Flight Plan Overview

Fall, 2013

8/2/2013

Outline

TENNESSEE TECH UNIVERSITY

WHAT IS FLIGHT PLAN?

Objectives

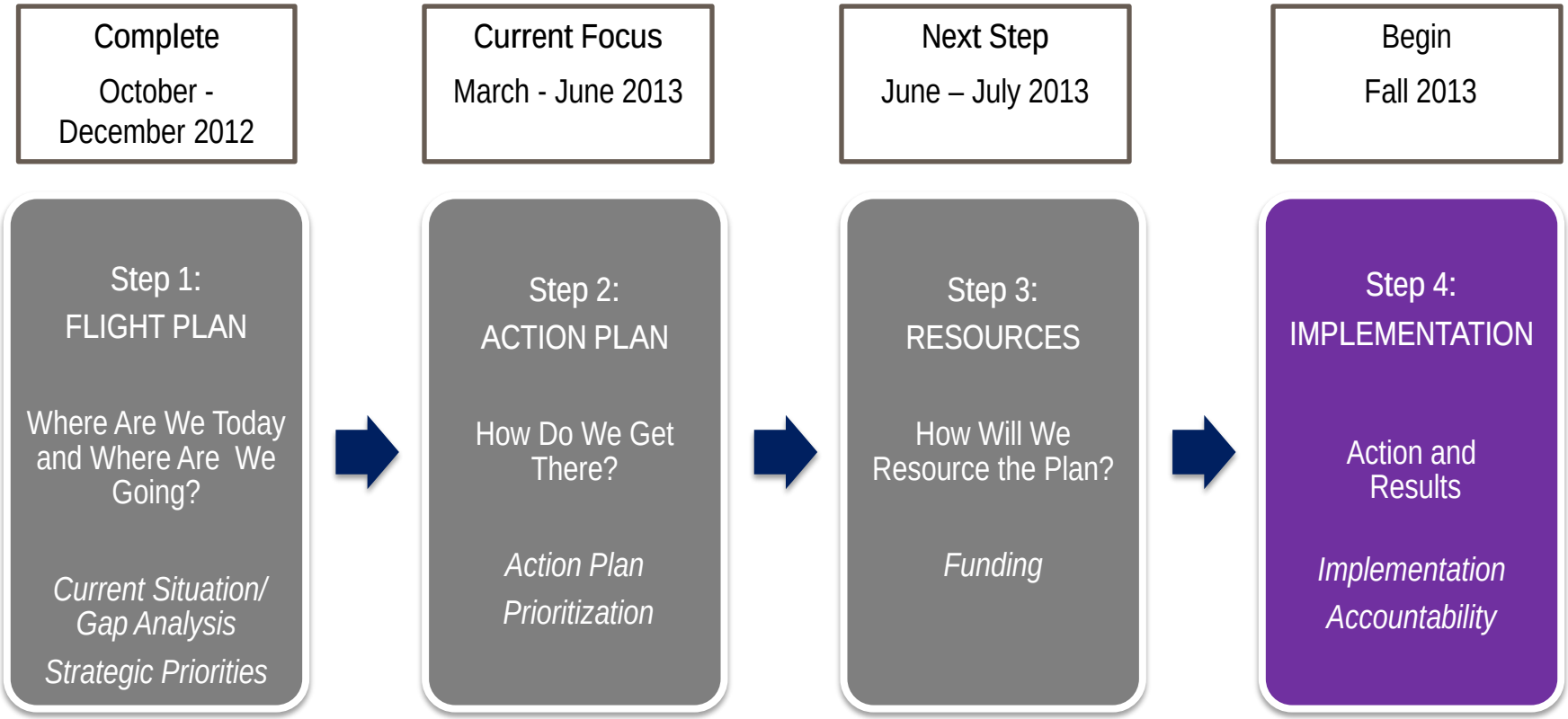
Flight Plan serves as a blueprint that guides Tennessee Tech's path forward.

- Develop a process that engages stakeholders in the development of a long-term plan
- Complete a fact-driven review of Tennessee Tech's current state
  - Use data to compare Tennessee Tech to selected peers
  - Gather stakeholder perspectives through engagement and interviews
  - Identify the implications of external factors impacting TTU, including the Complete College Tennessee Act
- Determine strategic directions to position the University for continued success in the future
- Establish a process to turn directions into action

Outcome - Flight Plan will identify specific actions that advance Tennessee Tech. It will support a vision that builds on Tech's unique differentiators and enhances its value to the residents of the State of Tennessee.

Timeline

The Flight Plan first evaluated TTU's current situation and identify strategic priorities. Supporting action plans were developed for priority actions to support implementation in Fall 2013.



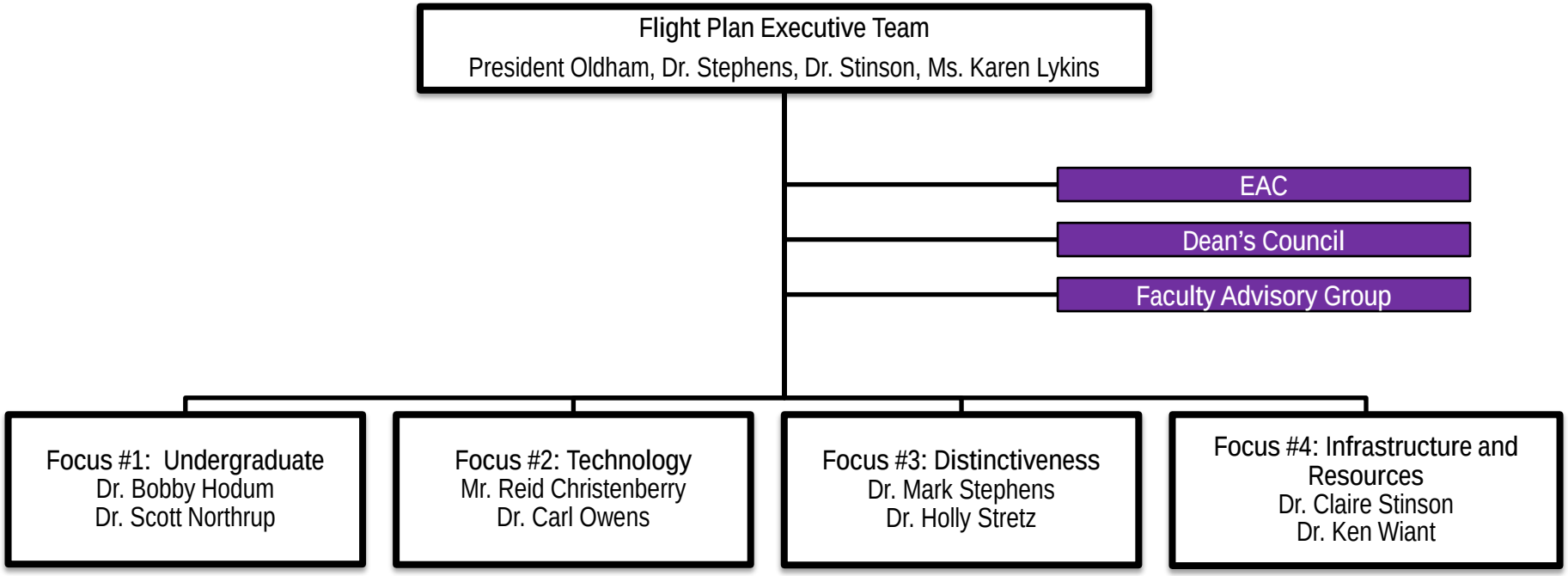
Stakeholder Engagement

Faculty, staff and students were engaged in the *Flight Plan* process through multiple focus groups and feedback points. The following individuals comprised the original *Flight Plan* Steering Committee.

Member	Position
Dr. Susan Elkins	Vice President for Extended Programs and Regional Development
Mr. Lee Gatts	Student Government Association President
Dr. Melissa Geist	Associate Professor, Nursing
Dr. Robert Hodum	Associate Vice President for Enrollment Management and Student Success
Dr. Glenn James	Director of Institutional Research
Dr. David Larimore	Professor, Research Methods in Education
Ms. Karen Lykins	Associate Vice President for Communications & Marketing
Dr. Brian O'Connor	Faculty Senate President; Associate Professor, Mathematics
Dr. Carl Owens	Professor, Curriculum and Instruction
Dr. Joseph Rencis	Dean of Engineering, Clay N. Hixson Chair for Engineering Leadership, and Professor of Mechanical Engineering
Dr. Mark Stephens	Interim Provost, Vice President for Academic Affairs
Dr. Claire Stinson	Vice President for Business and Planning
Mr. Mark Wilson	Athletics Director

Action Plan Engagement

Nearly 50 faculty, staff and students are now actively engaged in the action plan process. Co-leaders representing academic and administrative areas have been assigned to lead each Flight Plan focus area.



TTU TODAY:
WHERE ARE OUR GAPS?

Gap Analysis – Metrics

The Steering Committee identified 10 executive-level accountability metrics to include in a peer comparative analysis ("Gap analysis"). Six of the ten metrics align with Complete College Tennessee Act objectives.

Areas of Focus	Rationale	Metrics
Undergraduate Education	• Core focus area aligned with mission • Aligns with state completion agenda	• ACT Score Range • FTE Enrollment • *Bachelor's Degrees Conferred** • *Retention Rate (1st to 2nd Year)** • *Six-Year Graduation Rate**
Graduate Education	• Continues to push Tech toward new directions	• *Doctoral Degrees Conferred** • *Master's Degrees Conferred**
Research	• Opportunities to enhance connection to industry and innovate	• *Total Research Expenditures/Full-time Tenured Faculty**
Financial Resources	• Requirement to enable any strategic direction	• Operating Expenditures per Student FTE • Endowment per Student FTE

* *Related or Similar to Complete College Tennessee Act Metrics*

Gap Analysis – Peer Selection

The Committee agreed upon a set of selection of criteria to select peers for the gap analysis, while also allowing for additions to be made based on round-table discussions.

Initial Selection Criteria	Selection Metrics (Used to Identify Candidate Peers)
▪ Enrollment size ▪ STEM focus ▪ Carnegie Classification ▪ Undergraduate to Graduate Student Ratio ▪ Academic / degree profile ▪ Level of urbanization ▪ Geographic Region ▪ Comprehensive university ▪ Public Institution	▪ Comparable Undergraduate Enrollment (5,000 – 15,000 ▪ Comparable Graduate Enrollment (500 – 5,000) ▪ % of Bachelor's Degrees in STEM Fields/Top Engineering Schools ▪ Carnegie Classification (Master's Large, Research High, Research Very High) ▪ Comparable Degree of Urbanization ▪ Southern Geography

Final Selection Round: Exceptions Based on Previous History

In addition to selecting *Flight Plan* peers, the other eight public universities in Tennessee were vetted for consideration; the Committee selected four of the eight to be included in a separate Gap Analysis.

Gap Analysis – Peer List

TTU established three peer groups for provide the ability to assess comparative performance on different levels. Gap analyses were prepared for the "National" and "Tennessee" peers.

Aspirational *Aspirational Examples/ Case Studies*	National Peers *National Gap Analysis*	Tennessee Peers *Tennessee Gap Analysis*
▪ All Metrics – Clemson University ▪ Undergraduate – Miami University (Ohio) – James Madison ▪ Graduate and Research – SUNY-Binghamton – Univ. of New Hampshire	▪ Louisiana Tech ▪ South Dakota State ▪ Murray State ▪ New Mexico State ▪ Univ. of Alabama-Huntsville ▪ Univ. of Idaho ▪ Univ. of Maine ▪ Appalachian State	▪ Univ. of Memphis ▪ East Tennessee State ▪ Middle Tennessee State ▪ Univ. of Tennessee-Chattanooga

Gap Analysis – National Peers

TENNESSEE TECH UNIVERSITY

Areas of Focus	Metrics	TTU	Comparative Group	TTU vs. Comparative Group
Undergraduate Education	ACT Score Range (75th/25th Percentile)	26/20	26/20	Equal
	FTE Enrollment	9,266	9,329	-63
	Bachelor's Degrees Conferred[1]	1,704	1,800	-96
	Retention Rate (1st to 2nd Year)	73%	77%	-4 Pts.
	Six-Year Graduation Rate	50%	54%	-4 Pts.
Graduate Education	Doctoral Degrees Conferred	18	41	-23
	Master's Degrees Conferred	347	552	-205
Research	Total Research Expenditures per Full-time Tenured Faculty Member	$55K	$156K	-$101K
Financial Resources	Operating Expenditures per Student FTE[2]	$11,402	$15,222	-$3,820
	Endowment per Student FTE[3]	$5,844	$8,057	-$2,213

1. Bachelor's Degrees Conferred is not published on TTU's Common Data Set. TTU's figure comes from Office of Institutional Research
2. Operating expenditures includes instruction, academic support, student services, institutional support, operation of plant, and scholarships and fellowships
3. US News Endowment Data

Data Source: Common Data Set 2011 - 2012, NSF Research Survey 2010, IPEDS Data Center, US News, Audited Financial Statements

Gap Analysis – Tennessee Peers

Areas of Focus	Metrics	TTU	Comparative Group	TTU vs. Tennessee Group
Undergraduate Education	ACT Score Range (75th/25th Percentile)	26/20	25/20	+1/0
	FTE Enrollment	9,266	14,041	-4,775
	Bachelor's Degrees Conferred	1,696	2,574	-878
	Retention Rate (1st to 2nd Year)[1]	81%	79%	+2 Pts.
	Six-Year Graduation Rate[2]	56%	49%	+7 Pts.
Graduate Education	Doctoral Degrees Conferred	18	73	-55
	Master's Degrees Conferred	347	725	-378
Research	Research and Service per Full-time Tenured Faculty Member (THEC Definition)	$31K	$60K	-$29K
Financial Resources	Operating Expenditures per Student FTE[3]	$11,402	$15,098	-$3,696
	Endowment per Student FTE[4]	$5,844	$7,571	-$1,727

1. Retention rate reflects the THEC definition and includes those students that were enrolled at either the admitting institution or another Tennessee public institution the following year.
2. Six-year graduation rate reflects the THEC definition and includes those students who graduated from the admitting institution and/or another Tennessee Public university.
3. Operating expenditures includes instruction, academic support, student services, institutional support, operation of plant, and scholarships and fellowships. UT- Chattanooga is not included in the average of the comparative group. FY2010 Data used as FY2011 was not available for all institutions.
4. FY2011 US News endowment data and 2011 THEC Factbook enrollment data used.

Data Source: THEC Factbook 2012-13, Common Data Set 2011 - 2012, Business and Fiscal Affairs, IPEDS Data Center, US News, Audited Financial Statements

Undergraduate Education

CURRENT POSITION

- Students expressed the advising model, registration/scheduling system, and bottleneck classes as opportunities for improvement.

- Academic advising is inconsistent with some, but not all, colleges providing strong advising services to their students.

- Retention and graduation rates have remained strong relative to Tennessee peers, but continues to lag behind *Flight Plan* and aspirational peers.

Technology

CURRENT POSITION

- The demand for better services has been driven by the exponential increase in use of technology, including the number of mobile devices students bring to campus.
- Students have also detailed their desire to receive information via digital channels and perform university business processes through more convenient methods.
- Faculty and staff have acknowledged there is very little funding for ongoing experimentation or pilot projects in adopting leading-edge technology.
- *Flight Plan* identified the desire of faculty, staff, and students to expand emphasis on technology-forward experience into curriculum and the need for technology infrastructure to support research computing.

Distinctiveness

CURRENT POSITION

- *Flight Plan* identified the desire of faculty, staff, and students to expand emphasis on real-world problem solving into undergraduate curriculum by concentrating on co-curricular activities (study abroad, co-op learning, service learning, and undergraduate research).

- Faculty teams expressed a need for resources to incubate high-potential, interdisciplinary research ideas to ready opportunities for external funding.

- Overall graduate degrees offerings and research dollars are below expectations for the "Technological" institution of the state of Tennessee. Faculty wish to grow degree offerings in areas of market need and to better align with CCTA expectations.

- A focus on use of technology is needed to bring TTU closer to its position as the technological university in the State of Tennessee. This also includes new technology-based and innovative academic offerings and teaching methods.

Resources and Infrastructure

CURRENT POSITION

- TTU requires a new enrollment model to realize Flight Plan objectives. This includes the development of a data-driven enrollment model and improved use of scholarships to increase student yield.

- Stakeholders expressed a desire for a more developed infrastructure to support the needs of students, faculty, and the community. For example, stakeholders frequently cited need for increased green space, more commuter parking spots, enhanced student facilities, and greater dining capacity.

- Many of TTU's current business processes are out-of-date and inefficient, specifically the hiring and procurement processes.

Flight Plan Focus Areas

Based on a full internal assessment of TTU's current state, including the gap analysis, four strategic improvement directions emerged as *Flight Plan* focus areas.

1. Improve Undergraduate Student Experience

- Enhance quality of undergraduate student experience
- Improve academic advising
- Increase degrees conferred and retention; reduce time-to-degree
- Focus on incoming student quality and diversity
- Improve student recruitment and use of scholarships

2. Transform Technology

- Enhance technology capabilities
- Improve technology infrastructure systems, and support services
- Support faculty in the application of technology in the classroom

3. Create Distinctive Programs and Invigorate Faculty

- Expand research and faculty scholarly activity
- Support faculty collaboration and development
- Evaluate structure where appropriate to promote cross-disciplinary and integrated programs and scholarship
- Improve graduate recruitment, incoming student quality, enrollment and degrees conferred
- Provide undergraduate research opportunities

4. Expand Financial Resources and Modernize Infrastructure

- Identify new revenue streams
- Grow endowment and private funding levels
- Develop campus and modernize physical infrastructure

ACTION AND IMPLEMENTATION

Flight Plan Summary

TENNESSEE TECH UNIVERSITY

TTU VISION

4
FOCUS AREAS

UNDERGRADUATE EDUCATION

TECHNOLOGY

DISTINCTIVENESS

INFRASTRUCTURE AND RESOURCES

12
PRIORITY ACTIONS

1. FRESHMEN FLIGHT PATH
2. ACADEMIC ADVISING
3. HIGH-DEMAND COURSE CAPACITY
4. TECHNOLOGY SERVICE TO STUDENTS
5. TECHNOLOGY INFRASTRUCTURE AND INNOVATION
6. UNDERGRADUATE CO-CURRICULAR PROGRAM
7. MULTIDISCIPLINARY RESEARCH INNOVATION
8. NEW GRADUATE PROGRAMS
9. TECHNOLOGY IN TEACHING
10. ENROLLMENT, TUITION AND SCHOLARSHIPS
11. PHYSICAL INFRASTRUCTURE PRIORITIES
12. EFFICIENCY AND EFFECTIVENESS

10
METRICS

UNDERGRADUATE

1. ACT SCORE RANGE
2. FTE ENROLLMENT
3. BACHELOR'S DEGREES
4. RETENTION RATE
5. SIX-YEAR GRADUATION RATE

GRADUATE AND RESEARCH

6. DOCTORAL DEGREES
7. MASTER'S DEGREES
8. RESEARCH EXPENDITURES PER FACULTY

FINANCIAL

9. OPERATING EXPENDITURES PER STUDENT
10. ENDOWMENT PER STUDENT

Flight Plan Summary – 2013 to 2014

TENNESSEE TECH UNIVERSITY

PRIORITY	PLAN	PILOT	RESOURCE	IMPLEMENT
Freshmen Flight Path				
Academic Advising				
High-Demand Course Capacity				
Technology Service to Students				
Enrollment, Tuition, and Scholarships				
Efficiency and Effectiveness				
IT Infrastructure and Innovation				
Co-curricular Undergraduate Program				
Multidisciplinary Research Innovation Incubator				
New Graduate Programs				
Technology in Teaching				
Physical Infrastructure Priorities				

READY FOR ACTION

2013 to 2014 Action Focus: Implementation; outcomes

- Initiatives ready for action or address an immediate need
- Resources allocated for 2013 to 2014
- Outcomes expected

TRANSFORMATIONAL

2013 to 2014 Action Focus: Pilot programs; resource plans

- Large, multi-year initiatives
- Further planning and stakeholder engagement required
- Pilot projects
- Full resource plans needed

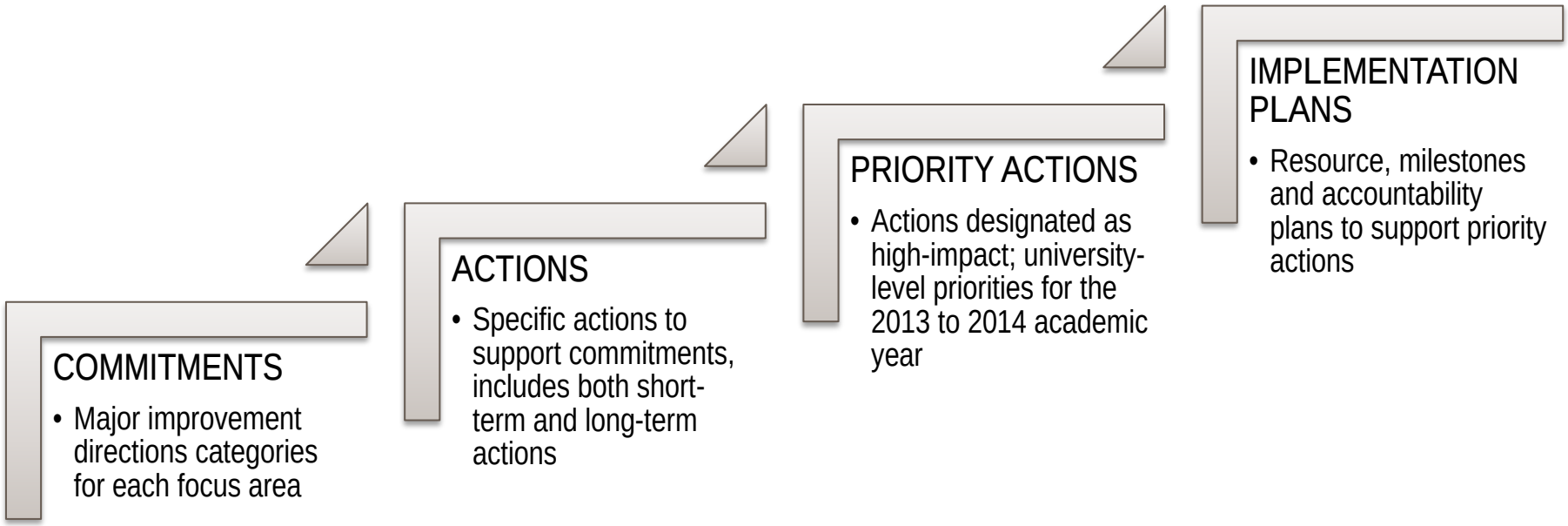
Objectives

The action and implementation plan process engaged stakeholder to identify high-impact actions aligned with Flight Plan and develop high-level implementation plans.

- Address gaps in the four areas of focus: undergraduate education, technology, distinctiveness, and infrastructure/resources
- Engage academic and administrative leaders to identify and prioritize opportunities for both immediate and long-term improvement
- Identify the necessary investments needed
- Establish an expectation for accountability, assessment, and continuous improvement
- Surface opportunities for operational effectiveness

Process

The *Flight Plan* focus areas serve as the foundation for the action plan process. The objective of this process is to surface university-level priorities for the 2013 to 2014 academic year.



FLIGHT PLAN FOCUS AREAS

UNDERGRADUATE EDUCATION

TECHNOLOGY

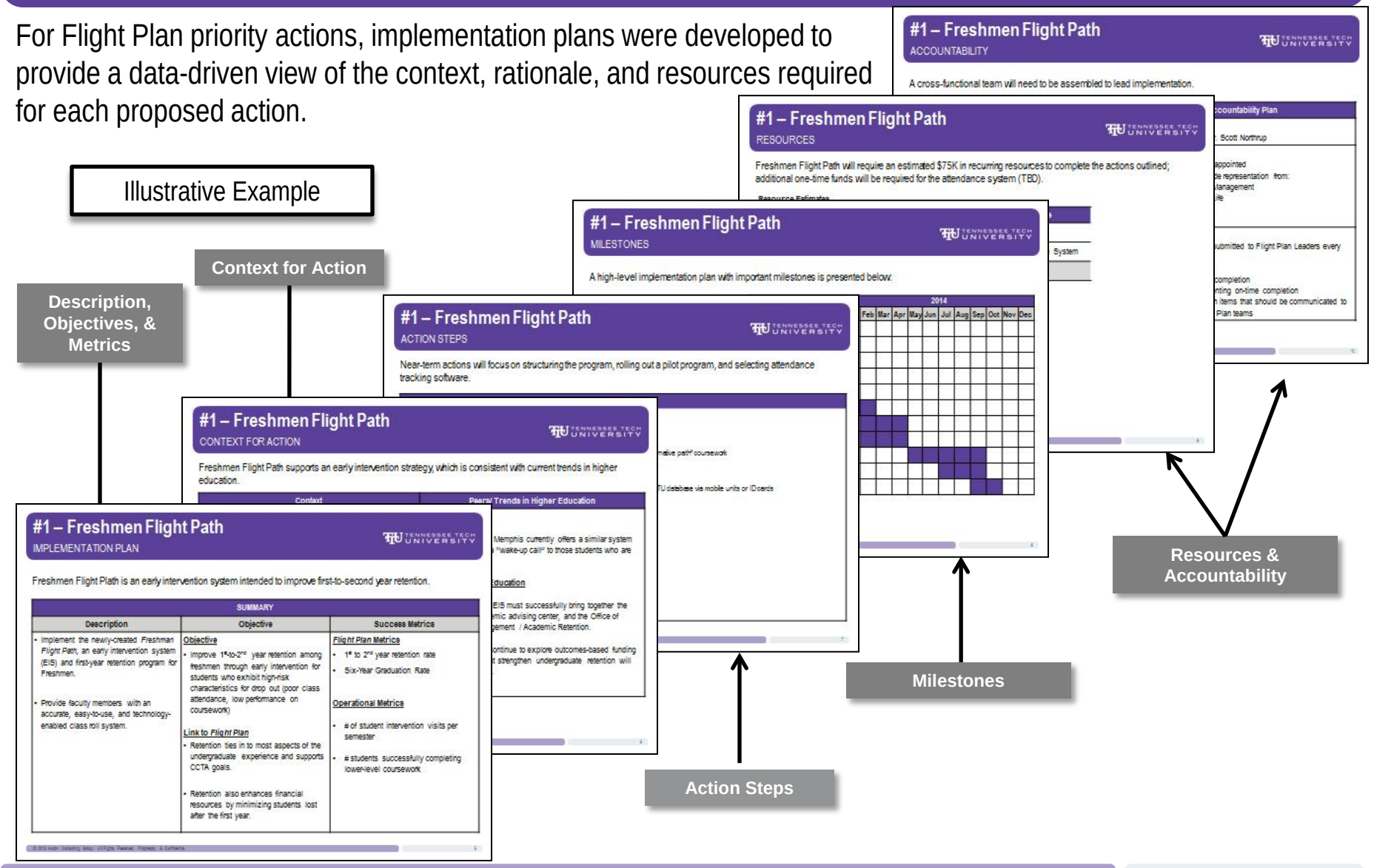
DISTINCTIVENESS

INFRASTRUCTURE AND RESOURCES

Implementation Plans

For Flight Plan priority actions, implementation plans were developed to provide a data-driven view of the context, rationale, and resources required for each proposed action.

Illustrative Example



Description, Objectives, & Metrics

Context for Action

Action Steps

Milestones

Resources & Accountability

Priority Actions

Flight Plan is supported by 12 priority action plans related to Undergraduate Education, Technology, Distinctiveness, and Infrastructure and Resources.

Team	Supporting Action Plan Profiles
Undergraduate Education	3
Technology	2
Distinctiveness	4
Infrastructure and Resources	3

Priority Actions

Implementation plans have been developed for 12 Flight Plan priority actions.

PRIORITY	ACTION	OBJECTIVE
1 Freshmen Flight Path	Implement an early intervention first-year retention program for freshmen focusing on class attendance	Improve retention through early, proactive intervention
2 Academic Advising	Establish a consistent approach to academic advising that expands the number of professional advisors and enhances the faculty-student mentorship role	Increase retention and graduation rates by ensuring consistency and focusing on success in the freshmen year
3 High-Demand Course Capacity	Identify high-demand courses and add additional capacity through hiring faculty and effectively using classroom space	Increase graduation rates by providing students access to courses needed to graduate on time
4 Technology Service to Students	Improve technology service to students by meeting student need for connectivity and support	Support a technology-forward student experience

Priority Actions

Implementation plans have been developed for 12 Flight Plan priority actions.

PRIORITY	ACTION	OBJECTIVE
5 IT Infrastructure and Innovation	Create an IT strategic plan to strengthen technology capabilities in infrastructure and services; establish a fund to promote innovation	Build technology capabilities representative of a premier technological university
6 Co-curricular Undergraduate Program	Redesign TTU's undergraduate programs to emphasize co-curricular activity in order to better prepare students to solve real-world problems	Increase graduation rates by proving students with a distinctive and relevant undergraduate experience
7 Multidisciplinary Research Innovation	Establish Innovation for Distinctiveness in Education and Applied Sciences, an incubator to cultivate promising and distinctive research opportunities	Expand funded research by surfacing prospects for new, distinctive research opportunities
8 New Graduate Programs	Offer new graduate degree programs in high-demand, distinctive areas	Increase Master's and PhD degrees conferred to align with CCTA objectives

Priority Actions

Implementation plans have been developed for 12 Flight Plan priority actions.

PRIORITY	ACTION	OBJECTIVE
9 Technology in Teaching	Provide faculty advanced support to increase adoption of digital learning practices and technology innovation in the classroom	Increase graduation rates and student success; support faculty innovation in teaching
10 Enrollment, Tuition, and Scholarships	Evaluate undergraduate and graduate enrollment and tuition; improve use of scholarships	Broaden financial resources through sustained growth; strengthen TTU's ability to recruit excellent students
11 Physical Infrastructure Priorities	Enrich and modernize university physical infrastructure	Improve the experience of students, faculty and staff
12 Efficiency and Effectiveness	Streamline administrative requirements by simplifying business processes and leveraging technology to improve effectiveness	Ensure effective stewardship of financial resources by increasing administrative efficiency

Undergraduate Action Plan

TENNESSEE TECH UNIVERSITY

FOCUS #1 – UNDERGRADUATE EDUCATION COMMITMENTS AND PRIORITY ACTIONS

Commitment One: Improve student success through early intervention

- ❑ Freshmen Flight Path

Commitment Two: Establish a dual approach to academic advising, both improving support for class registration and strengthening student-faculty mentorship

- ❑ Academic Advising

Commitment Three: Reduce time-to-degree

- ❑ High-Demand Course Capacity

Commitment Four: Improve the undergraduate experience

- ❑ Technology Service to Students
- ❑ Athletics Flight Plan Supplemental

Commitment Five: Advance enrollment practices

- ❑ Enrollment, Tuition and Scholarships

Technology Action Plan

TENNESSEE TECH UNIVERSITY

FOCUS #2 – TECHNOLOGY
COMMITMENTS AND PRIORITY ACTIONS

Commitment One: Improve Technology Service

- ❑ Technology Service to Students

Commitment Two: Strengthen Technology Infrastructure and Promote Innovation

- ❑ IT Infrastructure and Innovation

Distinctiveness Action Plan

TENNESSEE TECH UNIVERSITY

FOCUS #3 – DISTINCTIVENESS
COMMITMENTS AND PRIORITY ACTIONS

Commitment One: Redesign TTU's Undergraduate Programs to Better Prepare Students to Solve Real-World Problems

- ❑ Co-Curricular Undergraduate Program

Commitment Two: Establish New Distinctive, Collaborative Programs

- ❑ Multidisciplinary Research Innovation

Commitment Three: Offer New Graduate Degrees

- ❑ New Graduate Degrees

Commitment Four: Invigorate and Support Faculty

- ❑ Technology in Teaching

Resources and Infrastructure Action Plan

TENNESSEE TECH UNIVERSITY

FOCUS #4 – RESOURCES AND INFRASTRUCTURE DRAFT ACTION PLAN

Commitment One: Cultivate a Sustainable Financial Model

- ❑ Enrollment, Tuition, and Scholarships
- ❑ Maximize Complete College Tennessee Act Allocated Dollars

Commitment Two: Enrich Physical Infrastructure to Enhance the Student Experience and Support the Academic Mission

- ❑ Physical Infrastructure Priorities

Commitment Three: Improve Efficiency and Effectiveness

- ❑ Efficiency and Effectiveness

Commitment Four: Generate New External Resources

- ❑ TTU Foundation
- ❑ Increase External Grant Funding and Commercialization

RESOURCES

Overview

Resources required to support the Priority Action implementation plans were organized into two categories.

Near-term Investments

- Resource estimates and requests that will fund priority action plans during the 2013-14 year.
- Funding incorporated in 2013-14 plan

Longer-term Investments

- Resource estimates and requests that will fund priority action plans during the 2014-2015 year and beyond.
- Resource plans will need to be developed in the 2013-14 year

Summary of Resources

TENNESSEE TECH UNIVERSITY

Priority Action	2013-14 Resource Committed	Resource Plan To Be Developed 2013-14
1. Freshmen Flight Path Program	●	
2. Academic Advising	●	
3. Relieve High-Demand Courses	●	
4. Technology Service to Students	●	
5. Technology Infrastructure and Innovation	● (Partial)	●
6. Co-curricular Undergraduate Program	● (Partial)	●
7. Multi-Disciplinary Research		●
8. New Graduate Programs		●
9. Technology in Teaching		●
10. Enrollment, Tuition, and Scholarships	●	
11. Physical Infrastructure Priorities		●
12. Efficiency and Effectiveness	●	

Sources of Funds

The following funding strategies have been employed at public universities which have made performance advancements and can be applied to *Flight Plan*.

Source	Examples
Operational Effectiveness	▪ Strong focus on operational effectiveness measures to "reinvest" in the academic enterprise
Enrollment and Tuition Balance	▪ TTU has conveyed its desire to increase both in-state and out-of-state undergraduate enrollment, in addition to graduate enrollment
Retention	▪ Many of *Flight Plan*'s Undergraduate Education priority actions are designed to increase retention and graduation, keeping student tuition dollars on campus and increasing overall success in the CCTA funding formula.
Gifts and Endowment Support	▪ Development of strategic campaigns to reinforce broad university priorities

IMPLEMENTATION AND ACCOUNTABILITY

Overview

Those responsible for overseeing the Priority Action implementation plans will be held accountable for reporting to the *Flight Plan* executive team as well as measure success against operational and *Flight* Plan metrics.

Accountability

- Priority Action leaders will appointed for each of the 12 priority actions and have an implementation team made up of representatives from applicable departments.

Reporting

- The Priority Action leaders will report directly to their individual focus group leaders, who will be responsible for regular reporting on progress to the *Flight Plan executive team.*

Communication

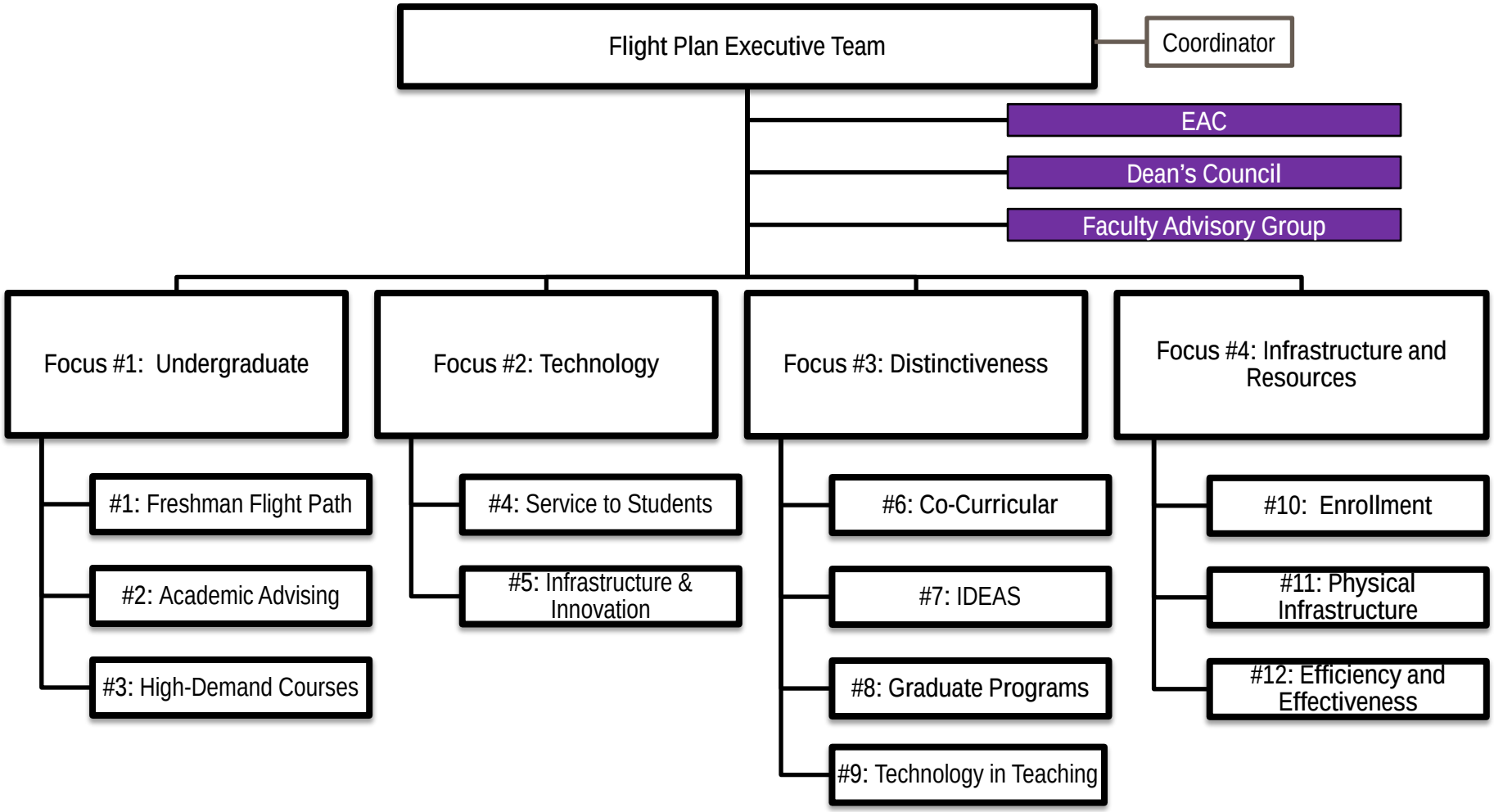
- Regular communications to campus stakeholder groups

Metrics

- The *Flight Plan* Gap analysis metrics will be updated on an annual basis under the direction of the *Flight Plan* executive team.
- Operational metrics included in individual plans will supplement this reporting with more frequent updates.

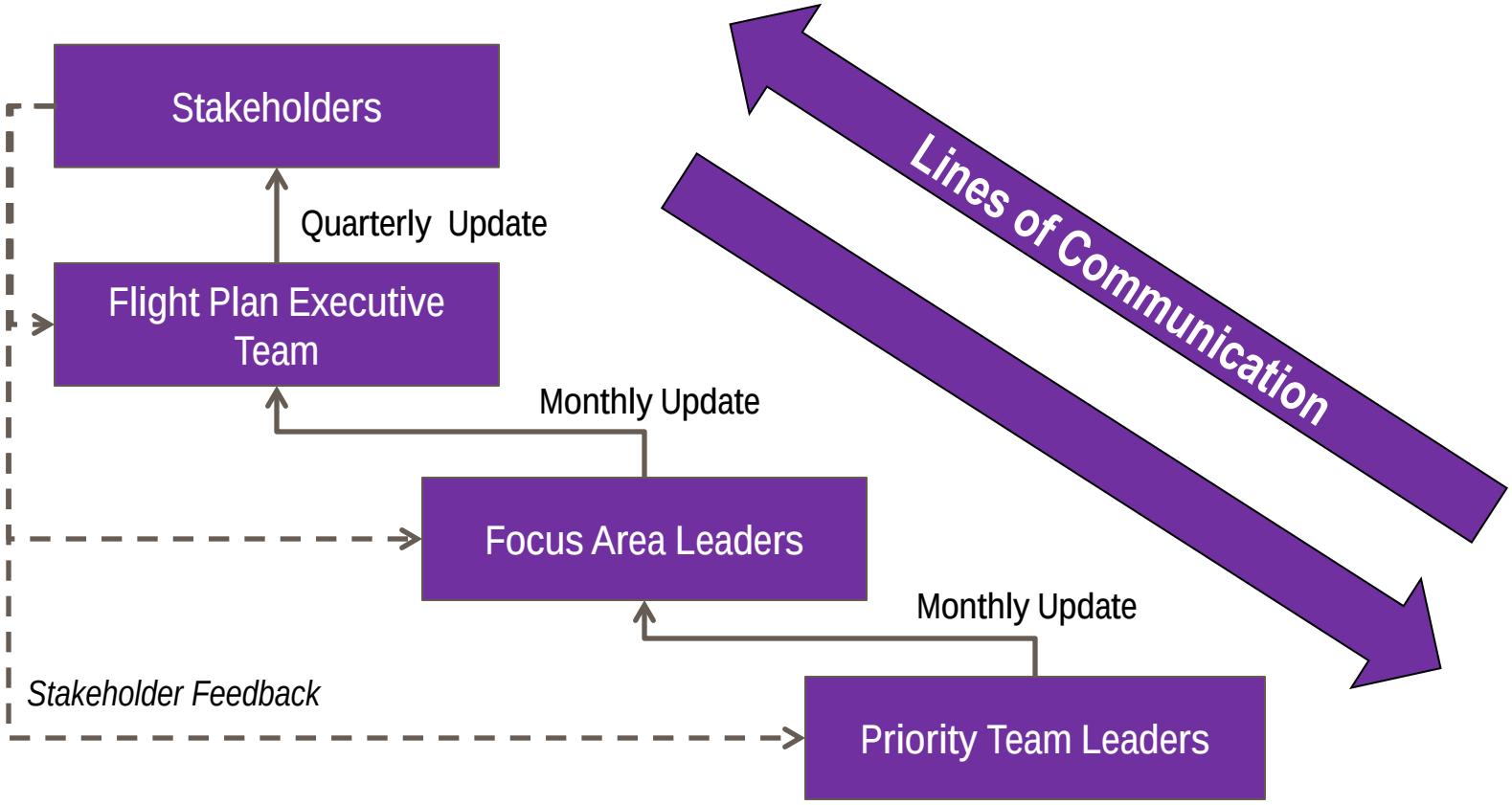
Structure

The following structure illustrates a suggested structure to implementation.



Progress Reporting

The lines of communication will depend on regular updates and accountability for progress reporting.



Executive Metrics

TENNESSEE TECH UNIVERSITY

The ten executive-level metrics included in the *Flight Plan* Gap Analysis will be refreshed concurrently.

		FLIGHT PLAN FOCUS AREAS			
Metrics		Undergraduate	Technology	Distinctiveness	Infrastructure & Resources
Undergraduate Education	ACT Score Range (75th/25th Percentile)	●			
	FTE Enrollment	●			
	Bachelor's Degrees Conferred[1]	●	●	●	
	Retention Rate (1st to 2nd Year)	●	●	●	
	Six-Year Graduation Rate	●	●	●	
Graduate Education	Doctoral Degrees Conferred		●	●	
	Master's Degrees Conferred		●	●	
Research	Total Research Expenditures per Full-time Tenured Faculty Member		●	●	
Financial Resources	Operating Expenditures per Student FTE				●
	Endowment per Student FTE				●

While operational metrics will be tracked at smaller intervals, formal reports on *Flight Plan* metrics should be delivered by the *Flight Plan* executive team to the President on an **annual** basis.

Operational Metrics

TENNESSEE TECH UNIVERSITY

PRIORITY	TEAMS	OPERATIONAL METRIC	REPORTING FREQUENCY
Flight Path	Undergraduate / Technology	Fall-to-spring retention rate	Annually
		# of student intervention visits per semester	Semester
		% of freshmen with 2.0 GPA or higher per semester	Semester
Academic Advising	Undergraduate	# of students eligible to return that register on-time	Semester
		# of withdrawals	Semester
		Professional Advisor-to-student ratio in the colleges	Semester
High-Demand Courses	Undergraduate	Seat and classroom utilization ratios (EMS)	Semester
		Number of students needing courses vs. capacity (DW)	Semester
Technology Service to Students	Technology	# of Wi-Fi “Dark Spots”	Monthly
		# of Tech Service Desk Visits	Monthly
		# of Switches/Access Points Across campus	Monthly

Operational Metrics

PRIORITY	TEAMS	OPERATIONAL METRIC	REPORTING FREQUENCY
Technology Innovation	Technology / Resources & Infrastructure	Central IT Operating Expenditures/ Student FTE	Annually
		# of Users Per Central IT Staff FTE	Annually
Co-Curricular Undergraduate	Distinctiveness	# of students participating in undergraduate research	Semester
		# of students receiving credit for study abroad coursework	Semester
		# of students receiving co-op positions (particularly in engineering)	Semester
		# of students in service learning programs	Semester
Multidisciplinary Research	Distinctiveness	# of cross-appointments for faculty members	Annually
		# of projects funded through the innovation incubator	Annually

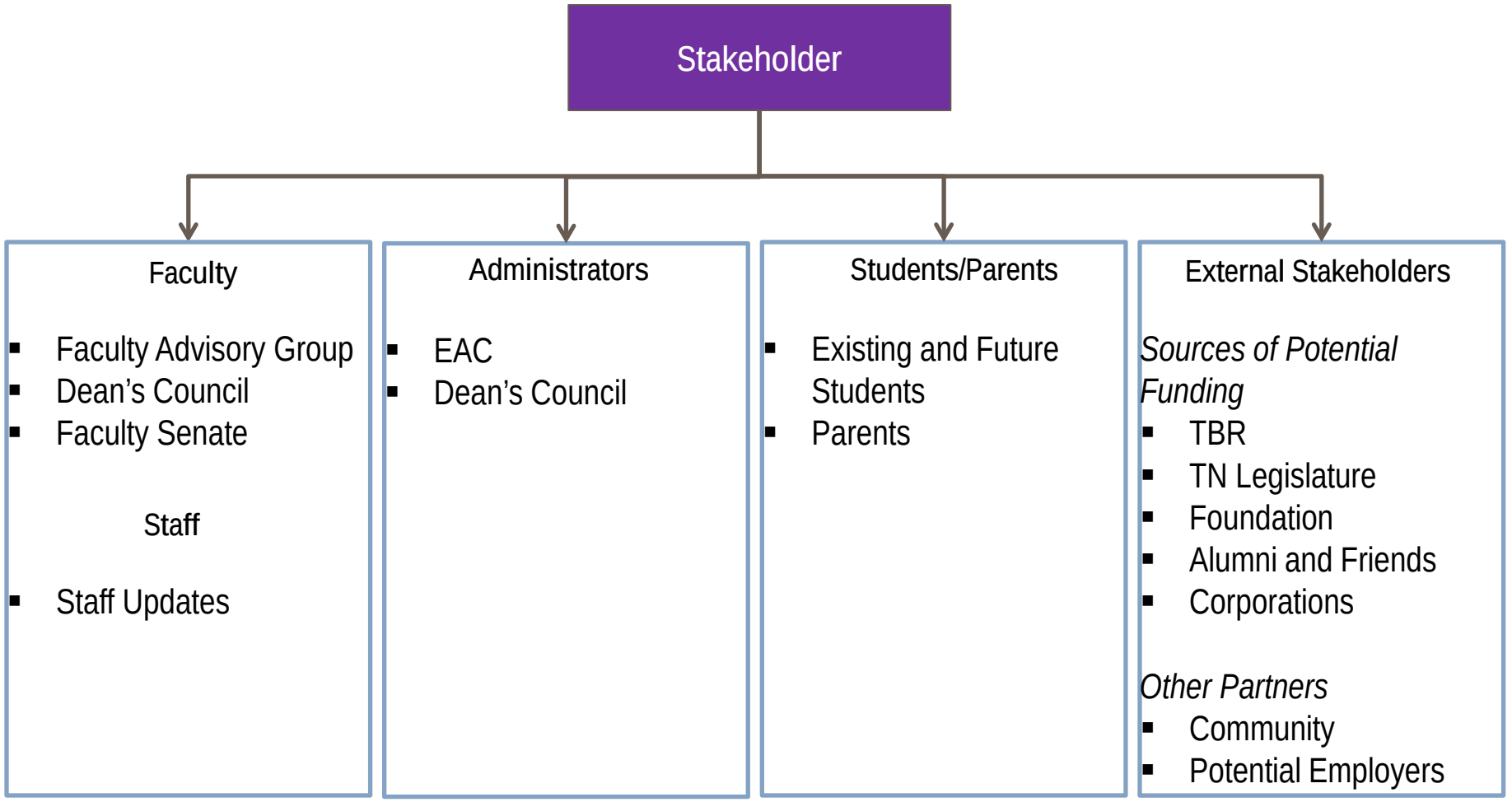
Operational Metrics

TENNESSEE TECH UNIVERSITY

PRIORITY	TEAMS	OPERATIONAL METRIC	REPORTING FREQUENCY
New Graduate Programs	Distinctiveness	# of Graduate Degrees offered	Semester
		# of graduate students enrolled	Semester
		# of Ph.D. students enrolled	Semester
Technology in Teaching	Distinctiveness / Technology	# of faculty participating in course redesigns	Semester
		# of redesigned courses	Semester
Enrollment, Tuition, and Scholarships	Resources & Infrastructure / Undergraduate	Net tuition revenue	Semester
		In-state vs. out-of-state mix	Annually
Physical Infrastructure Priorities	Resources & Infrastructure	Progress towards development and completion of the landscaping master plan	Annually
		# of parking spaces	Annually
		# of descriptive signs posted outside of campus buildings	Annually
Efficiency and Effectiveness	Resources & Infrastructure / Technology	Time to complete a new hire process	Semester
		Number of suppliers in an individual product category; % spend on contract	Annually

Stakeholder Communication

TTU will be responsible for communicating updates on the priority actions to four primary stakeholder groups.



Stakeholder Communication

The following chart outlines communication types and timing Flight Plan launch.

Stakeholder Group	Description	Mode of Delivery	Timing
University Stakeholders	▪ Faculty ▪ Administrators ▪ Staff ▪ Students	▪ Articles ▪ Printed Materials ▪ Website ▪ Meetings	▪ *Fall*– Vision, Flight Plan launch ▪ *Spring* – Implementation updates, “wins”, stakeholder feedback
TBR	▪ Tennessee Board of Regents	▪ Executive Meeting ▪ Printed Materials	▪ *Fall* – Executive briefing w/ TBR ▪ *Spring* – Executive-level metrics update, status update
Other Stakeholders	▪ Alumni ▪ Parents ▪ Regional Partners ▪ State Legislative Advocates ▪ Community	▪ Articles/Alumni Magazine ▪ Printed Materials ▪ Website	▪ *Fall*– Vision, Flight Plan launch, select meetings ▪ *Spring* – “Wins”

Implementation Plan Timeline and Milestones

Near-term priority actions will be completed throughout the 2013-2014 school year while long-term priority actions will commence in fall, 2014.

	2013						2014								
Milestone	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Finalize Draft Plans	■														
Near-term Resource Estimates Confirmed and Funded		■													
Implementation Teams Commence Near-Term Projects			■	■	■	■	■	■	■	■	■				
Discuss Long-term Funding Options							■	■	■	■	■				
Complete Near-Term Implementation Plans												■	■		
Secure Long-term Funding														■	
Launch Long-term Implementation Plans															■

▲ Quarterly Update to Campus Community

NEXT STEPS

Action Plan

MILESTONES

We are currently in the implementation plan finalization and community roll out phase for *Flight Plan* priorities.

Timeline	Milestones	Status
February 2013	▪ Leaders and teams appointed ▪ Kick-off discussion held ▪ Timetable established	✓
March 2013	▪ Action plan structure complete – Improvement directions and candidate actions	✓
April/May 2013	▪ Prioritization and sequencing of actions complete – Designate Flight Plan priorities – Identify unit-level improvement directions – High-level timetables and sequencing	✓
May 2013	▪ Supporting implementation plans for Flight Plan priorities complete – Context, actions and milestones – Resource estimates – Accountability plan	✓
June 2013	▪ Finalize priorities and implementation plans ▪ Budget review and commitments complete	✓
July 2013	▪ Implementation begins	Current Focus
August 2013	▪ Roll out to the community	Current Focus

APPENDIX A: COMPLETE IMPLEMENTATION PLANS

Implementation Plans

Implementation plans were developed to identify specific near-term actions for improvement, promote communication among stakeholders, and support implementation.

- Implementation plan profiles include:
  - Rationale and strategic objectives
  - Near-term action steps
  - Resource requirements
  - Implementation considerations
  - Accountability plan
  - Key success metrics for measuring progress

- Plans were used as a method of communicating and gathering feedback:
  - Shared with key stakeholders for early feedback and buy-in
  - Used to clarify resource needs

- Plans were also designed to promote accountability for implementation

Contents

TENNESSEE TECH UNIVERSITY

#1 – Freshmen Flight Path

IMPLEMENTATION PLAN

TENNESSEE TECH UNIVERSITY

Freshmen Flight Plath is an early intervention system intended to improve first-to-second year retention.

SUMMARY		
Description	Objective	Success Metrics
• Implement the newly-created *Freshman Flight Path,* an early intervention system (EIS), and first-year retention program for freshmen • Provide faculty members with an accurate, easy-to-use, and technology-enabled class roll system	<u>Objective</u> • Improve 1st-to-2nd year retention among freshmen through early intervention for students who exhibit high-risk characteristics for drop out (poor class attendance) <u>Link to *Flight Plan*</u> • Retention ties in to most aspects of the undergraduate experience and supports CCTA goals • Retention also enhances financial resources by minimizing students lost after the first year	<u>*Flight Plan* Metrics</u> • 1st to 2nd year retention rate • Six-Year Graduation Rate <u>Operational Metrics</u> • Fall-to-spring retention rate • # of student intervention visits per semester • % of freshmen with 2.0 GPA or higher per semester

#1 – Freshmen Flight Path

CONTEXT FOR ACTION

Freshmen Flight Path supports an early intervention strategy, which is consistent with current trends in higher education.

Context	Peers/ Trends in Higher Education
• TTU has seen flat levels of 1st-to-2nd year retention among first-time, full-time freshmen • Retention has remained strong relative to Tennessee peers, but continues to lag behind *Flight Plan* and aspirational peers • By targeting the attendance record of struggling students, TTU can provide an alternative path for success by intervening early in the process and potentially keeping the student on the proper course towards a degree	<u>Peers</u> • Mississippi State University uses its "Pathfinders Program" to assist incoming freshmen in getting easily transitioned to college life – Professors and instructors are encouraged to report student absences so that Pathfinders staff can offer assistance to those who are having trouble • UT-Chattanooga has its "Freshmen Academic Success Tracking Initiative" which tracks freshmen class attendance <u>Trends in Higher Education</u> • Implementing an EIS must successfully bring together the student, an academic advising system, and the Office of Enrollment Management / Academic Retention • As many states continue to explore outcomes-based funding models, ideas that strengthen undergraduate retention will continue to thrive

#1 – Freshmen Flight Path

ACTION STEPS

Near-term actions will focus on structuring the program, rolling out a pilot program, and selecting attendance tracking software.

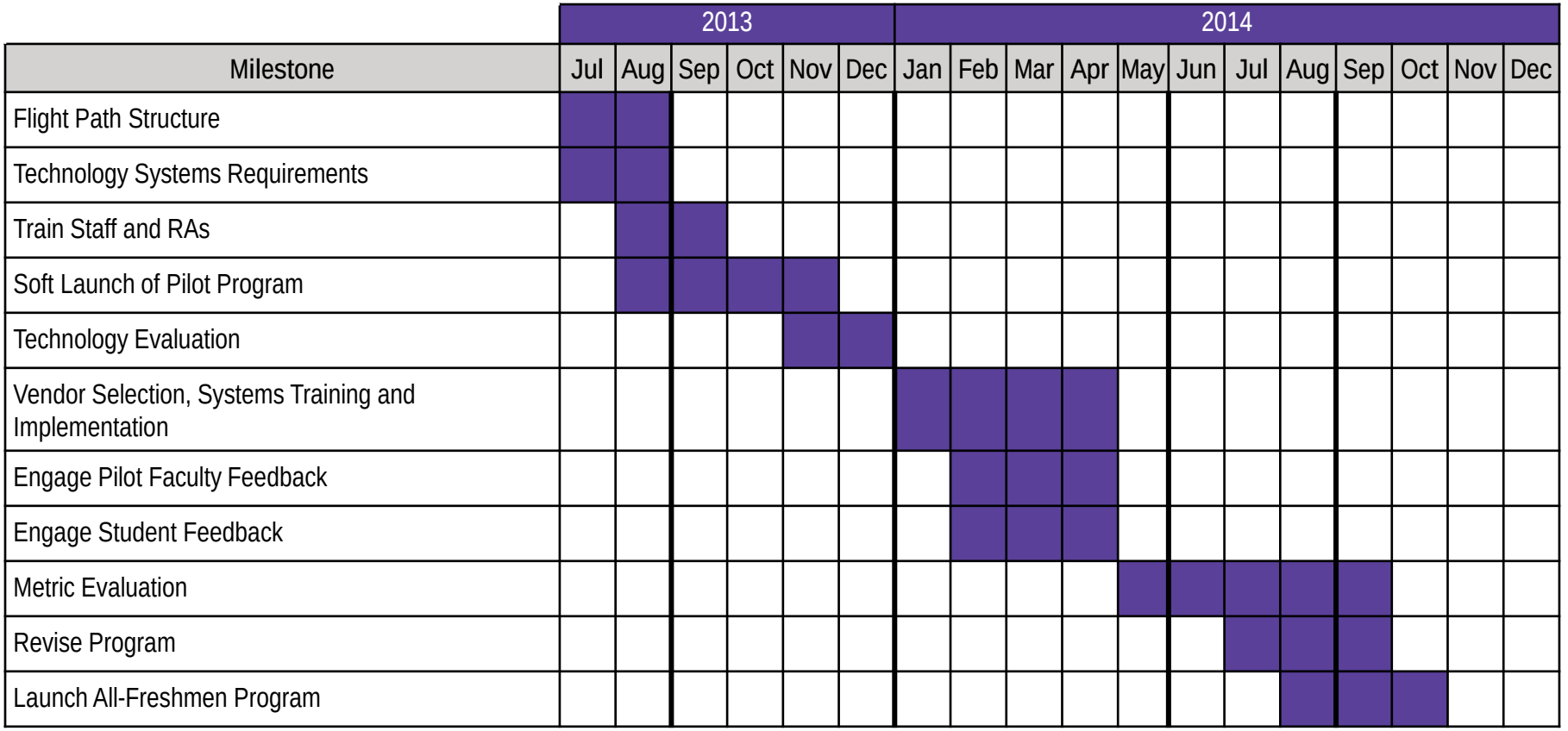
Action Steps
Near-Term (1 to 6 Months)
❑ Structure Freshmen Flight Path program; define role of faculty, staff and RAs
❑ Establish faculty buy-in on program and direction of system
❑ Train staff and RA's on how to successfully intervene with students missing classes
❑ Roll-out pilot program in Fall, 2013
❑ Define requirements for attendance software that can link into Banner or another TTU database via mobile units or ID cards
❑ Select system and begin implementation
Mid-Term (6 to 12 Months)
❑ Engage pilot faculty and advisors for real-time feedback on issues/successes of system
❑ Conduct student focus groups
❑ Train faculty on technology-based roll system
Long-Term (12+ Month)
❑ Launch program to all freshman (to include attendance)
❑ Gage success of program by monitoring both *Flight Plan* and operational metrics
❑ Determine any applicable revisions to program (expand variables to track)
❑ Issue communication to community on successes of new system

#1 – Freshmen Flight Path

MILESTONES

TENNESSEE TECH UNIVERSITY

A high-level implementation plan with important milestones is presented below:



	2013						2014											
Milestone	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Flight Path Structure	■	■																
Technology Systems Requirements	■	■																
Train Staff and RAs		■	■															
Soft Launch of Pilot Program		■	■	■	■													
Technology Evaluation					■	■												
Vendor Selection, Systems Training and Implementation							■	■	■	■								
Engage Pilot Faculty Feedback								■	■	■								
Engage Student Feedback								■	■	■								
Metric Evaluation											■	■	■	■	■			
Revise Program													■	■	■			
Launch All-Freshmen Program														■	■	■		

#1 – Freshmen Flight Path

RESOURCES

Freshmen Flight Path will require an estimated $75K in recurring resources to complete the actions outlined; additional one-time funds will be required for the attendance system (TBD).

Resource Estimates

Category	Recurring	One-Time
Labor	$55,000	$0
Non-Labor	$20,000	TBD – Attendance System
Total	$75,000	$0

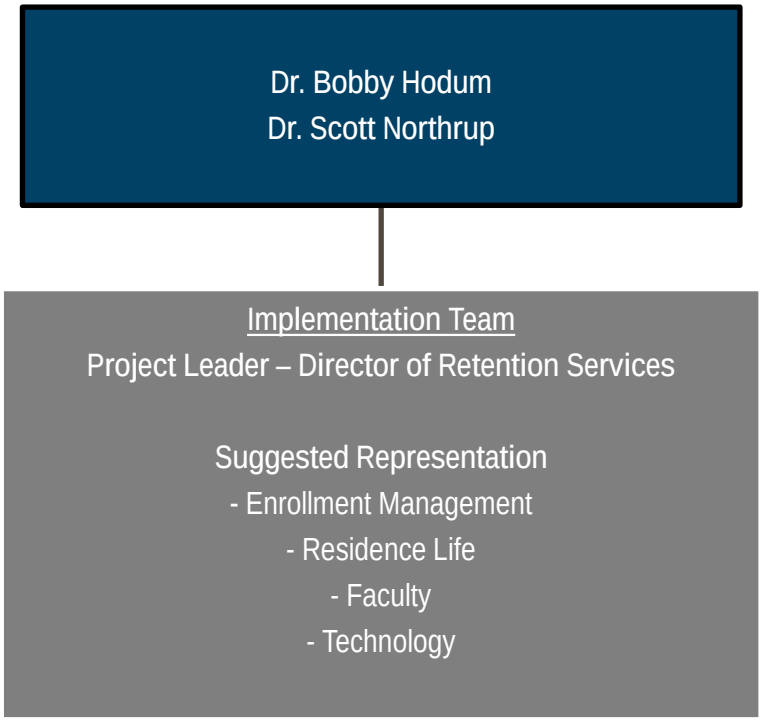
Detailed Description of Resource Needs

- Labor
  - Hire a Director of Retention Service ($55,000 Base)
  - Payments to Residential Advisors and other Interventionists
- Non-Labor
  - Purchase technology-enabled attendance system (Cost TBD)
  - Travel to stay up-to-date with latest research and best practices

#1 – Freshmen Flight Path

ACCOUNTABILITY

A cross-functional team will need to be assembled to lead implementation.



Accountability Plan
Flight Plan Leaders ▪ Undergraduate Leaders - Dr. Bobby Hodum, Dr. Scott Northrup
Implementation Team ▪ Project Leader – Director of Retention Services ▪ Project team to include representation from: – Enrollment Management – Residence Life – Faculty Rep – Technology
Status Reporting ▪ Monthly status reports to be submitted to Flight Plan Leaders ▪ Reports will include: – Progress to completion – Issues preventing on-time completion – Feedback on items that should be communicated to other Action Plan teams

#2 – Academic Advising

IMPLEMENTATION PLAN

TENNESSEE TECH UNIVERSITY

The academic advising plan establishes a two-prong system of advising by expanding the number of professional advisors to support the registration process and refining the faculty role as mentor.

SUMMARY		
Description	**Objective**	**Success Metrics**
• Develop a professional advising system to improve class registration counseling • Expand the role of the "professional advisor" to ensure a student's registration process is aligned with the forecasted degree path and time-to-degree • Build up the student-faculty relationship where the faculty member mentors the student on career and course recommendations	<u>Objective</u> • Provide a consistent experience in academic advising • Improve effective use of faculty time in advising • Develop a simpler process for freshmen registration <u>Link to *Flight Plan*</u> • Targeting the complete advising process from freshman registration through commencement improves the student experience and demonstrates commitment to increasing the number of four-year graduates	<u>*Flight Plan* Metrics</u> • Bachelor's Degrees Conferred • 1st to 2nd year retention rate • Six-Year Graduation Rate <u>Operational Metrics</u> • # of students eligible to return that register on-time • # of withdrawals • Professional Advisor-to-student ratio in the colleges

#2 – Academic Advising

CONTEXT FOR ACTION

The plan addresses student feedback on access and consistency of advising; similar academic advising systems are in place at undergraduate aspirational peers.

Context	Peers/ Trends in Higher Education
• During the *Flight Plan* process, students communicated inconsistent advising experiences • Certain colleges were able to provide exemplary advising services while others struggled to graduate students in four years due to inaccurate advice • Students do not have a self-service method for verifying their progress towards degree requirements	<u>Peers</u> • Aspirational peers James Madison University and Miami University assign all Freshman a professional advisor to assist with academic planning, the registration process, and exploring academic programs and careers <u>Trends in Higher Education</u> • Scholars have sought to prove that there is an undeniable link between academic advising and student retention • Many universities include advising as a critical component of a faculty member's yearly evaluation • Colleges have attempted to automate the advising process as much as possible by offering "self-service" solutions before students meet with in-person advisors

#2 – Academic Advising

ACTION STEPS

Near-term actions will focus on hiring and allocating professional advisors into colleges.

Action Steps
Near-Term (1 to 6 Months)
❑ Hire a Director of Advisement Services
❑ Develop plan for professional advisor integration into colleges
❑ Secure additional funding for professional advisors
❑ Designate physical space for professional advisors to take appointments in the colleges (if necessary)
❑ Interview and hire advisors; distribute new hires among the colleges
❑ Establish consistent professional development programs for faculty and professional advisors
❑ Engage faculty on the new process and their enhanced role in mentorship
❑ Train advisors on Degree Works / Visual Flow Charts and TTU systems
❑ Issue communication to student and parent community on advising changes
Mid-Term (6 to 12 Months)
❑ Introduce DegreeWorks and appointment scheduling to students
❑ Structure and pilot faculty mentorship program
Long-Term (12+ Month)
❑ Implement any changes to the system based off of constituent feedback
❑ Roll out professional advising and faculty mentorship program to campus

#2 – Academic Advising

MILESTONES

TENNESSEE TECH UNIVERSITY

A high-level implementation plan with important milestones is presented below:

	2013						2014											
Milestone	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hire a Director of Advisement Services	■	■																
Professional Advising Integration and Resource Plan	■	■	■															
Physical Space and Support Systems Plan			■	■														
Professional Development Plan			■	■														
Faculty Communications and Feedback				■	■													
New Staff Hiring and Training					■	■	■											
Student and Parent Communications						■	■											
Structure Faculty Mentorship Program						■	■											
Launch Pilots							■	■										
Student Feedback/ Focus Groups									■	■								
Improvements to System/ Add Advisors as Needed											■	■	■	■				
Roll Out to Campus														■	■			

#2 – Academic Advising

RESOURCES

Freshmen Flight Path will require an estimated $785K in recurring resources to hire a Director of Advisement Services and additional professional advisors.

Resource Estimates

Category	Recurring	One-Time
Labor	$775,000	$0
Non-Labor	$10,000	$0
Total	$785,000	$0

Detailed Description of Resource Needs

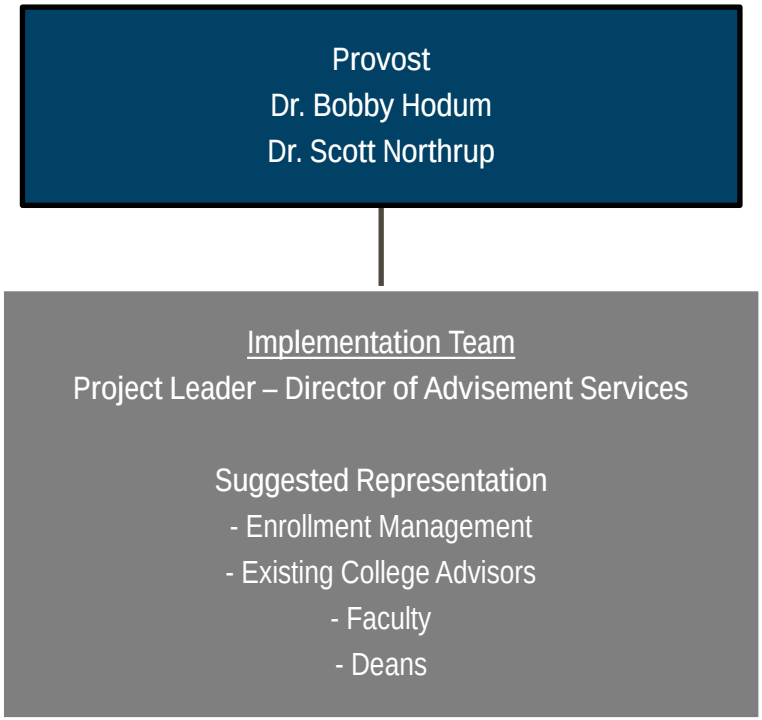
- Labor
  - Hire Director of Advisement Services ($70,000)
  - Hiring of 15 Professional Advisors ($705,000)

- Non-Labor
  - Operating and Travel Budget

#2 – Academic Advising

ACCOUNTABILITY

A cross-functional team will need to be assembled to lead implementation.



Accountability Plan
Flight Plan Leaders ▪ Provost ▪ Undergraduate Leaders - Dr. Bobby Hodum, Dr. Scott Northrup
Implementation Team ▪ Project Leader to be appointed: Director of Advisement Services ▪ Project team to include representation from: – Enrollment Management – Existing College Advisors (Representative) – Faculty Rep – Deans (Education, Arts & Sciences, Engineering)
Status Reporting ▪ Monthly status reports to be submitted to Flight Plan Leaders ▪ Reports will include: – Progress to completion – Issues preventing on-time completion – Feedback on items that should be communicated to other Action Plan teams

#3 – High-Demand Courses

IMPLEMENTATION PLAN

TENNESSEE TECH UNIVERSITY

The plan to add capacity to high-demand courses focuses on adding new faculty lines in needed areas and improving the utilization of space and scheduling.

SUMMARY		
Description	Objective	Success Metrics
• Identify high-demand courses and add additional capacity • Evaluate classroom capacity and space issues via the newly implemented Event Management software • Hire faculty positions in areas with high-demand courses • Utilize a more robust summer program	<u>Objective</u> • Eliminate course availability issues that prevent students from graduating on time • Promote better space usage by aligning classroom needs with accurate student counts <u>Link to *Flight Plan*</u> • Reducing time-to-degree is a critical, and necessary, component of *Flight Plan* • Adding faculty lines to provide additional capacity will support student graduation rates and retention	<u>*Flight Plan* Metrics</u> • Bachelor's Degrees Conferred • 1st to 2nd Year Retention Rate • Six-Year Graduation Rate <u>Operational Metrics</u> • Seat and classroom utilization ratios • Number of students needing courses vs. capacity

#3 – High-Demand Courses

CONTEXT FOR ACTION

The plan provides additional capacity in required classes to allow students to make progress towards graduating in their anticipated time frame.

Context	Peer Context/ Trends in Higher Education
• Students conveyed feedback to the *Flight Plan* steering committee that many classes did not have enough seats to fulfill student demand • The lack of section availability can prevent students from registering and delay graduation • To date, no event/classroom management system is in place for faculty/staff to quickly address space needs	<u>Peer Context</u> • At Clemson University, "TBA sections" of traditionally high demand courses can be used to provide enrollment when the number of seats released is not sufficient – The TBA section allows the student to enroll in the course and be considered "full-time" – An additional "Section Migration tool" can help departments identify optimal times for new sections and/or move the students out of the TBA section • James Madison University offers many of their most popular and high-demand courses during the summer session <u>Trends in Higher Education</u> • The California State University System is trying to utilize online classes and technology to relieve class bottlenecks • Similar to James Madison, many schools try to utilize summer session for additional offerings of high-demand courses

#3 – High-Demand Courses

ACTION STEPS

Near-term actions will focus on identifying departments and courses most in need of additional faculty positions.

Action Steps

Near-Term (1 to 6 Months)

- ❑ Evaluate registration patterns to identify high-demand courses
- ❑ Launch new event management software system
- ❑ Utilize software and qualitative interviews to further review areas of high-demand courses
- ❑ Develop multi-year faculty hiring plan to address high-demand courses (Provost)

Mid-Term (6 to 12 Months)

- ❑ Evaluate space utilization data to review opportunities to optimize schedule
- ❑ Benchmark against metrics
- ❑ Engage faculty and student feedback

Long-Term (12+ Month)

- ❑ Revise processes

#3 – High-Demand Courses

MILESTONES

TENNESSEE TECH UNIVERSITY

A high-level implementation plan with important milestones is presented below:

	2013						2014											
Milestone	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Identify High-Demand Courses	■	■	■															
Launch Event Management Software			■															
Develop Capacity Plan for Year 1				■	■													
Develop Multi-Year Faculty Hiring Plan				■	■													
Begin Hiring Faculty for Year 1					■	■												
Launch New Course Sections							■											
Space Utilization and Scheduling Optimization							■	■	■									
Evaluate Capacity Expansion through Summer School and On-line Courses								■	■									
Develop Capacity Plan for Year 2										■	■							
Confirm Faculty Hiring Plan for Year 2										■	■							
Begin Hiring Faculty for Year 2												■	■	■				
Launch New Course Sections															■			

#3 – High-Demand Courses

RESOURCES

Relieving high-demand courses will require an estimated over $1 million in recurring resources to hire approximately 12 faculty positions.

Resource Estimates

Category	Recurring	One-Time
Labor	$1,045,000	$0
Non-Labor	$0	$0
Total	$1,045,000	$0

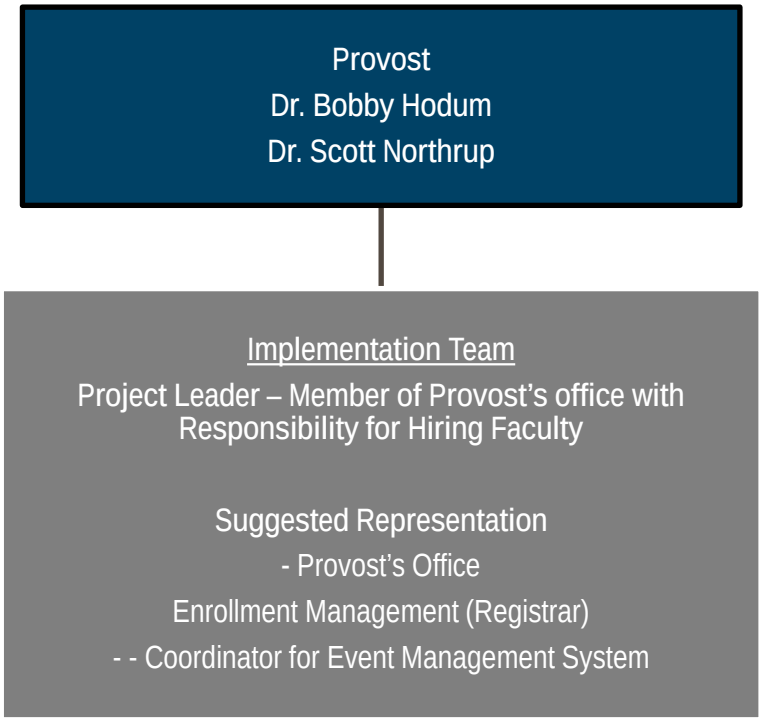
Detailed Description of Resource Needs

- Labor
  - Resources to add ~12 Faculty positions
- Non-Labor
  - Operating and Travel Budget

#3 – High-Demand Courses

ACCOUNTABILITY

A cross-functional team will need to be assembled to lead implementation.



Accountability Plan
Flight Plan Leaders ▪ Provost ▪ Undergraduate Leaders - Dr. Bobby Hodum, Dr. Scott Northrup
Implementation Team ▪ Project Leader: Member of Provost's office ▪ Project team to include representation from: – Provost's Office – Enrollment Management/Registrar – Coordinator for Event Management System
Status Reporting ▪ Monthly status reports to be submitted to Flight Plan Leaders ▪ Reports will include: – Progress to completion – Issues preventing on-time completion – Feedback on items that should be communicated to other Action Plan teams

#4 – Technology Service to Students

IMPLEMENTATION PLAN

TENNESSEE TECH UNIVERSITY

The objective of this plan is to improve technology services to students with an emphasis on Wi-Fi connectivity and support.

SUMMARY		
Description	**Objective**	**Success Metrics**
• Improve technology service to students by meeting student need for connectivity and service: – Ubiquitous Wi-Fi – Technology Service Desk – Student TechSpot	<u>Objective</u> • Provide students with reliable and innovative technology services • Support the TTU brand as a technology-forward experience <u>Link to *Flight Plan*</u> • Transforming technology is one of the core improvement directions of *Flight Plan* • Improving and scaling technology service to students improves the student experience	<u>*Flight Plan* Metrics</u> • 1st to 2nd Year Retention Rate • Bachelor's Degrees Conferred • Six-Year Graduation Rate • Master's Degrees Conferred • Doctoral Degrees Conferred <u>Operational Metrics</u> • # of Wi-Fi "Dark Spots" • # of Tech Service Desk Visits • # of Switches / Access Points Across campus

#4 – Technology Service to Students

CONTEXT FOR ACTION

Improving service to students addresses major points of feedback from the *Flight Plan* process and helps TTU become more competitive with peers.

Context	Peers/ Trends in Higher Education
• Throughout the *Flight Plan* planning process, students frequently mentioned gaps in basic technology services • The demand for better services has been driven by the exponential increase in the number of mobile devices students bring to campus • Students have also detailed their desire to receive information via digital channels and perform university business processes through more convenient methods • While device usage has surged, students have no access to service or opportunities to purchase additional devices on campus	<u>Peer Context</u> • Each of the Flight Plan aspirational peers have robust, reliable campus-wide Wi-Fi networks that have been evaluated against customer service surveys • Students are able to purchase Dell and Apple computers through the university contracts • Customers have access to tech support staff who are able to do warranty repairs and answer basic questions on hardware, purchasing, and software installation <u>Trends in Higher Education</u> • Universities are quickly adapting to student pressure/demand for reliable and quality technology support services and Wi-Fi coverage • Push mobile app technology has made it simpler for many university departments to quickly provide students with vital information on a myriad of topics

#4 – Technology Service to Students

ACTION STEPS

Near-term actions will focus on expanding Wi-Fi and adding support services for students.

Action Steps
Near-Term (1 to 6 Months)
❑ Finalize installation of switches and access points for ubiquitous Wi-Fi
❑ Secure a location for a technology service desk and Student TechSpot (preferably combined) and renovate if necessary
❑ Hire employees for service desk
❑ Train student employees
❑ Acquire equipment
❑ Plan Student TechSpot format and secure funding
Mid-Term (6 to 12 Months)
❑ Launch technology service desk
❑ Establish TechSpot support services
❑ Develop Student TechSpot store or contract with outside vendor
Long-Term (12+ Month)
❑ Launch Student TechSpot store

#4 – Technology Service to Students

MILESTONES

A high-level implementation plan with important milestones is presented below:

	2013						2014											
Milestone	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Finalize installation of switches and access points	■	■																
Locate and fund Service Desk/TechSpot			■	■														
Hire and train employees					■	■	■											
Launch service desk							■											
Develop plan and resource estimates for TechSpot								■	■									
Develop TechSpot										■	■	■	■	■				
Launch TechSpot															■			

#4 – Technology Service to Students

RESOURCES

The resources required for Wi-Fi and services are included in the broader technology plan. Additional estimates that may be required for TechSpot are to be determined next year.

Resource Estimates

Category	Recurring	One-Time
Labor	Included in Technology Plan	
Non-Labor		
Total		

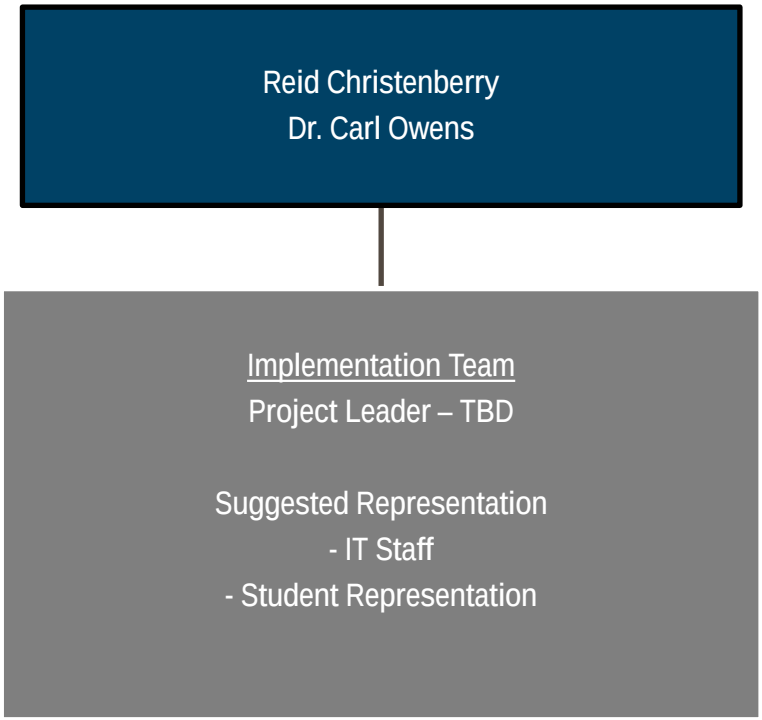
Detailed Description of Resource Needs

- Labor
  - Included in technology plan
- Non-Labor
  - TBD

#4 – Technology Service to Students

ACCOUNTABILITY

This plan will be led out of IT.



Accountability Plan
Flight Plan Leaders ▪ Technology Leaders - Reid Christenberry, Dr. Carl Owens
Implementation Team ▪ Project Leader to be appointed from IT staff ▪ Project team to include representation from: – IT Staff – Student representation
Status Reporting ▪ Monthly status reports to be submitted to Flight Plan Leaders ▪ Reports will include: – Progress to completion – Issues preventing on-time completion – Feedback on items that should be communicated to other Action Plan teams

#5 – IT Infrastructure and Innovation

IMPLEMENTATION PLAN

The objective of this implementation plan is to fortify the technology infrastructure at TTU and promote future innovation through a dedicated IT strategic plan.

SUMMARY		
Description	Objective	Success Metrics
• Develop an information technology strategic plan that fortifies TTU's IT infrastructure and enables innovation for the future – Complete an ad-hoc evaluation of research and academic computing • Create a Technology Innovation Fund to generate new ideas and implement advanced capabilities in academics and research • Add staff resources to address technological gaps	<u>Objective</u> • Increase overall performance of infrastructure and support staff through additional hires • Evaluate opportunities to create a technology innovation fund to add representation from stakeholders on use of funds <u>Link to *Flight Plan*</u> • Necessity to provide dedicated resources that support innovation and growth • Ability to support the goals of Focus Group # 4	<u>*Flight Plan* Metrics</u> • Supportive of all metrics <u>Operational Metrics</u> • Central IT Operating Expenditures/ Student FTE • # of Users Per Central IT Staff FTE

#5 – IT Infrastructure and Innovation

CONTEXT FOR ACTION

Similar to trends at many universities, TTU intends to address technology gaps to increase competitiveness and implement incentives to encourage innovation and stakeholder participation.

Context	Peers/ Trends in Higher Education
• Technology capabilities were widely acknowledged as a performance gap during the Flight Plan process • Faculty and Staff have acknowledged there is very little funding for ongoing experimentation or pilot projects in adopting leading-edge technology	<u>Peer Context</u> • Miami University uses a portion of their student technology fee as funding for "innovative student-focused technology projects submitted by students, faculty or staff" • The University System of Georgia has placed in its guidelines for a technology fee that innovative uses of technology is an emphasis <u>Trends in Higher Education</u> • Most universities are building advanced IT capabilities to improve service to students and advance competitiveness in instruction and research • Certain universities have created hybrid funds that, in addition to having a commercialization/research emphasis, are dedicated to innovative academic technology projects that: – Improve the quality of instruction – Create a differentiator for attracting higher caliber students to the University

#5 – IT Infrastructure and Innovation

ACTION STEPS

Near-term actions will focus on implementing the technology staffing plan, creating the strategic plan, and governing the TIF development.

Action Steps
Near-Term (1 to 6 Months)
❑ Brief faculty on process to create a new strategic plan
❑ Launch an ad-hoc committee to review research computing needs
❑ Form strategic planning committee with representation from faculty, administrators, students, and IT staff
❑ Develop baseline assessment to peers on IT metrics
❑ Begin creation of a three year Information Technology Strategic Plan and corresponding resource plan
❑ Begin hiring additional resources for year one
Mid-Term (6 to 12 Months)
❑ Have the IT strategic planning committee develop a governance structure, including a process to create and manage the TIF charter (guidelines, and reasonable expectations for annual allocations)
❑ Launch IT strategic plan to campus and community
❑ Secure initial funding for TIF
❑ Begin taking proposals for technology projects
❑ Make decisions on funded projects
Long-Term (12+ Month)
❑ Provide funding for initial round of projects
❑ Review performance metrics to peers

#5 – IT Infrastructure and Innovation

MILESTONES

TENNESSEE TECH UNIVERSITY

A high-level implementation plan with important milestones is presented below:

	2013						2014											
Milestone	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Announce IT Strategic Plan	■	■																
Ad-Hoc Committee on Research Computing		■	■	■	■													
IT Strategic Plan			■	■	■	■												
Resource Plan for IT Strategic Plan and Research Computing						■												
Governance Structure and TIF Structure							■	■										
Launch IT Strategic Plan							■	■										
Secure TIF Funding for Pilot Project								■	■									
Receive Proposals for TIF and Select Pilot Project									■	■	■							
Determine Resource Allocations for IT Strategic Plan and TIF												■	■					
Launch Formal TIF Initiative														■				
Launch 2014 IT Strategic Initiatives (Consistent with Plan)															■	■	■	■

#5 – IT Infrastructure and Innovation

RESOURCES

The technology plan calls for $500K to augment the IT staff at TTU by 11 staff positions with additional resources to be allocated to IT. Plans for additional resources will result from the planning processes outlined in this action plan.

Resource Estimates

Category	Recurring	One-Time
Labor	TBD	
Non-Labor		
Total		

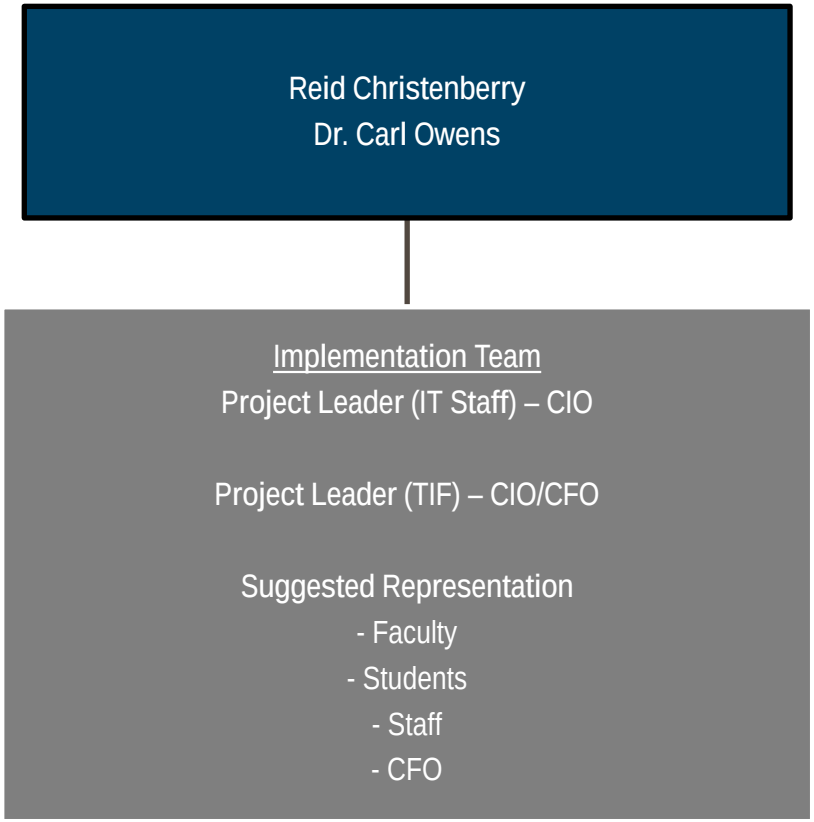
Detailed Description of Resource Needs

- Labor
  - 11 staff position hires to IT services (Year 1)
  - Additional positions to be determined; funding secured
- Non-Labor
  - TBD

#5 – IT Infrastructure and Innovation

ACCOUNTABILITY

This plan will be led out of IT with significant stakeholder engagement.



Accountability Plan
Flight Plan Leaders ▪ Technology Leaders - Reid Christenberry, Dr. Carl Owens
Implementation Team ▪ The CIO will lead the IT strategic plan ▪ The strategic plan will be crafted by a committee with representation from: – Faculty – Staff – Students – CFO
Status Reporting ▪ Monthly status reports to be submitted to Flight Plan Leaders ▪ Reports will include: – Progress to completion – Issues preventing on-time completion – Feedback on items that should be communicated to other Action Plan teams

#6 – Co-Curricular Undergraduate Programs

IMPLEMENTATION PLAN

TENNESSEE TECH UNIVERSITY

The objective of this plan is to augment the overall student experience for undergraduates by promoting and encouraging, co-curricular activities.

SUMMARY		
Description	**Objective**	**Success Metrics**
• Redesign TTU's undergraduate programs to emphasize co-curricular activity in order to better prepare students to solve real-world problems – Promote Undergraduate Research (URECA Funds) – Expand co-ops – Sponsor service learning – Encourage study abroad	<u>Objective</u> • Emphasize the co-curricular undergraduate experience to distinguish TTU from peers • Align the requests of potential employers with undergraduate curricula • Promote cross-discipline work <u>Link to *Flight Plan*</u> • Increase co-curricular undergraduate programs to establish a distinctive environment at TTU	<u>*Flight Plan* Metrics</u> • 1st to 2nd Year Retention Rate • Six Year Graduation Rate • Bachelor's Degrees Conferred <u>Operational Metrics</u> • Number of students participating in undergraduate research • Number of students receiving credit for study abroad coursework • Number of students receiving co-op positions (particularly in engineering) • Number of students in service learning programs

#6 – Co-Curricular Undergraduate Programs

CONTEXT FOR ACTION

There is the desire among faculty and students to enhance current programs and highlight the opportunities available from alternative learning experiences.

Context	Peers/ Trends in Higher Education
• *Flight Plan* identified the desire of faculty, staff, and students to expand emphasis on real-world problem solving into undergraduate curriculum • While undergraduate engineering students are frequently able to secure co-op positions during the year, students from other disciplines would like similar experiences • Increasing service learning opportunities complements THEC's plan for comprehensive skill development	<u>Peer Context</u>: • SUNY-Binghamton provides an alternate transcript that details a student's co-curricular and leadership activities • Miami University includes co-curricular experiences with the Honors program • Clemson University offers both online (classroom) and outside-the-classroom co-curricular experiences <u>Trends in Higher Education</u>: • Purdue University found that "highly-engaged" students in co-curricular activities had higher retention and success rates • The AAUC has highlighted a number of high-impact educational opportunities, including: – Collaborative assignments/projects – Undergraduate Research – Service learning/Community-based Learning – Diversity/Global Learning – Capstone Projects / Internships

Data Source: http://www.aacu.org/leap/hip.cfm; http://www.purdue.edu/newsroom/research/2011/111206GordonCoCurricular.html

#6 – Co-Curricular Undergraduate Programs

ACTION STEPS

Near-term opportunities will focus on establishing an administration for tracking co-curricular participation and encouraging participation to both faculty and students.

Action Steps

Near-Term (1 to 6 Months)

- ❑ Appoint a faculty-led group to develop strategy and implementation oversight for co-curricular program expansion
- ❑ Establish an Office of Undergraduate Research
- ❑ Launch pilot undergraduate research projects
- ❑ Coordinate existing co-curricular programs and evaluate ways to make programs more robust
- ❑ Evaluate opportunities to recognize co-curricular achievements for student records

Mid-Term (6 to 12 Months)

- ❑ Identify requirements for co-curricular activities and connect them with evaluation criteria
- ❑ Develop expansion plans with resource estimates for study abroad, service learning and co-ops

Long-Term (12+ Month)

- ❑ Launch co-curricular transcript
- ❑ Evaluate co-curricular requirement

#6 – Co-Curricular Undergraduate Programs

MILESTONES

TENNESSEE TECH UNIVERSITY

A high-level implementation plan with important milestones is presented below:

	2013						2014											
Milestone	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Appoint faculty oversight group on co-curricular programs	■	■																
Establish an Office of Undergraduate Research		■	■															
Undergraduate Research Program Development				■	■	■												
Coordinate Co-Curricular Programs / Develop Ideas				■	■	■												
Undergraduate Research Pilot Programs							■	■	■									
Co-Curricular Program Evaluation and Student Record Creation Plan (Co-Curricular Transcript)							■	■	■									
Co-Op Expansion Plan and Resources										■	■	■						
Study Abroad Expansion Plan and Resources										■	■	■						
Service Learning Expansion Plan and Resources										■	■	■						
Resource Decisions													■					
Launch Co-Curricular Transcript														■				
Expand Co-Op, Study Abroad and Service Learning														■	■	■	■	■

#6 – Co-Curricular Undergraduate Programs

RESOURCES

The initial phase plan calls for nearly $300K to add resources to support undergraduate research. Future resources will be required to address co-cop, study abroad and service learning expansion.

Resource Estimates

Category	Recurring	One-Time
Labor	$60,000	$0
Non-Labor	$230,000	$0
Total	$290,000	$0

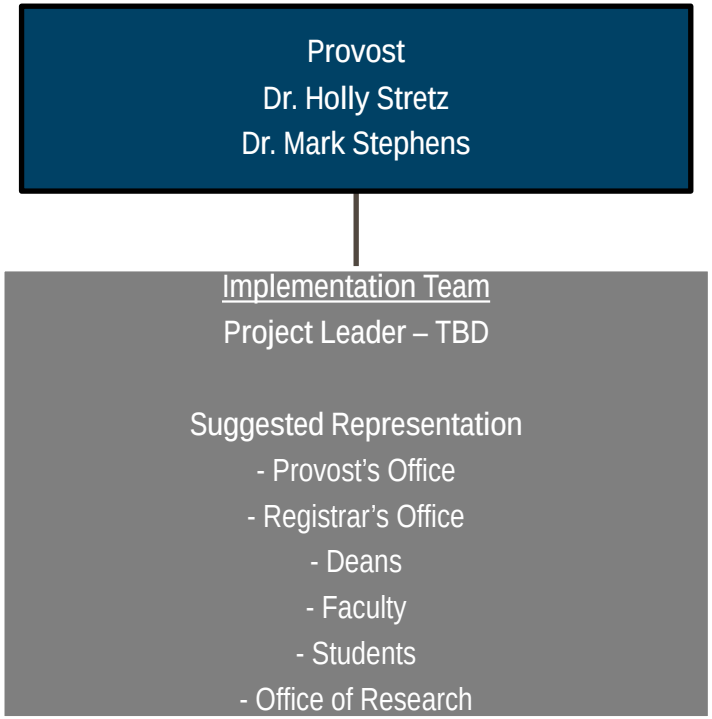
Detailed Description of Resource Needs

- Labor
  - Necessary personnel to establish an Office of Undergraduate Research (Director, release time, administrative staff, etc.)
- Non-Labor
  - Additional URECA funds
  - Equipment and office expenses
  - Faculty development
  - Marketing

#6 – Co-Curricular Undergraduate Programs

ACCOUNTABILITY PLAN

This plan will be led out of the Provost's Office.



Accountability Plan
Flight Plan Leaders ▪ Provost ▪ Distinctiveness Leaders - Dr. Holly Stretz, Dr. Mark Stephens
Implementation Team ▪ Project Leader- To be appointed ▪ Team to include representation from: – Provost's Office – Registrar's Office – Deans – Faculty – Students – Office of Research
Status Reporting ▪ Monthly status reports to be submitted to Flight Plan Executive Team ▪ Reports will include: – Progress to completion – Issues preventing on-time completion – Feedback on items that should be communicated to other Action Plan teams

#7 – Research Innovation

IMPLEMENTATION PLAN

TENNESSEE TECH UNIVERSITY

The objective of this action plan is to develop an incubator system to promote inter-disciplinary research among faculty members.

Action Summary – INNOVATION INCUBATOR (IDEAS)		
Description	**Objective**	**Success Metrics**
• Create a Multidisciplinary Innovation Incubator to cultivate promising and distinctive research opportunities with an end goal of promoting commercialization • Develop common criteria (NSF-style) and faculty oversight to select promising ideas and provide short-term support to ready the opportunity for external funding	Objective • Surface prospects for new, distinctive research opportunities • Offer new, collaborative programs that fit the educational needs of the state of Tennessee Link to *Flight Plan* • Invigorating faculty to collaborate and explore research opportunities is an essential component of *Flight Plan*	*Flight Plan* Metrics • Total Research Expenditures/Full-time Tenured Faculty • Doctoral Degrees Conferred • Master's Degrees Conferred Operational Metrics • Number of cross-appointments for faculty members • Number of projects funded through the innovation incubator

#7 – Research Innovation

CONTEXT FOR ACTION

IDEAS is intended to identify, select, and cultivate new interdisciplinary research opportunities on a competitive basis.

Context	Peers/ Trends in Higher Education
• As the only "Technological" university in the state of Tennessee, TTU requires a more robust research and innovation profile • Creating a NSF-style application process can support innovative faculty members with new, and distinctive, interdisciplinary research ideas • The idea is to support faculty teams over a short period of time to incubate and ready the opportunity for external funding	<u>Peer Context</u>: • The Clemson University CyberInstitute serves as an "incubator of transdisciplinary research, empowering students, researchers, and educators to contribute, and compete in, today's knowledge-based economy" • The CyberInstitute engages with scholars and researchers in all disciplines, including those in the humanities and social sciences, to help them "leverage existing resources and take advantage of new knowledge and technologies to transform their research" <u>Broad Trends in Higher Education</u>: • Inter-disciplinary research/collaboration that produces technological innovation is a focus of funding agencies

Data Source: http://cyberinstitute.clemson.edu/about; http://edudemic.com/2013/01/innovative-universities/

#7 – Research Innovation

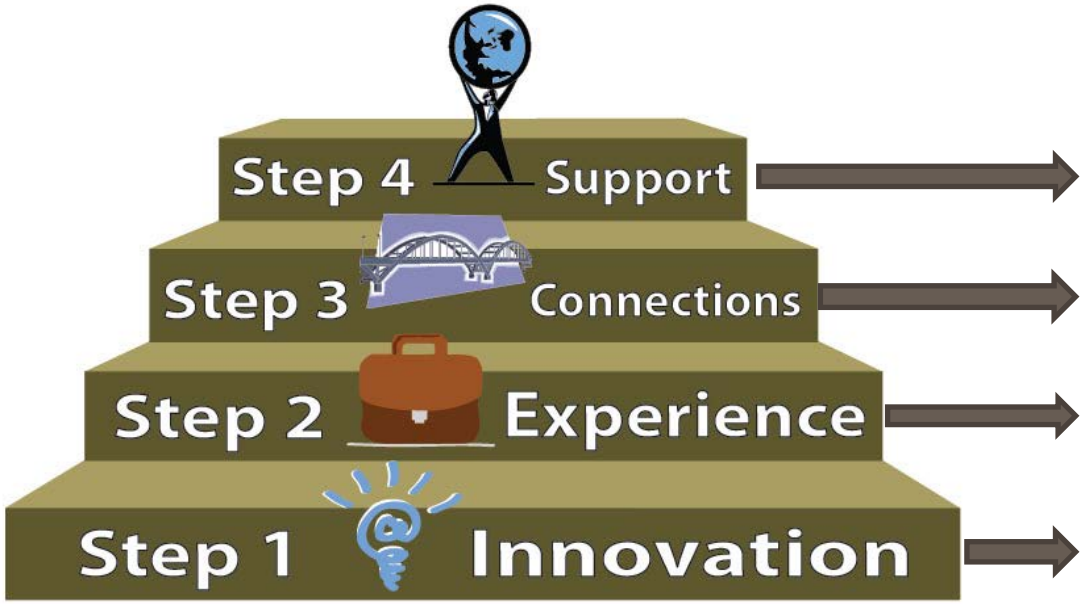
CONCEPTUAL MODEL

TENNESSEE TECH UNIVERSITY

The following is a conceptual model that the Committee may consider as it develops the incubator.

IDEAS

Incubator for Distinction in Education and Applied Sciences



University and Industrial Support
During the last phase of funding, the selected project must develop a strategic plan to ensure long term viability.

Long-term Partnerships to ensure Future Success
Projects will be given funding to establish external partnerships.

Experience and partnerships
Selected projects will be given funding for the first year of implementation of the project.

Invest seed funds to provide proof of concept
Environment for cross-discipline innovation in research, education, and service

*Graphics created by Dennis George

#7 – Research Innovation

ACTION STEPS

Near-term actions will concentrate on establishing a governance structure for funding ideas and requesting proposals.

Action Steps

Near-Term (1 to 6 Months)

- ❑ Establish a governance structure for the innovation committee
- ❑ Adopt selection criteria and terms of support (timeframe, deliverables, expectations, resources)
- ❑ Launch ad-hoc research computing review (note: action to be sponsored in technology team)

Mid-Term (6 to 12 Months)

- ❑ Call for proposals for additional pilot projects(s)
- ❑ Receive report of findings

Long-Term (12+ Month)

- ❑ Secure funding for additional pilot projects
- ❑ Re-think patents and invention disclosures to foster innovation
- ❑ Incentivize faculty to start new ventures

#7 – Research Innovation

MILESTONES

TENNESSEE TECH UNIVERSITY

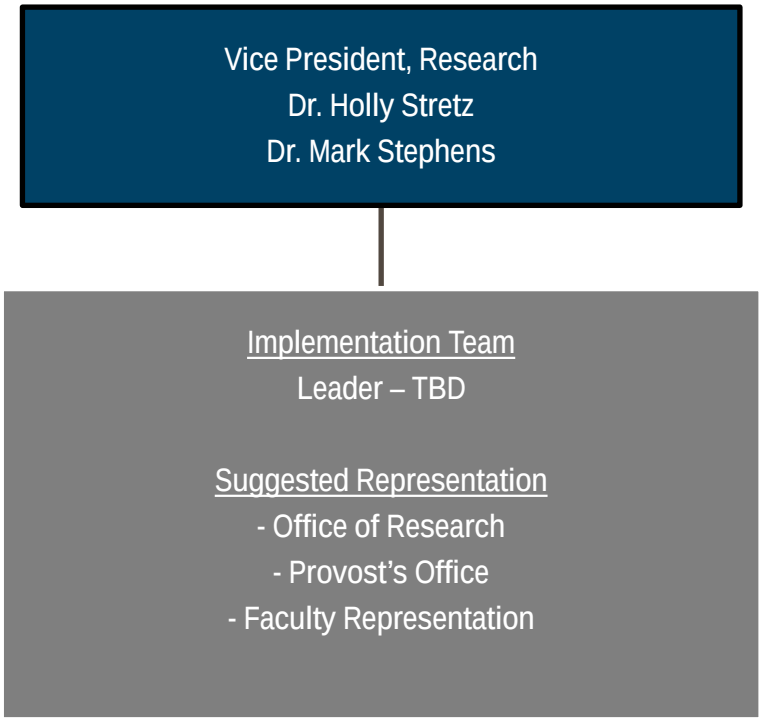
A high-level implementation plan with important milestones is presented below:

	2013						2014											
Milestone	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Establish governance structure and committee	■	■																
Develop selection criteria and terms of support			■	■	■	■												
Ad-hoc committee on research computing (via technology team)			■	■	■	■												
Pilot project funding and selection							■	■	■	■	■							
Call for additional proposals											■	■						
Secure funding for second round of pilot projects													■	■				
Revisions to criteria and terms based on pilot													■	■				
Fund second round of pilot projects															■	■		

#7 – Research Innovation

ACCOUNTABILITY PLAN

This plan will be led out of the Research Office.



Accountability Plan
Flight Plan Leaders ▪ Vice President, Research ▪ Distinctiveness Leaders - Dr. Holly Stretz, Dr. Mark Stephens
Implementation Team ▪ Project Leader- Research (TBD) ▪ Project team to include representation from: – Office of Research – Provost's Office – Faculty
Status Reporting ▪ Monthly status reports to be submitted to Flight Plan Executive Team ▪ Reports will include: – Progress to completion – Issues preventing on-time completion – Feedback on items that should be communicated to other Action Plan teams

#8 – New Graduate Programs

IMPLEMENTATION PLAN

TENNESSEE TECH UNIVERSITY

The objective of this plan is to increase the total number of graduate and Ph.D. degrees conferred with new offerings in high-demand fields.

SUMMARY		
Description	**Objective**	**Success Metrics**
• Offer new Graduate Degrees in high-demand fields • Educate and support faculty on the structure for evaluating and developing new graduate programs	<u>Objective</u> • Increase the quantity and quality of TTU's Graduate Degrees • Offer new programs in growing fields, especially STEM-related fields <u>Link to *Flight Plan*</u> • Adding new degree programs is a major component of *Flight Plan* • Graduate degree programs in targeted areas will increase the research emphasis of the institution and provide more STEM-related offerings to students	<u>*Flight Plan* Metrics</u> • Doctoral Degrees Conferred • Master's Degrees Conferred • Total Research Expenditures/Full-time Tenured Faculty <u>Operational Metrics</u> • Number of Graduate Degrees offered • Number of graduate students enrolled • Number of Ph.D. students enrolled

#8 – New Graduate Programs

CONTEXT FOR ACTION

Offering new, targeted graduate programs aligns with CCTA goals, while simultaneously fulfilling demand from Tennessee residents for certain programs.

Context	Peers/ Trends in Higher Education
• Moving forward, the added emphasis on increasing TTU's research profile will call for the institution to add additional Master's Degree offerings and/or concentrations • The Complete College Tennessee Act metrics include both PhDs and Master's Degrees conferred • To date, the majority of faculty have misconceptions about the evaluation and approval process for establishing new Graduate programs	<u>Peer Context</u>: • Not all aspirational peers are currently offering Professional Science Master's programs • James Madison University is launching an Online Ph.D. Program in Nursing in Spring, 2014 • University of New Hampshire's Ph.D. in Nursing program offers online and hybrid classes as part of the curriculum <u>Trends in Higher Education</u>: • "New advanced practice nurses can anticipate needing or being strongly encouraged to get a doctor of nursing practice (D.N.P.) degree beginning in about 2015"- *US News* • Between 2008 and 2010, the number of universities offering a Master's degree in Professional Sciences nearly doubled as students see the degree as "hybrid" and "agile" – NYTimes.com

Data Source: USNews.com; http://www.nytimes.com/2010/12/27/education/27iht-educLede.html?pagewanted=all&_r=0

#8 – New Graduate Programs

ACTION STEPS

Near-term actions will focus on clarifying the process to launch new graduate programs.

Action Steps

Near-Term (1 to 6 Months)

- ❑ Develop a clear, and communicative, methodology for faculty to establish new graduate programs, including multi-disciplinary programs
- ❑ Hold a symposium to teach faculty about the process
- ❑ Launch additional Professional Sciences Master's (PSM) Degree concentrations
- ❑ Develop, and communicate, protocols on PSM concentrations

Mid-Term (6 to 12 Months)

- ❑ Continue launching additional Professional Sciences Master's Degree concentrations
- ❑ Faculty begin writing proposals for new programs
- ❑ Faculty review new proposals with Provost's office and make decisions

Long-Term (12+ Month)

- ❑ Complete proposal for Nursing Ph.D. Program with ETSU

#8 – New Graduate Programs

MILESTONES

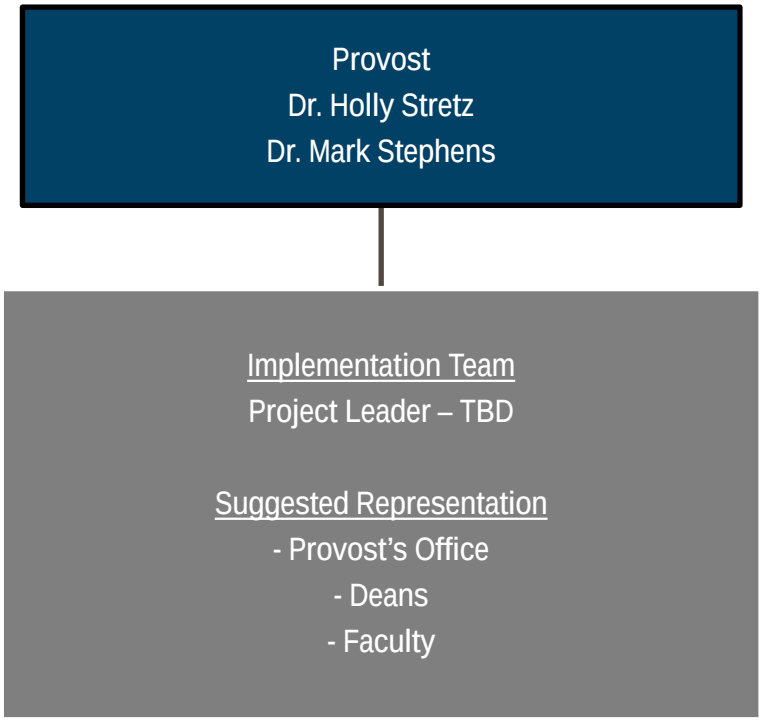
A high-level implementation plan with important milestones is presented below:

	2013						2014											
Milestone	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Clarify methodology for new or expanded graduate programs			■	■	■													
Add initial PSM concentrations to the Master's Program					■													
Host workshop for faculty on creating new programs					■													
Continue developing and launching PSM concentrations					■	■	■											
Provost's Office receives faculty proposals on new programs								■	■	■								
Send Ph.D. in Nursing proposals (with ETSU) to TBR for approval											■							

#8 – New Graduate Programs

ACCOUNTABILITY PLAN

This plan will be led out of the Provost's Office.



Accountability Plan
Flight Plan Leaders ▪ Provost ▪ Distinctiveness Leaders - Dr. Holly Stretz, Dr. Mark Stephens
Implementation Team ▪ Leader- To be appointed ▪ Project team to include representation from: – Provost's Office – Deans – Faculty
Status Reporting ▪ Monthly status reports to be submitted to Flight Plan Executive Team ▪ Reports will include: – Progress to completion – Issues preventing on-time completion – Feedback on items that should be communicated to other Action Plan teams

#9 – Technology in Teaching

IMPLEMENTATION PLAN

TENNESSEE TECH UNIVERSITY

The objective of this plan is to promote digital learning techniques to interested faculty and encourage them to revamp their undergraduate courses.

SUMMARY		
Description	**Objective**	**Success Metrics**

• Invigorate and support faculty to offer advanced support for technology in teaching
  o Course Redesign (flipping classrooms, hybrid courses)
  o Approach for incorporating MOOCs and other digital innovations
  o Provisioned Mobile Devices
  o Classroom Technology Upgrade
• Utilize the TBR's new relationship with *Coursera* to capitalize on opportunities that fit well with the desires of TTU's faculty
	<u>Objective</u>
	• Promote digital instruction that suits faculty interests and fulfills demand for more instant communication channels
	
	<u>Link to *Flight Plan*</u>
	• Supporting faculty as they approach technology in the classroom is another pillar of *Flight Plan*
	• This action enables interactive learning with a digital component and incorporates hybrid class learning techniques to fulfill student demand
		<u>*Flight Plan* Metrics</u>
		• 1st to 2nd Year Retention Rate
		• Six Year Graduation Rate
		• Master's Degrees Conferred
		• Bachelor's Degrees Conferred
		
		<u>Operational Metrics</u>
		• Number of faculty participating in course redesigns
		• Number of redesigned courses

#9 – Technology in Teaching

CONTEXT FOR ACTION

TENNESSEE TECH UNIVERSITY

Digital instruction methods are becoming increasingly integrated among aspirational peers, and offer an additional medium for distribution of education.

Context	Peers/ Trends in Higher Education
• Student feedback informed the *Flight Plan* steering committee of a desire to have content delivered through multiple formats • Utilizing mobile technology and "Flipped classrooms" offers alternatives to the traditional classroom and fulfills the needs of those students seeking an alternative experience • General classroom technology upgrades are needed to bring TTU closer to market competitors by offering a comparable, if not enhanced, experience • The recent TBR agreement with *Coursera* can assist TTU administration, as well as faculty, by offering a proven platform for experimenting with new online formats	<u>Peer Context</u>: • Each of the five aspirational peers are either practicing the "Flipping the Classroom" model or are in the process of exploring implementation • Miami University recently implemented their The Top 25 Project focusing on redesigning the university's highest enrollment courses and placing the student at the very center of the learning experience <u>Trends in Higher Education</u>: • Both faculty and administrators are actively searching for the best way to utilize mobile technology in the classroom • Universities are investing in "smart" classrooms that can easily interact with different types of mobile devices to enhance the classroom experience and allow students better access to faculty content

#9 – Technology in Teaching

ACTION STEPS

TENNESSEE TECH UNIVERSITY

Near-term efforts will concentrate on educating faculty about different opportunities while determining the best course of action for applying technology in the classroom.

Action Steps
Near-Term (1 to 6 Months)
❑ Engage faculty on course redesign process
❑ Hold an assessment period to determine prospective courses for re-design by enrollment and faculty interest
❑ Determine technological needs in the classroom to implement re-designed courses
❑ Develop resource plan for implementation
❑ Engage colleges on necessary upgrades to technology
❑ Select pilot courses based on assessment period results and faculty desires
Mid-Term (6 to 12 Months)
❑ Secure release time for selected faculty
❑ Redesign courses (hybrid course, Flip the Classroom, etc.)
❑ Implement mobile device usage in classroom
Long-Term (12+ Month)
❑ Launch pilot courses

#9 – Technology in Teaching

MILESTONES

TENNESSEE TECH UNIVERSITY

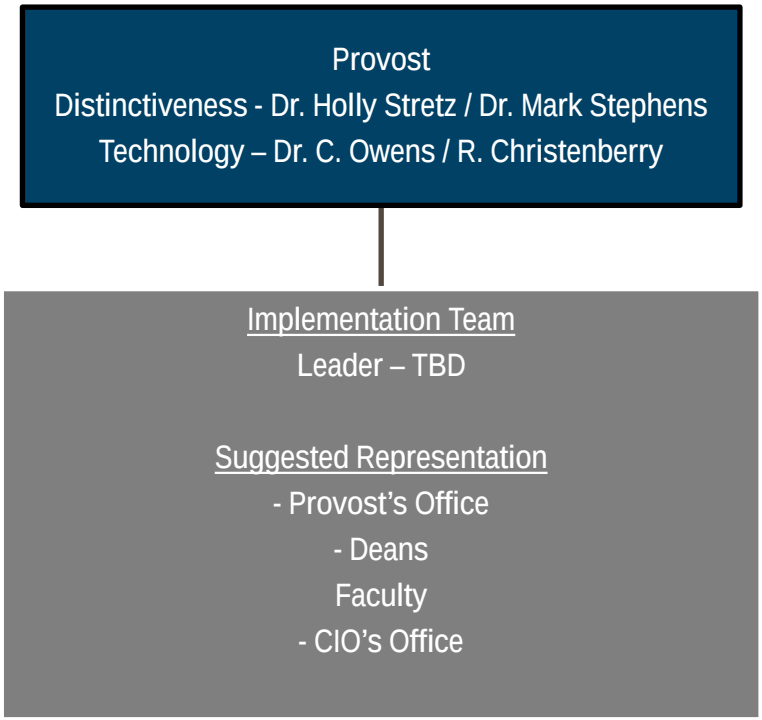
A high-level implementation plan with important milestones is presented below:

	2013						2014											
Milestone	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Faculty engagement	■	■																
Course re-design Assessment Period		■	■	■	■	■												
Overall classroom technology assessment			■	■	■	■												
Define need, determine approach to service, and establish criteria and terms of course selection						■	■											
Engage colleges and experiment with pilot programs							■	■	■	■								
Evaluate pilot programs and develop plan for broader initiative										■	■							
Develop resource plan and secure resources for Year 1												■						
Engage colleges to identify courses tor program													■					
Redesign applicable courses														■	■	■	■	
Launch Redesigned courses																		■

#9 – Technology in Teaching

ACCOUNTABILITY PLAN

This plan will be led out of the Provost's Office.



Accountability Plan
Flight Plan Leaders ▪ Provost ▪ Distinctiveness - Dr. Holly Stretz, Dr. Mark Stephens
Implementation Team ▪ Project Leader- Provost ▪ Project team to include representation from: – Provost's Office – Deans – Faculty – CIO and IT Staff
Status Reporting ▪ Monthly status reports to be submitted to Flight Plan Executive Team ▪ Reports will include: – Progress to completion – Issues preventing on-time completion – Feedback on items that should be communicated to other Action Plan teams

#10 – Enrollment, Tuition, and Scholarships

IMPLEMENTATION PLAN

TENNESSEE TECH UNIVERSITY

The objective of this plan is to institute a data-driven enrollment model to evaluate and optimize enrollment.

SUMMARY		
Description	Objective	Success Metrics
• Assess current state of enrollment management offices to determine future priorities • Implement a data-driven enrollment and tuition model • Evaluate current and future in-state and out-of-state undergraduate enrollment plans • Increase scholarships through fundraising	<u>Objective</u> • Sustain and grow undergraduate enrollment • Improve usage of scholarship dollars to target specific groups of students (out-of-state, high performing, etc.) to broaden total financial resources <u>Link to *Flight Plan*</u> • A data-driven enrollment and tuition model represents a proactive approach to targeted enrollment growth	<u>*Flight Plan* Metrics</u> • Undergraduate FTE Enrollment • Bachelor's Degrees Conferred • Operating Expenditures per Student FTE <u>Operational Metrics</u> • Net tuition revenue • In-state vs. out-of-state mix

#10 – Enrollment, Tuition, and Scholarships

CONTEXT FOR ACTION

TENNESSEE TECH UNIVERSITY

To date, scholarship dollars are provided to students without significant data to support their potential return on investment to the institution.

Context	Peers/ Trends in Higher Education
• TTU has very limited control over tuition due to legislative constraints • A data-driven enrollment and tuition model is not currently in place • Student and administrator feedback determined that financial aid packages are not conveyed to prospective students early enough in the admissions process	<u>Peer Context</u>: • Clemson University embarked on an enrollment management assessment to forge a long-term and data-driven methodology for admissions and financial aid <u>Trends in Higher Education</u>: • Universities use discounting for a variety of strategic purposes • While tuition discounting has traditionally been practiced at small, private institutions (with high rates), medium-to-large public schools have also begun adopting these practices • "Tuition discounting reached a record high in 2011-12 at private nonprofit colleges, but that common technique for attracting students often failed to have the desired effect, especially at small, less-selective institutions" – NACUBO

Data Source: http://chronicle.com/article/Small-Private-Colleges-Lose/139091/?cid=at&utm_source=at&utm_medium=en

#10 – Enrollment, Tuition, and Scholarships

ACTION STEPS

Near-term actions will focus on evaluating the current state and implementing a fully-functional model; in the long-term, scholarship decisions will be made via the model.

Action Steps

Near-Term (1 to 6 Months)

- ❑ Assessment of admissions data, current processes, and technology capabilities
- ❑ Evaluation of current enrollment strategy for TTU residents and non-residents
- ❑ Prioritize future changes in strategy and operations
- ❑ Start scholarship fundraising efforts

Mid-Term (6 to 12 Months)

- ❑ Structure the beginnings of a data-driven enrollment and tuition model that integrates scholarship and financial aid offerings to make admissions and financial aid offerings in a timely manner (comparable to other TBR institutions)
- ❑ Develop the model
- ❑ Train enrollment management and admissions staff
- ❑ Launch model

Long-Term (12+ Month)

- ❑ Apply new model to admissions and financial aid decisions for the entering transfer class in Spring, 2014 and all students in Fall, 2015

#10 – Enrollment, Tuition, and Scholarships

MILESTONES

TENNESSEE TECH UNIVERSITY

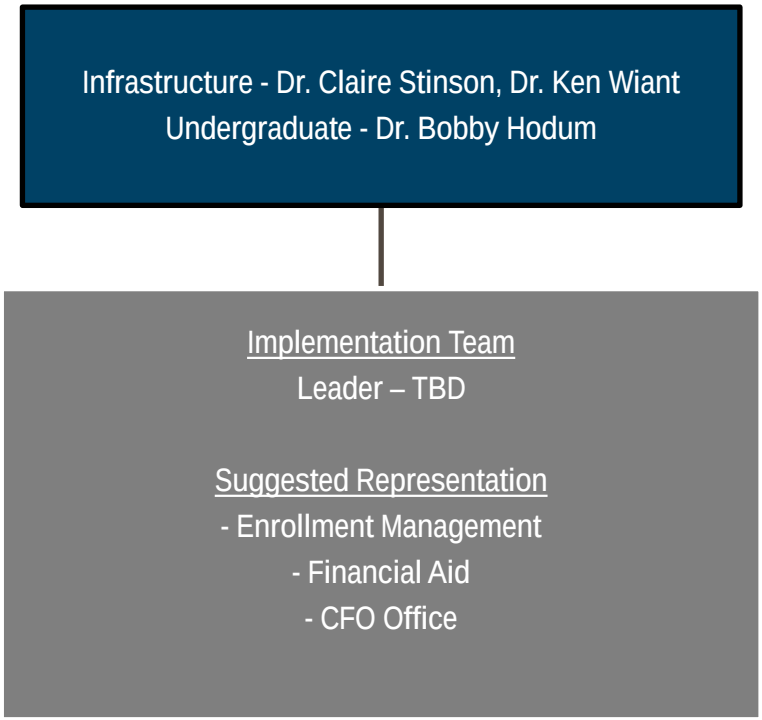
A high-level implementation plan with important milestones is presented below:

	2013						2014											
Milestone	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Admissions Assessment	■	■	■															
Financial Aid Assessment	■	■	■															
Evaluation of Current Strategies	■	■	■															
Finalize Action Steps and Resource Plan			■															
Scholarship Fundraising			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Begin Structuring Data-Driven Financial Aid Decision Model				■														
Develop Model					■	■	■											
Launch Model							■											
Continuous review, model evaluation, and improvement							■	■	■	■	■	■	■	■	■	■	■	■
Apply Model to Decision Making							■	■	■	■	■	■	■	■	■	■	■	■

#10 – Enrollment, Tuition, and Scholarships

ACCOUNTABILITY PLAN

This plan will be led through a combination of the Business Office and Office of Enrollment Management.



Accountability Plan
Flight Plan Leaders ▪ Infrastructure & Resources - Dr. Claire Stinson, Dr. Ken Wiant ▪ Undergraduate – Dr. Bobby Hodum
Implementation Team ▪ Leader- To be determined ▪ Project team to include representation from: – Enrollment management – Financial Aid – CFO's Office
Status Reporting ▪ Monthly status reports to be submitted to Flight Plan Leaders ▪ Reports will include: – Progress to completion – Issues preventing on-time completion – Feedback on items that should be communicated to other Action Plan teams

#11 – Physical Infrastructure

IMPLEMENTATION PLAN

The objective of this plan is to enhance Tennessee Tech's campus and infrastructure based on prioritized needs.

SUMMARY		
Description	Objective	Success Metrics
• Add new academic space and renovate classrooms • Enrich university physical infrastructure to address the student experience: – Intramural sports – "Commons" space – Dining • Enhance exterior university spaces: – Green space – Parking – Roads – Signage – Landscape master plan	<u>Objective</u> • Make it simpler for stakeholders to travel to, from, and around campus • Create a well-defined main entrance to campus to signal to the community when someone is on campus • Provide students and faculty with enhanced space <u>Link to *Flight Plan*</u> • A key *Flight Plan* recommendation was to upgrade overall physical infrastructure to improve the student experience and support faculty and staff	<u>*Flight Plan* Metrics</u> • Operating Expenditures per Student FTE <u>Operational Metrics</u> • Number of parking spaces • Total number of descriptive signs posted outside of campus buildings • Progress towards development and completion of the landscape master plan

#11 – Physical Infrastructure

CONTEXT FOR ACTION

Outdoor space development has been delayed in recent years due to a backlog of deferred maintenance initiatives that have taken priority over green space enhancement efforts.

Context	Peers / Trends in Higher Education
• Classrooms and academic spaces in many buildings are outdated • There are currently a number of limitations across campus affecting the student experience: – Insufficient intramural sports opportunities – Limited collaborative study space – Limited dining capacity and diversity • Many of TTU's buildings on campus mirror one another in their design, making it difficult for those unfamiliar with campus to navigate • Lack of green space contributes to some students' perception of TTU as a commuter school • There are not enough parking spots on campus to accommodate all commuter students along with faculty and staff (this need will increase in order to support campus growth and a loss of parking for new buildings)	<u>Peer Context</u>: • Clemson University provides an information system on all on- and off campus facilities to aid the public in identifying and locating facilities • Miami University sets up "Green Space" networks to ensure that their wireless is reachable to outdoor areas <u>Trends in Higher Education</u>: • Increasing signage across campus can have a direct impact on admissions process • Some campuses have turned to digital signage to promote the sharing of vital information • According to a study by Texas State University, the presence of green space plays a large role in enhancing the overall quality of life for many undergraduate students

Data Source: http://greenplantsforgreenbuildings.org/attachments/contentmanagers/25/CampusGreenSpaceQualityofLife.pdf

#11 – Physical Infrastructure

ACTION STEPS

Near-term actions will focus on identifying potential areas for development and enhancement, specifically areas that promote the student experience.

Action Steps
Near-Term (1 to 6 Months)
❑ Identify space for large classrooms
❑ Define classroom structure suitable for differing teaching needs and styles across faculty, disciplines, and courses
❑ Launch event management software
❑ Evaluate needs for intramural sports
❑ Tie external items into the refined campus Master Plan
– Identify locations within academic buildings and the University Center for improved common space
– Identify locations for development of new dining space
– Identify green space needs
❑ Identify building signage needs
❑ Conduct campus traffic/parking study
Mid-Term (6 to 12 Months) to
❑ Develop resource and fundraising plan
❑ Prioritize year one projects
❑ Fund projects
Long-Term (12+ Months)
❑ Launch funded projects

#11 – Physical Infrastructure

MILESTONES

TENNESSEE TECH UNIVERSITY

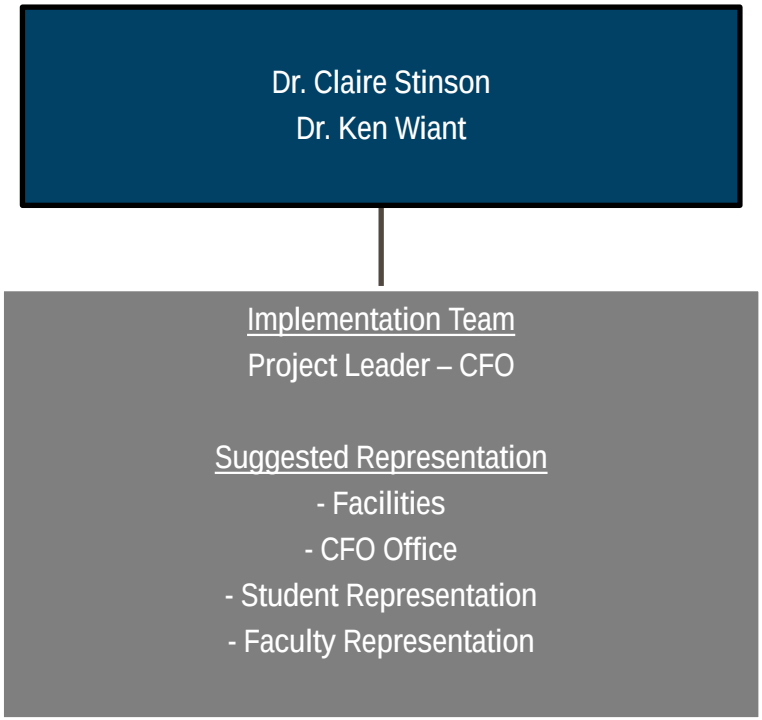
A high-level implementation plan with important milestones is presented below:

	2013						2014											
Milestone	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Identify academic space for renovation	■	■	■															
Identify development areas for athletic facilities	■	■	■															
Launch event management software			■															
Identify refined campus Master Plan additions				■	■	■												
Identify signage needs				■	■	■												
Launch traffic/parking study					■	■												
Prioritize year one opportunities							■	■										
Develop resource plan							■	■	■	■	■							
Commence with funded projects												■	■	■	■	■	■	■

#11 – Physical Infrastructure

ACCOUNTABILITY PLAN

This plan will be led through a combination of the Business Office and Facilities Management.



Accountability Plan
Flight Plan Leaders ▪ Dr. Claire Stinson, Dr. Ken Wiant
Implementation Team ▪ Project Leader- CFO ▪ Project team to include representation from: – Facilities – CFO's Office – Student Representation – Faculty Representation
Status Reporting ▪ Monthly status reports to be submitted to Flight Plan Leaders ▪ Reports will include: – Progress to completion – Issues preventing on-time completion – Feedback on items that should be communicated to other Action Plan teams

#12 – Efficiency and Effectiveness

IMPLEMENTATION PLAN

TENNESSEE TECH UNIVERSITY

The objective of this plan is to increase administrative efficiency and effectiveness.

SUMMARY		
Description	**Objective**	**Success Metrics**
• Improve efficiency and effectiveness through optimizing and automating business processes: – Recruiting, Hiring, and Onboarding – Purchasing – Scheduling/Registration • Utilize effective, collaborative, and technology-enabled tools – Electronic Workflow / Microsoft SharePoint – Mobile Applications – Push Technology	<u>Objective</u> • Simplify administrative processes to improve efficiency and effectiveness • Leverage technology to automate processes <u>Link to *Flight Plan*</u> • Effective use of human and financial resources by making processes more efficient	<u>*Flight Plan* Metrics</u> • Operating Expenditures per Student FTE <u>Operational Metrics</u> • Project dependent metrics (examples): – Recruiting, Hiring, and Onboarding - Time to complete a new hire process – Purchasing - Number of suppliers in an individual product category

#12 – Efficiency and Effectiveness

CONTEXT FOR ACTION

TENNESSEE TECH UNIVERSITY

Many of TTU's current business processes are cumbersome, inefficient, and time-consuming, resulting in displeased stakeholders.

Context	Peers/ Trends in Higher Education
• The hiring process requires many pages of required regulations and burdens • While purchasing is not a major issue for the institution, the process is not streamlined or automated • Changes can be made to the registration and scheduling process that would increase service levels to students • Collaborative sharing tools are not currently utilized on many paper-based business processes	<u>Peer Context</u>: • In 2009, Clemson University's HR team identified an opportunity to streamline Clemson's hiring process • The old process was filled with duplicate entries, wasted time, unnecessary paper, and an inefficient signature/approval model • The new result was an electronic process that targeted the inefficient issues and aligned to their new strategic plan <u>Trends in Higher Education</u>: • Many universities have adopted business process efficiency initiatives to streamline and automate administrative processes • Public institutions are using a combination of state and locally-negotiated contracts in order to capture the best price on goods

Data Source: http://chronicle.com/article/Small-Private-Colleges-Lose/139091/?cid=at&utm_source=at&utm_medium=en

#12 – Efficiency and Effectiveness

ACTION STEPS

TENNESSEE TECH UNIVERSITY

Near-term actions will focus on identifying problem processes and developing best-practice workflows.

Action Steps
Near-Term (1 to 6 Months)
❑ Launch purchasing software and optimize procurement business processes
❑ Implement revised hiring procedures
❑ Conduct study of current inefficient business processes
❑ Engage feedback from administrators on inefficient processes
❑ Determine appropriate areas to introduce collaborative tools (SharePoint)
Mid-Term (6 to 12 Months)
❑ Develop Phase 1 process optimization plan for scheduling and registration
❑ Adopt mobile technology/push communication to pilot on scheduling and registration
❑ Determine continuous improvement cycle
❑ Phase 2 process efficiency project selection
❑ Develop resource plan for Phase 2
Long-Term (12+ Month)
❑ Launch Phase 2 process efficiency projects

#12 – Efficiency and Effectiveness

MILESTONES

TENNESSEE TECH UNIVERSITY

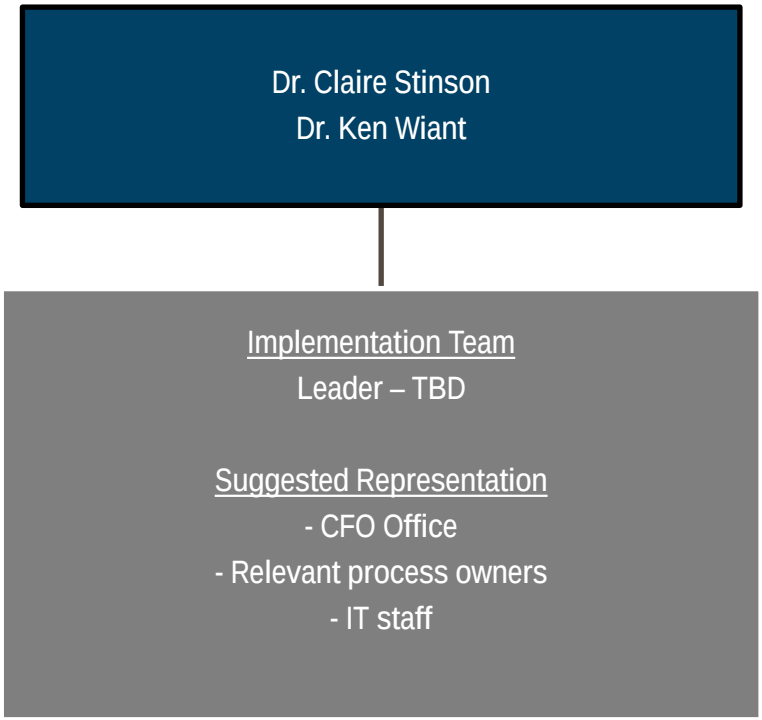
A high-level implementation plan with important milestones is presented below:

	2013						2014											
Milestone	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Procurement process implementation	■	■	■															
Hiring process implementation			■	■														
Determine registration and scheduling process optimization				■	■	■												
Feedback on new candidate processes for future					■	■	■											
Phase 1- Registration and scheduling implementation							■	■	■	■								
Mobile app/push communication pilot									■	■								
Continuous improvement cycle development											■	■						
Phase 2 resource plan												■						
Phase 2- process efficiency selection and optimization												■	■					
Phase 2- process efficiency implementation													■	■	■	■	■	■

#12 – Efficiency and Effectiveness

ACCOUNTABILITY PLAN

This plan will be led through a combination of the Business Office with participation from IT.



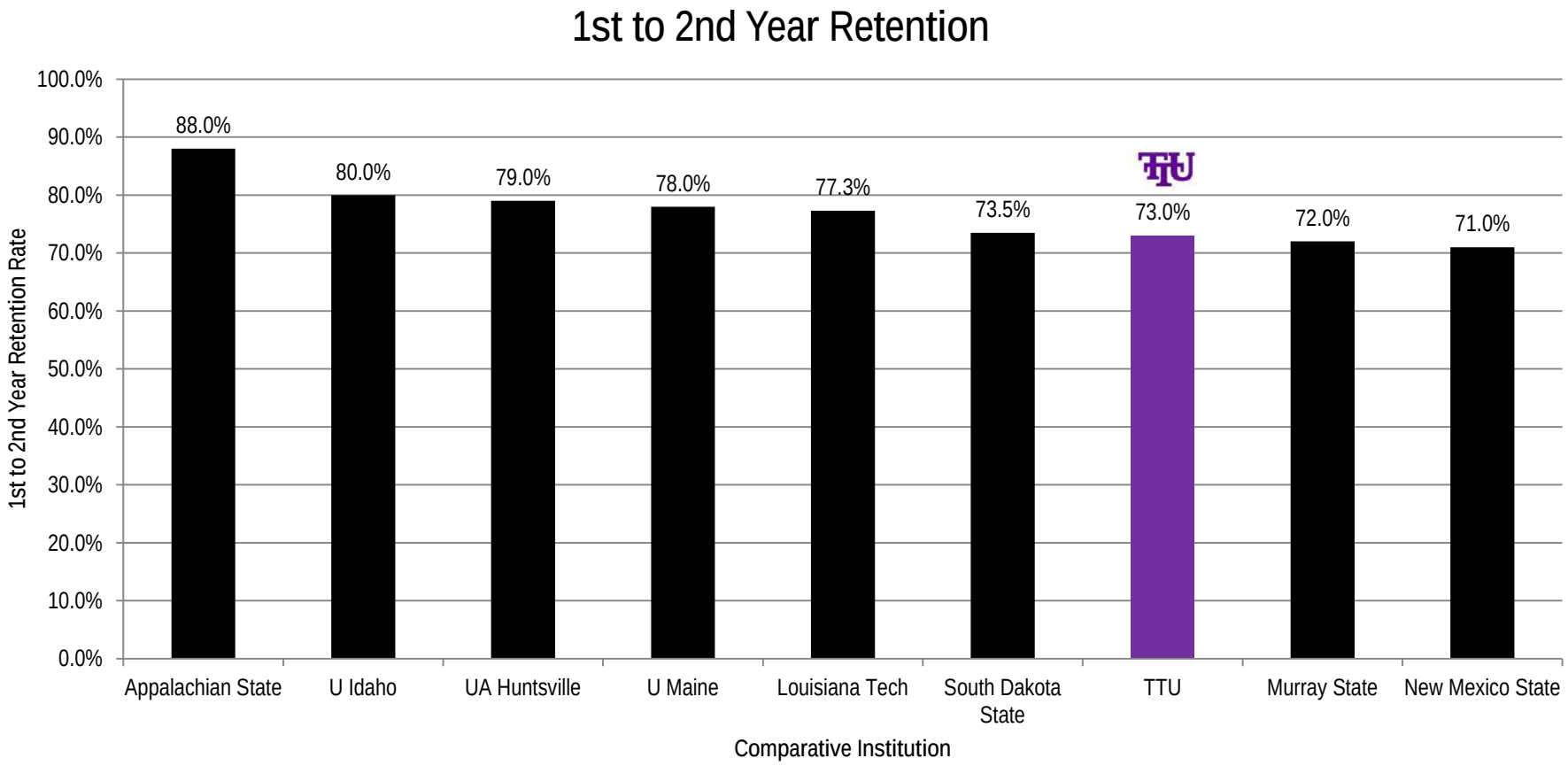
Accountability Plan
Flight Plan Leaders ▪ Dr. Claire Stinson, Dr. Ken Wiant
Implementation Team ▪ Leader- To be determined ▪ Project team to include representation from: – CFO's Office – Relevant process owners – IT staff
Status Reporting ▪ Monthly status reports to be submitted to Flight Plan Leaders ▪ Reports will include: – Progress to completion – Issues preventing on-time completion – Feedback on items that should be communicated to other Action Plan teams

APPENDIX B:
SELECT COMPARATIVE CHARTS

National Comparative Peers

RETENTION

Tennessee Tech's 1st to 2nd year retention is in the bottom third.

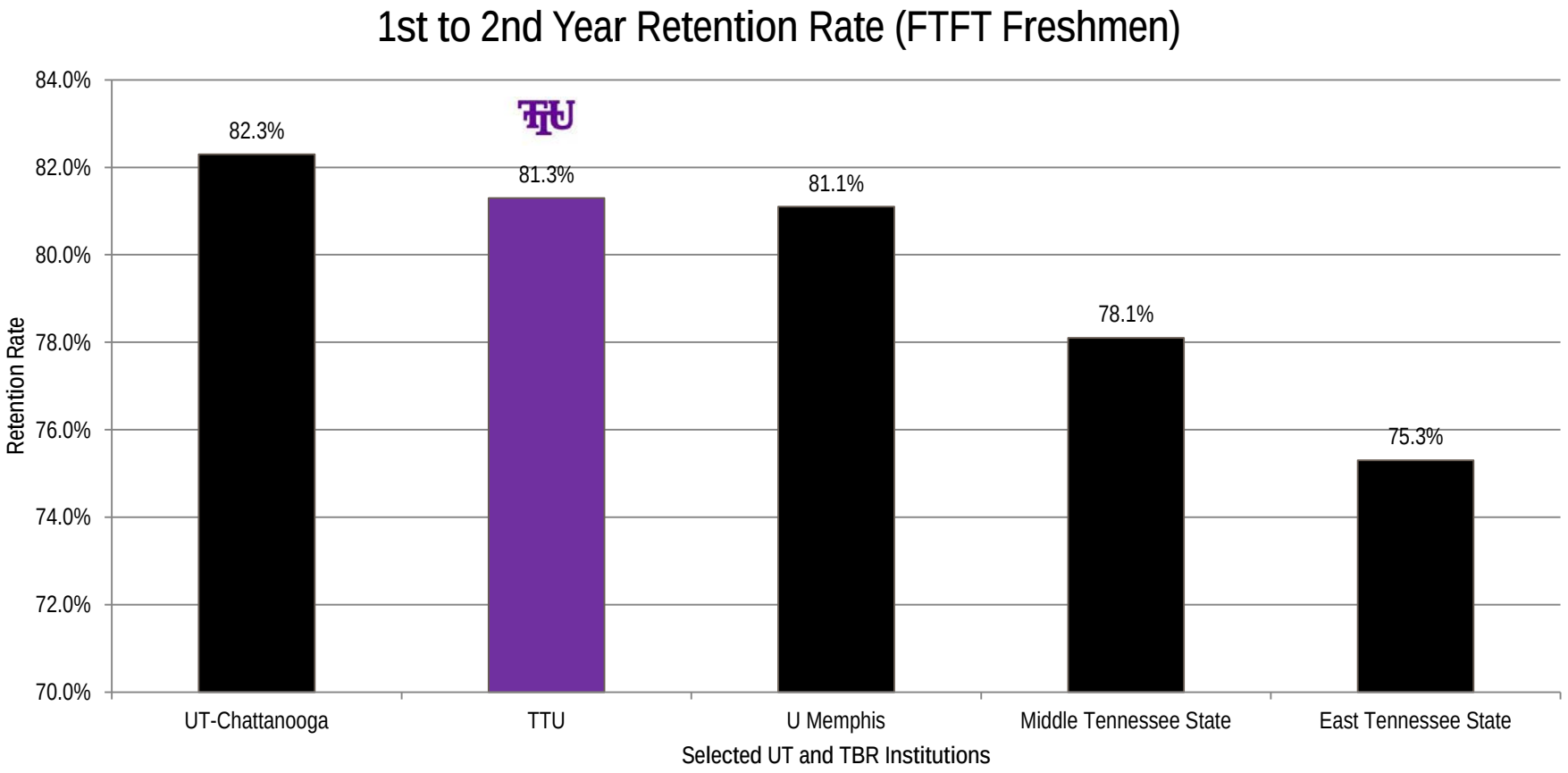


Data Source: Common Data Set 2011-12

Tennessee Comparative Peers

1ST TO 2ND YEAR RETENTION RATE

Tennessee Tech's 1st to 2nd year retention rate is near the top of the Tennessee Peer group.

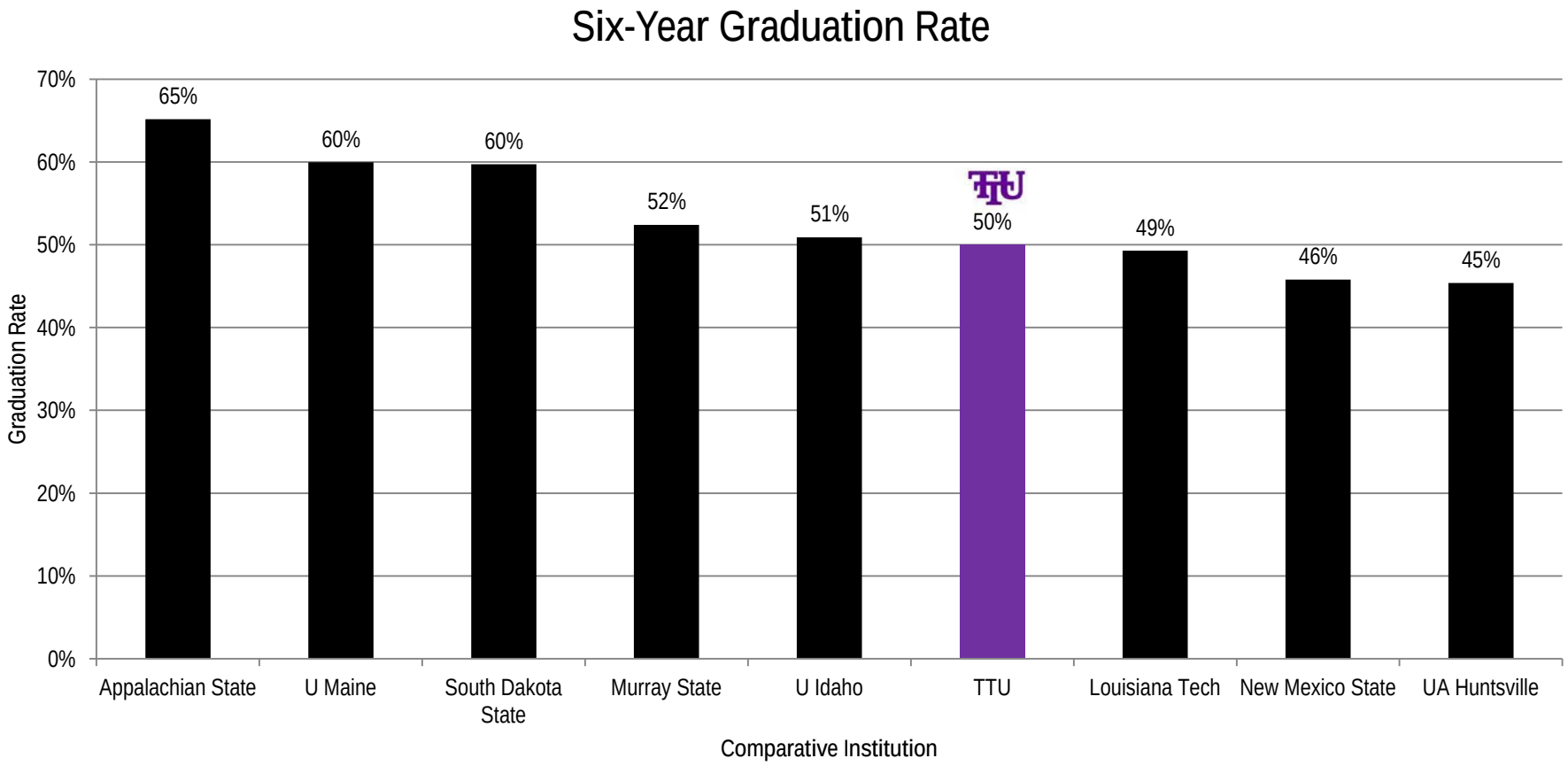


Data Source: THEC Factbook 2012–13, Table 2.1

National Comparative Peers

SIX-YEAR GRADUATION RATE

TTU's six-year graduation rate is in the bottom half of the comparative peer set.

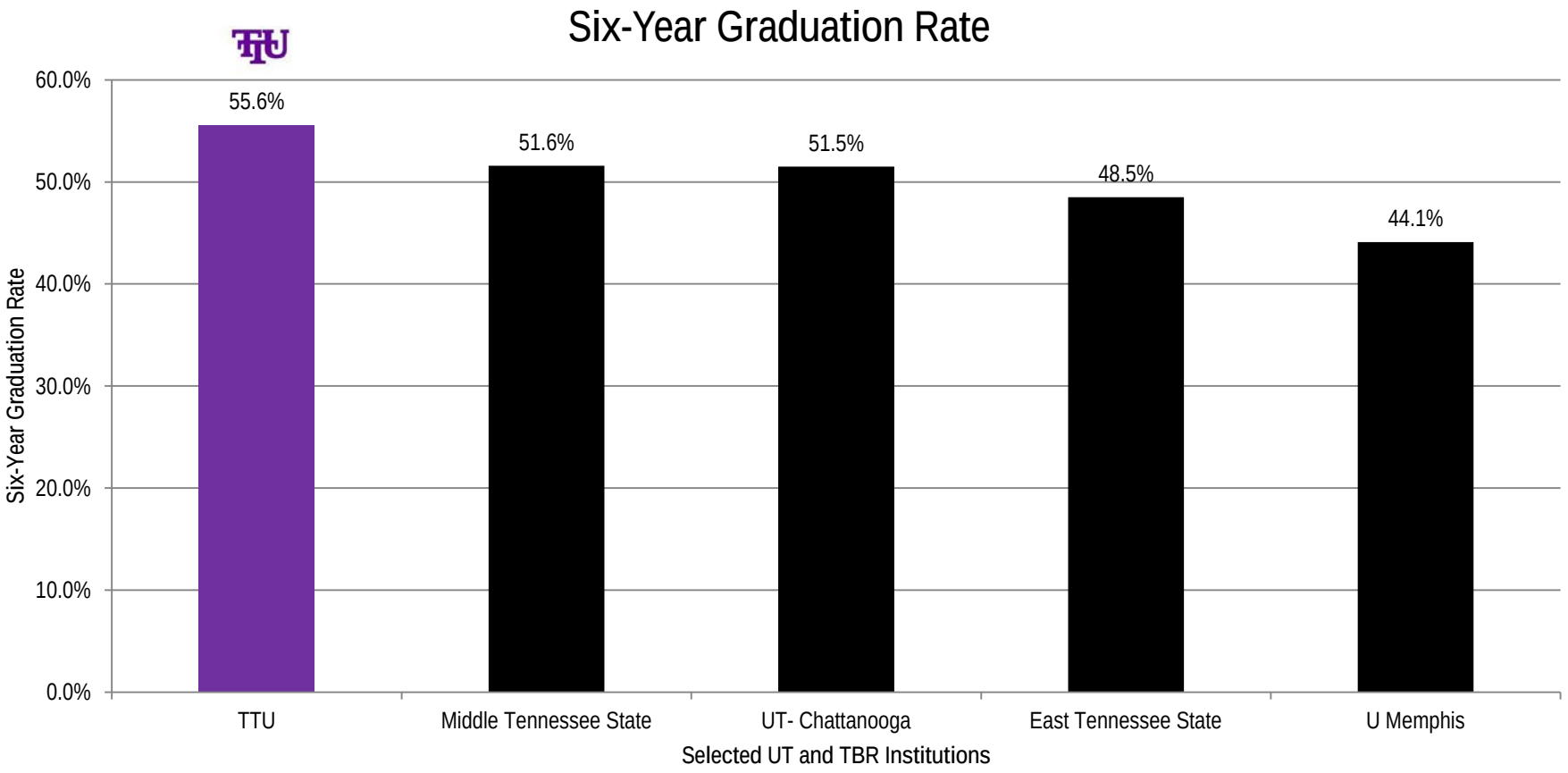


Data Source: Common Data Set 2011-12

Tennessee Comparative Peers

SIX-YEAR GRADUATION- UPDATED

Tennessee Tech's six-year graduation rate is the highest out of the selected Tennessee peers.

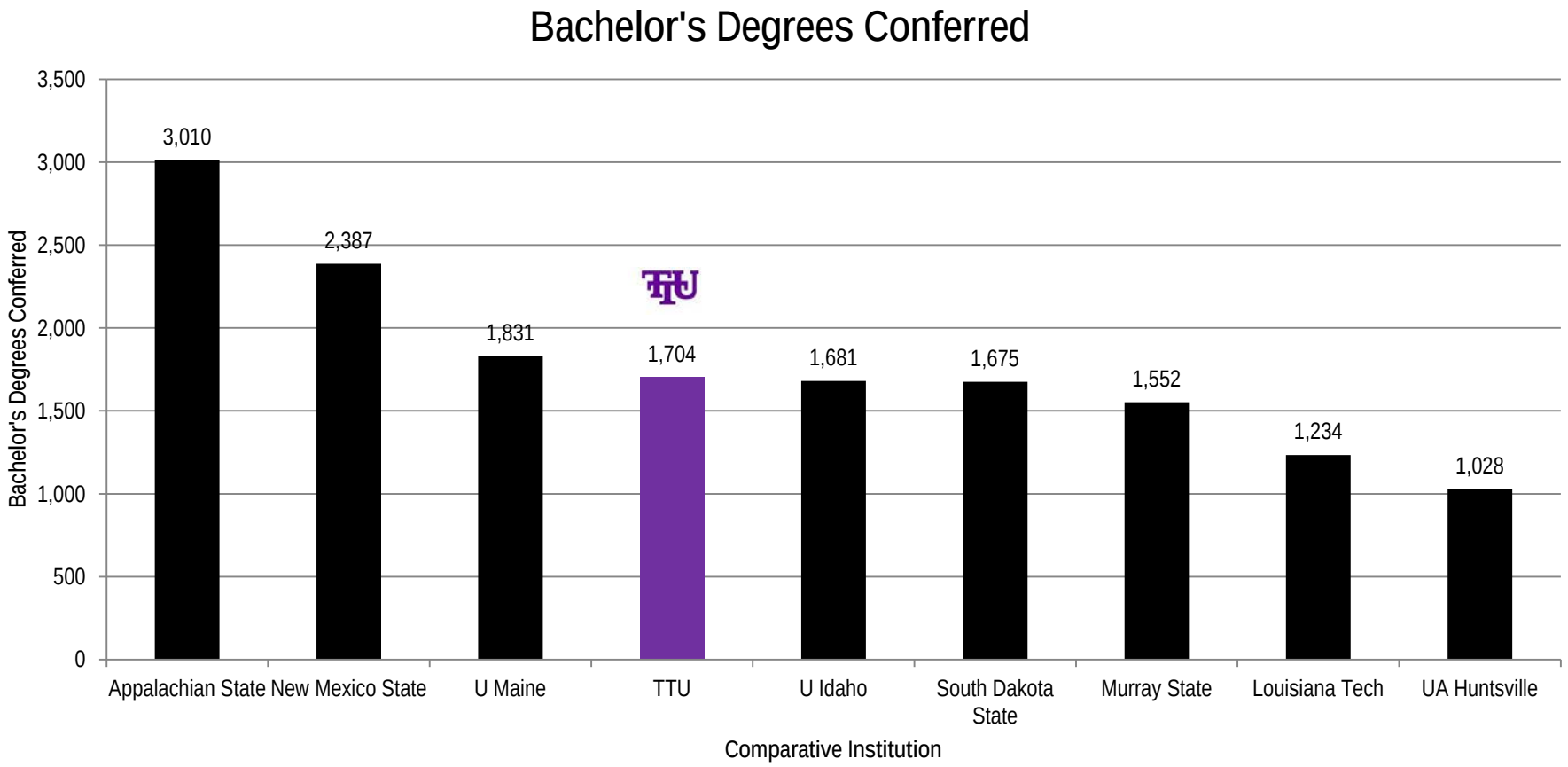


Data Source: THEC Factbook 2012–13, table 2.16

National Comparative Peers

BACHELOR'S DEGREES CONFERRED

TTU's Bachelor's degrees conferred is also above the median of the comparative peer set.

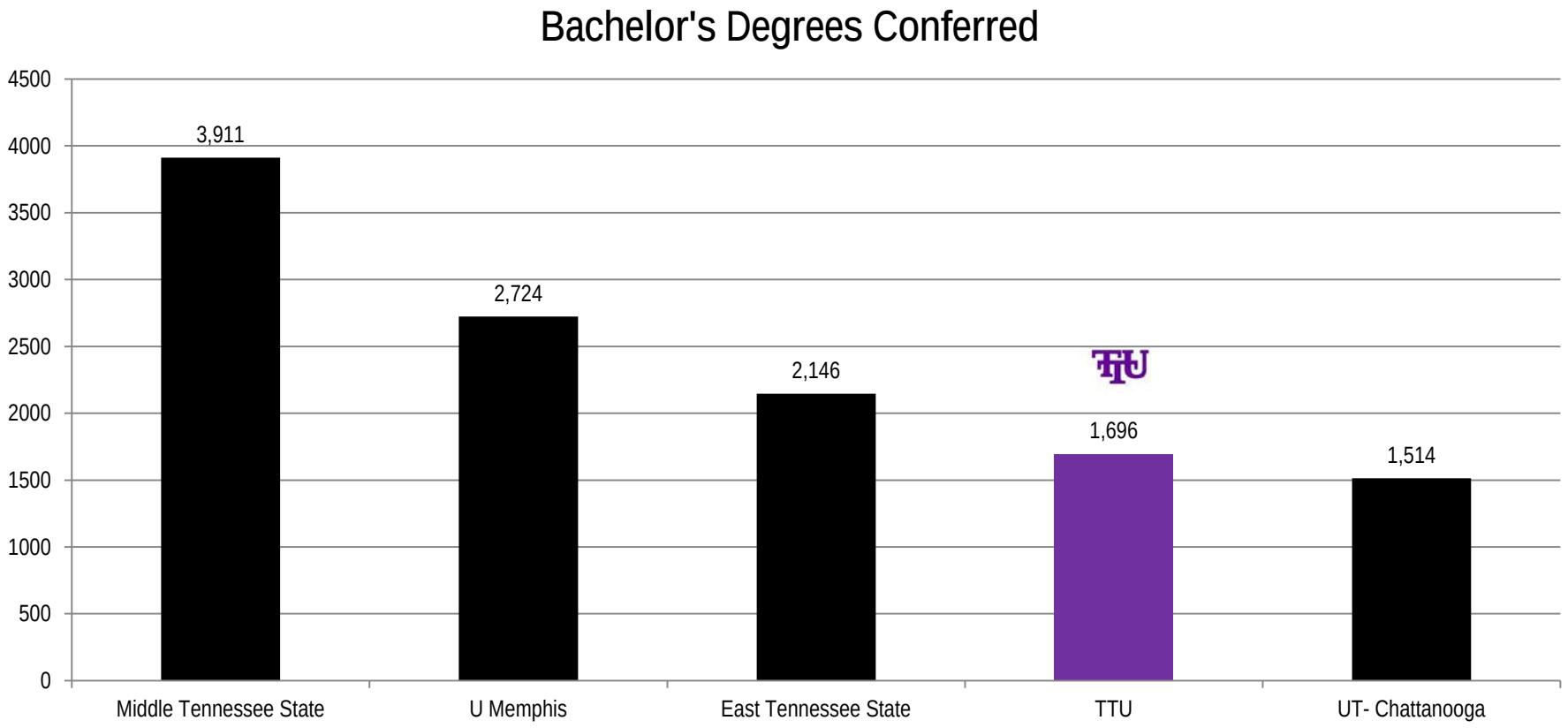


Data Source: Common Data Set 2011-12

Tennessee Comparative Peers

BACHELOR'S DEGREES CONFERRED

TTU confers the second lowest number of Bachelor's degrees in the peer set.

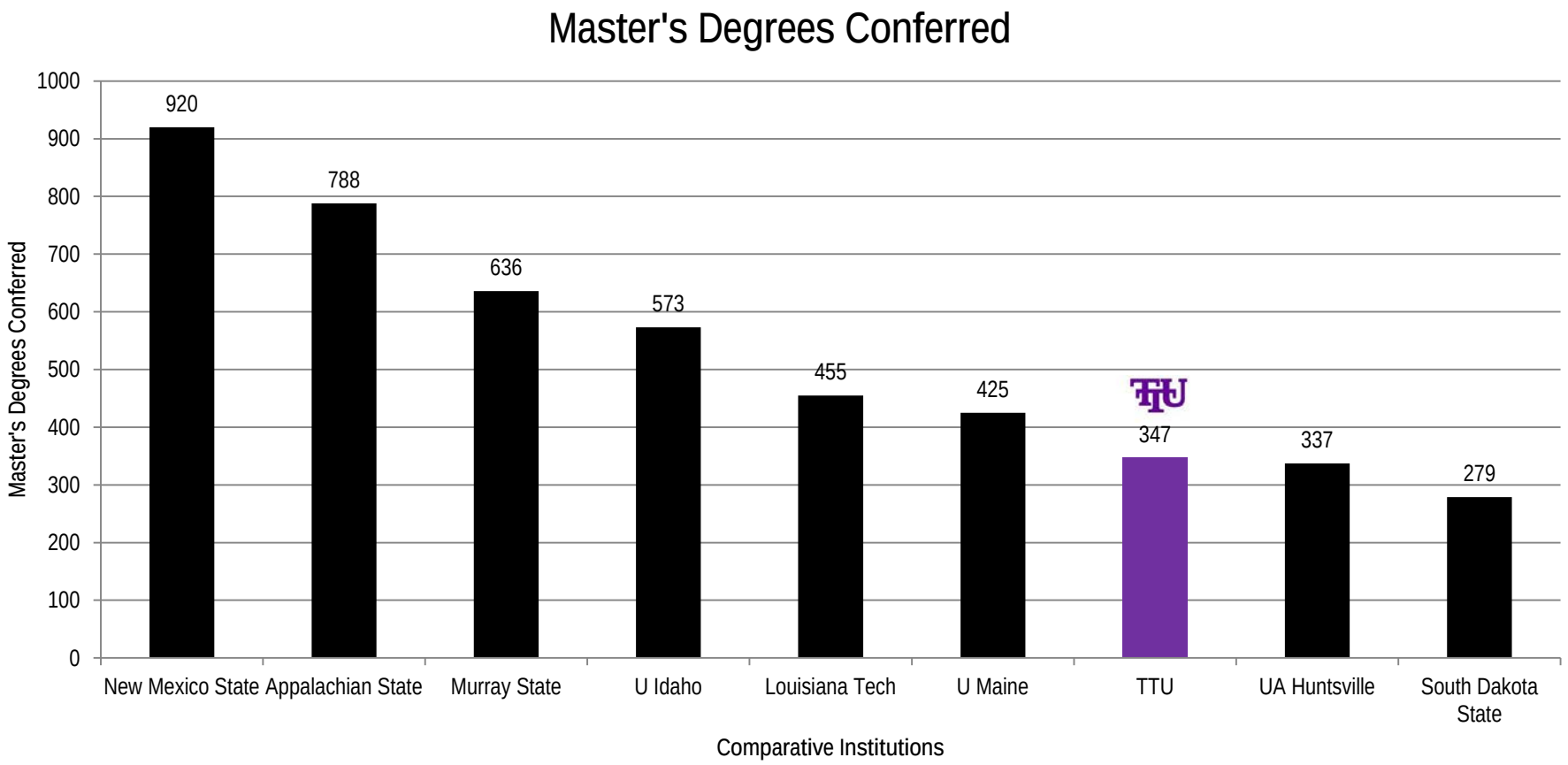


Data Source: THEC Factbook 2012-13, table 2.4

National Comparative Peers

MASTER'S DEGREES CONFERRED

Master's degrees conferred are below average for the comparative peer set.

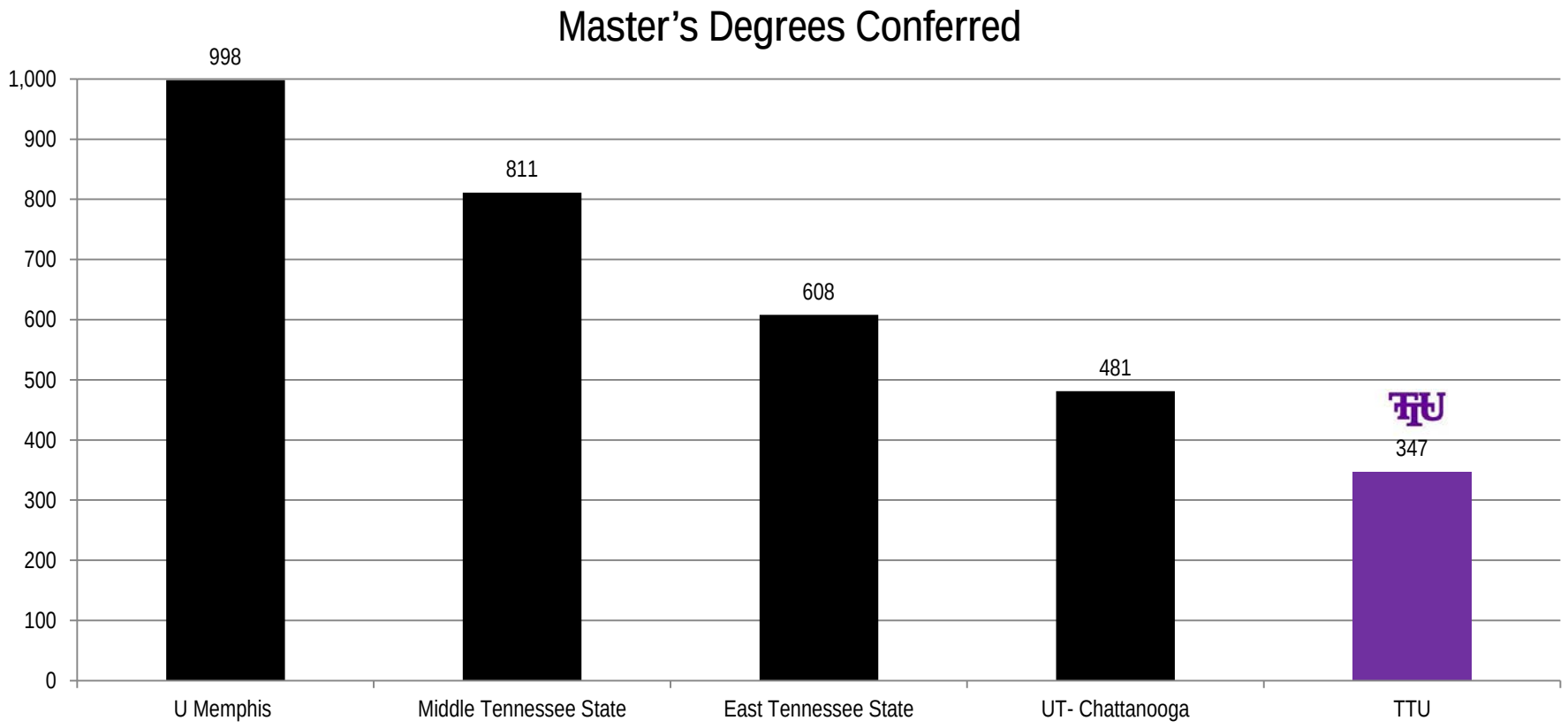


Data Source: Common Data Set 2011-12

Tennessee Comparative Peers

MASTER'S DEGREES CONFERRED

Master's degrees conferred is at the bottom of the selected Tennessee peers.



Data Source: THEC Factbook 2012-13, table 2.4