Currently, the committee is reviewing the cost of summer boot camp per student. This tactic will be assessed by a review of the current EOP and Math Boot Camps to identify what works, and through the first term GPAs, specifically Math grades, of the first time full-time first year students. *(40% Complete)*

Observe and analyze the Pre-Calculus Summer Boot Camp Program. Assessment of the program is on-going, and the committee will review the information compiled from the summer 2016 cohort to see their current Math progression in their degree programs. This tactic will be assessed by a review of the first and second term GPAs and specific math grades, of the first time full-time first year students. *(70% Complete)*

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 by maximizing student course sequencing to help avoid scheduling conflicts for required courses, promote timely graduation, and increase persistence & retention, therefore increasing graduation rates. 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 developing alternative and additional course offerings, particularly online. 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 wait list. *(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 that they are nearing 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. *(75% Complete)*

1.3.2.2 Eliminate the student-initiated application for graduation by creating 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 for students by utilizing 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, enhancing student satisfaction and success, by working with the Office of Institutional Effectiveness to better identify areas of student satisfaction and dissatisfaction. Additionally, several customer service trainings have been conducted for all members of the Division of Academic Support and Student Affairs and the Department of Public Safety. *(100% Complete)*

1.4.1.2 Develop a service-focused philosophy for all faculty and staff after a systematic examination of current practices. 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 Systematic examination and regular ongoing review of the effect of current policies by an “owner” review of every policy. On the university web page should be the most updated version of the policy and each department will be responsible to timely update its pages. This tactic will be assessed by regular review of policies. *(20%)*

1.3.2.2 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, 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. *(60% Complete)*

1.4.3.2 Develop an “Events Center” that will provide space and support for student activities, by constructing the Wellness and Events Center. Construction is underway. The Center will open in Fall 2017. *(75% 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 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 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 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 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 disciplines 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. 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 has been led by an external consultant's review of the Physics program. The delivery of introductory courses in Physics and Chemistry is being modified through participation in the Gateway to Completion (G2C) program. This tactic will be first assessed by the analyzing the impact of the G2C program. (*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, 57% 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 the 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. (*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 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 will be implemented as of 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. 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. In fact, 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. *(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. 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)*

2.2.1.6 Design and offer a collection of short non-credit courses, collectively to be known as non-credit credentials, for the working professional, and develop a process enabling academic course equivalency for these credentials. Course equivalency toward graduate degree requirements will require the appropriate academic department to develop a process for student assessment. The student's NJIT transcript will show a T(transfer) for the transferred course. This tactic will make NJIT more responsive to requests from corporations, increase adult enrollment and concurrently maximize the lifelong marketability of adults. This tactic will be assessed by the number of students who transfer graduate courses based on this approach. *(New tactic)*

requiring final approval of the 2020 Vision Steering Committee; if approved it will be ongoing as of Fall 2017)

2.2.2 Innovate Graduate Education

2.2.2.1 Create professional science master (PSM) option for MS degree programs. A Cyber Defense Option for the MS in Cyber Security and Privacy degree program in the YWCC has been approved by all relevant NJIT bodies, and the Academic Issues Committee of the NJ Presidents Council was informed about it in December 2016. This Option will be available to students in Fall 2017, and an application will be submitted soon for its affiliation with the PSM National Office. Two additional such options were approved by the relevant NJIT bodies during the Spring 2017 semester, and the NJ Presidents Council was informed about them in June 2017; these are the Applied Quantitative Finance Option for the MS in Mathematical and Computational Finance degree program, and the Biotechnology Option for the MS in Pharmaceutical Chemistry degree program. These new Options will be available to Students in Fall 2017. Departments have undertaken efforts toward the creation of PSM options for other MS degree programs. 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. A new MS degree in Data Science to be offered jointly by the Departments of Computer Science and Mathematical Sciences has been proposed and fully approved during the 2016-2017 academic year. Students will start getting admitted to this new degree program in Spring 2018. 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. Stipend increases were implemented for FY 2016 and FY 2017. This tactic will be assessed by comparing the stipends we offer with those offered by peer institutions. *(Ongoing)*

2.2.2.4 A doctoral program in Business Data Science was approved in AY 2015-2016 and has been offered since Fall 2016 in the Martin Tuchman School of Management. This new program has attracted substantial interest and has already received a large number of applications for admission. *(100% Complete)*

2.2.3 Update the Curriculum Continuously

2.2.3.1 Incorporate feedback from professional organizations and accrediting agencies. BArch and ET programs have recently introduced curriculum changes to ensure compliance with their accrediting bodies. This tactic will be assessed by the success during 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. Each PSM degree option will have its own IAB as per the requirements for national PSM affiliation; these IABs are expected to 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 face-to-face and online modes of course delivery by pilot testing the idea of convergence. This pilot study, overseen by the TLT Committee of Faculty Senate, is underway. This tactic will be assessed by the number of courses offered in the converged 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. Eight online MS programs are currently being offered by NJIT without collaboration with outside entities. Discussions are underway for the creation of fully online programs in Industrial Engineering and Information Technology using only NJIT capabilities. An incentives program for the creation of additional online versions of MS programs is in its final stages of preparation/adoption and is expected to catalyze the creation of such programs. 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 will be assessed by a satisfaction survey sent to students using the Tutoring Center. (*Ongoing*)

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 CUE, CGE, and Faculty Senate and will be implemented immediately. The TLT subcommittee collaborates with the Institute for Teaching Excellence in overseeing implementation of the guidelines. 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. The Institute for Teaching Excellence has started collecting teaching and learning artifacts that will be made available to faculty and students. This tactic will be assessed by the number of artifacts in the repository. (*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 UPR 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 the 2016 – 2017 Academic Year 223 undergraduate students participated and \$528.5 K went to student stipends and project support (supplies). 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. A new policy for NCE undergraduate students has been developed and approved. As per the new policy, students will be admitted to programs selecting or not selecting the co-op option; the co-op option will involve two semester-long experiences which will be recorded on the student's transcript. While on co-op, students will maintain their full-time student status. This tactic will be assessed by the number of students selecting the co-op option for their engineering degree. (*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 our current MOUs with foreign universities to identify study abroad opportunities for our students. New MOUs have been signed with universities overseas (Germany, Greece, Italy, China, Thailand, Spain, and Lebanon) and more are in final stages before signing. Additional opportunities are to be identified by the Office of Global Initiatives which, in coordination with academic departments, will also start creating a course equivalency inventory. During the 2016-2017 Academic Year, 15 NJIT students went abroad, and an equal number of students in foreign universities came to NJIT. 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. An agreement has been signed by NJIT and the New Jersey Judiciary for students in the capstone course in Computer Science to complete part of the course requirements by serving in the NJ Judiciary. Also, the Medical Informatics Technology Option in the BS in Engineering Technology degree program in its revised curriculum requires students spend a semester at a hospital or other medical facility. This tactic will be assessed by the number of students 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 undergraduate and graduate students through expanded MOUs. 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/or service projects. (*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. 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. No progress reported on this tactic.

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. This has been achieved by changing doctoral degree credit requirements to require earlier and more substantive input from dissertation committees. Additionally, the PSM options and applied MS degrees will help students meet their professional objectives faster. Undergraduate students selecting the co-op option in NCE will have better chances to get the jobs they desire. This tactic will be assessed by the average reduction in time to complete doctoral NJIT degrees and by the number of undergraduate students getting a job offer from the place of their co-op experience. *(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 to its students during the 2015-2016 Academic Year. In Academic Year 2016-2017 the department purchased a 68-hour online course comprised of modules with assessment tests to monitor preparation. and makes 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. This tactic will be assessed by the percent of junior and senior CE and ME students passing the exam in comparison to the national average success rate. *(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 used for their on-campus meetings as well as in support of projects through which students participate in regional and national competitions. 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 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*)

2.5.3 *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. This tactic will be assessed by the average value of the satisfaction reported in the 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. This tactic will be assessed by the response rate on the survey and the utility of the survey report. (*Ongoing*)

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 FY17, \$311,164 was returned to 125 eligible faculty, department chairs, and college deans in overhead return. 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. Forty-two (18 in FY15 and 24 in FY16) Faculty Seed Grants have been awarded involving 66 faculty members. In FY17, 22 Faculty Seed Grants were awarded involving 33 faculty members. Progress will be assessed by the number of external grants received by the recipient of faculty seed grants. (*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 and growth of students in these 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 40 collaborative projects have been funded in FY17 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. Fifty-five (55) international collaborative projects, contracts, and exchange program MoUs are active in FY17. 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. 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. 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. 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. Three new research centers and one research institute (Institute of Brain and Neuroscience Research) 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/or other institutions. Teaching assistants are assigned to colleges to be re-allocate 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 coreLabs), each of which is generating program activity in partnership with the private sector and government. NJII has helped double the impact of NJIT's economic and technology development mission as measured by NJII-related (NJII and NJII@NJIT) expenditures, which have increased from roughly \$30M in its first year of operation to nearly \$60M in FY 2017. This increase in impact has been accomplished with significant productivity increases in the use of institutional funds, with NJII now leveraging over \$13 in sponsored awards for every dollar invested by NJIT, an increase of four-fold since NJII was started. Its growing portfolio of innovation services span a robust innovation model ranging from 1) ideation and agile strategy to 2) simulation and prototyping platforms to 3) education and research to 4) open innovation, supply network, and cluster accelerators, and to 5) technology commercialization and enterprise development.

NJII's work with NJIT academic units continues to expand as its relationships and assets grow. Highlights include assisting the College of Science and Liberal Studies develop a graduate certificate program in biotechnology, embedding its chief data analytics scientist in the Ying Wu College of Computing to advance industrial partnerships, and convening the New Jersey ecosystem to establish an agenda around remediation. Some of the notable private sector partners include Hackensack University Medical Center, Lockheed Martin, Prudential, Panasonic, the US Air Force, Nokia, IBM, Bell Labs, Celgene, Merck, Purdue Pharma, Lutron, and the State of New Jersey to name a few. 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, 91 small awards have been granted 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 nano-probes for diagnostic testing, thin films, membranes, biomaterials, 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 and the New Jersey Health Foundation to further commercialization activity. 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 (5/8/2017), NJIT has obtained 219 unexpired patents with 106 pending provisional and non-provision patents. In addition, five provisional patents are being submitted. In FY17 more than 44 invention disclosures (as of 5/8/2017) were submitted as compared to 38 in FY16 and 42 in FY15. (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 has expanded to include interested academic deans. The BET identified eight high priority companies with whom to engage and deepen relationships with NJIT. Broad-scale partnering meetings and company engagements have occurred with Purdue Pharma, PATH, Lutron, Boeing, the US Air Force, Exxon, Microsoft, among other concerted efforts stemming from this collaborative structure. As an example of the types of work these sustained engagements produce, NJIT, the Martin Tuchman School of Management, and Newark College of Engineering partnered to define two pilot projects with USAF Tinker AFB leaders, which have received verbal commitment for funding. One pilot focuses on reverse engineering orphaned parts and the other on supply chain risk management. 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. NJIT 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. NJIT 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, NJIT 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)*

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 FY15-16 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 FY17 lab renovations for new faculty for most faculty were completed by early September. Assessment will be based on the number of renovations labs ready within two 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)*

3.5.3.2 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. *(80% 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 FY17, 55 internal 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. *(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, and American Mathematical Society 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 has been drafted, with input from Dr. Steffen-Fluhr and shared with the Diversity Committee on April 4, 2017. Feedback and comments have been solicited and received from committee members and revisions to the draft are in progress. The Diversity Committee was expanded to include the diversity liaisons from each college. *(20% 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. Recent campus student and staff diversity activities and programming have included a series of social and celebratory events for heritage months such as Hispanic Heritage Month, Black History Month (9 events) and Diversity Week. 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. In recognition of One World Week (April 2017), a total of 7 events were held. *(20% Complete)*

4.1.2 Support Student Diversity

4.1.2.1 Foster a safe university environment that respects differences and encourages inclusiveness. A Title IX Summit was held for students, faculty, and staff on April 13. The Summit featured guest speakers and topical breakout sessions, with roundtable discussions. Residence Life holds staff training each August prior to student move-in which lasts approximately ten calendar days. Content within this training includes a variety of topics such as community development, programming education, social justice and diversity inclusion, conflict mediation, mental health, AOD, etc. *(10% Complete)*

4.1.2.2 Ensure that the university's academic curriculum creates global awareness and promotes tolerance and understanding among students. *(No progress reported)*

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.

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. This year six student exchange programs for research have been established with international universities, and respective MoUs have been signed. *(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 55 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 31 courtesy 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 18 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. *(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. *(100% Complete)*

4.2.1.2 Recognize the importance of all other campus stakeholders and ensure their voice is heard through the University Senate. *(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. Research into the development of a code of conduct has been initiated by Human Resources. The on-line training for Title IX, launched in October 2016, has been completed by all incumbent staff and faculty. New staff and faculty are expected to complete the training within 30 days of hire. *(50% Complete)*

4.2.2.2 Acknowledge the importance of the voice of the student body. *(No tactics developed)*

Objective: 4.3 Diverse Faculty Leadership

4.3.1 Support Diversity

4.3.1.1 Establish a baseline for diversity assessment. The NJIT demographic data for 2016 Affirmative Action Program for Women and Minorities (AAP) analysis has been completed, and the data is on file in Human Resources. Report to the senior management team will be provided. *(20% Complete)*

4.3.1.2 Expand the NJIT Affirmative Action Plan to include a comprehensive Diversity Plan. (See 4.1.1.1 above.)

4.3.2 Coordinate Recruitment and Retention

4.3.2.1 Engage college and school deans to develop plans for achieving faculty diversity. Plan development pending completion of 2016 AAP. As of 5/1/2017, of 20 faculty lines, 10 of 18 hires were women. *(No progress reported)*

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. *(100% Complete)*

4.3.2.3 Coordinate resources and information to recruit diverse faculty at college, school and department levels. Following the approved Faculty Search and Selection Guidelines, the University Lecturer Search and Selection Guidelines have been developed and are pending approval is available in the Policies and Procedures section of the Provost's Website and a link is posted on the Faculty Senate website. The faculty approved the same on October 19. The Guidelines are designed to ensure that NJIT can attract a broad pool of outstanding candidates and to provide resources that will help University Lecturer search committee members optimize the effectiveness of their time and effort. *(Ongoing)*

4.3.2.4 Cultivate potential faculty through conferences and speaking engagements. *(No progress reported.)*

4.3.2.5 Train search committees for accountability, especially in implicit bias awareness. Implicit bias awareness training for faculty search committees continues to be in development, following extensive research and benchmarking. Also, search committee members for the Dean of Students and Campus Life and the Vice Provost, Undergraduate Studies were invited to complete the web-based training program, “Uncovering Unconscious Bias.” *(Ongoing)*

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. *(No progress reported.)*

4.4.1.2 Improve utilization of university databases containing administrator rank and diversity data. *(No progress reported.)*

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. *(Ongoing)*

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. *(No progress reported.)*

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. Continue to strengthen traditional programs with four the events that jointly engaged students and alumni. *(Ongoing)*

4.5.1.2 Engage alumni in student recruitment, campus life, and career services. Revamped Alumni Council Meeting and invited the Alumni Board, alumni committee chairs, young alumni, Board of Visitor and Industry Advisory Board alumni to Council meeting at Park Avenue Club

in Florham Park; engaged significant alumni leaders who are already connected with the school to network and listen to campus updates from Provost Deek. (*Ongoing*)

4.5.1.3 Develop a strategic plan for alumni relations that employs best practices from across higher education and at peer institutions. New Volunteer Engagement with establishment of new regions (Houston, Colorado, Northern NJ), corporate affiliations (PS&S, Schneider Electric), and affinity groups (Greek Alumni Board; Executive MBA). (*Ongoing*)

4.5.2 Continuous Improvement of Alumni Engagement

4.5.2.1 Set clear, measurable goals and objectives for the improvement of alumni engagement. Goal of 700 unique alumni attending events for FY17; approx. 1,100 to date. (*Ongoing*)

4.5.2.2 Create metrics and establish standard reports on alumni engagement. Sent Alumni Satisfaction Survey to 50,000+ alumni. More than 800 responses. 1,500+ pieces of information collected (address, email, phone, etc.) (*Ongoing*)

4.5.2.3 Use social media to build a digital-alumni contact list. (*No progress reported.*)

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. 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. *(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. Additional spaces will be constructed in subsequent fiscal years. A \$10 million grant from the state will support makerspace operations. 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. 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. (*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 (FY17-FY21) 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. *(Ongoing)*

5.2.1.7 Develop a mentoring plan for both faculty and instructional staff by setting up specific plans within each college. CSLA reports 4 out of 6 departments have developed department-specific mentoring plans for research and instruction. The remaining two departments are working on development. The balance of the Colleges continue to work on the development and implementation 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. *(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 Ekualiti KC – Grant Management Software system which was purchased at the end of FY15. Training started February 2016. Future Modules such IBC IAUCUC will go live in January 2017. Streamlyne based proposal submission process was implemented, and more than thirty proposals have been submitted this semester. This tactic will be assessed based on the percentage of submissions being made through the system versus the total number of submissions. *(50% 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. The process of linking Banner to online grant billing and invoices has been started but still requires some manual intervention. Percent complete progress on the implementation of the Banner Finance module will be the assessment for this tactic. (30% 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*. An initial draft of the Facilities Master Plan, including an examination of research space needs, will be presented to the Board of Trustees in June. This tactic includes an overall reduction in research space needs due to the goal of common facilities and flexible labs. The final plan is anticipated to be completed in September 2017. 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. (Ongoing)

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)

5.3.3 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 began in January 2016. Collaboration on the master plan has occurred through shared governance committees and campus interviews. The senior administration requested the process be expanded to include facilities planning to 2030. Student headcount, faculty, staff, and research space is being examined to that end. The initial draft of the facilities master plan will be presented to the Board of Trustees in June 2017. The plan is scheduled to be ratified by the Board in September 2017. Completion of the Facilities Master Plan will be the metric to assess this tactic. *(Ongoing)*

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 began in the Fall 2015 and is expected to be completed in the Fall 2017. There is also a financial plan for the renewal of capital assets which will provide for over \$20M annually by 2020. Collaborative instructional spaces are planned and are being 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. The Facilities Condition Index, which was produced through the facilities condition assessment, will be the metric used to assess this tactic going forward. *(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. This has been produced and shared with the Finance division. It is reviewed every six months. Restructuring of the digital learning and technology support functions for alignment with 2020 Vision is being implemented with formal announcement to the campus community planned for the new academic year. The technology plan document is being updated for shared governance review during the new academic year. Progress on this tactic will be assessed based on the actual versus planned IST Capital Replacement and Renewal Schedule improvements. *(Ongoing)*

5.4.2.2 Evaluate the current use of funds for technology decisions by allocating \$500K in the FY2017 capital budget for the renewal of technology equipment. Equipment is being installed at the Halsey Street colocation facility (Old Macys building) to provide redundancy for the campus Internet services. Equipment ordered and planned for spring 2017 deployment. IT service continuity –Backup servers and storage systems being removed from GITC5 Data Center and moved to CKB and Student Mall. This will provide for continuity of some key IT services in the event the GITC5 Data Center is unavailable. Installation is scheduled for late spring 2017. Also, lifecycle replacement of the virtual private network (VPN) servers which are at end of life, will be deployed in spring 2017. Progress on this tactic will be assessed based on the completion of the planned renewal of technology equipment versus actual. The consideration of technology equipment renewal will continue in subsequent fiscal years. (*Ongoing*)