Revitalization Project for
West Virginia University Institute of Technology Team Report

Submitted to

Dr. Brian Noland, Chancellor
West Virginia Higher Education Policy Commission

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Introduction

Those familiar with West Virginia University Institute of Technology (WVU-Tech) know its rich history, accomplishments and challenges. The institution has a more than a 100-year history as a high school, trade school, junior college, college, university, and as a regional campus of West Virginia University (WVU). Since 2007, WVU-Tech has been a fully integrated division of WVU. Over the years, WVU-Tech earned a reputation for the quality of its engineering programs that have been an important resource to the State.

The major problem facing the Institution is low enrollment, compounded by an antiquated physical plant with major infrastructure needs. According to data provided by WVU-Tech, there has been over the past five years nearly a 20 percent loss in enrollment, and more than a 20 percent decline in retention of first-time freshmen. In this five-year period, there has been a slight increase in the number of staff and faculty primarily due to expansion of staffing in intercollegiate athletics. The total dollar amount of capital needs is in excess of $70 million. The institution is generating insufficient revenue to address its needs, including the recruitment and retention of students.

The West Virginia Legislature passed Senate Bill 486 in 2011 to establish a revitalization project intended to:

> *…encourage WVU-Tech to build upon its tradition of high-quality, student-centered STEM education, to assist the institution to reach its full potential as a center of excellence and a positive force for economic development and cultural enrichment within the community and state, to implement certain recommendations from the WV-CURE report and to create a successful policy model that state decision makers may employ in other areas where state institutions of higher education struggle to overcome similar problems. The revitalization project shall serve as a laboratory in which to identify problems, research solutions and implement those programs and procedures that best meet the intent of this article.* (Article 18B)

To accomplish this, the legislation instructs the West Virginia Higher Education Policy Commission (HEPC) to establish a Team to study the needs and potential remedies for WVU-Tech. Members of the Team have more than 230 years of higher education experience. Team members include Constantine Curris (Chair), Donald Carson, Bill Elswick, Edwin Jones, Alec Testa, and Ben Tuchi. The Team was instructed by the Commission to investigate the following at WVU-Tech: Administration and Governance, Academics, Athletics, Student Services, Finances and Human Resources, Facilities, Capital Improvement, and the Strategic Plan. Team members were also instructed to consider several recommendations drawn from the WV-CURE (Consortium on Undergraduate Research and Engineering) report. These are summarized as:

- meaningful interaction among K-12 educators and professional communities;
- enhance student design/capstone experiences;
- stimulate interest of young people in training in careers in engineering and related fields;
- increase the diversity of students enrolled in STEM programs;
- increase the capacity for high quality engineering instruction and research in the State;
- explore collaboration between institutions; and,
- develop more technological classrooms, online offerings, and similar innovations.

From this report, the Chancellor shall coordinate the development of a plan that addresses the following:

(1) Exploring new academic programs that meet emerging industry needs in West Virginia;
(2) Developing distance education and adult-targeted degree and programmatic offerings, with particular attention to avoiding costly program duplication;
(3) Examining marketing and recruiting strategies at the institution;
(4) Reviewing nonacademic programs and auxiliary operations, focused upon efficiencies and strategic development;
(5) Reviewing fiscal and operating procedures, emphasizing initiatives through which the institution can reduce annual operating costs and maximize all available revenues;
(6) Evaluating all institutionally-affiliated groups, including the alumni association, the WVU-Tech Foundation and all other institutionally-affiliated organizations which are exempt from taxation pursuant to Section 501(c)(3) of the Internal Revenue Code of 1986, as amended, stressing revitalization of these entities; and,
(7) Reviewing and assessing the capital infrastructure of the institution.

The plan developed by this process will in turn lead to a means by which WVU-Tech can request and receive funds allocated by the Legislature to revitalize the Institution.

The Team assembled in West Virginia and visited the campus of WVU-Tech from July 25-28, 2011. Members of the Team met with members of faculty, administration, and staff individually and in groups. The Team also had open meetings and teleconferences with students, alumni, classified staff, professional staff, members of the community, and industry representatives. Team members held more than 35 meetings over the course of the visit.

In addition to access to various constituencies, WVU-IT made available a wide array of reports and data both through an exhibit room and electronically through a protected web-site. Materials were related to academics, accreditation, athletics, enrollment, facilities, finances, human resources, and the strategic plan. Ad hoc requests were made and quickly responded to. The Team was impressed by the helpfulness and openness of the entire WVU-Tech community.

What follows are reports on each of the areas that the Team reviewed. Each details the challenges and makes recommendations. The report concludes with a summary of prioritized recommendations.

<u>**Governance**</u>

Strongly held viewpoints on the governance of WVU-Tech greeted Team members in virtually every setting, save our meeting with students. While a majority of those from whom we heard, in meetings as well as through email and phone conversations, favor a free-standing, independent West Virginia Institute of Technology, the Team agrees that today WVU-Tech has neither the enrollment nor the financial base to warrant independent status.

This issue, moreover, is moot inasmuch as the legislation creating the WVU-Tech Revitalization Study and Program clearly states a legislative intent "to promote institutional stability at WVU-Tech by keeping the governance structure of the institution unchanged until… [the evaluation of the Revitalization Program]…is received in 2014."

The Team noted in the current governance structure several attributes which merit acknowledgment and appreciation, as well as several shortcomings which warrant amelioration. Several Tech administrators expressed gratitude that the current governance structure has provided the Montgomery campus access to expertise and excellent counsel at no cost to the Tech campus. Several back room functions are performed by WVU main campus officials with important cost savings accruing to WVU-Tech. A couple of WVU-Tech academic departments have taken the initiative to work with Morgantown counterparts to strengthen program offerings that would otherwise not be available to Tech students.

On the other hand, the Team became aware of serious governance problems that need to be addressed. The absence of fully compatible systems has limited the capacity of some Tech personnel to serve well incoming and returning students. For example, high school seniors cannot apply on-line to both institutions but must choose one or the other. This weakness in on-line admissions creates considerable frustration for prospective students as well as Tech staff. Likewise, the inability of staff in Montgomery to make or change on-line room assignments for Tech residence halls compromises the provision of student services. Clearly priority needs to be given to eliminating these problems, or full authority for the impacted services should be restored to the Montgomery campus.

A major issue, in the eyes of the Team, is the degree to which WVU-Tech can or should maintain a separate identity. While Tech is a "division" of WVU, it is expected to recruit students and raise funds to support its operations independent of the main campus. Tech cannot effectively fulfill those expectations when its "brand" is unclear. Similarly, several alumni have withheld contributions, unclear as to whether they would be giving to WVU or to Tech. As one alumnus pithily expressed his frustration: "I am a Golden Bear, not a Mountaineer, and I am not sure what my school is."

Related to the issue of identity is the need for a clearer definition of the role of the campus executive officer – referred to as "Campus Provost." Legislators expressed concerns and suggested their unhappiness over not having contact with the Campus Provost, who indicated to the Team that he has been advised not to have those contacts and to work through legislative liaisons working for West Virginia University. It should be noted that on an organizational chart the Campus Provost reports to the WVU Provost, but in practice, primarily interacts with an Associate Provost on the main campus. He is not included as a participant in the several meetings of public college and university presidents.

The relationship between WVU-Tech and Bridgemont Community and Technical College has likewise generated both noteworthy accomplishments and lingering concerns. The Team noted focused and effective efforts by the executive and administrative staffs of both institutions to achieve workable protocols. The Team found the array of 2 + 2 completion programs and the on-going and periodic meetings of the leadership of both institutions admirable, and important in minimizing difficulties of two relatively small institutions sharing a common campus.

The Team is concerned about course duplication in general education offerings as well as with duplicative administrative staffing. Such duplication may be an unavoidable aspect of the State maintaining two separate higher education systems, but in the final analysis one has to question whether the State's tax dollars are being expended as judiciously as they could be. To minimize administrative expenditures, both institutions have worked out cost-sharing arrangements with other institutions (WVU-Tech with the Morgantown campus; Bridgemont with Kanawha Valley Community College). In recognition of the legislative charge to be "focused upon efficiencies and strategic development," we need to raise the question whether key administrative positions should be shared by campuses 40 miles apart, as opposed to 40 yards apart.

Recommendations

- The Team believes that greater clarification of the role and responsibilities of the WVU-Tech chief executive is needed and that clarification needs to lead to common understandings on both campuses, with the HEPC and with the State's gubernatorial and legislative leadership. At the heart of these understandings is a clear delineation of the meaning and implications of "divisional" status.
- Given the fact that WVU-Tech must earn separate professional accreditations, and is viewed as a distinct entity in funding formulae calculations, the Team encourages greater operational autonomy for WVU-Tech, and an enhanced stature for the campus provost position.
- WVU and WVU-Tech must work cooperatively to identify where student information systems and similar IT systems are either not compatible or not fully available to Tech staff. In particular, those instances were Tech staff must email WVU personnel to accomplish routine data entry and reporting needs to be eliminated.
- WVU-Tech should be encouraged and allowed to develop and maintain its own identity not only in athletics, but also in marketing and outreach as well as alumni and community relations.
- WVU-Tech and Bridgemont CTC should continue to explore efficiencies (and develop action plans) in both general education offerings and shared administrative functions. This will likely require the full engagement of the HEPC and the West Virginia Community and Technical College System.

Administration

A search process will soon be initiated to select the Campus Provost (hereafter referred to also as campus chief executive). While the selection of a leader is important to any organization, at WVU-Tech the upcoming selection will be a critical one. Two considerations must be kept in mind.

First, the history of Tech is writ largely through its campus leadership, notably the distinguished tenure of Dr. Leonard C. Nelson. The Tech community is accustomed to strong, committed and passionate leadership. Secondly, the implementation of the "WVU-Tech Revitalization Plan" will heavily depend on the leadership of the campus chief executive. The best thinking in Morgantown and Charleston will be secondary to decisions made on the WVU-Tech campus.

It is not the intent of the Team to detail the ideal qualities of the chosen candidate; such lists are widely available. We do wish to identify three qualities that we believe should be paramount in the selection process, namely:

1. *Credibility*. The campus chief executive must have credibility on the campus, in the local community, with alumni, as well as in Morgantown and Charleston. WVU-Tech is at a fragile point in its history. It can no longer afford divisions and polarizing disagreements. The chosen leader must share the confidence of all constituent groups and must "rally" all who care for WVU-Tech behind the new directions for the Institution. WVU-Tech is a small ship, and there is room for only one captain.

2. *External Advocacy and Visibility*. If the recommendations proffered in this report are endorsed, much work will need to be done extramurally. The case will need to be made for the significant capital investments needed to upgrade campus facilities and to rebuild campus enrollment. The establishment of significantly larger cooperative education and internship opportunities will entail extensive visits to employers throughout the region, as well as with alumni, many of

whom hold positions pivotal to implementing revitalization efforts. Given the paramount need to expand enrollment, the campus chief executive must attend to building working relationships with fellow educators in K-12 schools and community colleges.

3. *Vision*. WVU-Tech's historic strengths have been built on developing academic programs responsive to the workforce needs in the Kanawha Valley and throughout the State. For the past two decades, WVU-Tech has experienced programmatic contraction, losing some of its comparative advantage vis-à-vis other institutions. The new campus chief executive needs to lead the academic community both in reevaluating extant program offerings, with meaningful input from employers and State leaders, and in exploiting opportunities to meet 21st century workforce needs.

WVU-Tech's campus chief executive will work with a relatively strong leadership staff. The Team was impressed with the capabilities and commitment of that leadership team. We especially noted the evident "teamwork" which characterized their work and interaction. It is important that the search for the campus chief executive not be an unduly lengthy process, and that the work of the leadership team remain focused during the search process.

During our visit, the Team heard criticism about the expansion of the number of administrators. We were not in a position to validate or refute those statements. We did observe, and it is noted in several sections of this report, a shortage of key personnel in several areas, especially in the physical plant, business office and student service. Of course, if the Team's recommendations are accepted there will be additional staffing considerations in cooperative education programming and STEM teacher education. The campus chief executive will need to evaluate staffing needs throughout the institution, reallocate positions, and redirect funding to better meet priority needs. Decision-making on the campus needs to be nimble, yet inclusive. Until there is a strong rebound in enrollment, there will be underutilized faculty resources that could be effectively deployed to implement a good portion of these recommended changes.

<u>**Academics**</u>

West Virginia University Institute of Technology (WVU-Tech) is organized into two colleges, the College of Business, Humanities, and Social Sciences (BHSS) and the Leonard C. Nelson College of Engineering and Sciences (LCNES). In addition, there is a Department of Nursing (NURS). In turn, BHSS has eight departments offering approximately 25 programs, while LCNES has nine departments offering five engineering degrees in four departments, one department with five engineering technology programs and one industrial technology program, and four science departments offering majors in these areas as well as providing important learning for students across the campus.

During the visit of the Team, selected Team members visited with approximately 15 of the department heads, the two deans, a librarian, and a student group. Selected Team members had some telephone conversations with individuals unable to be on campus. With one exception, the meetings were private. Discussions centered on perceived strengths and weaknesses, opportunities, and needs. These individuals were uniformly respectfully and candid in their observations, and are clearly dedicated to the future of WVU-Tech.

The Team also met with a group of nine students who took time from their summer break to share their ideas. As is usual in such visits, student meetings are a real highlight. Like the faculty and staff, the students were candid, interested, and recognized both opportunities and needs.

The approximately 35 academic programs at WVU-Tech are solid and conventional. Many faculty members use the term *practice-oriented* to describe the programs, seen as an important institutional strength. Many programs suffer from outdated facilities and some safety issues in the laboratories (discussed further in the Facilities section of this report). Nearly all have inadequate enrollment. Higher enrollment is necessary for a collegial student experience as well as economy of scale.

Historically, many of the programs have had vibrant co-op programs or internships. Virtually all of the alumni who responded to the requests for comments have praised these programs as ways for students to earn while learning, to gain experience through their learning years, and to be ready to contribute to the rapidly-changing Kanawha Valley industrial scene. Indeed, many co-op and internship experiences lead to career employment. This meant that WVU-Tech programs met important needs in the State of West Virginia, and nearby areas. Given that, this may provide WVU-Tech with a unique market niche. The nearest required co-op program is probably the highly regarded co-op program at the University of Cincinnati.

The Team believes that WVU-Tech needs programs that distinguish themselves from those at other institutions. WVU-Tech cannot compete on the basis of either cost or location, but it could on academic programming, accompanied with recruiting, outstanding web pages and creative use of social media, conventional publicity, extensive interaction with alumni who live and work in the State, and other creative use of resources of the faculty and staff. The Team believes that reinstatement of co-op and internship programs as **required** program elements will give all programs a feature that attract the students that WVU-Tech has attracted in the past.

Closely related to programs that will attract students is the necessity for a university catalog—at a minimum, an on-line version, and a web presence that will generate excitement and interest on the part of students while they are still in high school. The Team opines that the current web sites could and should be revised significantly so as to attract potential students. As one example, to be accredited, engineering programs are expected to have articulated program educational objectives and to publicize these. The objectives written by the various engineering programs are, in the opinion of the Team, stated in a way that meets the accreditation requirements, but will not attract students or employers. In some cases they do not appear to be on the web site, or are not readily found or prominently displayed.

WVU-Tech has had teacher education in the past. While demographic factors do not support a reinstatement of the entire program, there is an important new need for preparation of a new class of teachers. Commonly known as STEM[1],this study area recognizes that our society needs teachers with solid credentials in Science, Technology, Engineering, and Mathematics. WVU-Tech has strengths in its faculty in these four areas of study. WVU-Tech has the potential for developing teachers who are first of all practitioners in one or more of these areas and who are also prepared to teach in schools, primarily in secondary schools. This could be accomplished by developing creative, vigorous programs in these

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[1]The word *technology* has a wide variety of definitions. In STEM, the definition that is often used is somewhat anthropological, and relates to the idea that *technology* is the art and science of converting resources into devices, systems, and processes that improve the quality of life for people.

areas coupled with a study of the educational principles that would make them effective in the classroom. These STEM Education programs should be nested in the existing academic departments and not in a separate department of teacher education.

Accreditation

Accreditation of professional programs, while voluntary in principle, is essential for the Institution to earn and maintain, and for the graduates who wish to obtain professional licenses (nursing, engineering, etc.). It is important that institutions demonstrate that they have met expected professional standards. Institutions should also clearly publicize accreditation status in literature and on the web, when it has been earned.

Regional Accreditation

WVU-Tech is accredited by the Higher Learning Commission of the North Central Association (HLC-NCA) through a process linked to accreditation of the main WVU campus.

In the HLC-NCA Mandated Focus Visit Team report submitted to WVU-Tech in January of 2009, assessment of student learning was singled out for a focus visit. WVU-Tech was required to submit a progress report on student learning by May 1, 2010, which it did. Assessment of Student Learning, however, did not make its way into the WVU-Tech Strategic Plan and appears to again be languishing for attention, effort and resources.

Engineering and Engineering Technology Accreditation

The engineering and engineering technology programs were visited in AY 2008-09 and AY 2009-10, respectively. Some of the engineering programs received (in ABET terminology) *interim reports*. These reports dealt with facilities and with assessment and continuous improvement requirements of ABET. The reports were submitted and ABET sent a draft statement, which was reviewed. Subsequent to the Team visit, the campus was informed that ABET program accreditation had been renewed. It appears that all will be in order for the next general review (NGR) in 2014-15 when engineering and engineering technology programs will be eligible for review simultaneously.

At present, all five engineering programs are accredited through September 30, 2015. Electronics Engineering Technology, Engineering Technology (Civil), and Engineering Technology (Mechanical) are also accredited through September 30, 2015. It appears that the programs Engineering Technology (general), Engineering Technology (Environmental), and Industrial Technology have not requested accreditation visits. The accreditation status of these programs is stated on the WVU-Tech web site. These accreditations are independent of the WVU Engineering accreditations, which is consistent with ABET practices.

One requirement for ABET accreditation in both engineering and engineering technology is a regular review of program educational objectives. The programs must show that the objectives meet constituent needs. This should receive immediate attention.

Nursing

Following is a quotation from the web site of the WVU Medical School, readily found with links from www.wvu.edu as well as the WVU-Tech web site.

*The Commission on Collegiate Nursing Education (CCNE) is the sole accrediting agency that accredits only baccalaureate and higher degree programs. Their new accrediting process was initiated in 1998 and West Virginia University School of Nursing was in the initial accreditation cycle. The School received a full, 10 year, accreditation for the baccalaureate and masters' programs in April, 1999. In April 2009, The School received another full 10 year re-accreditation for the baccalaureate and masters' programs, with all standards met and no areas of concern. **This accreditation also applies to the WVU School of Nursing programs offered at the Charleston Division, at West Virginia Institute of Technology, and at Parkersburg (WVU-P).** It also includes the freshman course and sophomore year nursing courses at Glenville State College and Potomac State College.*

It is to be noted that the WVU-Tech web site does not appear to directly mention this accreditation status, which would be critical for recruiting students.

Chemistry
While not, strictly speaking, an accreditation process, the American Chemical Society (ACS) has a certification process for programs in chemistry. It considers facilities and curricular matters. The WVU-Tech chemistry program does not have ACS approval.

Business
The Business programs at WVU-Tech do not have AACSB accreditation.

Computer Science
The Computer Science program has, apparently, not applied for ABET Accreditation in Computing.

Academic Resources

Library
The WVU-Tech Library is a modern building. It has electronic catalogs, periodicals, and books. It is a good place for students to learn and work. It has some electronic data bases, such as IEEE ExPlore. It appears that some agencies treat WVU and WVU-Tech as separate campuses, and require separate subscriptions for databases, while others treat WVU-Tech as a branch campus.

The Team was told that there were no funds for library book acquisitions. Examination of the books on shelves showed that the collections are out of date and lacking in current reference books, essential for an "institute of technology" in this rapidly developing age.

Web site
In today's society, a commanding web presence is essential for attracting potential students, employers, alumni, high school teachers and counselors, and the public. Some research has suggested that teachers may have more influence on students' choice of professions and universities than do counselors. WVU-Tech recognizes that its current web site falls short in this regard, and is experiencing difficulty in getting a qualified, creative person to do the necessary work. Closely related is the importance of social media. Current students would be valuable in evaluating web sites and, at least in some cases, doing the necessary design work to make them attractive to the target audiences.

Personnel
The Team was told that there was difficulty in hiring employees from other countries due to candidates acquiring work visas. The role of the HEPC in helping to resolve work visa problems for institutions with limited resources and experiences is not clear, but perhaps WVU and the HEPC working together with WVU-Tech might be able to resolve some of these issues.

Computer Networking
At present, WVU-Tech has an Ethernet network in the academic buildings, the library, and the dormitories. But, today's student expects Wi-Fi, and an "institute of technology" should have modern, highly secure wireless networking.

Recommendations

Recommendation Regarding the Academic Programs
- The Team recommends that all programs at WVU-Tech establish required co-op or internship programs, and provide the resources needed to find appropriate employment for students, including evaluation mechanisms, and to consider whether or not academic credit should be given for such activity. The Team recognizes that challenges will surface in the implementation of this recommendation. Nevertheless, the Team is convinced that the recommendation should command the highest priority.
- The Team recommends that, using its resources in Science, Technology, Engineering, and Mathematics, WVU-Tech develop a program for education of students in these general disciplines who are also prepared to teach these subjects in schools of West Virginia and beyond. This recommendation is conditional that the STEM Educations be embraced by and housed in the academic departments, and not based on the creation of a separate teacher education department.

  The Team recognizes that the professional education component of the teacher education program, including the coordination and review of field experiences, will need to be handled through the chief academic officer or as part of the administration of internships and cooperative education.

  The Team is also aware that the HEPC may need to make adjustments to accommodate a limited, but focused teacher education program.

- The Team recommends that WVU-Tech implement the goals and strategies as outlined in the Progress Report on Assessment, submitted to the HLC-NCA in May of 2010.

Recommendations Regarding the Library
- The Team recommends that a reasonable book acquisition budget be restored to WVU-Tech Library.
- The Team recommends that WVU-Tech, WVU, and the HEPC work together to clarify with appropriate data base vendors to ensure that all recognize the same status of the campus with regard to electronic databases and similar items.

Recommendations Regarding Accreditation, Academics, and the Web Site

• The Team recommends that the Nursing program accreditation status be prominently displayed on the web site.

• The Team recommends that, in Engineering and in Engineering Technology, the program educational objectives be reviewed with constituents, with a view to revising them to make them attractive to prospective students and to employers. When completed, these should be prominently displayed on the web sites.

• The Team recommends that the HLC-NCA accreditation status be prominently displayed on the web site.

• The Team recommends that, to the maximum extent possible, WVU resources be made available to assist WVU-Tech in resolving immigration and work visa issues in order to facilitate the employment of qualified professional individuals for WVU-Tech.

• The Team recommends that WVU-Tech install a highly secure wireless computer network that links all academic buildings, all dormitories, and the library. Consideration should be given to sharing this network with the co-located community college, for the convenience of students, faculty, and staff, as well as economy of scale.

• The Team recommends that WVU-Tech reinstate publication of its catalog. An on-line catalog is appropriate at this time.

Student Services

Among the eleven areas of focus for the Team established by Senate Bill 486 is the area of Student Services. There are three specific areas of focus outlined in the legislation for which Student Services is directly responsible. They are:

"Examine marketing and recruiting strategies at the institution;"
"Review nonacademic programs and auxiliary operations, focused on efficiencies and strategies development;"
"Diversify the types of students who pursue STEM education and careers by developing strategic initiatives focused on recruiting traditional underrepresented groups."

The Fall 2010 enrollment was 1,209 students representing a five- year decline of more than 18 percent (Fall 2006 total enrollment was 1,486). The freshmen retention rate fell from 57 percent for the Fall 2005 cohort to 44 percent for the Fall 2009 cohort, a decline of more than 22 percent (data summarized by WVU-Tech and provided to the Team). This decline in enrollment and retention rates prompts a focus on that which is preeminent-student recruitment and retention.

Student Services at WVU-Tech is administered by a Dean who reports directly to the Campus Provost. The following offices and programs report to the Dean: Residence Life, Upward Bound; Career Planning and Placement; Student Union and Activities; Student Support Services, Public Safety; and Dining Services. Recruitment and Admissions (Campus Provost) and the Office of the Registrar (Associate Campus Provost) do not currently report to the Dean. Intramurals is the responsibility of the Athletics Department where two coaches are assigned 20 percent release time.

Like so many areas at WVU-Tech, Student Services has a number of new appointments over the last two to three years who are dedicated to the institution and its mission. The institution has made a concerted effort to market itself and recruit new students. While there has been an increase in personnel in the

area of Recruitment and Admissions, there has not been an increase in other Student Services staff positions to meet a variety of needed student development and retention strategies. There does seem to be criticism among some regarding the growth in 'administration' and lack of a clear vision of the division of responsibilities or collaboration between Academic and Student Services. While the WVU-Tech Strategic Plan in the area of Recruitment and Retention is primarily a plan to plan, those plans were completed for student recruitment/admissions, and student retention. The Strategic Plan includes Improved Student Experience and focuses on three things: gathering data to determine need through a student satisfaction survey, athletics, and a student success center (the plan for which is part of the completed but not yet adopted Retention Proposal).

Challenges
In meeting with a variety of constituency groups and Tech management, the following challenges emerged:

- Deferred maintenance on administrative and educational buildings.
- Two residence halls are off-line, one of which the Team believes should be razed and the other either replaced or substantially rebuilt. A third residence hall, Ratliff Hall, does not have air conditioning.
- Students believe, perhaps accurately, that it is less expensive to live off campus in the Montgomery area.
- Some students expressed the concern that the community and parts of the campus are not safe.
- Students state that there is a need for more activities, particularly in the evenings. There are few recreational activities in the local community. Students and staff report that students frequently drive to Charleston for recreational and entertainment reasons.
- There is disagreement between Faculty and Student Services regarding which group should advise students, particularly freshman. This needs to be resolved to ensure that this important service to student is provided.
- Neither a comprehensive student orientation experience, freshman year experience components, nor a freshman seminar are in place.
- There is confusion about coordinating data entry/access with the student information system. Housing, for example, reports that they must email WVU to update data in the student information system.
- Two coaches with 20 percent release time oversee Intramurals. At one time there had been a member of the Student Services division with this responsibility. There has been a decline in Intramural offerings.
- There are no personal counselors available to students on campus. Students must seek help off-campus for mental health concerns.

Recommendations
The following recommendations are made to improve student enrollment, retention and out-of-class learning and development.

- Implement the Retention Proposal of July 18, 2011, including the Student Success Center, with the following additions:
    - Emphasize the importance of developing and delivering a comprehensive student orientation program by Fall 2012.

- o Work with Academic Affairs for the development of a freshman seminar to be piloted in Fall 2012 and fully implemented by Fall 2013.
  - o Move Intramurals from Athletics (and reallocate the release time given to two coaches) to Student Activities and increase by 40-50 percent the number of intramural and student activity offerings. The budget for Intramurals should be raised from $1,000 to $10,000.
  - o Ensure that Students have access to a Licensed Professional Counselor.
- Enhance out-of-state and international recruiting with an emphasis on traditionally underrepresented groups in the STEM field both through the allocation of resources and clear benchmarks.
- Seek through the HEPC or Legislature (as appropriate) tuition waivers for out-of-state and international students from traditionally underrepresented groups in STEM fields, understanding that no West Virginia resident would be replaced by such waivers and so long as there is significant capacity in academic programs.
- Working with Academic Affairs, create a Minority Engineering Program (MEP) and Society of Women Engineers (SWE)chapter as part of an effort to attract, retain, and graduate students from traditionally underrepresented groups in STEM fields.
- Strategize ways to involve faculty, particularly those in low enrollment programs, to assist in recruitment of students, orientation, student success efforts, and student organizations such as MEP and SWE.
- Explore possible recreation center strategies in Baisi, the Tech Center, or a stand alone facility.
- Install emergency phones on campus to promote community safety.
- Develop a place where students can congregate on campus. Recommendations are to use space in either the Tech Center or the Library for a computer/study space, or perhaps a coffee shop. Students should be encouraged to both study and socialize in these spaces.
- Advertise, on the web and in recruiting literature, Montgomery's proximity to outdoor recreational opportunities that are among the best in the country.

Athletics

The Department of Athletics has been characterized by change in the last three years. A new Athletic Director was hired in July 2009. He brought years of experience, having served as an Athletic Director at three different institutions before arriving at WVU-Tech. He has provided leadership and direction to the Department. One of the first areas addressed was the issue of conference affiliation. WVU-Tech was the founding member of the West Virginia Intercollegiate Conference, which was a part of NAIA. In 1994, the conference joined the NCAA Division II. But in 2006, WVU-Tech left WVIAC conference to return to NAIA and compete in the Mid-South Conference.

In July, WVU-Tech's application to return to the WVIAC NCAA Division II was rejected. Two of the most important reasons for making this change were to reduce travel costs and be able to return to natural rivalries located within West Virginia. The NCAA provides limited formal information as to its denials, but every effort should be made to ascertain why the application was rejected and to plan the best move forward. One of the considerations that may have impacted this decision was the inability of the sports program to be competitive in the last three years. During that period from 2008–09 thru 2010-11, the football program won five games and lost 28. The other sports teams had a record of 235 wins and 731 losses. The only winning programs during that period were men's basketball program (46 wins and 44 losses) and men's soccer (26 wins and 24 losses).

Since 2005, soccer has been adopted as a sport; men and women's tennis has been dropped as a sport; wrestling was added in 2007, and men and women's cross country programs were added in 2008. There is a proposal to add men's and women's swimming in 2012-13. In addition, the Athletic Department hopes to add women's lacrosse and rowing in the next few years. There are three full-time administrative staff and an administrative secretary in the Athletic Director's office, the Assistant Athletic Director for Compliance, and the Senior Women's Administrator and a Budget Analyst.

There are twenty coaches in charge of twelve sports. Most of the coaches are full-time and five serve part-time. There is a medical staff of two full-time Athletic Trainers and one part-time Athletic Trainer; two physicians who are on campus weekly, or as needed; and one physician not on campus and is there as needed. Two of the coaches coach two different sports. Nine of the other coaches provide other duties in addition to their coaching, including community service, marketing, and being responsible for some facility or other university program.

The major impact on the Athletic program has been the hiring of four new women head coaches for women's sports. These sports are: volleyball, basketball, softball, and soccer. In addition, if the swimming proposal is approved, the head coach designee is a woman, who is currently director of the aquatic center. She would do 50 percent of her duties as the head swimming coach and 50 percent of her duties would continue managing the aquatic center. The addition of these women has given new energy and stability to the programs.

There are two major athletic facilities on the campus – the Baisi Athletic Center and the Martin Field. The Baisi Center has a 2,000-seat gymnasium, wellness center, a newly renovated swimming pool, a weight room, a wrestling training room, an athletic training room, and locker rooms for the sports using the facility. The Martin Field was constructed in 1932 and Astroturf was put on the field in 1977, with upgrades in 1986. Lights were installed in 2010. It has a seating capacity of 2,800 and is located at the highest point on WVU-Tech campus.

Currently there are five sports that play their games on campus—football in Martin Field, men and women's basketball, volleyball, and wrestling are played in the Baisi Center. Swimming is being requested to become a sports program beginning 2012. Both men's and women's swimming team would practice and swim in the Baisi Center. The remaining sport teams practice and play games in off-campus facilities that are not owned by the University. These are baseball, softball, men and women's soccer, golf, and men and women's cross country. Baseball and softball play in stadiums owned by the Kanawha County School System and the golf team's home course is at Glade Springs Golf Course.

A feasibility study to determine if the hillside where the Martin Field is located could undergo substantial excavation concluded that such an undertaking is not feasible. A related study to replace the grandstands and locker facilities and to construct a new two-lane road leading up to the field was estimated to cost $4.3 million. The replacement of the artificial turf on the field (which needs to occur given safety considerations) is projected to cost $750,000 to $800,000. Currently, there are no funds to proceed with either project.

One of the major problems confronting the Athletic program is the lack of facilities. The on-campus facilities are old and need repair and upgrades. While there have been improvements in the Baisi Center, most of the areas, including the basketball arena, are not air-conditioned. Regardless of what happens with the feasibility study for Martin Field, the playing surface must be addressed, if for no other reason than the safety of the players. One of the biggest challenges to the soccer, baseball and softball

programs is that the teams having to practice and play games in facilities off the campus. The baseball facility is 7 -8 miles off campus and many times the soccer teams must play in Charleston. The softball field is closest to the campus, but not within walking distance. Off-campus programs present great challenges in trying to develop a fan base for these programs. Even if you play on campus and are not competitive, attendance is an issue. This is illustrated by the football team, which plays its games on campus, and has struggled with attendance. For example, the football season for the Fall of 2009 had a total attendance of 1,577 fans, for an average of 263 fans per home game with a low attendance of 89 and a high of 504. In 2010, which had one less home game than 2009, the smallest attendance was 139 and the highest was 474. The total of tickets sold/passes for total attendance was 1,414, with an average attendance per game of 283 fans.

Compliance is handled by an assistant Athletic Director and Compliance Officer. He oversees the eligibility process, rules education program, and monitors recruiting and use of outside funds. The process of review seems well established, with key areas of the University aware of the process and with a cooperative spirit existing among all those areas. There is on-going communication and discussion with the offices of Registrar, Admission/ Recruitment, the Associate Provost and Faculty representatives, who must play a key role in the success of compliance. In addition, the Athletic Director and Associate Provost keep the campus executive committee informed of issues and actions. This arrangement seems to have worked well and has been successful in its efforts to avoid issues of eligibility.

There is an Institutional commitment to provide support for the women's sports program. As indicated earlier, there are four head coaches for women sports, with a possibility of another in 2012-13. In the fifth sport, women's and men's cross country share the same coach who is male. In addition to the coaches, there are three other women on the professional staff: the Senior Women's Administrator who also serves as Director of Sports Information and Supervisor of Sports Medicine, the Assistant Athletic Trainer, and the Budget Analyst.

The budgets for the women's and men's sports, where they are comparable, share the same level of resources. For the years 2009-10, there were 161 men and 86 women on scholarship. In the following year, there were 159 men and 62 women. The drop off in women in the second year may be attributed in part to the change in head coaches in basketball, softball, soccer and volleyball, which can affect recruiting and squad size.

In looking at the academic performance of the student athletes for 2010-11, 12 finished the year on probation, and one was suspended. Of the 242 student athletes who completed eligibility requirements, their grade point averages are the following:

- 2 percent had a 4.0 GPA;
- 26 percent had at least 3.0 – 3.99 GPA;
- 54 percent had at least a 2.0 – 2.99 GPA; and,
- 18 percent had less than 1.99 GPA.

The overall academic performance record of student athletes is very good. As the following table indicates, the one area where academic performance is poor is in the football program.

Residency	Fall Average GPA	Spring Average GPA
Non-Resident	1.41	1.79
Resident	1.82	2.08
Overall Average	**1.67**	**2.00**

The contrast between all student athletes and football athletes is striking. The data indicate that for the last academic year approximately 90 percent of the athletes in sports other than football earned a 2.0 grade point average or higher, while fewer than 50 percent of the football student athletes earned the 2.0 grade point average.

Of particular concern is the following table which indicates that only 10 football players of the 78 enrolled in the Fall earned 15 hours of credit. Equally troubling is the fact that 51 of the 78 players earned 11 hours or less, with an even more troubling academic performance on the part of football athletes not residents of West Virginia.

Hours Earned	Non-Resident	Resident	Grand Total	% of Total	Cumulative % of Total
0	3	1	**4**	5%	5%
1		4	**4**	5%	10%
2	1	1	**2**	3%	13%
3	1	1	**2**	3%	15%
4		2	**2**	3%	18%
5	2		**2**	3%	21%
6	4	2	**6**	8%	28%
7		2	**2**	3%	31%
8	3		**3**	4%	35%
9	4	12	**16**	21%	55%
10	2	2	**4**	5%	60%
11	2	2	**4**	5%	65%
12	3	4	**7**	9%	74%
13	1	5	**6**	8%	82%
14	1	3	**4**	5%	87%
15	2	2	**4**	5%	92%
16	1	2	**3**	4%	96%
17		1	**1**	1%	97%
18		1	**1**	1%	99%
19		1	**1**	1%	100%
Grand Total	**30**	**48**	**78**		

In reviewing the turnover of football players from year to year, the numbers are large. The table below shows the total players, number of returning players, and the new players for the seasons 2008, 2009, 2010, and 2011. The average of new players each year was about 63 percent of the total squad. The 63 percent average turnover in the four season period means that the players are one year in and out. This becomes a very costly program to support for a university with limited resources and appears to be offering very little to the institution as a means to grow enrollment or support the institution's overall mission.

Turnover for Football

Season	Total on Squad	New	Returning
2007-08	79	52 (66%)	27
2008-09	126	90 (71%)	36
2009-10	97	64 (66%)	33
2010-11	107	53 (49%)	54

The institutional graduation rate for student athletes is listed below. In 2009-10, the student athletes' graduation rate exceeded the institutional graduation rate by 6 points. The following shows the improvement in graduation rates over the past three years:

Graduation Rate

Reporting Year	Institutional Graduation Rate	Athletics Graduation Rate
2007	34	17.3
2008	50	31.6
2009	36	42.4

For those athletes who have exhausted their eligibility, which total 97, 63 have graduated and 20 are expecting to graduate within the six-year time frame, bringing the total expected to graduate to 83.

There are active efforts on the part of the coaching staff to provide support for their student athletes, either through monitoring attendance, conducting study halls, or referring students to the Student Support Center for tutoring and assistance. In the coming year there will be a new Student Success Center that will be a valuable resource center for students and student athletes.

It appears that WVU-Tech sees athletics as a way to grow enrollment. The athletic budget for 2010-11 was $2,794,000 including $900,000 for personnel; $ 744,000 for operations; and $1,150,000 for scholarships. All of these funds come from the Institution, except for $219,000, which is the responsibility of the Athletic Department to raise each year. Most of the external funds go to provide room and board supplements to the student athletes. The scholarship assistance provided by the institution does not cover room and board for the student athlete. The funds externally are contributed by the WVU-Tech Foundation, Golden Bear Club, WVU-Tech Athletic Fund, companies, and individuals. Additional revenue comes from ticket sales, programs, concessions, advertising and game guarantees, but it is very limited. The total for these additional revenues for 2009-10 was $16,600 and 2010-11 was $15,283. The generous scholarship waivers provided by the University has been the major source for expanding the sports program.

The total sports scholarship program consumes almost two-thirds of the scholarship waivers provided by the University to all students.

The intramural program for the Institution is housed in the Department of Athletics. Two head coaches are given 20 percent release time to coordinate the program. The budget is slightly under $1,000. With so many of the students living on campus or in the community and with strong leadership, more direction, and more funds, the intramural program could be improved greatly. This support would take a program not viable at WVU-Tech and make it as popular on WVU-Tech's campus as it is in most university campuses. Intramural athletics is important because it is an effective way to connect students to the community.

An athletic program can bring energy and excitement to the campus and can contribute to the quality of student life. It is important to develop an athletic program that is appropriate for the campus with special emphasis on facilities, financial resources, and consonance with the academic program. It is important to look at the program objectively and shape it to meet expectations, needs, and affordability. For example, soccer is a program where WVU-Tech can recruit international students majoring in engineering, and can combine athletic teams with academic studies in a way consistent with the major purpose of the institution.

Recommendations
- Continue to pursue membership in the West Virginia Intercollegiate Athletic Conference (WVIAC) and NCAA Division II. The latter must be done strategically as the Institution has already had two failed attempts and only three are permitted.
- Eliminate the intercollegiate football program. As noted in the Finances Section, with WVU-Tech's current financial/enrollment/facilities challenges, football is neither affordable nor sustainable. The elimination of football may impact conference affiliation.
- A serious examination should occur as to the cost of scholarships given to the athletic program.
- Replace the Astroturf of Martin Field with Field Turf or other new playing service. This is a safety issue that must be addressed. If feasible, expand Martin Field to permit soccer to also be played there and serve as the field for Intramurals.
- Transfer Intramurals to Student Affairs. A separate recommendation has been made in that section to expand Student Affairs staff to accommodate this.
- Determine the cost benefit of sustaining intercollegiate athletics at its current level (and in the case of swimming and lacrosse, expanding it). It is the view of the Team that building enrollment on athletics (and scholarship tuition waivers) is not sustainable.
- Expand campus recreation opportunities through new construction or the renovation and expansion of current space. A campus recreation center would a very important asset in attracting and retaining students.

<div align="center">**Finances and Human Resources**</div>

The financial issues facing WVU-Tech are simple, clear, and stark. The nearly 50 percent decline in student enrollment in the last 10 years has left WVU-Tech continually starved for operating funds. Without supplemental funding, WVU-Tech cannot replace employees; it cannot beautify or even maintain its grounds nor can it replace its failed underground electrical system; it cannot repair or renovate any of the facilities that students take for granted at all the nation-wide successful enrollment driven colleges and universities; it cannot enhance its library or its Wi-Fi network; it cannot bring its scientifically oriented academic programs up to competitive standards; it cannot recruit students in this competitive environment as it has few campus attractions. The enrollment deficiency enforces a stark

reality. Without the application of significant investment, WVU-Tech cannot overcome its recruiting and retention challenges.

In the last decade WVU-Tech has become more dependent upon State appropriations. The year-to-year variation in State appropriated funds is certain to imbue financial managers with an extreme sense of uncertainty. One only has to glance at the WVU-Tech financial statements to see that the annual variation in State appropriations, plus and minus, regularly exceeded 10 percent and sometimes approached 30 percent.

An estimated $2.5 million in annual supplemental funds from WVU have made it possible for WVU-Tech to try to pay competitive wages and make necessary campus improvements. But even with that subsidy, WVU-Tech has had great difficulty in meeting its needs (many of these issues are addressed in other sections of this report). Several WVU-Tech constituencies believe that the institution is a "cash-cow" when the reverse is true. The question is "How long can WVU-Tech be reasonably assured that WVU will provide this subsidy?"

No entity can exist when its cash is depleted. An entity cannot pay its bills when it is cash starved. WVU-Tech has run negative cash balances in its operating accounts, with only August 2010 as the exception, for 18 successive months.

There are two misallocations of expenditures of note that will require great courage to change. By far, the most significant is that intercollegiate athletics consumes nearly 11 percent of the total expenditure budget of WVU-Tech. Six to seven percent is very high, 11 percent is almost unheard of. Even more striking is that scholarship and tuition waiver aid to athletics consumes almost 70 percent of the total WVU-Tech waiver and scholarship aid. In seven years (2004–2011) the Athletics workforce (head count) rose approximately 140 percent , the student athlete enrollment rose by about 15 percent , but the overall enrollment at WVU-Tech fell by about 30 percent.

Football consumes a large part of the budget and student aid. There are 79 full and partial aid awards out of a total of 228 for all of Athletics, costing nearly $300,000 out of a total WVU-Tech student scholarship and waiver aid of $1.6 million. Football is also a disproportionate consumer of total WVU-Tech operating dollars with direct expenditures of over $310,000 in addition to tuition waivers. In total, football consumes approximately 3 percent of the WVU-Tech budget (salaries, benefits, tuition waivers, scholarships, Baisi operating expenditures specific to football, field operating, and team operating expenditures). It should be noted that football has a total complement of 100 athletes, roughly 8 percent of the total student body. This lends credence to the statement often heard at WVU-Tech that football is important for its enrollment numbers.

WVU-Tech officials contend that football generates additional income to the institution, and is thus a profitable operation. They point to $300,000 in non-resident tuition (above resident tuition waivers) and to $520,000 in Housing and Dining fees collected from these players.

While the Team recognizes that these tuition waivers are leveraged to generate additional income, it believes that these same tuition waivers if awarded to students of academic ability could likewise generate non-resident tuition and housing and dining revenues-- without the direct and indirect costs attendant the football program.

The Team is troubled by data which show that in one year alone football student athletes borrowed nearly $700,000 (over half of which was unsubsidized). Given the academic performance of these student athletes and the large number who leave WVU-Tech after one or two semesters, it is evident that many young men will be saddled with appreciable debt and little to show for it.

Residency	Loans	Pell Grant	Other Grants and Scholarships	Academic Tuition-Fee Waiver	Athletic Tuition-Fee Waivers	Total Financial Aid
Non-Resident	$341,519	$89,300	$452	$0	$126,800	**$558,071**
Resident	$347,789	$146,060	$45,950	$3,500	$108,270	**$651,569**
Grand Total	**$689,308**	**$235,360**	**$46,402**	**$3,500**	**$235,070**	**$1,209,640**

Loan Source	Perkins	Subsidized	Unsubsidized	Total
Non-resident	$28,000.00	$141,844.00	$171,675.00	$341,519.00
Resident	$36,500.00	$132,282.00	$179,007.00	$347,789.00
Total Expenses	**$64,500.00**	**$274,126.00**	**$350,682.00**	**$689,308.00**

As outlined in the section on Facilities, there are significant infrastructure needs. From the perspective of finance, lowering operating costs is prudent and deserving of attention.

The fixed costs of WVU-Tech are fixed. Whether class sizes are large or small, faculties are necessary to staff each of the courses. The physical plant workforce (45 staff and 2 top managers) is too small to adequately address campus needs. To reduce staffing further would be foolish. In the past 10 years, the student population decline of nearly 50 percent was matched by a faculty roster decline of slightly more than 22 percent declines of less than 20 percent FT and 25 percent PT, respectively), and staff position declines of about 5 percent. These observable characteristics will allow WVU-Tech to benefit handsomely if its enrollment increases. In the alternative, it will continue to learn the fallacy of trying to manage an entity with huge fixed costs but declining revenues.

No analysis would be complete without noting deficiencies in three important revenue streams - deficiencies:
> (a) Grants and Contracts have fallen by two-thirds in the last seven years – from a 2004 actual of $5.4 million to a 2011 estimated $1.8 million.
> (b) Athletics generates almost no revenue.
> (c) The WVU-Tech Foundation has not produced measurable revenue in at least the last two years, and must to depend entirely upon the WVU-Tech general revenues to pay for its operating expenditures. The WVU-Tech Foundation is now being incorporated into the WVU Foundation. It is mentioned here only because it is in a worse position than it was when the task force report, THE FUTURE OF WVU TECH 2004, was issued. Efforts are underway to ameliorate deficit issues within the Foundation. The Team was informed that within two years the WVU-Tech Foundation should again be on solid footing. While the Team did not explore the issues under girding the Foundation's difficulties, we hold a strong belief that "transparency" in financial issues is a critical safeguard to insure fiscal soundness.

The revitalization of WVU-Tech is not simply a function of finding the funds to recover or replace the physical plant. The SIGHTLINES: May 2011, report calls for an expenditure of more than $70 million for buildings, grounds, and infrastructure. That report needs to be carefully vetted. While it may exaggerate WVU-Tech's needs, it should be noted that a number one-half that size is still very large. (For example, the Maclin Hall reconstruction alone was about $12 million and is much less complex than Orndorff, Conley, and Engineering.) It is noteworthy that Maclin has retrofit needs already. It is also noteworthy that the task force report, THE FUTURE OF WVU TECH, done in 2004, details the need for $10 million in repairs and renovations. (See EXHIBIT M of that report) If those data are used as very rough benchmarks, it is easy to understand why SIGHTLINES calls for a $40 million outlay now.

A significant investment in WVU-Tech is needed. If the governing bodies cannot commit to a five to seven million dollar investment for each of the next five years, the revitalization legislation of 2011 will be seen as merely an exercise in futility. If it can do so, WVU-Tech has a chance in four years to produce an income stream that can support its further facilities and program enhancement needs. A delay of a year means that the application of any funding cannot occur until FY 2013-14. The significance of such a delay will result in another two years of:
>   (a) Ratliff without air conditioning;
>   (b) A technically oriented university without Wi-Fi for students;
>   (c) Erratically performing elevators in the Engineering building;
>   (d) A nine-times broken electrical campus-wide electrical main cable;
>   (e) Level of funding for the system-wide salary schedule that is among the lowest of all the HEPC schools;
>   (f) Computer labs that are five years old; and,
>   (g) The absence of necessary significant improvements in student life.

The bottom line is that WVU-Tech cannot recruit students without significant improvements. Without recruiting, enrollment losses will occur to the point where WVU-Tech cannot operate unless WVU keeps providing additional support. That would and should be a completely unrealistic expectation.

It is important to note that the dollars needed for physical plant are secondary to the academic and programmatic needs of WVU-Tech, which are very large and recurring.

Recommendations
- From a financial perspective, unless a heady three to five year action plan is implemented immediately, there will be no distant future. This action plan must be accompanied by a five to seven million dollar infusion in each of the next five years. If, for example, student enrollment (new and/or retained) falls by just 50 students, revenues (tuition and fees) will fall by nearly $350,000. Conversely, the opposite is equally true.
- Enrollment Management must be a priority. It is almost axiomatic that student enrollment – new or retained – must dramatically increase quickly or WVU-Tech will ultimately fail. Each 100 students generate about $700,000 in tuition and fees and another $600,000 in residence hall revenues. Since enrollment management is the key to WVU-Tech's survival, before other costs are incurred, expenditures that are oriented toward new and retained students should have priority.
- Residence and Student Life must be a priority. The recruiting/retention program currently under way has an optimistic goal of increasing student enrollment by about 150 for the 2011-12 year. Even if that goal is achieved, unless it is supported by major residence hall and other student life improvements, there will be too many hurdles to be overcome to ensure an increase in the current cohort retention rate of about 44 percent , an already low rate.

- Residence Halls are critical to enrollment goals; enrollment goals are critical to financial stability. Two residence halls, Maclin and Ratliff, have total bed space capacities of only 455 students after allowing for residence advisors and Bridgemont Community and Technical College student allowances. As there are very few apartments available in Montgomery (or a 20 mile radius), a successful recruiting/retention year will result in residence hall over capacity. Air conditioning in Ratliff should require immediate attention, as it is not likely that students will accept its condition on a long-term basis. The remediation costs will be high, but any changes cannot be undertaken during the year and so must wait until next summer. After a carefully staged remediation of Ratliff is plotted, the costs can be estimated.
- WVU-Tech cannot afford its football program, it is a barrier to its financial stability, and, regrettably, must be eliminated. The 2004 Task Force recommended a powerful permanent change in WVU-Tech's expenditure pattern. It would have required no outlay, except courage, but could yield about $700,000 per year. Not only was this 2004 recommendation ignored, but its object has increased its costs by 100 percent in the last 10 years. WVU-Tech cannot ignore the cost burdens imposed by Athletics, particularly those incurred by the football program. The elimination of football would provide immediate financial benefits.
- If the WVU-Tech recruitment and retention efforts are successful, paying students' tuition and fees would replace the 79 football scholarship holders who cause the school to spend nearly $300,000. The remaining $400,000 would come from salaries, benefits, team operating expenses, and physical plant savings.
- University officials are encouraged to examine and evaluate the impact of financial assistance other than tuition waivers which finance the education of student athletes.

NOTE: It must be clearly understood, however, that eliminating football would not allow the full annual operating costs to be recovered immediately. Severing staff may require a year's salary and benefits and scholarship waivers may have to continue for at least a year and perhaps two. Since it isn't likely that many of the scholar athletes will find alternative sponsors, the bulk of the $300,000 cost component may have to continue for 2 years. In addition, the recruitment of students would have to be ramped up because football has a total roster of 100 students, many of whom would not likely attend WVU-Tech if football were dropped. It should be noted that the $7.3 million for the field would also not go away. Some significant part of the sum would be needed for expanded intra-mural activities to be expanded in that same area if student life issues are to be addressed.

- Expanding summer activities for the community and its children can have a positive impact on revenue for WVU-Tech. Some of the Athletics staff are full year employees while some are nine month (or less) employees. Summer camps for local children should be examined for their revenue generating capacities. Assuming that improvement of student facilities will occur it may be feasible to operate numerous inexpensive camps in soccer, swimming, basketball, and softball. This kind of venture can be analyzed, financially planned, and implemented with current staff and without great effort.
- WVU-Tech needs to have its management reports redesigned so they are specific to its campus. The Administration and Finance division appears to have a good relationship with the same office on the main campus. WVU-Tech benefits from the frequent assistance it receives from functions like Human Resources, Payroll Services, Accounting, Purchasing, and Accounts Payable. However, while WVU-Tech is a division of WVU it is nearly 200 miles away. Additionally, WVU-Tech has over 200 employees and over 1,200 students; it is a large division.
- The campus should fill the controller/accounting vacancy and be prepared to replace the accounting vacancies. Analyses from afar done by people who have little knowledge of local

daily conditions and events are rarely precisely on target, even though they are well intentioned. The local campus has had a controller/accounting manager vacancy for nearly two years and is about to lose its accountant due to retirement. These two positions need to be replaced quickly, if the WVU-Tech executive officers are to receive timely, insightful, and site specific information.

- It might also be pointed out that all of the equipment in the Administration and Finance functions are noticeably outdated. Ergo, high traffic student functions are neither inviting nor efficient.

<u>**Facilities**</u>

Most comprehensive facility plans go to ten years and perhaps longer. The views and recommendations in this section focus on three to five years only. However, triggers are placed to be pulled if the enrollment of WVU-Tech is moving forward at a continuum.

Curb Appeal
The obvious lack of aesthetic appeal when one first sees the campus is most concerning. Some very basic low cost/no cost items can enhance aesthetic improvements. Simply painting curbs, watering lawns, planting and maintaining flowers enhance the curb appeal. No evidence of *"we are glad you're here to visit us"* was readily apparent.

It should be noted that the occupied buildings were clean and neat, though many visited needed new furniture, carpet, window treatment and lighting.

Heating, Ventilating, and Air-Conditioning (HVAC)/Building Automation Systems (BAS)
Although there have been a few upgrades to the aforementioned systems, these are some of the most neglected HVAC systems team members have observed. Not only are the HVAC units antiquated, but the BAS are typically the older versions that are controlling the HVAC systems. These systems are the brains of HVAC systems. The HVAC systems then are limited in supporting the physical plant managers' ability to positively impact energy-savings as well as occupant comfort.

Personnel
As noted above, the staffing level is compromised. Not only are the numbers low, but the skilled trades have been diluted to the level where only the most serious problems are addressed. Time is rarely available for routine maintenance. The individuals on campus know the facilities well but have been working on a shoestring budget and with limited staff. The custodial group is not any better off, cleaning beyond what should be expected, which makes them feel less than adequate and frustrated by what they have to leave uncompleted. The ground-keepers are certainly more than that. They are movers, set-up people, and additional hands for the craftsman, as well as landscape architects. Their primary focus should be on attending to the aesthetics of the campus, as well as snow-removal and leaf removal during those specific times of the year. Also, there is a lack of opportunity to move to the skilled trades from either the housekeeping or the grounds, which creates a morale issue.

Operations and Maintenance
Any contemporary facilities plant operations and maintenance group must have an appropriate, computerized maintenance management system, at this time, WVU-Tech only has a work-order system. Missing are a preventive maintenance program, an inventory system, a life-safety check system, and the ability to do predictive maintenance and cost-tracking. Without these systems and capabilities, the

facilities management group will always be flying by the seat of their pants and without a valid charge-back system for auxiliary operations and private functions.

Physical Plant and Management
One positive finding was that the current director chose to obtain an outside firm to complete a facilities' plan. Such support in helping find one's way is welcomed by seasoned, experienced managers, administrators, and executives. The contracting with Sightlines to do the facilities plan provided credibility to the director of facilities and the administration as well. Without suggesting that WVU-Tech should violate State purchasing regulations, it appears that a great opportunity was missed to embrace the alumni, faculty, community, and the public by not having a local A/E firm conduct the facilities study. Missed was working with local folks who have the expertise to do what Sightlines has completed.

There were two pieces of negative feedback about the current physical plant management: 1) a sense that overtime was not equitably allocated; and, 2) clear career development opportunities either in to or within the skilled trades. The employees were positive about the WVU relationship and some of the resources that were available to them.

Recommendations
- Immediately, paint, plant flowers, and pave the appropriate areas.
- Buildings that will remain on-line should be re-commissioned/retro-commissioned to the original design-intent as much as possible. This should provide more functional reliability for the HVAC systems and better energy-management. This is simply a stop-gap measure to reduce energy loss and comfort-enhancement until more money is available. Energy consumption would decrease by at least 10 percent in those buildings.
- The building automation systems (BAS) need to be standardized into one system. Having multiple systems adds an unfair burden to the staff that requires them to learn each of the current three systems.
- The facilities group must be permitted to have reasonable staffing levels as soon as is feasible.
- An apprenticeship or similar progression program would be most helpful to the organizations' facilities group morale as well as providing a source of craftsmen in the future.
- The skilled trades clearly warrant a higher wage scale to be competitive with the market place.
- Purchase a contemporary computerized maintenance management system that will assist in tracking costs and recovering expenditures. Also, these systems are a great dovetail for trending energy use with a BAS.
- Continue working with WVU to expand coordination in all areas where possible (training, safety management, technical support, and environmental evaluation) with the facilities group.

<u>**Capital Improvements**</u>

The facilities recommendations are the most difficult to prioritize as the needs are truly great. When examining any one of the buildings, one is conflicted on where to start suggesting further investment for this campus. The process is even more complicated knowing the limits of funding in West Virginia, competition for that funding from other institutions and State agencies, and life safety, and environmental requirements. For every significant upgrade occurring in West Virginia, the State Fire Marshal's office will require at least a sprinkler system installation or upgrade and possibly a new fire alarm system. Those costs are embedded in any work that is completed at WVU-Tech and must always be reflected in project estimation.

The use of a local architectural/engineering (A/E) firm would have been advantageous for the Sightlines group. The Team is concerned there were no A/E firms or technical designers used by Sightlines in developing the WVU-Tech report. The experience and knowledge of the campus facilities group is critical to the information in the Sightlines report but architects and engineers should drive the facilities examination and project estimation.

This report will be limited to recommendations for five years. There are two main reasons for doing this: 1) the student recruitment and retention must be evolving concurrently with the capital expenditures and academic program developments, and 2) at a point, which should be within a five year time frame, there should be a decision if this Institution can exist without continuous supplemental funding from outside sources.

Recommendations

Year One
- Immediately replace the elevators for the Engineering Building.
- Immediately install campus wide Wi-Fi.
- Immediately replace the main underground electrical feed and distribution system to the campus.
- Immediately start a design build HVAC/BAS for Ratliff to expedite having another dorm with air-conditioning on-line.
- Immediately make a determination if Co-Ed Hall is to be raised or renovated (approximate cost of each are outlined in Randolph Engineering's report dated April 26, 2011).
- Immediately start a full design build renovation for Orndorff.
- Re-commission/Retro-commission the HVAC systems for Vining Library, Engineering, and the Engineering Lab Building to reduce energy costs, provide better occupant comfort and minimize the maintenance burden for the facilities group until funds are available to address other needs in these facilities.
- Complete aesthetics upgrades to the Vining Library.

Year Two
From here forward, the recommendations may/will be conditional.
- If the student enrollment figures have increased for the second year, based on head count after the first semester begins, start the renovations and HVAC/BAS system retrofit for the Baisi Athletic Center, start design renovation or design build for Co-Ed replacement whichever is appropriate.
- Start the design build renovation or demolition/design-build replacement of Co-Ed.
- Complete painting and classroom reconfiguration to Conley. This will provide additional classroom space if need.

Year Three
- If the student population has increased for the third straight year, raze Hi-Rise for replacement.
- Initiate planning of building expansion/remodeling/repurposing to provide for student and community recreation.

Year Four
- Start complete renovation to the Engineering and Engineering Lab buildings.

Year Five
- If the student population has continuously grown at this point, start the complete renovation of Vining Library (this will be necessary as replacing the mechanical system will be intrusive for the entire facility).
- Replace or completely renovate Conley Hall.
- Start and complete a ten year comprehensive facilities plan for the continued success of this campus.

Strategic Plan

WVU-Tech launched a strategic plan[2] in 2010 that was comprehensive in scope. Its development was broad in including various constituencies and stakeholders. The seven areas of focus are consistent with the needs of the institution, as identified by the Team, Senate Bill 486, and the WV CURE report. The areas of focus are:

1. Enhancing Financial Resources and Creating a Sustainable Business Model.
2. Strategic Recruitment and Retention.
3. Campus Facilities and Beautification.
4. Creating an Improved Student Experience.
5. Our People and Our Culture.
6. Enhancing Academic Programs, and,
7. Enhancing Relations and Communications.

While these areas are consistent, they are not entirely identical. For example, most, but not all of the areas of Senate Bill 486 are addressed in the Strategic Plan (one such example is the development of centers of excellence). In addition, the Team will be making additional recommendations and priorities through a report. This report will be the basis of a Revitalization Plan to be coordinated by the Chancellor.

For each of the Plan's seven areas, yearly goals through 2015 were outlined. In July 2011 the Institution produced a report on first year initiatives in which many, but not all of the first year goals were met (understandably, it was an ambitious plan). The 2010 plan makes clear that the Institution intends for the document to be a dynamic one, changing as needed and it is good that this is the case. Our evaluation is that the plan was a good starting point. But, there were some things that should have been included. For example, the Institution submitted a response to the HLC in 2010 on the assessment of student learning, and none of those elements were included in the Enhancing Academic Programs section.

It is indeed the case that there are plans to review the plan for its appropriateness and to make adjustments as necessary. WVU-Tech reports that it is anticipated that this will happen through the Fall 2011 semester with a revised plan prepared by January of 2012.

Observations
- Team members found aspects of the Strategic Plan confusing, experiencing uncertainty as to anticipated outcomes.

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[2]Dr. Guy Vitaglione, Professor of Psychology, has led the Strategic Planning Process. He reports to the Campus Provost for this effort.

- In many instances the plan does not include clear timelines and benchmarks (what will happen and when). Indeed many of the elements are process-oriented and not results-oriented.
- Data and analysis methods used in the first year report are not always included in the report so that the veracity of the claims cannot be determined.
- There should be a provision or explanation of the tactical planning, including person(s) responsible, resources, benchmarks and timelines to provide for the management of the plan.
- Yearly goals are not clearly identified and labeled so that those not intimate with the document can readily review what is to happen each year in each category.

Recommendations

- Integrate elements from the Revitalization Plan as they are approved for implementation.
- Continue with the broad, collaborative and inclusive nature of the planning process.
- Continue with the intention that the Strategic Plan will be a living document, and plans for its revisions in Year 2 and each subsequent year.
- Now that data for decision making has reportedly been gathered and analyzed, used these evaluations to inform revisions to the Strategic Plan.
- Clearly identify, perhaps by setting off with bullet points, the goals for each year, including timelines and benchmarks.
- In reporting, include data and the type of analysis that were used to reach the conclusions made.
- Explain and perhaps include in the plan and report, the actual planning documents used for meeting the specific yearly goals (perhaps something like Microsoft Planner or similar production tool). Alternately, WVU-Tech might develop a simple template for deployment.

Summary of Prioritized Recommendations

The Team understands that it may not be feasible to implement all of the recommendations in the report; however, all recommendations were thoughtfully considered and none is believed to be trivial. The list that follows includes those that the Team considers to be essential and that are, in fact, critical for the revitalization of WVU-Tech.

- WVU-Tech's most pressing need is enrollment growth. Recommendations for recruiting new students and retaining them are of first importance. This recommendation entails the redeployment of tuition waivers and the operational effectiveness of the Student Success Center.
- WVU-Tech needs a defined niche built around a distinctive educational experience. Therefore, the Team recommends the implementation of cooperative education and internships into its mission statement and practice. This recommendation needs the action of the HEPC and the blessing of the Legislature.
- With enrollment growth is the immediate need to improve the residence halls. Given the structural deficiencies and related costs, Co-Ed needs to be razed. High Rise needs to be razed or replaced. Ratliff Hall needs to have air conditioning.
- The Team makes a conditional recommendation that WVU-Tech offer teacher education in STEM fields provided that the disciplines become the home of those educators. The Team does not favor a separate department of teacher education or a broad-based teacher education program.

- WVU-Tech needs to increase the offerings of online courses and potentially move into on-line degree programs.
- An institution of technology needs to be more technologically advanced. Therefore, Wi-Fi needs to be made available throughout the campus.
- There are campus facilities that need significant overhauls. These have outlined in priority sequence.
- The Team is concerned about the lack of interactive systems that delay some functioning on the campus. There are impediments because personnel at WVU-Tech are not able use the system at WVU. The Team recommends that WVU-Tech continue to use the resources of WVU and increase collaboration with the main campus. This includes ameliorating issues related to WVU-Tech's personnel ability to access and use student information systems.
- The Team believes that WVU-Tech needs greater autonomy and authority to enhance decision-making. The Team further recommends that WVU-Tech needs to strengthen its own identity and brand.
- The Team recommends that WVU-Tech and Bridgemont Community and Technical College seek greater efficiencies through shared administrative roles responsibilities. In addition, course duplication between the two institutions needs to be examined.
- The Team firmly believes that the percentage of the budget allocated to Athletics, given the many needs of WVU-Tech, is unduly high. Though some at WVU-Tech have pinned enrollment gains on Athletics, the use of Tuition waivers for athletes needs to be fewer in number. When considering the cost, facilities, attendance, and academic performance of athletes, the Team observes that it would be most prudent to discontinue football.
- The Team reemphasizes the necessity for strong, confidence-building, and support-generating leadership on campus.

Concluding Observations

Despite the major challenges facing WVU-Tech, many identified in this report, the institution enters the second decade of the 21st century with strong assets. WVU-Tech has a deserved reputation as an institution of academic quality, preparing well graduates who are sought by business and industry. It has committed, competent personnel who care about the institution and who work well together. Its students are bright, eager and earnest. Its graduates are well-placed in business, education, and corporations, and most importantly its programmatic strengths mesh with West Virginia's (and the nation's) workforce needs.

Two questions remain: 1) What will it take to revitalize WVU-Tech, and 2) How will the State know when revitalization has occurred?

The observations and recommendations of the Team are comprehensive in nature and reflective of our best judgment. Yet they can all be distilled into a clear answer to these two questions; namely, WVU-Tech must grow its enrollment to a size where it can sustain, on an on-going basis, high quality educational programming without the significant operating budget subsidy it currently receives from the main campus of West Virginia University. The Team estimates that enrollment number to be a minimum of 1.800, primarily full-time students.

Achieving this enrollment level, in conjunction with the acceptance of other recommendations made in this report, will position WVU-Tech to be a significant factor in meeting West Virginia's workforce needs – especially in the STEM fields for which WVU-Tech has long been noted. Considering the ways a revitalized WVU-Tech will support West Virginia's ability to compete industrially and economically, the resources required in this study should be viewed as a prudent investment.

The observations and recommendations outlined in this report are focused on identifying what must occur for WVU-Tech to attain that 1,800 enrollment goal. Key to that attainment is WVU-Tech reclaiming a distinctive niche in the West Virginia higher education landscape. The Team recommends that WVU-Tech become the cooperative education (co-op) institution in the State, requiring cooperative education or internship experiences for all graduates. The Team strongly believes that this cachet is needed for WVU-Tech to achieve and sustain its enrollment goals. It should be noted that this niche both builds on WVU-Tech's historic strengths and facilitates a re-engagement with alumni and friends who are in pivotal positions to help implement this recommendation.

The West Virginia Higher Education Policy Commission will need to take action to adopt and protect this designation. The Team does not recommend that other institutions be precluded from offering cooperative education opportunities, but rather that no other institution be permitted a significant expansion into Tech's designated niche.

The revitalization of the physical plant is critical to the growth and sustainability of quality educational programs. Investments in the physical plant, in accordance with a proposed schedule, needs to include student housing and services. Such investments will be necessary to accommodate expanded enrollment and to retain those students through meaningful student life activities. The Team recommends that the State make a five year commitment of capital outlay that would total $30 million or more.

The significant financial support extended by West Virginia University's main campus will need to be maintained during this critical revitalization period, or supplemented with State funds. WVU-Tech is on a financial life-line which will be needed during the interim period until the 1,800 student enrollment level is achieved. Clearly that level of financial support cannot, and should not, be sustained over the long term, but definitely will be needed for the period envisioned in the Revitalization Plan.

At the same time, WVU-Tech needs to re-assess its current deployment of operating funds. Several recommendations in the report address the current pattern of expenditures, the most notable being the elimination of the intercollegiate football program after the 2011 season. The Team makes this recommendation not with any bias toward the sport, but rather in recognition of the annual operating costs associated with this program and the alternate uses of those funds to meet pressing campus needs. The estimated $400,000 net cost of the program should be weighed against alternate use of those funds. Given the fact that there is no budgeted funding for acquisition of library books, for filling key personnel vacancies, for establishing a need-based student aid program, for the reinstitution of an intercollegiate swimming program now that the natatorium has been renovated, a reallocation of funds would seem to be a necessary part of the institution's revitalization.

Lastly, the Team cannot overstate the importance of executive campus leadership. Implementation of the best- conceived recommendations, the most generous financial support, and all the recommended physical plant improvements, in the end are dependent upon strong campus leadership. The campus CEO position must have the stature and operational autonomy to make real the plans that are adopted.

The individual selected for this leadership position must command the confidence of both the Montgomery and main campuses of West Virginia University, as well as having the support of the local community and the State's higher education and civic leadership.

It should be noted that these key recommendations are interwoven. They should be viewed as parts of a whole, not separate items - - some of which can be implemented and others discarded. If all of these recommendations are adopted and faithfully implemented, the Team foresees a revitalized WVU-Tech, fulfilling well its mission of service to the citizens of West Virginia.

Appendix A: Selected Abbreviations, Acronyms, and Comments

ABET	Formerly the Accreditation Board for Engineering and Technology	Responsible for professional accreditation of engineering, engineering technology, and computing programs. Unlike some accreditation systems, ABET operates "program by program." This could mean, for example, that Electrical Engineering might receive an accreditation differing from Mechanical Engineering.
AACSB	The Association to Advance Collegiate Schools of Business	Responsible for professional accreditation of business schools.
CCNE	Commission on Collegiate Nursing Education	Responsible for professional accreditation of nursing programs
Wi-Fi	Wireless Network System	Wireless network for interconnecting computers
Ethernet	Wired Network System	Wired network for interconnecting computers
BHSS	College of Business, Humanities, and Social Sciences	
LCNES	Leonard C Nelson College of Engineering and Sciences	
NURS	WVUIT Department of Nursing	
AY	Academic Year	
CCNE	Commission on Collegiate Nursing Education	Responsible for professional accreditation of nursing programs
CO-OP	Cooperative Program	A co-op program is generally characterized as employment while studying, including 3 or 4 full-time work periods spread over the academic period of 4 years, with 3 or 4 work periods, the same employer, and with increasing responsibilities from one work period to the next. Academic involvement with industry is necessary for such programs to be successful. Some universities give academic credit for co-op, others do not.
INT	Internship	Internships are work experiences that are not so tightly structured as co-op programs, but they are more structured than typical "summer jobs." They may involve several employers.
HLC-NCA	Higher Learning Commission of the North Central Association	This agency provides institutional accreditation for colleges and universities in West Virginia and several other states in the USA.
HEPC	West Virginia Higher Education Policy Commission	The public coordinating body for higher education in West Virginia
STEM	Science, Technology, Engineering, and Mathematics	Algorithm for a relatively new study area to prepare students and teachers for our highly technological society.

It is well known that WVU-Tech is facing challenging times. What may not be as well understood is its historical development and the influence of those developments on current conditions. This Appendix summarily reviews WVU-Tech's historical development and presents trends in several key performance areas commonly used to assess the health of an institution. These indicators are: enrollment, student retention, graduation, tuition and fees, and cash reserves. (Trends derived from HEPC published data).

Historical Overview

WVU-Tech was established by the State Legislature in 1895 as a preparatory school for West Virginia University and offered its first classes in January, 1897. Since that time, it has evolved from a preparatory school (Montgomery Preparatory School) to a trade school (West Virginia Trades School), to a junior college (New River State School), to a regional college (New River State College), to a technical institute (West Virginia Institute of Technology), as a branch of West Virginia University, and now as a division of WVU (the latter two iterations bearing the name of West Virginia University Institute of Technology).

While the first five iterations responded to changing needs in West Virginia, the last two were driven by challenges facing the campus.

The designation of WVU-Tech as a regional campus of West Virginia University in 1996 provided WVU-Tech access to the resources and expertise of the State's major institution of higher education. The incorporation of WVU-Tech as a fully integrated division in 2007 was designed to integrate administrative functions so that WVU-Tech could focus on academic programs and student life programs.

Despite enrollment challenges faced over most of its history and the changing missions that unfolded, WVU-Tech has a deserved reputation for producing high quality engineering graduates and for providing educational opportunity for many West Virginians who might not otherwise have had access to higher education. The institution has for many years enjoyed staunch support in many quarters.

Community and Technical College

Early in the presidential tenure of Leonard Nelson, WVU-Tech began offering two-year engineering technology courses, and in the early 70's established a Community and Technical College as an integral part of the institution. These programs, along with two year nursing and dental hygiene technology, helped to build WVU-Tech's enrollments.

In 1999, the West Virginia Legislature established a separate community college system, and in 2004 required that all community colleges seek independent accreditation from the Higher Learning Commission of the North Central Association. Subsequently, the Legislature in 2008 required that all community and technical colleges operate independently and, pursuant to that legislation, the Governor appointed a separate Board of Governors. In the May of 2009, the CTC at WVU-Tech became Bridgemont Community and Technical College (BCTC).

While BCTC has made appropriate progress toward fulfilling its mission, unintended consequences of the separation have been decreased enrollment (the CTC accounted for approximately a third of WVU-

Tech's enrollment), an effective increase in administrative costs (the same number of administrators for fewer students), and complexity to students transferring credits from BCTC where before there were none.
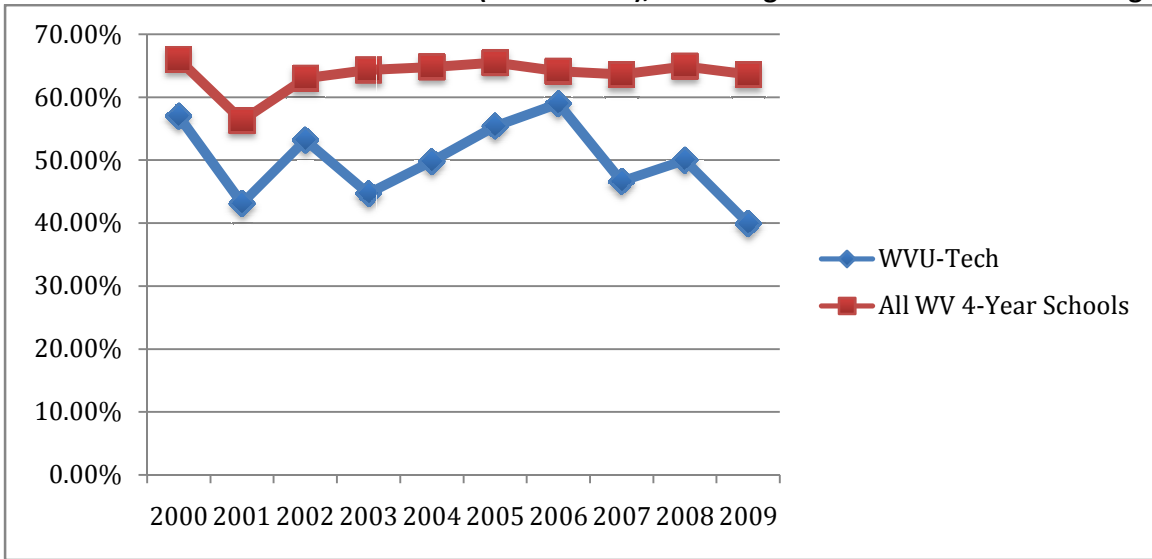
Enrollment

WVU-Tech's declining enrollment is represented in Chart 1 below. Institutional enrollment has fallen from a high of 1387 students in 2003 to an enrollment of 1067 students in Fall 2010. This is an enrollment decline of 23 percent. Graduate enrollment has gone from a high of 27 in 2002 to zero students for the years 2008-10.

Chart 1: Fall Enrollment 2002-10
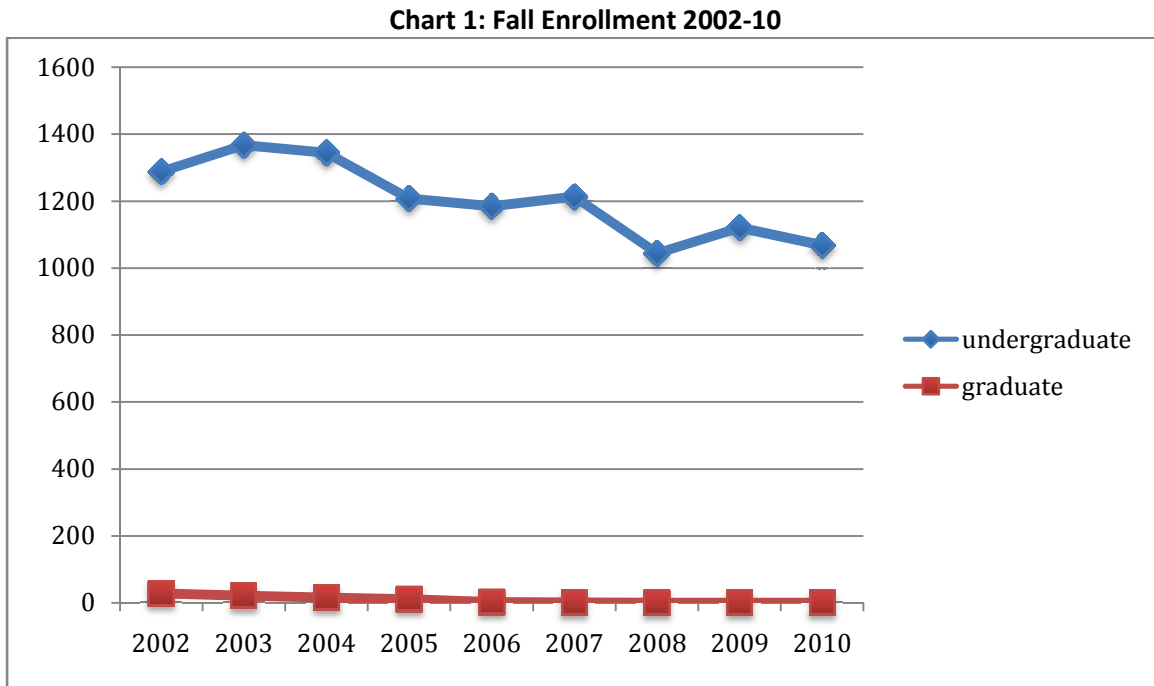
Student Retention

Retention of first-time, full-time freshmen students seeking a bachelor's degree has trended slightly higher for West Virginia four-year schools generally. At WVU-Tech, the trend has not been as consistent. The retention rate has declined the last three years, following three years of improvement. The most recent data (for the Fall 2009 cohort) reports a 39.9 percent retention rate, while all publicly supported four-year schools in West Virginia have a rate of 63.6 percent. These data are shown in Chart 2.

Chart 2: Retention of First Time Freshman (End of Term), Returning to Same Institution Following Year

Graduation (Degree Production)

With the decline in student enrollment and challenges in retaining students, there is also a decline in the number of degrees produced. These data are shown in Chart 3. Graduate degree production has fallen to zero, and in each of the last three years where data were available WVU-Tech has produced just less than 150 baccalaureate degrees.

Chart 3: Degrees Awarded 2002-10
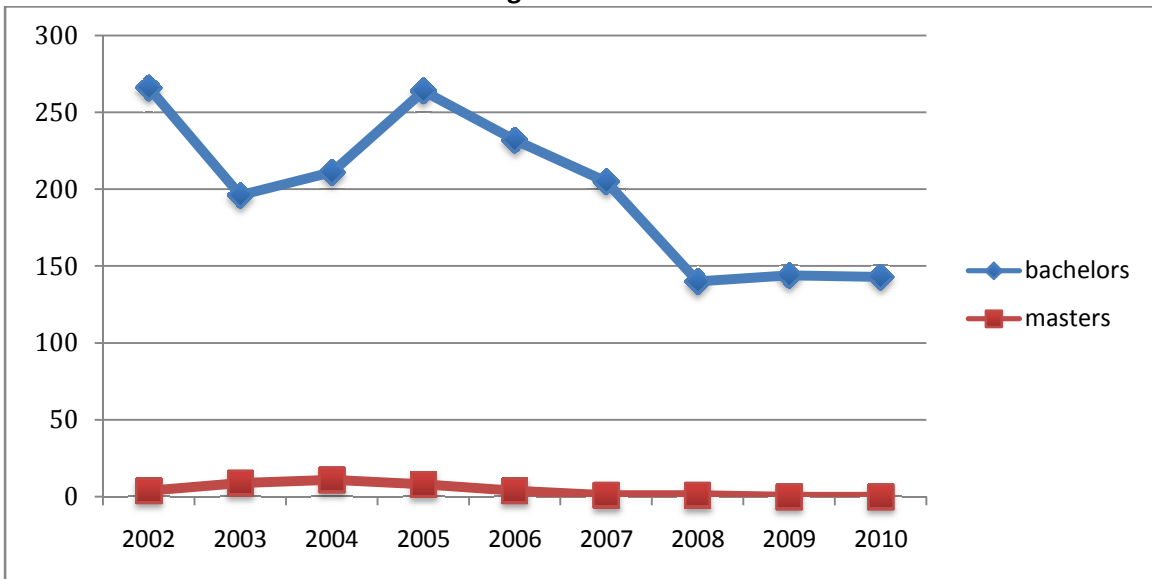
Tuition and Fees

For several years WVU-Tech tuition and fees were higher than the statewide average. And while tuition and fees have generally risen at all publicly supported institutions of higher education, WVU-Tech's tuition and fees have not risen quite as quickly and are now slightly less than the statewide average.

Chart 4: Tuition and Fees
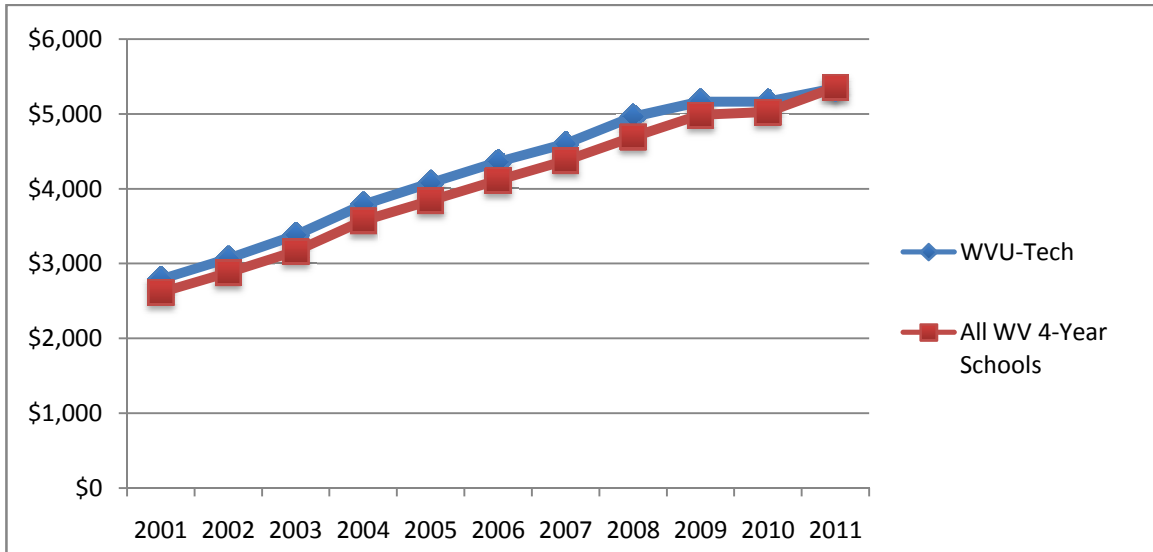
Cash Reserves

WVU-Tech's cash reserves have declined each of the last five years. As Chart 5 illustrates, the institution's year-end cash reserves have gone from nearly $8 million to a deficit of nearly $7 million.

In the latest data made available to the Team (FY 2008), the State contributes $166 per student credit hour, compared to a statewide average of $78 (a difference of 112 percent).

Chart 5: WVU Closing Cash Report FY 2004-11
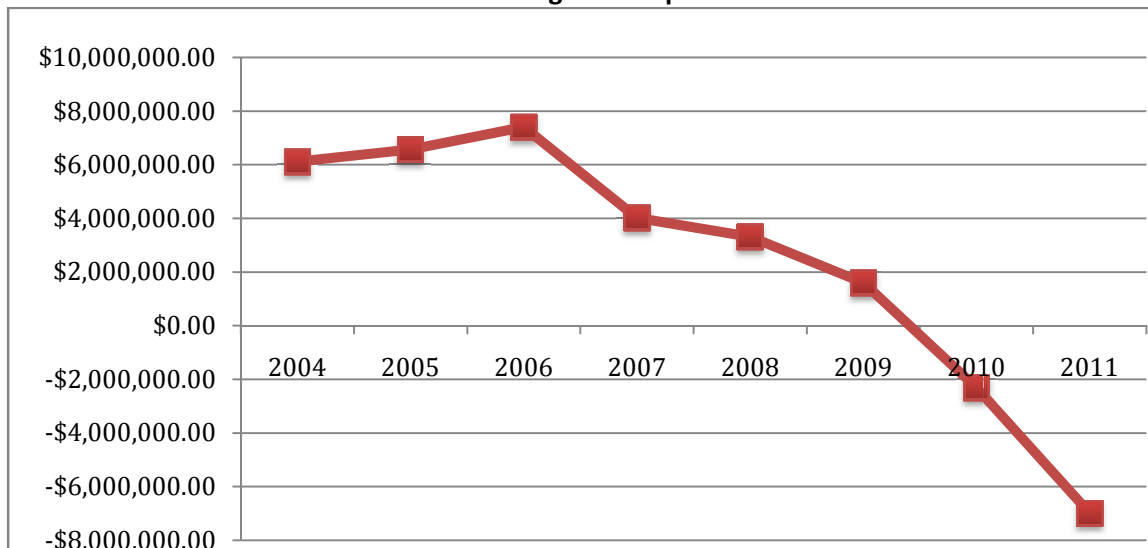
Conclusion

Given this context and the trends reflected in the charts, the Team offers its collective assessment as to how best to "revitalize" WVU-Tech and to insure its long-term success.