



January 24, 2011

Working Group 2 Outline

## **Chapter 2. Standard 2: Planning, Resource Allocation, and Institutional Renewal**

Part 1— Introduction

- I. Précis: NJIT Planning and the ViSTa Model of Vision and Strategy
- II. An Overview of Group 2’s Standard 2 Charge and Questions Addressed

Part II—Self Study Inquiry and Outcomes

*2.0 How has the institution's planning process--as opposed to the elements of the strategic plan--changed since the 2002 self-study? What has been the impact of that planning process on strategic planning?*

- In 2002 NJIT had in place “a budget resource development and allocation process with a strong emphasis on strategic planning [that required] clear resource identification and assessment of the operational results.” (An Emerging Presence: Self-Study & Strategic Plan 2002, p. 92) The planning process was conducted on an on-going basis aligned to the state’s fiscal cycle.
- Since the 2002 self-study the institution’s planning process has been revised to assist in meeting a goal set by President Altenkirch in 2003: “to refine and focus our strategic plan with measurable goals and resource allocation.” (President’s Report 2002-2003).
- The key component of NJIT’s revised planning process is ViSTA, a framework for a strategic planning process adapted to the distinct challenges NJIT faces as an institution. This framework consists of three core elements (Vision, Strategy, Tactics) and seeks to facilitate and structure a top down-bottom up strategic planning process that engages all members of the university community.
- Through ViSTA, NJIT has enacted a planning process that has enabled the institution’s stakeholders to: help shape a vision of the school’s desired future and help chart a course of action for achieving that vision; participate in establishing institutional priorities and objectives; and assist in making decisions about the allocation of resources.
- Perhaps the most important impact of the revised planning process enabled by ViSTA is the implementation of a clear “top down-bottom up” approach that not only ensures that all stakeholders are a part of process but that views consensus building (or participatory planning) around the plan as critical to the university’s shared governance model. This approach is organized around a steering committee, representatives of institutional research and planning, department heads and key stakeholders from the boards of trustees and overseers, students, alumni, and state and local government, and task forces appointed for each strategic objective and consisting of faculty, researchers, and administrative staff.
- The implementation of the ViSTA framework has clarified and concretized the planning process so that it is possible to identify how each priority and objective in the final strategic

plan can be clearly correlated to each step in the planning process, from internal and external analysis to drafting a vision statement of NJIT's purpose, principles, and mission; from strategizing on the development of priorities to creating tactics and metrics for implementing and assessing the final elements of the plan.

- The administration presented the ViSTa model developed, I think, by Norbert Elliot based on the Kaplan and Norton Balanced Scorecard model (minus the Finnish University Elements IT program to provide constant feedback and data). This framework was more or less imposed as a means to organize discussion. The discussion groups were composed of representatives from several departments, rather than proceeding from a disciplinary base. These groups gave a final report and then the discussions evolved to the “top-down” group that produced the strategic plan. I think the principal difference between this strategic plan and the past is that the focus areas this time are defined in broad interdisciplinary (or metadisciplinary) interest areas (“sustainability”, “digital ‘everyware’”).
- The notion of combining top down responsibility and decision-making authority with bottom up percolation of ideas, in the end, means top-down. One of the readings (A. Lerner, *Unique Aspects of Strategic Planning in Higher Education*, p. 21) emphasizes faculty authority in teaching and research, which might lead to a stronger faculty role in setting strategic priorities. Because the strategic planning process includes no departmental or college level reports involving faculty input, it is presumed that individual faculty contribute as individuals and that the colleges are represented by their deans at upper level “top-down” discussions.
- There seems to be an emphasis on the business metric for assessment, tasking the institutional research and planning to conduct “market and competitive analysis”. This seems to outweigh more traditional educational and research goals, such as contributing to the creation and dissemination of new knowledge. There are references to “threats” to the accomplishment of strategic plan that give the document the feel of a military campaign.
- This said, the Middle States group recognizes the importance of context in conducting their assessment, and our present context is one of extreme financial duress. So it is perhaps necessary that we frame the strategic plan as a military campaign where the major objective is to increase revenues, starting with tuition from enrollment. A key issue for our strategic planning process is the contrast, drawn by Lerner, between the business model with the university model, between the long-term investment in educating people and more short-term bottom-line considerations.

*2.1 What new strategic priorities, objectives, and metrics have been developed since the 2002 self study regarding the allocation of resources? How do these priorities, objectives, and metrics effectively serve the NJIT mission?*

General Documentation:

1. [http://www.njit.edu/president/docs/2005/0-Revised\\_Strategic\\_Plan.pdf](http://www.njit.edu/president/docs/2005/0-Revised_Strategic_Plan.pdf)
2. <http://www.njit.edu/president/docs/2010/2010-04-30-assessment.pdf>
3. [2010-04-30-fy09-balanced-scorecard.pdf](http://www.njit.edu/president/docs/2010-04-30-fy09-balanced-scorecard.pdf)

**2.1a Enhance and enrich the quality of life of the university community and ensure a focus on the student.**

[http://www.njit.edu/president/docs/2005/landscape\\_master\\_plan\\_3-1-05.pdf](http://www.njit.edu/president/docs/2005/landscape_master_plan_3-1-05.pdf)

<http://gateway.njit.edu/>

[Graduating Student Spring 2010.pdf](#)

<http://www.njit.edu/provost/events/2010/2010-09-27-fall2010-workshop-schedule.php>

- In 2005 NJIT, using the construction of the East Building and the renovation of the Campus Center redefined NJIT's campus core by developing a five year Master Landscape Plan.
- In 2006 NJIT developed the Campus Gateway Project as a key planning initiative to improve the amenities available to the campus and local community. Enhancing campus life and the neighborhood around NJIT are important to the growth of NJIT as an urban university.
- Student Survey trends upward on quality of NJIT grounds.
- The Office of the Provost instituted the Provost Workshop Series to enhance intellectually stimulating on campus events.

#### **2.1b Increase revenue from private sources.**

<C:\Documents and Settings\rfederic\My Documents\University Giving By Type.xlsx>

<http://www.njit.edu/giving/campaigns/index.php>

- Albert Dorman Honors College Completes Successful \$22.8 Million Campaign
- NJIT has successfully completed the [Highlanders Athletics Campaign](#) at \$5.4 million of the \$5 million dollar goal.

#### **2.1c Develop a core of nationally recognized programs.**

[2010-04-30-assessment.pdf](#)

[fsip.pdf](#)

<http://www.njit.edu/president/docs/2008/2008-06-04-aac-presentation.pdf>

<http://www.njit.edu/president/docs/2005/Plan-Math.pdf>

<http://www.njit.edu/president/docs/2005/plan-Arch.pdf>

<http://www.njit.edu/president/docs/2005/plan-wireless.pdf>

[2010 Fall Undergraduate HC.xls](#)

[2010 Fall Graduate HC MS.xls](#)

- Three Strategic Core Academic Programs were identified and funded as well as three niche areas: Architecture, Mathematics, Wireless Communications, Advanced Engineered Particulate Materials, Neural Engineering, and Nanotechnology
- To facilitate a phased transition to retireemnts for tenured and tenured-track faculty, thus giving NJIT the ability to allocate personeel resourses toward strategiv directions, NJIT developed a Faculty Separation Incentive Program.
- Developed 19 total new programs since 2002 self study.
- Increases in enrollment is track by major (including new programs).

#### **2.1d Improve national rankings in research and intellectual property development.**

[FY08 Mid Year Scorecard.pdf](#)

[2010-04-30-fy09-balanced-scorecard.pdf](#)

[2010-04-30-assessment.pdf](#)

<http://www.njit.edu/officetech/industry/portfolio/index.php>

- By 2009, research expenditures increased by 75%
- Office of Technology Development: OTD has grown from a single position (vacant during the 2002 site visit) to an operation of three full-time professionals dedicated to commercialization activities. The number of licenses from intellectual property increased by 234%
- Strengthen partnerships with small businesses through SBIR & STTR grants which has help the students to be exposed to real business experience

### **2.1e Become nationally recognized for attracting high achieving students from diverse**

#### **national and international populations.**

[C:\Documents and Settings\rfederic\My Documents\programsFall2007-2010.xls](#)

[Enrollment by UG level 2000 -2010.xls](#)

[C:\Documents and Settings\rfederic\My Documents\NJIT enrollment 2001-2010.xls](#)

[NJIT Branding A Message From President Altenkirch.mht](#)

[Middle States 2007 Periodic Review.pdf](#)

- NJIT launch a major branding campaign to attract national & international recognition
- Recruiting and Retaining Women Students: Through the Murray Center and the Center for Pre-College Programs, NJIT is proactive in its outreach to young girls, encouraging them to consider STEM majors.
- Recruiting and Retaining Minority Students: In the area of ethnicity, NJIT has also set metrics and targets for students and faculty. The strategic plan measures success against a 15% target for entering Hispanic and African-American students by Fall 2010. Already NJIT has achieved an increase of 4% to a 16% rate for Hispanic students since Fall 2004. This exceeds the average at universities nationally. The recruitment rate for African-American students remained stable but above the national average, at about 11%.
- Increased the number of Honors College enrollment by 17%
- Exceeded goal of increasing the mean SAT score for incoming FTFTF by 23%

### *2.2 What process does the institution use to develop and prioritize its strategic planning initiatives?*

#### **Resources:**

- Strategic Plan 2004-2010
- State Budget Submissions FY02-FY12
- Strategic Plan 2010-2015
- Enrollment Reports
- Enrollment Planning Presentation to Board of Trustees
- University Advancement Goal
- NJIT uses the [ViSTa](#) model as a strategic planning process for the university. The process allows NJIT to identify its vision for the future while making choices as to how to allocate resources

in achieving its vision. The following core elements are part of the ViSTa model: Vision, Strategy, Tactics

- The ViSTA model can be summarized as follows:
- A top down, bottom up approach to strategic planning while providing opportunities for the broader university community to provide input.
- Establish a forward looking vision for the university.
- Determine NJIT's value proposition, using its Vision as a guide and armed with knowledge about the needs and characteristics of the markets it serves as well as information about the university's strengths, weaknesses, opportunities and threats.
- Identify a few (no more than four) strategic priorities on which the University will focus to deliver on its value proposition and achieve its Vision.
- Develop a limited number of specific, measurable, actionable, realistic, and time-based (SMART) objectives and tactics that are aligned with these strategic priorities, indicating how resources will be allocated to achieve the university's strategic objectives.
- Using a balanced scorecard approach, establish metrics that communicate the progress the university is making toward achieving its Vision.

*2.3 Who are NJIT's major constituencies, both internal (students, faculty, staff, Board of Trustees) and external (alumni, Board of Overseers, Advisory Boards, private industry, community, City of Newark, State of New Jersey) which inform the planning process? How are these groups identified; how is their input provided, and how is their input subsequently incorporated into the strategic planning process?*

**Resources:**

State Budget Submissions  
Strategic Plans 2004-2010, 2010-2015  
Budget Submissions to Board of Trustees  
Selected Trend Analysis FY94-FY10

As noted in the VISTA document, “the Steering Committee, led by the University President and guided by **input received from the various stakeholder groups and task forces**, assumes significant responsibility for determining the content of the University's strategic plan.”

**Who are NJIT's major constituencies?**

- The VISTA planning document stresses the importance of gaining consensus on strategic plan content and employs a “top down – bottom up” approach to develop the strategic plan and strategic plan metrics. The “bottom up” component is designed to enable input from NJIT's key stakeholders. Those identified in the VISTA document include:
  - Faculty
  - Researchers
  - Administration
  - Alumni
  - Students

- Board of Trustees
- Board of Overseers
- Local and State government agencies

#### **How are groups identified?**

- Connection to NJIT's core mission
- Strategic Plan 2004-2010: Mission\_ NJIT is the state's technological research university, committed to the pursuit of excellence
- Strategic Plan 2004-2010: Goals\_enhance our educational programs, enhance and focus our research, efforts, strengthen our sense of community, enhance our revenue base, impact the economy, and strengthen our efforts in civic engagement.
- Strategic Plan 2004-2010: Once University objectives/goals are identified departments develop plans consistent with these objectives. (i.e. targeting programs for national prominence within the next five years, NJIT's planners opted to build upon its strongest academic areas, selecting programs that already have a level of national visibility and providing them with the resources to place among the top-ranked leaders in their fields) As a result task forces are then identified in relationship to University objectives and areas of expertise....

#### **How is input provided?**

- VISTA planning process: Department Heads at NJIT and key stakeholders form an independent organizational group in the strategic planning process.
- The Head of each faculty, research and administrative department at NJIT and one representative from each of the remaining stakeholder groups (see above list) are responsible for representing the interests of their constituent groups and sharing information with these groups during the planning process. Specific responsibilities of the stakeholder group include review and input to: 1. vision statement, 2. value proposition and, 3. strategies and objectives.
- Stakeholder input is provided via Task Force membership
- Strategic planning (2004-2010): task force committee composition includes stakeholder representation from NJIT faculty, NJIT alumna, NJIT students. For example:
  - Task force 1-Campus appearance committee included representation by the alumni association, graduate student association, alumna from the School of Architecture

#### **How is input incorporated into the strategic planning process?**

- As part of the VISTA process the draft vision, value propositions and strategies statements undergo stakeholder review. Draft documents are disseminated to the NJIT Department Heads and Key Stakeholder group to share with their constituencies and obtain feedback. NJIT Department Heads and Key Stakeholders can submit comments based on constituency feedback to the Institutional Research and Planning.
- Comments across departments are consolidated by Institutional Research and Planning and provided to the Steering Committee for their review.

- A finalized product is produced in workshop format in the presence of the NJIT Department Heads.

**Outcomes (not in the question but of potential importance to Middle States – will be addressed by questions of other committees?)**

NJIT strategic priorities and external engagement with stakeholder groups

- City of Newark:
  - NJIT has strong collaborative relationship with the city of Newark.
  - Redevelopment Agreement with Newark
  - Campus Gateway Initiative
- State of New Jersey :
  - integral role in educating a workforce grounded in science and technology
  - Acquisition and development of Central High School as the center for science, technology and mathematics education in the state of NJ
- Industry:
  - Development of “market-driven” graduate programs to meet the required breadth and depth of scientific and technological expertise required in New Jersey and globally.
  - Collaborative partnerships in Research? Example(s)?
- NJIT community:
  - Increasing safety and security
  - Public Safety Emergency Response System
  - Campus appearance initiatives
- Board of Trustees:
  - Discussion with Board of Trustees on budget submissions
- State of New Jersey
  - Budget submissions to state

*2.4 What strategies are used to incorporate differences in perspectives among constituencies included in the strategic planning process?*

*QUESTION*

**Resources:**

Strategic Plan 2010-2015

Strategic Plan 2004-2010

Strategic Planning Process

NJIT follows an inclusive approach in mitigating differences, if they exist, among its constituents. The following bullet points summarize strategies taken to bring about a coherent strategy that is inclusive as well as reference the relevant documents. In essence, due diligence is expended in the development of strategic plans through inclusive task force assignments, various iterations, revisions, and presentations to the involved constituents.

- Task force assignments for strategic plan 2004-2010 (2/27/2004) where members are selected from the interested parties to develop the tactics required for the approval and the subsequent implementation of the adopted plans (pages 1-7).
- In the Strategic Planning Process Document, the following Strategy is used (pages 4 and 13):
  1. In a two day workshop, Steering Committee members develop a statement of the University's core competencies and value proposition. They also identify a small number of strategic priorities and draft objectives for each priority.
  2. The draft strategic priorities and objectives are distributed to Department Heads and key stakeholders for their review and comment.
  3. In a one day follow-up workshop, Steering Committee members finalize the value proposition, statement of strategic priorities, and SMART objectives. They also discuss and reach agreement on the set of expertise needed to develop tactics for each SMART (specific, measurable, actionable, realistic, and time-based) objective.
- In the Strategic Planning Process Document on page 17 in the Summary: "Establish a top down, bottom up approach to strategic planning, ensuring that university decision-makers determine the strategic priorities on which NJIT will focus its resources while providing opportunities for the broader university community to provide input."
- The final president report on the strategic plan (2004-2010) delineates the extent of the process and its inclusiveness to achieve the needed incorporation where it is stated in the foresaid report that over the course of nine (9) months a thoughtful and inclusive effort that included over 100 individual from all sectors of the university community (Final Strategic Plan 2004-2010, page 2). The effort was developed in accordance with a business plan that evolved from discussions with NJIT's Board of Overseers, Board of Trustees, Faculty, Community, and Bodies of Student Representatives (President Message to Alumni and Friends, page 1, 2/27/2004). Similarly, on page 8 of the Final Strategic Plan 2004-2010, NJIT's Mission, Vision, Core Values, Value Proposition, and Goals reflect its inclusive strategic planning process.
- The Strategic Planning Task Forces for the 2004-2010 Strategic Plan (<http://www.njit.edu/president/planning/strategicplan-2004-2010/task-forces.php>) identified 10 along with an additional one, the 11<sup>th</sup>, to ensure all constituencies were included in the process with emphasis on diversity: faculty, students, staff, and the community at large. The revision of the strategic plan of 2004-2010, dated November 28, 2005 was amended to reflect the adaptation of strategies in attracting more diverse population of highly achieving students and faculty members from Hispanic groups, women, African Americans, and other minorities (see page 4 of the revision dated 11/22/2005).
- The strategic plan of NJIT, 2010-2015, demonstrates the same thoroughness in its development for the inclusion of different constituencies in the process in order to achieve the stated mission of the institute. The plan along with several assessment reports were shared and discussed with the diverse communities of NJIT. In its development, several iterations were conducted and shared with constituencies to reach common consensus thereof. The plan emphasizes the inclusiveness (see Assessment Plan Progress, Strategic plan 2010-2015 pages 3 and 4). Furthermore, the Strategic Plan 2010-2015 (pages 1-4) includes NJIT's Mission, Vision, Value Proposition, Goals, and Strategic Priorities and Objectives. These areas reflect NJIT's inclusive approach to strategic planning.

*2.5 To what extent are the strategic planning, resource allocation, and assessment processes at NJIT transparent? What strategies might be used to make these processes increasingly transparent?*

- The university-wide strategic planning process is very transparent. The President maintains a public website documenting the planning process; the plan with its strategic priorities, objectives and tactics; and periodic assessment scorecards. He regularly communicates to the campus community via e-mail on strategic planning matters and solicits feedback. The ViSTa (**V**ision - **S**trategy - **T**actics) process has been used for two university-wide strategic planning cycles (2004-2010 and 2010-2015).
- The interrelationships among institutional, operational, and unit-level goals are not always evident. While clearly evident with the Campus Master Plan, the Landscape Master Plan, and the Gateway Initiative, there could be greater evidence of interrelationships with the plans of academic units.
- For example,
  - Not all academic units have adopted the same ViSTa planning process.
  - The university plan sets a strategic priority to be nationally recognized for a number of thematic core areas of integrated research and learning, yet none of the academic units identify priorities, objectives, or tactics to participate collaboratively in any of these themes. Academic unit plans appear very parochial.
  - The university strategic plan sets an objective to develop a market-driven inventory of a minimum of 12 online MS degree programs and 20 graduate certificate programs, yet online MS degrees and graduate certificate programs discussions can not be found in plans of the academic units.
- Increased transparency to the planning process might be achieved by having all major plans (e.g. institutional, academic, financial, enrollment, technology) follow the same ViSTa planning format, link planning websites to the university site, and where practical, adopt the same 5-year planning cycle.
- Major resource requirements are detailed annually in the state budget submission document. Resource allocation is managed centrally and decisions are made at the senior staff level. This is understandable as budgets have become very tight with state support decreasing and the university more dependent on student tuition and fees. The process could be made more transparent by publishing the score cards that are developed for senior staff and the resulting priorities assigned for the many competing initiatives.
- The last ten years have seen a significant growth in assessment initiatives with the Office of Institutional Research and Planning (IRP) conducting a number of major annual surveys (e.g. entering students, graduating students, alumni, student satisfaction) and coordinating participation in national surveys of student engagement and use of technology. Results are analyzed and presentations are made to major campus constituencies and used to inform the planning process. Survey results are published on the IRP website.
- Major academic units are assessed by national accrediting bodies (ABET, AACSB, NAAB). Those programs not falling under the auspices of an accrediting body undergo a periodic program assessment coordinated by the Office of Institutional Research.

- The assessment process could be made more transparent and holistic by linking all assessment initiatives from a single website and summarizing, on an annual basis, the change and renewal initiated as a result of these many assessment initiatives.

*2.6 What methods are used to integrate NJIT's strategic planning process with the resource allocation planning process?*

[http://www.njit.edu/president/docs/2005/0-Revised\\_Strategic\\_Plan.pdf](http://www.njit.edu/president/docs/2005/0-Revised_Strategic_Plan.pdf)

<http://www.njit.edu/president/docs/2010/2010-09-27-2010-2015-strategic-plan.pdf>  
[fsip.pdf](#)

[NJIT President Strategic Planning at NJIT.mht](#)

[http://www.njit.edu/president/docs/2005/strat\\_plan\\_progressreport05.php](http://www.njit.edu/president/docs/2005/strat_plan_progressreport05.php)

[http://www.njit.edu/president/docs/2004/strategic\\_plan\\_memo.php](http://www.njit.edu/president/docs/2004/strategic_plan_memo.php)

<http://njit.mrooms.net/file.php/1234/FY11->

[FY08 Budget Planning Scorecard/FY08 Mid Year Scorecard.pdf](#)

<http://njit.mrooms.net/file.php/1234/FY11->

[FY08 Budget Planning Scorecard/FY10 Original Budget Scorecard.pdf](#)

<http://njit.mrooms.net/mod/resource/view.php?id=116258>

[Enrollment by UG level 2000 -2010.xls](#)

[2010-04-30-assessment.pdf](#)

<http://njit.mrooms.net/mod/resource/view.php?id=114160>

[http://njit.mrooms.net/file.php/1234/Strategic\\_Plan\\_Tracking/FY2007\\_Strategic\\_Planning\\_Funds\\_Distribution\\_Detail\\_7-19-2006.pdf](http://njit.mrooms.net/file.php/1234/Strategic_Plan_Tracking/FY2007_Strategic_Planning_Funds_Distribution_Detail_7-19-2006.pdf)

- The strategic planning process defines the resources allocation in a continuous dynamic process that has lead to period assessment and systematic change. Resource allocation has been constructed to align around near-term objectives with long-term priorities. To initially support the plan, \$2.1 million of operating funds were reallocated as a Reinvestment Fund. In addition private and federal funds were raised as well. NJIT chose to use “top down – bottom up” approach to developing its strategic plan and associated metrics. Integration of the planning process plus the resource allocations happened in parallel
- Create a vision of its desired future and a course of action for achieving that vision
- All constituents are involved in the process
- Determine how it can obtain competitive advantage given the array of alternatives available to its customers and stakeholders by compiling input, analyze trends, and conduct workshops.
- Establish priorities and objectives through focused tasks forces
- All academic program priorities have business plans that include enrollment projections, capital requirements, personnel needs.
- Make decisions about where to allocate scarce resources; Resources are prioritized based on strategic plan highlighted program priorities. The Budget Planning Scorecard is built to be balanced based on projected revenue and cost of Plan implementation. The Faculty Separation Incentive Plan savings were used to further fund priorities.

- Align the work of all its constituents around its objectives: A Milestone Strategic Plan Progress Assessment Report tracks our success quantitatively and qualitatively.
- Continuous assessment: Enrollment headcount data is compiled (including new programs) and trend analysis is done; the Budget Score Cards track the balanced budget expenditures for all initiatives; the Strategic Planning Funds Distribution Detail tracks budget associated with Plan

*2.7 What forms of fiscal accountability (strategies, processes and controls) are in place to assure that resources are allocated in a manner consistent with the strategic plan?*

**Resources:**

- Strategic Plan Progress Assessment
- Audited Financial Statements FY03-FY10
- NJIT Bond Ratings: Moody's and S&P 500
- Utility Efficiencies
- Online Budget Management Reports
- Budget Planning Scorecards FY08-FY11+B15
- Upon inception of the university's strategic plan, task forces, metrics, resources, and expense allocations are identified and assigned to the strategic priorities. The metrics are necessary to be able to determine the success or failure against the tasks goals set forth in the plan. (Strategic Planning Process)
- On an on-going basis senior staff collects and prioritizes divisional budget requests. As part of the annual budget process, these requests are compared to the strategic plan, and discussed and prioritized by senior staff. It is then determined if funding is available to fund these strategic priorities, or if re-allocations need to occur to fund these priorities. These unfunded strategic priorities are then added to the budget planning scorecards, which at the end of the budget planning process, results in a balanced operating budget. (Budget Planning Scorecards)
- The Board of Trustees approves the annual operating budget which includes highlights of the budget plan, and describes objectives consistent with the strategic planning priorities. (Budget Submissions to Board of Trustees)
- Once the budget for these task forces are approved and allocated the Budget Office tracks associated expenses. Expense results are periodically shared with senior staff to determine if the budget established for the strategic priority is sufficient to carry out the goals assigned to the task force. (Strategic Plan Tracking folder)
- Periodic progress and assessment on the individual tasks will be examined and reviewed by the senior staff and department heads to ensure that the strategic task forces are meeting their assigned goals. (Strategic Planning Process)
- On-going review of overall operating budget to assess fiscal condition may affect strategic plan short-term funding. This is determined at the senior staff level based on the monthly

status memo/reports, enrollment reports, and budget management reports. (Month End Reports Memos)

- Annually, achievements are measured against the metrics to determine if the plan has been effective in achieving its objective. The data is compiled by the Office of Institutional Research and a Balanced Scorecard and Assessment report is produced. (Strategic Plan Progress Assessment)

*2.8 How are resource allocations balanced with strategic planning given available operating and capital resources?*

**Resources:**

- Budget Planning scorecard FY 08 - FY 11
- Strategic Plan 2010-2015
- Faculty separation incentive
- Enrollment Reports
  
- NJIT balances the resources required to achieve strategic objectives.
  - Enrollment reports provide ongoing assessment of income from tuition stream.
  - A Faculty Separation Incentive program has been designed to facilitate the phased transfer to retirement for tenured and tenured track faculty to provide a means to allocate resources toward strategic objectives.
  - Capital campaign developed to raise funds to support strategic initiatives.
  
- University scorecard system is utilized to assess priorities and allocate limited resources based on need.
  - Senior staff assess requests that need to be prioritized and fit within the balanced scorecard.
- Mid Year budget adjustments made by senior staff to reallocate operating and capital resources towards strategic objectives based upon mid year assessment of the budget. The following actions are considered.
  - Reduce expenses
  - Defer capital expenditures
  - Increase budget
  - Utilize University resources
  - Return available funds to University reserves
  
- Human Resources
  - Layoffs are being averted to avoid related staff disruptions that result in lower productivity.
  - Hiring of new staff members is curtailed to the extent possible in order to control salary budget.
  - Use of temps and consultants is preferred to address immediate needs without having to commit to a long-term employee relationship.

- Teaching loads are assessed on an ongoing basis to insure effective utilization of faculty
- Capital projects are prioritized based upon their need for support of research, athletics, campus appearance, and replacement of facilities having reached the end of their useful life. Examples of projects linked to the strategic plan are as follows:
  1. Upgraded locker rooms for Men’s and Women’s Basketball support Division I strategy.
  2. Campus appearance projects which support the objectives to improve student satisfaction with building and grounds.
  3. Research lab upgrades to support research growth in the last three years include:
    - Biomedical Engineering
      - Tissue Models Laboratory
      - Stem Cell and Tissue Engineering Laboratory
    - Chemical Engineering
      - Supercritical Fluid Process Laboratory
      - Two-stage turbulent Flow Reactor Laboratory
      - Particle Engineering Laboratory
      - Laser Diagnostics Laboratory
    - Physics
      - THZ Spectroscopy and Imaging Laboratory
      - Flexible Electronic Devices and Sensors Laboratory
  4. Purchase and rehabilitation of Central High School now referred to as the Central King Building. Phase I renovations will include space for approximately 550 students in smart classrooms with network access which will support enrollment growth and improved technologies.

*2.9 What processes are applied by the institution to assess success in meeting its strategic priorities and objectives?*

**Resources:**

- Strategic Plan 2004-2010
- 5<sup>th</sup> Milestone (FY 09) Strategic Plan Progress Assessment Report
- Strategic Plan 2010-2015
- Strategic Planning Process
- Strategic Plan Tracking
- Progress Scorecard
- A strong system of internal controls is maintained to ensure compliance with university policies and procedures and governmental regulatory directives.
- NJIT participates in independent surveys to gain access to information about other universities that can be used for benchmarking purposes.
- NJIT uses VISTA model to develop objectives and monitor progress toward it. Objectives are written in the SMART format as follows:

S	Specific	Describes exactly what is expected
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<b>M</b>	Measurable	Quantifies the result that is expected
<b>A</b>	Actionable	Describes the actions the university will take
<b>R</b>	Realistic	Is highly challenging yet achievable
<b>T</b>	Time-based	Has a completion deadline

- A milestone assessment report includes strategic priorities/objectives, baseline and baseline final target as evaluated by specific metrics.
  - Progress is defined as follows
  - Target met
  - Progress Made
  - Opportunity for additional progress
- The NJIT balanced scorecard documents progress toward achievement by objectives from the perspectives of education, research community, resources and engagement as follows:
  - Strategic Plan implementation proceeding well, objectives likely to be met.
  - Strategic Plan implementation is proceeding, objectives likely to be met with achievement of one or more objectives.
  - Strategic Plan implementation is proceeding, objective to be met with concerted effort to achieve one or more objectives.

*2.10 How effective is NJIT in evaluating and assessing post-resource allocation decisions and how does this process influence institutional renewal to NJIT shareholders?*

- NJIT effectively has ensured that the university community is informed of the various components of the budget in a monthly basis. This process has properly documented the areas where the allocation of resources has been fruitful. For example the monthly budget memos provide information where the budget is over/under target which allows each head department to reassess the allocation of resources to accomplish the targeted budget.  
<http://njit.mrooms.net/mod/resource/view.php?id=114188>
- NJIT has almost double externally sponsored research and expenditures (75%). One of the main sources is the Federal government with almost near 50% of the funding. Following the national trends – areas of challenges are: make solar energy economical, advance health informatics, secure cyberspace amongst others. NJIT has already established partnerships thru grants such as NJIHITEC and Picatinny for the development of the new challenges.  
<http://njit.mrooms.net/mod/resource/view.php?id=116265>  
<http://www.njit.edu/president/planning/strategicplan-2004-2010/plan-progress.php>
- NJIT tracks student enrollment per program and per semester  
<http://njit.mrooms.net/mod/resource/view.php?id=115911>
- NJIT has increased his revenue from private sources.

<http://njit.mrooms.net/mod/resource/view.php?id=116105>

- NJIT tracks budget allocation through and post implementation

[http://njit.mrooms.net/file.php/1234/Strategic\\_Plan\\_Tracking/FY2007\\_Strategic\\_Planning\\_Funds\\_Distribution\\_Detail\\_7-19-2006.pdf](http://njit.mrooms.net/file.php/1234/Strategic_Plan_Tracking/FY2007_Strategic_Planning_Funds_Distribution_Detail_7-19-2006.pdf)

*2.11 How effectively does NJIT use the results of strategic planning and assessment to initiate renewal?*

- NJIT uses the results of strategic planning very effectively to initiate institutional renewal. Because NJIT has implemented comprehensive reporting on strategic plan progress assessment it is in the position to apply its findings to recalibrate and refine the university's vision, strategies, and tactics.
- Through such reports as Fiscal Year Strategic Planning Funds Distribution and annual Balanced Scorecards and Assessment Reports, NJIT is able to evaluate how effectively we are meeting our strategic objectives at key milestones (usually the fiscal year). This evaluation is used to make sure that the university continues on its trajectory of the pursuit of excellence in service, education, research, and economic development (as qualified in its Mission).
- By following the approach established by the ViSTA framework, NJIT is actively engaged in the process of revising the University Strategic Plan for 2010-2015. This revision is a key component of institutional renewal because it indicates responsiveness to the necessity of changing the strategic priorities, objectives, and tactics (Altenkirch Memo 6/24/09, Strategic Plan Update & Middle States Self-Study) according to the changing dynamics of the university as a whole.
- Evidence of the use of strategic planning and assessment is found, for example, in the determination to use language consistent with the current University descriptor, "New Jersey's Science and Technology University" but to include "design" as an emphasis in the Mission, and to combine the two Strategic Priorities focused on developing nationally recognized programs and improving rankings in research and technology development. The combination makes clear that research and learning are intimately related. (see Altenkirch memo 6/24/09)
- I think this question asks us to compare the previous strategic plan with the current one to see what lessons were learned and applied. It also asks us to define "renewal". The goals seem mainly aimed at boosting enrollment through one of two means: developing "hot" areas of the curriculum and adding new MS programs. We tried the second strategy when Priscilla Nelson was provost, notably through a series of MS programs at the School of Management. There were two issues: will the new MS programs add new students, or simply siphon students from other existing programs for no appreciable net gain; and whether there were faculty on hand to teach the new courses without new hires and faculty lines. I have not seen analysis of how that approach worked out at the SOM.
- How did we fare with respect to benchmarks established for enrollment increase, diversity goals, alumni giving, private donations, programs of national recognition, niche areas, etc.? To determine how we use the results effectively we need to see the data from the previous strategic plan.

- The (physical) Campus Master Plan of 2008 was prepared in the absence of an academic master plan, resulting in buildings being proposed for strategic locations without specifying what they might house. A subsequent “blue-skies” planning exercise involving a broad segment of the NJIT community in a series of meetings intended to prioritize physical space needs as part of a major capital campaign that is still in its “quiet” phase.
- Except for the focus on life and health science and engineering, which has associated degree programs, what are the implications for the various colleges, in both academic and physical terms, of the focus on sustainability and digital “everyware”?
- One enrollment strategy is the creation of new MS programs. What was the experience with the effort to add new MS programs two years ago, notably at SOM? Did they add enrollment? Was existing faculty on hand to teach the new courses? Did they bring in new students or roll students over from other MS programs?
- How did we fare with respect to benchmarks established in the previous strategic plan for enrollment increase, diversity goals, alumni giving, private donations, programs of national recognition, niche areas, etc.? To determine how we use the results effectively we need to see the data from the previous strategic plan.
- Is there an academic master plan in place or in preparation? How does this plan lead to or respond to the proposed new strategic areas?
- What is the relation between the academic master plan, the new strategic plan, and the capital campaign now in its “quiet phase”?
- The previous master plan included the move to NCAA Division I. What studies have been conducted on the impact of this move with respect to applications, enrollment, student satisfaction with campus life, budget, etc.?
- The previous plan projected moving several programs into national prominence and creating niche areas of excellence on campus. Has this been accomplished? What are the programs/niche areas? What is the metric for measuring success?

*2.12 What are the most significant current and near-term challenges facing NJIT regarding its human, financial, technological, and facility resources? How are these challenges identified, prioritized and addressed?*

- NJIT is increasingly dependent on student enrollment as a revenue source for human, financial, technological, and facility resources. The university strategic plan calls for an enrollment increase to 11,000 students, with an increasing percentage of graduate students. enrollment targets for fall 2010 were not met, making targets for fall 2011 and succeeding years more challenging.
- Each of the academic units have detailed plans with nearly all calling for an increase in faculty lines. Increased enrollments will also call for increases in lecturer and adjunct lines. *[Insert table showing current and planned levels of T/TT faculty, lecturer, and annual adjunct equivalent hires by academic college/school]* .
- The Faculty Separation Incentive Program will provide some resources for hiring of new faculty lines *[Insert table showing projected re-investment fund for faculty new hires]*.
- Tight budgets have deferred capital maintenance in a number of areas including classrooms and laboratories, building infrastructure, and technology infrastructure. *[Insert table showing summary of deferred maintenance issues, detailing classroom infrastructure, laboratories, building infrastructure, technology infrastructure, and other]*.

- The acquisition of Newark's Central High School as the Central King Building will provide much needed space for many campus initiatives. A university task force is currently developing proposals for its final use. *[Insert some of the initial ideas and estimates for initial and final capital costs].*
- Summary paragraph of Campus Master Plan initiatives, Landscape Master Plan initiatives, Gateway Plan initiatives and table of costs identifying which will require university funding and which will be funded from private/external sources.
- The university faces a significant budget challenge in balancing the one-time capital costs for new initiatives vs. accumulated deferred maintenance capital costs for existing infrastructure. *[Insert Table to illustrate]*

*2.13 In light of challenges to human, financial, technological, and facility resources, how effectively does NJIT allocate institutional resources to achieve mission success?*

[see above]

*2.14 In support of the present strategic plan, how will NJIT assure that sufficient resources are allocated to foster education, research, economic development, and service?*

- NJIT is well aware of the challenges we face in the allocation of scarce resources across the university and it has implemented a strategic plan and strategic planning process that is designed to ensure that sufficient resources are allocated to foster education, research, economic development, and service as determined by the priorities and objectives established in our bottom up and top down approach.
- Every step of the planning process analyzes the present allocation of resources in order to make recommendations about future allocations. This includes, in particular, a rigorous internal assessment process that evaluates the allocation of intellectual assets, financial resources, facilities, and operating systems and structures.
- NJIT uses the “balanced scorecard” approach as a way of measuring its performance from different perspectives (such as financial, student/customer, learning and growth, internal business processes) to support allocation of resources as dictated by the priorities of the strategic plan. More specifically, it has developed specific, measurable, actionable, realistic, and time-based (SMART) objectives and tactics that aligned with NJIT’s strategic priorities and indicate how resources are allocated to achieve the university’s strategic objectives (ViSTA, p. 27)
- The issue is not how NJIT will assure that sufficient resources are allocated but how they will assure that there are sufficient resources to be allocated. This is the elephant in the room. At present, efficient use of resources is driving curricular decisions, from class size and scheduling to business plans for certificate programs. The strategic plan says nothing about how these decisions will be made, or by what process a decision-making process will be developed. My understanding is that, for example, the provost advocates for the academic budget; the deans advocate for allocations to their colleges; the VP for research advocates for seed money to

support the research agenda. It is not clear from the assembled documents how support for economic development or service are allocated.

- A notable change to the Mission Statement is addition of **economic development** to core mission of education, research and service. Focus identified on economy, industry and business ventures, all in a few short lines. This strikes me as moving closer to the business model of assessment as opposed to the education model outlined in the attachments.
- How will the new master plan, focused in interdisciplinary initiatives, allocate budget among the colleges?
- What is the process for allocating money between academics, athletics, administration, and other activities?

Part 3—Critical Analysis and Conclusions

Part 4—Collaboration with other Working Groups

Part 5—Recommendations for Improvement



January 24, 2011

Working Group 2 Outline

### **Chapter 3. Standard 3: Institutional Resources**

#### Part 1— Introduction

- I. Précis: NJIT Planning and Resource Allocation under Conditions of Scarcity
- II. An Overview of Group 2's Standard 3 Charge and Questions Addressed

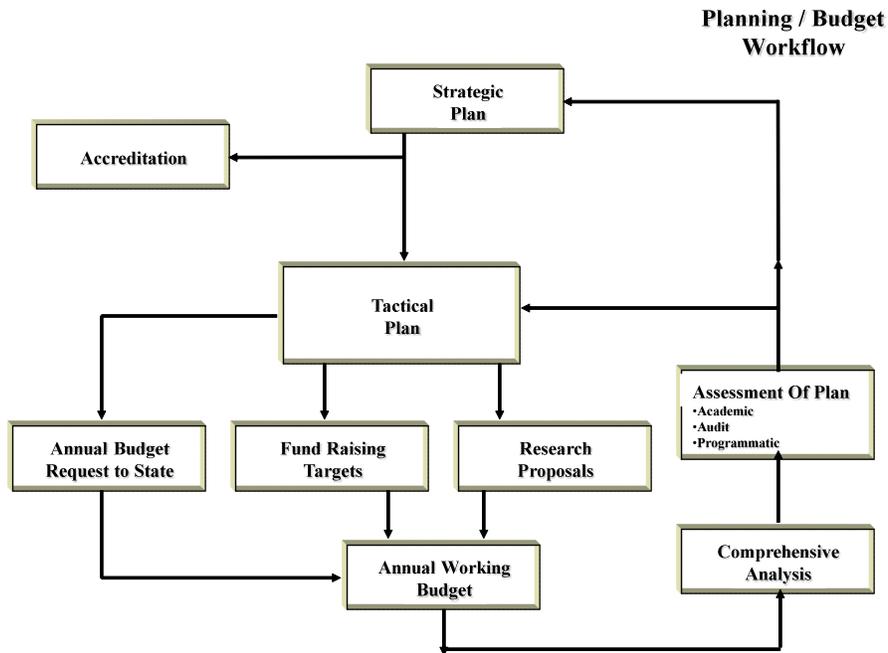
#### Part II—Self Study Inquiry and Outcomes

##### Resource Development and Allocation Process

New Jersey Institute of Technology follows a budget resource development and allocation process that facilitates clear funding identification as well as assessment of operational results. As displayed in Chart I, this process is conducted on an on-going basis and is closely linked to strategic planning.

In summary, the NJIT resource allocation process seeks to:

- Assess and determine how best to develop and allocate resources that support accomplishing the university's strategic objectives,
- Determine the financial, human and facility requirement to achieve the operational effect,
- Conduct operations on an annual basis within available resources,
- Assess outcomes of operational programs, processes and financial results on an on-going basis,
- Communicate results to the university community and constituency.



Given the overall economic downturn affecting appropriations received from the State of New Jersey, the University has made business decisions maximizing revenue while prioritizing expense allocations. For example, resources required to effectively support the overall success of our 2005 – 2010 strategic plan, as well as our newly revised 2010 – 2015 strategic plan, were primarily supported by effectively reallocating existing funds.

Personnel costs (salaries and employee benefits) exceed 61% of the total operating budget and, to a large extent, the result of collective bargaining agreements. More than 82% of full-time employees are currently affiliated with one of our seven bargaining units. Additionally, an eighth bargaining unit was recently created that covers approximately 320 graduate students. Human resources are sufficient to adequately support current academic, administrative and support functions. However, administration recognizes the need for revitalization and, as such, has, over the past five years, made selected faculty and staff hires that are in line with its' mission and strategic objectives, or, are critical to support on-going operations. Funds made available by faculty separation agreements, to a large degree, have been 'fenced -in' and applied toward new faculty appointments in the College of Architecture and Design, Biology, Biomedical Engineering and Management. These new hires will enhance the academic programs within their department and support anticipated enrollment growth.

Preliminary base operating budget allocations are distributed during the budget development phase (February), which is closely aligned to the State of New Jersey fiscal cycle and the Governor's Budget recommendations. The Office of University Budgeting works closely with Dean's, Vice President's and President in analyzing supplemental budget requests and displaying these requests on a budget scorecard (attachment I). Once all budget factors (revenue and expense) are fully discussed and prioritized, the Sr. Staff (President and Vice

President's) make final allocation decisions resulting in a balanced budget, supported by tuition and fees, State appropriations, external research and private/corporate giving. The annual operating budget is summarized and presented to the Audit and Finance Committee of the Board of Trustees for discussion and input. The final budget, including tuition and fee rates for the upcoming academic year, is presented for approval at their July meeting, which is after the State appropriation Act is approved by the State Legislature. The Sr. Vice President for Administration and Treasurer is responsible for briefing the Board of Trustees on all financial matters at their meetings throughout the year. The University is kept informed of the budget process through the 'Presidential News' website.

On-going detailed budget monitoring occurs throughout the year, facilitated by an on-line budget management system. This secured access system, which is updated daily, provides fiscal managers drill-down capability to their budgets; providing these managers with up-to-date budget management tools. The Office of University Budgeting also conducts detailed mid-year (December) and end of third quarter (March) budget reviews where any corrective actions required to maintain a balanced budget are reviewed/approved by Sr. Staff and implemented in Banner.

Progress on campus development has been on-going at NJIT, and follows the Facilities Master Plan updated in 2008 (attachment II). The NJIT campus encompasses more than 45 acres. Its 28 buildings contain approximately 2.9 million gross square feet and has a replacement value of \$906 Million (attachment III). Of the total building space, approximately 80% was constructed after 1965. Over the past ten years, there has been an acceleration of facility improvements, including an \$80 million, 178,023 sq. ft. campus complex that encompasses: a new Campus Center which includes a modern, state-of-the-art servery, campus dining area, the Hazell Ballroom, student activity offices, and a faculty and staff dining facility; the newly constructed Fenster Hall to house the Department of Biomedical Engineering, Admissions, and administrative offices and the full renovation of Eberhardt Hall NJIT Alumni Center to serve as a facility to accommodate alumni and fundraising functions and office space for the Alumni Association of NJIT and University offices of Advancement, Alumni Relations and Development.

In June, 2010, the University purchased the historic Central High School building. Upgrading the fire detection and suppression systems are underway (January 2011) and the second floor will be used for classrooms. The full use of this facility is still in planning stages, but will be consistent with strategic priorities.

The Naimoli Family Athletic and Recreational Facility, opening in the spring of 2011, is a 25,600 square foot facility housing athletic and recreational activities as well as year-round tennis. This facility, made possible, in part, by a generous gift from Vincent Naimoli '62, Founder and Chairman Emeritus of the Tampa Bay Rays of Major League Baseball.

In addition, management of the Big Bear Solar Observatory in Big Bear Lake, California, and a dedicated array of solar radio telescopes at Owens Valley Radio Observatory in Owens Valley, California, became the responsibility of the Center for Solar Research at New Jersey Institute of Technology effective July 1, 1997 under a lease for the land and buildings until the year 2048. The observatories and equipment are valued at about \$12 million.

Funds to support all facility improvements have come from State bonds, NJIT bonds, private gifts and operating reserve funds. Recently, Moody's Investors Service, Inc. and Standard & Poor's Rating Services have assigned their municipal bond ratings of "A1" and "A+", respectively.

Implementation of the NJIT Campus Gateway, a mixed-use, residential and retail redevelopment of properties north of campus, plus an NJIT parking lot has taken some major steps forward. A designated redeveloper for the project is to fund these initiatives through private investment. This project focuses on neighborhood residential, retail, and entertainment enhancements to the area. Implementation has begun in partnership with the Master Developer, Jones Lang LaSalle. Proposals for development of a "Greek Village", as well as a potential residential and retail complex on Warren Street within the same footprint, have been received and are currently being evaluated.

During the past ten years, direct state appropriations have declined while state support for employee fringe benefits has grown. Overall, total State support for university operations has declined compared to the growth in the overall budget, and now represents 23 percent of total revenue. For comparison, State support represented 34 percent in FY02. Chart II displays the significant growth in revenue NJIT experienced in comparison to State appropriations. Chart III displays the major income sources over the past ten years, indicative of steady, significant financial growth. Since FY02, total NJIT revenue has grown by 47 percent and totals \$296 million in FY11. Owing to the continued downward trend in State support, the university has relied more heavily on tuition and fee income as a major revenue source. Tuition and fee revenue has increased from \$65 million in FY02 to an estimated \$122 million in FY11, representing 41% of total operating revenue. Another significant factor in NJIT's financial growth is in research and development activities, which has grown from \$50.1 million in FY02 to an estimated \$74.6 million in FY11.

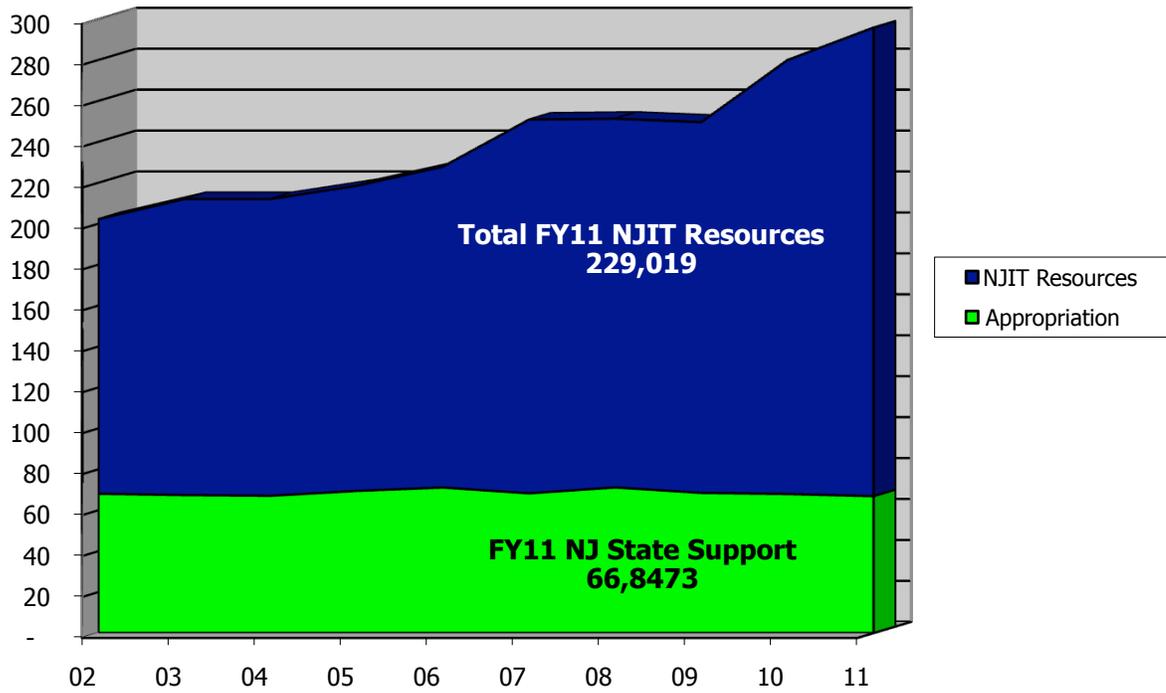
The overwhelming majority of expenditures at NJIT continue to be academic or research related (Chart IV). Over the past ten years, scholarship and fellowship expenses have more than doubled. Over the same period, support and auxiliary service expenses have had very modest growth.

An independent auditing firm (currently KPMG LLP) annually audits the university financial statements with results discussed with senior administration and the Board of Trustees. Their unqualified opinion consistently recognizes that the financial position of New Jersey Institute of Technology and the changes in its financial position and its cash flows for the years then ended are in conformity with U.S. generally accepted accounting principles with no material weaknesses indicated (attachment III – FY10 Financial Statements and Management's Discussion and Analysis).

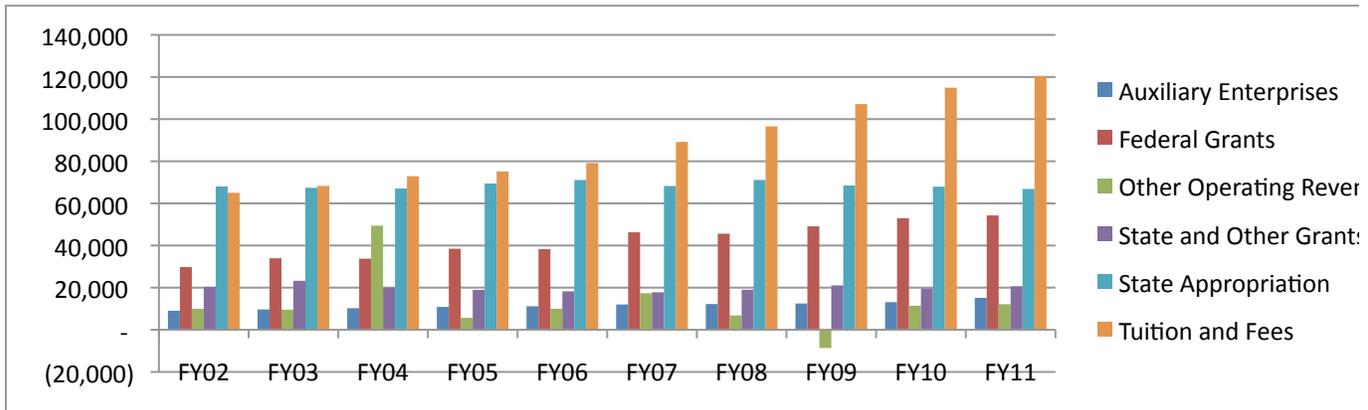
Further, financial data are provided to the Office of Institutional Research for inclusion in annual IPED's and other external reports, as well as to the New Jersey Commission on Higher Education.

Chart II

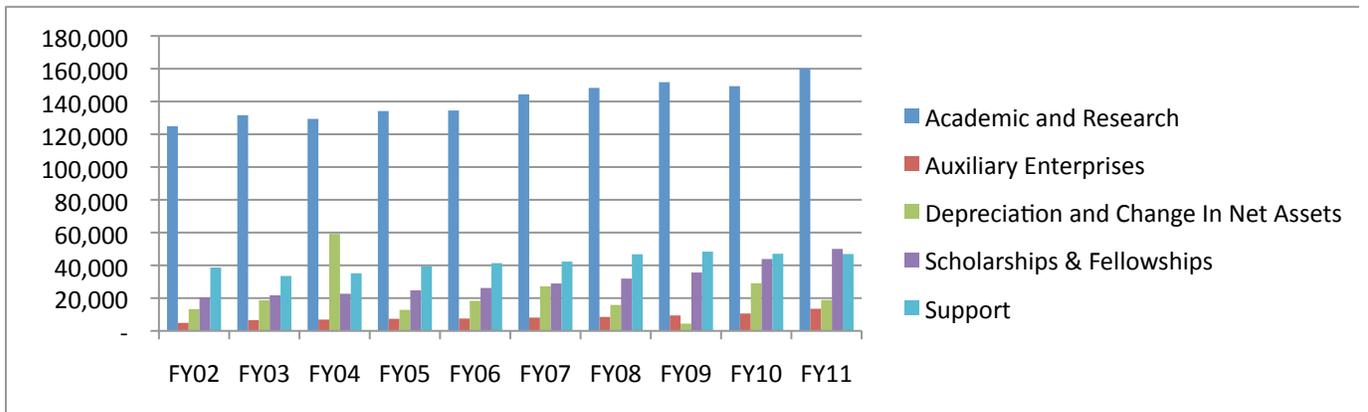
**NJIT Operating Resources *Dollars In Thousands***



**Chart III – 10 year History of Revenue Sources**



**Chart IV – 10 year History of expense detail**



Comments on budget trends will be made once below attachments are finalized.

It is recommended that the Attachments be part of the appendix.

Attachment IV – FY02 – FY07 – FY11 Operating Budget – Revenue Detail

Attachment V – FY02 – FY07 – FY11 Operating Budget – Expense Detail

Attachment VI – Comparison of General Operating Expense Trends for University and Key Support Areas

Attachment VII – FY11 operating budget and revenue projections for FY12 – FY14

Attachment VIII – FY11 operating budget and expense projections for FY12 – FY14

Part 3—Critical Analysis and Conclusions

Part 4—Collaboration with other Working Groups

Part 5—Recommendations for Improvement