Division of Information Technology
University Technology Services

2015-18 Strategic Plan
# University Technology Services

Under the Division of Technology

Strategic Business and Services Plan

2015 - 2018

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PREFACE

This document is the Strategic Plan of University Technology Services (UTS). The plan includes the UTS Mission, Technology and Service Vision, Supporting Values, and Guiding Principles that provide the necessary guidance for the alignment of UTS Products and Services with the strategic missions of the Division of Information Technology and the Office of the Provost, all in direct support of the mission of the University of South Carolina.
UTS Strategic Planning - Overview

The University Technology Services (UTS) Leadership Team worked in conjunction with the Division of Information Technology (CIO’s Office) to develop this Strategic Plan that includes an associated Vision, Organizational Values and Guiding Principles from which planned Information Technology (IT) investments and decisions are organized.

This Strategic Plan was developed utilizing a series of leadership planning meetings. Additional data was collected utilizing customer and employee input to help identify service gaps and to develop specific initiatives. In parallel, Guiding Principles were reviewed and updated to further assist UTS in improving a framework for governance and service excellence.

The Strategic Planning Process

The UTS Strategic IT planning process was developed to provide direction and clarity for the development and maintenance of the UTS Strategic Plan. This involves participation and review of the CIO’s Blueprint for Excellence initiative. Directives and initiatives from this plan are disseminated to leadership and become the first stage of the UTS planning process. Second, strategic requirements and plans are collected and organized into the UTS Strategic-planning template. Plans and presentations are reviewed for future considerations involving new strategic ideas, projects, new technologies, and other best practices that may provide strategic value based on a vision for improved Customer Services, or enhanced Operational Efficiencies. In parallel, it is our commitment to continually assess UTS’s Strengths, Weaknesses, Opportunities and Threats (SWOT) as a framework for measuring process improvement. Each area is evaluated and discussed in terms of identifying needs for change.

All four steps culminate in the creation of one comprehensive UTS Strategic Plan, with further details broken out by departmental areas of responsibility. Each sub-plan identifies goals, priorities and planned initiatives in support of the UTS Mission.

Step 1 was the development of the Office of Information Technology’s “Blueprint for Service Excellence” plan. Clearly stated from this plan, is the mission from which we further define our organizational goals and structure is “…to support the teaching, research, and service goals of the university.”

Step 2 was the development of the UTS Strategic Plan and Vision statements. Leveraging our strategic partnerships and relationships with UTS customers and vendors through both formal and informal planning processes, the review of current and future service needs across the USC enterprise have been identified and organized into this planning document.

Step 3 will be the validation and “Action Planning” process, a further breakdown of IT strategies and plans for each of the departments that make up UTS. These efforts will further involve UTS customers who will have the opportunity to further participate through on-going annual planning “summits” or specific participation via the UTS Project Management review and update process.

Step 4 is the publishing of this plan. The UTS Strategic Plan will be reviewed and updated and will provide input into the annual USC budget review and request process.
University Strategic Initiatives

Focus Carolina

Focus Carolina is the University of South Carolina's strategic plan that provides a blueprint for key decision making in the next decade and beyond.

Focus Carolina articulates the university's quest for educational quality, leadership, innovation, diversity, access, global competition, and community engagement at all eight campuses of the university system. The Focus Carolina initiatives include:

- Teaching and Learning
- Research, Scholarship and Creative Achievement
- Service Excellence
- Quality of Life on the University Campus
- Recognition and Visibility

First and foremost, UTS will align resources and priorities to partner with all the Carolina stakeholders in achieving Focus Carolina goals and objectives. Second, UTS will continue to provide core infrastructure and IT support services necessary to meet the ongoing daily operations of the university.

Next, we will continue to review and remind ourselves of the overall mission of the university, the Office of the Provost, the Division of Information Technology and University Technology Services.

OneCarolina

OneCarolina is University of South Carolina's multi-year project to modernize, streamline, and enhance academic and administrative services. This project will create an integrated digital community linking the university's eight campuses. It strives to support the university's primary mission as a multi-campus public institution serving South Carolina's learners, educators, and community.

One University, One Network, OneCarolina

The vision of the OneCarolina project is to create an integrated digital community. In today's higher education environment, students, faculty, and staff need access to reliable, integrated information to make intelligent, efficient, and cost-effective decisions. By creating a unified system of information integration and sharing, the Project will fulfil those needs, building "One University, One Network, and OneCarolina."

Presidential Strategic Focus Areas

At the President’s 2015 strategic planning retreat, the President identified four specific areas of focus from which the university will formulate change. They include:

- Provide a superior student experience
- Maintain a flexible higher education model for easy access and affordability
• Be recognized as a globally high impact research university
• Remain a vital part of South Carolina’s economic and overall well being
Mission Statement Summary

1. University of South Carolina Mission:

The primary mission of the University of South Carolina, a multi-campus public institution serving the entire state of South Carolina, is “to educate the state's diverse citizens through teaching, research and creative activity and service.”

2. The Office of the Provost Mission:

The Provost Blueprint Plan for 2011-2012 states that the Office of the Provost is “dedicated to the faculty and students of the University of South Carolina and to their academic success. The primary mission of the Office of the Provost is to provide leadership for academics at the University of South Carolina and to ensure academic excellence, integrity, and fairness in educating our students, in performing our research, scholarship, and creative works, in serving our university, community, and professions, and in fostering an environment that embraces and promotes diversity of people and ideas.”

3. The Division of Information Technology Mission:

The mission of the Division of Information Technology is “to support the teaching, research, and service goals of the university.”

4. University Technology Services Mission:

The UTS mission is “to support the teaching, research and public service goals of the University of South Carolina.” University Technology Services, under the direction of the Vice President for Information Technology and Chief Information Officer, provides services in centralized and distributed computing, communications and infrastructure, studio and digital media, pedagogical technologies for academic, research and administrative use to support and meet the needs of the students, faculty, and staff at the University of South Carolina.
UTS Values Statements

UTS has identified four distinctive core beliefs by which we hold ourselves accountable. These beliefs are the underlying assumptions and principals that influence our work, our attitudes and our behaviors, ultimately driving how we make decisions on a daily basis.

1. **We serve our Customers** – Students, faculty and staff with innovative solutions, and responsive services.

2. **We value our People** – by seeking talented co-workers, developing and recognizing our outstanding employees, and caring for them and their families.

3. **We operate with Integrity** – by treating our customers, people and business partners in a fair and honest manner, just as we would want to be treated.

4. **We contribute to our Community** – by investing our time, talents and resources to better the conditions in the diverse communities in which we work.
University Technology Services - Guiding Principles

The UTS Guiding Principles are the collective assumptions, values and ethics from which we hold ourselves accountable in how services will be provided and how decisions will be made within the organization. Our work environments are complex in both diverse lines of support services and related supporting technology. Every day, we face competing requests for information technology (IT) needs and we must stay diligent to carefully evaluate and ensure that UTS achieves optimal use of limited resources. This requires that our Leadership Team consider and balance the following competing aspects of our services, in light of staying focused on the mission of UTS:

1. Standardization vs. Autonomy/Experimentation
2. Innovation vs. Stability/Reliability
3. Accessibility vs. Security/Privacy
4. Consensus vs. Efficiency in decision making
5. Centralized vs. Distributed Services
6. Proprietary vs. Open Source Development
7. Commercial vs. Home Grown – Solutions and Maintenance

In this context, the following principles emerge:

1. **Responsive IT - Support for the university setting:** We will provide UTS customers with responsive IT products and services that enrich and enhance the academics, research and administrative service environments of the university.

2. **Sustainable Solutions - integration and use of standards and best practices:** Whenever possible, UTS will look to deploy and leverage IT industry “best practices” when implementing projects or developing new solutions.

3. **Appropriate Protection - security and reliability:** Students, faculty, staff and university affiliates should feel secure that their intellectual property, digital assets, and electronic information will be handled in a stable, safe, and secure environment.

4. **Enhanced and Integrated Communications - ubiquity:** UTS will ensure that essential communications exist for the entire campus, utilizing defined standards and “best practices” for the support of the university’s enterprise communications infrastructure.

5. **Ease of use:** Developed or purchased software applications, systems, communications, and classroom technologies will be integrated and easy to use.

6. **Alignment with priorities:** Campus priorities will drive UTS IT strategies and investments. When information technology requirements differ among our collective customers, UTS will strive to facilitate resolutions that allocate resources appropriately and accountably, anticipating, and utilizing new IT innovations/standards that provide the most value to USC as a whole.
7. **Only service excellence:** Students, faculty and staff deserve information technology that meets the highest standards of service excellence. We will evaluate our organizational effectiveness, performance and quality through consistent communication and feedback from our customers.

**University Technology Service - Vision Statement**

The vision of University Technology Services is to become the recognized campus leader in providing reliable and cost-effective technology services in alignment with the changing needs of our students, faculty, and staff of the University of South Carolina.

- **Goal:** Recognized leader in technology services aligned with customer needs
- **Constraints:** We take direction from the Office of the CIO, in concert with the Office of the Provost, in support of the mission of the University of South Carolina
- **Quality Expectations:** Reliable and cost-effective
- **Measured by:** Feedback surveys from customers of the project management office and service desk

There are many academic, business and technological components that make up the sum total of UTS. The following items represent “Statements of Vision or Direction” as it applies to where UTS envisions aligning future products and services in support of current and future customer needs. The UTS vision includes enhancements and work towards addressing these topics:

**UTS – Service Enhancements**

- Customers: one-stop help, service orders, updates, delivery, billing, and surveys
- Full life-cycle self-services
- Enhanced communications: one-stop information, common planning process
- USC IT Advisory Committees: students, faculty and staff
- Published performance metrics and monitoring
- Resource management and reporting
- Expanded service offerings: UTS project management methodology
- Enhanced communications for customers and staff
- Operational progress reporting
- Service Management and standards
UTS SWOT Assessments – Strengths, Weaknesses, Opportunities and Threats

UTS must adopt a strategy of continued process improvement if we are to achieve our vision of becoming “the recognized campus leader in providing reliable and cost effective technology services.” This process includes the assessment of strategic organizational “Strengths” and “Weaknesses.” Once assessed, “Opportunities” can be identified that, when acted upon, will assist UTS in reaching our goals. Finally, we recognize that potential roadblocks and unforeseen obstacles will confront us in our endeavors. If UTS properly identifies known “Threats,” and monitors for developing “Threats” then mitigation planning can take place to avoid, or at least minimize, the impact of those “Threats” on UTS and our customers.

Strengths:

- Employees care for customers and coworkers
- Teamwork within internal UTS teams
- Customer relationships
- Problem solving to address issues promptly
- Training for staff across the organization

**Employees Care:** UTS is a large organization and has a number of strong team members who understand that their job is to take care of our customers. They understand that providing excellent customer service requires both “servant leadership” and “self-sacrifice” for the good of the enterprise first, departments and organizations second, individual customer needs third, teams and co-workers fourth. For this model to operate at the highest levels of success, UTS must also recognize an equal level of importance placed on recognition and valuing of our employees. Though we demonstrate strengths on overall “care” for customers, there are still a number of team members with a lesser understanding of this type of service model.

**People Programs:** UTS has put into practice new management processes and tools to assess and analyze employee confidence and concerns related to the employee work environment, compensation, and career opportunities. In 2015, we identified the following human resources initiatives that will continue as a UTS priority:

- Career development planning
- Compensation evaluations
- On-boarding processes
- Employee recognition program – UTS SPUR program
- Leadership 360 evaluations

UTS expects that there will be additional opportunities for management to address survey related issues and will continue to consider new ideas to further define a quality personnel management program. During this planning period, UTS will improve strategic human resources functions to include focused recruiting, streamlined onboarding, and continued staff training.

**Teamwork:** Similar to strengths identified in “employees care” are the strengths that are found in individual departments in the area of teamwork. In the past, when teams were self-reliant and
focused on “team only” functions, an opportunity was missed for development of enterprise level teamwork skills as the IT industry moved towards an enterprise integrated model. Our challenge is to expand our teamwork model outside the departments while keeping the already successful departmental teamwork operating at maximum levels. This includes third party service providers.

**Customer Relationships:** With a very broad spectrum of customers and service needs, UTS has created some very strong customer relationships with customers in our traditional lines of service. Without impacting these positive pockets of service, UTS must recognize that there are varying levels of service and relationships that need further development. This will require organizational clarity on who our customers are and what our services include. Current challenges include underlying opinions that UTS is “all things to all people.” This strategy degrades customer service, service quality and reliability.

**Problem Solving:** UTS is currently an organization that is challenged in operational measurements and lacking in depth of staff and skills to support the ongoing growth of products and services needed at USC. These strategic weaknesses give rise to the daily challenges of keeping the university daily systems up and operational. This leads to a reactive versus proactive system of management and survival services. In “survival” mode you learn to sharpen and utilize your “problem solving” skills in order to just keep core systems operational. UTS must re-focus these energies from reactive to proactive while maintaining “problem solving” skills to serve when needed.

**Training:** Traditionally, UTS has invested in training and conferences as a means of expanding and investing in knowledge and skills within the organization. While UTS will need to continue in this strategy, UTS can improve in the overall effectiveness by linking the overall training strategies and balance of investments with organizational goals and career path management.

**Weaknesses:**

- Strategic planning lacks holistic perspectives across the service life cycles
- Operations management lacking metrics and reporting
- Financial management lacks flexibility to handle competitive services
- Resource and asset management is not fully developed

**Comprehensive Strategic Planning:** If the university is to compete for the best and brightest, and improve its overall ranking as a prominent university in comparison to peer universities, then IT needs to be seen as strategic in accomplishing its mission. Aligning IT to any mission will not be achieved without a deliberate planning and monitoring process to focus and re-focus the efforts and resources of UTS.

We will accomplish better strategic planning through the awareness and implementation of information technology best practices. Providing a metrics driven approach for our leadership to use as they monitor service life-cycles is a first step toward the continual service improvement processes which will allow us to focus on our mission in addition to our daily operations.
Operational Metrics: UTS lacks a comprehensive framework and resources to aggressively measure and assess operational metrics to support the ongoing growth of products and services. This strategic weakness gives rise to the daily challenges of keeping the enterprise systems up and operational and knowing where future problems may be developing. This leads to a reactive versus proactive system of management and survival based services.

UTS must focus our efforts from reactive to proactive in order to better understand where efforts are needed for improvements and further investments. Process documentation, service operations manuals, responsibility models, and report monitoring will be outcomes of the Service Management initiative started in 2014.

Financial Planning: UTS follows the USC annual budget process, which culminates with a “request for funding” initiative based on project priorities and justified needs. Significant work has been started, and must continue, to further categorize where commitments should be allocated versus the annual discretionary spending for all departments and all “fund” types. Other customer service improvement opportunities include the UTS billing processes, rates management and communications and contracts management.

Resource and Asset Management: It is the desire of UTS to better utilize the skills, time, talents and tools of its staff members. This will require the tracking and analysis of data associated with those same categories.

Work has begun in both Resource and Asset Management and will continue until:

- All UTS resources can be accounted for in areas of historical assignments and performance, present job assignments with performance to date, and future job assignments.
- Operational vs. project resource allocations can be measured, evaluated and reported.
- Inventory procurement, storage and deployment are integrated into the workflow and billing process.
- Inventory/staff tools and equipment are accountable by department and name.

Opportunities:

- Assess needs of customers and staff to deliver better service
- Organizational communications improvement to clarify the mission
- Focus on our staff to include compensation, career development and training
- Align mission and philosophies for current and future positions
- Financial management to better utilize resources
- Training and development of staff to prepare for market changes
- Security enhancements for business and technical strategies

Assessing Customer and Staff Needs: With an evolving workforce comes opportunity for change. UTS must engage both customers and staff in creating an environment where communications have a direct impact on creating better customer services and creating a better place to work. UTS will work to achieve:
• Direct inquiry and assessments with customers on services and communications
• Direct inquiry and assessments with staff on workplace issues and career path management

Organizational Communications and Clarity: By the creation of an annual UTS strategic planning document and associated UTS departmental and customer involvement, UTS will be able to provide clear and concise direction as to “Where we are going?” and “How we will get there?” Additional communications at all levels will encourage employees to take a more active role strategically in the direction of their teams by understanding the link between team objectives and the mission of UTS.

Focus on Our People (UTS Team): UTS has put into practice new management processes and tools to assess and analyze employee confidence and concerns related to employees’ work environment, compensation, and career opportunities. In 2012, employee satisfaction and leadership evaluations surveys were identified that allowed UTS to gather metrics to drive future decisions. These types of surveys are expected to be completed on a regular basis. UTS expects that there will be additional opportunities for management to address survey related issues and will continue to consider new ideas to further define a quality personnel management program.

Mission Aligned Philosophies: UTS will continue its focus on career development and management, staff training and planning. Our leadership is being shaped to execute goals in the most efficient ways possible to continue to meet and align with the changing business needs. With this opportunity comes the responsibility to identify the leadership, business, technical skills and values necessary to deliver on the mission of UTS.

Financial Management: UTS recognizes the importance of financial management. We believe that a management team with strong financial management skills will yield better use of our entrusted resources. To maintain financial management skills, UTS requires leadership to participate in the financial aspects of their areas of responsibility while enhancing their overall knowledge of university business by developing skills in:

• University Fund Accounting
• Product and Service Development and Product Management
• Return on Investments
• Budget Development and Management

Training and Development: Possibly the greatest challenge in providing the best value and service to our customers and staff is in providing an environment that can keep up with the rate of change. We believe change starts and must be lead from the top down. The following areas have been identified as areas for significant opportunity in creating environments conducive of positive change:

Leadership Development:

• By using a variety of assessment tools and techniques, on-going training will be designed to improve leaders' knowledge, awareness, and performance. This includes mandatory participation in the university “LEAD” program.
• Continue to utilize the Career Development Plan and encourage employees to actively participate in their development paths.
• Monthly meetings will continue to be held with existing leadership in the organization to focus on areas of opportunity and identify areas of concern.
• Quarterly meetings will be held for emerging leaders to disperse important information.

Staff Enhancement Programs:
• Employee recognition programs (SPUR) to acknowledge positive efforts of staff will continue
• Staff morale initiatives and special events will allow staff to interact across the organization regardless of position or tenure and to foster an environment of teamwork, cooperation and collaboration
• Town Hall and All Hands meetings will be held as needed to disperse consistent messages to all staff
• Communications plans are in development to increase staff awareness of current initiatives, topics of interest and leadership messages

Security (Business and Technical Strategies):
In 2012, UTS launched the SecureCarolina initiative to enhance security at the University of South Carolina. This comprehensive initiative was completed in 2015 which delivered:

• Improved policy measures for greater security
• Improved measures for added privacy
• A comprehensive information security program
• Increase security awareness at all levels of the university
• Installed tools to assist with security and monitoring

The next wave of security enhancements that will build upon security of the enterprise and begin to increase security on privately owned devices that access and store university information will be implemented. These plans include:

• Two factor authentication
• Encrypted device management
• Tool licensing for privately owned devices

Threats:

• Historical organizational culture
• Rate of change
• Attitudes towards change – individual vs. team
• Resource constraints

Historical Organizational Culture: If UTS is going to continue to re-invent itself into an organization that values its customers, staff and community, traditional business and employment practices will have to change. Without change, we are destined to repeat our past and remain passive when challenged to adopt newer and more progressive service and support
strategies. To mitigate this threat, UTS is actively working on leadership development and staff enhancement programs to encourage cultural changes at all levels throughout the organization. UTS recognizes cultural changes are more complex than changing behaviors and we must promote positive changes from executive leadership all the way to the grassroots in the organization.

**Rate of Change:** We are a university of many valued traditions that afforded the institution many years of predictable academic and business operations. Market and cultural influences now find us having to effect change at rates much faster than our previous practices allowed. Another mitigation strategy will include the ongoing development of employee and leader competencies to support the existing employee performance management system in place today to focus on flexibility and adaptability as an expectation to accomplishing our jobs.

**Attitudes: Individual vs. Team:** If UTS desires to achieve goals that exceed the sum total of all its individual efforts, then an attitude shift must take place that values the result of the organization and team greater than oneself. Our past practices have rewarded individual efforts at the expense of the team, as individuals sought to carve out positions and roles as mission-critical players based on individual knowledge and expertise. Such information was not typically shared with others. Future rewards and programs, currently in practice, will continue to focus on incentives that promote teamwork.

**Resource Constraints:** UTS has endeavored to increase its performance and service reputation by taking on more work which requires ongoing maintenance support. There were many scenarios where no additional recurring budget support was available, which created a type of “service grid-lock” by spreading the organizational resources over to many projects and operational requirements. This practice created single points of failure, reduced product and service expertise, reduced service response times, and reduced reliability. Without the introduction of an enterprise change, control process for all IT products, services and standards across the university and the continued demand for new and expanded IT services will only be met with lower organizational performance, status quo/subpar IT services, and a growing risk of catastrophic IT outages. Better resource planning tied to university priorities will assist in reducing such risks.

**University Technology Services - Goals, Priorities and Initiatives**

**Goals:**

UTS is currently focused on three specific goals:

1. Improve customer service
2. Increase operational efficiency
3. Improve employee job satisfaction

**Priorities:**

UTS has identified the following priorities for both project and operational activities:

1. Improve leadership effectiveness
2. Improve staff work environments and staff development opportunities
3. Improve planning and resource management.
4. Support OneCarolina
5. Support UTS Service Management

Support priorities:

OneCarolina is a multi-year project to modernize, streamline, and enhance academic and administrative services. This project will create an integrated digital community linking the eight campuses within the university system. The project will support the primary mission of the university. UTS will continue to partner with project stakeholders through implementation and beyond.

UTS Service Management is a multi-year project that focuses on the operations within UTS. This project will allow UTS to standardize processes based on industry best practices. By incorporating best practices and service lifecycle management, UTS will better serve customers’ needs due to improved, consistent operations, documented processes and governance over changes.

Initiatives:

The following list represents strategic initiatives identified by both customers and operational staff that will be reviewed and updated as university priorities change. Based on resource constraints and ongoing university priorities, initiatives will either be scheduled or deferred accordingly. Balancing the external view of service (customer view of service) with the internal view of service (IT operational view of service) is essential to ensure the organization can keep up with the demands of the business. The table below shows the top five initiatives for each:

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<td>1. OneCarolina</td>
<td>Leadership Development</td>
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<td>2. Enterprise Space Management</td>
<td>Service Management</td>
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<td>3. Enhance collaborative IT research</td>
<td>Standardize IT security policies and practices</td>
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<tr>
<td>4. Centralize all UTS customer interface points</td>
<td>Establish &amp; improve third party services</td>
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<td>5. Establish specific industry best practices based on ITIL with associated metrics</td>
<td>Staff enhancement initiatives (career development, staff recognition, training)</td>
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Appendix A: UTS Departmental Strategic Plans
University Technology Services
University of South Carolina

Service Management Strategic Plan
2015-18
Mission Statement

The mission of Service Management is to align UTS services with the evolving IT needs of university constituents and improve service delivery and customer service in a meaningful and measurable way.

Vision Statement

The vision of Service Management is to establish and support an environment that consists of multiple areas within UTS but functions as a single, integrated organization. All areas will have common objectives and standard practices for delivering services. Service Management will guide UTS in offering high-quality, affordable services and support that competes with private industry. This will result in repeat customers and increased revenue streams.

Business Responsibilities

Functional

- Customer relationship management
  - Develop standards for interactions with current and future customers
  - Client advocate program
- Customer service
  - Manage the provision of products and services before, during and after a purchase
  - Identify and develop activities to enhance customer service and satisfaction
  - Clearly define SLAs and OLAs
  - Provide one-stop support, service orders, updates, delivery and billing and surveys
- Process definition management
  - Define UTS-wide standard processes for Request, Incident, Problem, Release, and Demand management (ICRPD)
  - Define and develop ITIL-based metrics and monitoring around UTS-wide standardized processes (ICRPD)
  - Continual improvement initiatives
- Performance metrics management for products and services
  - Identify, quantify and develop meaningful metrics to assess UTS products and services
  - Define continual improvement initiatives
- Product and service lifecycle, acquisition, and rate management
  - Identify, define and develop/acquire new and/or existing products and services
  - Manage/monitor applicable products and services through entire lifecycle or assisting product owners with the lifecycle of their products
- Vendor product and service delivery management
  - Ensuring contracted products and services are delivered per contract guidelines
- Centralize all UTS customer interface points
o Establish a single customer contact for products, services and support (7-1800)

*Note:* iCARE is currently walk-in access.

**Operational**

- Customer service operations (TBD)
- ServiceNow operations and support
- UTS website and related sites operations and support
- Service Catalog management
- Customer Relationship Management
  - Escalations
- UTS process management
- Problem management
  - Identify and help operational areas prevent problems and resulting incidents from occurring
  - Assist operational areas eliminate recurring incidents
  - Assist operational areas in minimizing the impact of incidents that cannot be prevented
- Demand management
  - Prioritize, manage and forecast demand of current and future products and services
- Public Relations and marketing of UTS products and services
- Performance metrics and monitoring for products and services
  - SLA and OLA compliance of products and services
  - Operational metrics and monitoring handled by operations team
- Customer business analysis
- Software distribution
- SLA Billing

**Service Management – Products and Services**

**Services**
- ServiceNow support
- Bomgar support

**Products**
- ServiceNow
- Bomgar
Service Management – SWOT Assessments – Strengths, Weaknesses, Opportunities and Threats

Strengths

- Executive support
- Employees care about customers
- Customer relationships
- Excellent problem solving and analytical abilities
- ITSM experience
- Commitment to training

Strengths: Detailed Description

Executive Support: Service Management (SM) has executive support to fulfill the mission and vision of the department.

Employees care: SM is a new department within UTS and has been staffed by a number of strong team members who understand that their job is to take care of customers and coworkers. They understand that providing excellent customer service requires both “servant leadership” and “self-sacrifice” for the good of the enterprise first, departments and organizations second, individual customer needs third, teams and co-workers fourth.

Customer relationships: SM team members have strong relationships with customers in traditional lines of service. Without impacting these positive pockets of service, SM must recognize that there are varying levels of service and relationships that need further development. This will require organizational clarity on who our customers are and what our services include. A current challenge is the underlying opinions that UTS is “all things to all people.” This idea, which is held by many in the organization, degrades customer service, service quality and reliability.

Problem solving: Problem solving and analytical skills are critical in understanding our customers’ business requirements, identifying possible solutions, and delivering solutions that meet those business requirements. The years of operational experience within the SM team enables them to hone their problem solving and analytical skills. This leads to a proactive system of customer relationship management and service delivery.

ITSM experience: While Information Technology Service Management (ITSM) has not been fully adopted by UTS, pockets of knowledge and understanding exist with regard to ITSM best practices. New ITSM tools have been acquired and are being implemented. These pockets of knowledge who have familiarity with ITSM lessens “culture shock” to UTS staff.

Training: Traditionally, UTS has invested in training and conferences as a means of expanding and investing in knowledge and skills within the organization. SM team members can utilize this UTS strategy to further their ITSM knowledge and expand their customer service toolset.
Weaknesses

- Work load prioritization
- Resource constraints
- Resource/Asset management
- Service lifecycle management
- Operational maturity
- Resistance to change
- Silo mentality: my area vs the whole organization

Weaknesses: Detailed Description

**Prioritization:** Conflicting priorities can, and will, affect implementation of service management. Conflicts must be identified early and parties must work together to resolve in a timely manner.

*Mitigation:* SM will assist UTS in implementing a governance process to prioritize work and initiatives.

Initiative: Standardize processes of UTS work

**Resource Constraints:** UTS lacks the required resources to implement ITSM in a timely manner.

*Mitigation:* UTS leadership and SM will work together to identify resource needs and shift appropriate resources when necessary.

**Resource/Asset Management:** In order to provide quality customer services, the required resources and tools must be available.

*Mitigation:* UTS will implement resource management to better utilize and mobilize resources.

Initiative: Resource Management

**Lack of service lifecycle management:** Currently, the organization has no means to track a service throughout the lifecycle of the service. Stale and unneeded services exist.

*Mitigation:* SM will implement a service lifecycle management process to manage and monitor services.

Initiative: Service Lifecycle Management

**Operational Maturity:** There is currently no adequate means to measure and assess operational metrics. This strategic weakness gives rise to the daily challenges of keeping the enterprise systems up and operational. This leads to a reactive versus proactive system of management and survival based services.

*Mitigation:* SM will implement metrics and monitoring of operational activities to measure service delivery. Continual improvement initiatives will

Initiative: Metrics and Monitoring
Change: UTS employees have historically been very resistant to change.

Mitigation: Since ITSM is a fundamental change in the way the organization operates, it is crucial that ITSM be implemented in a methodical and transparent fashion where changes are thoroughly communicated with staff and roles and responsibilities are clear.

Initiative: Communications and Marketing

Silo mentality: A successful ITSM implementation requires input, cooperation, and coordination from the entire organization. Past attitudes valued respective areas vs. the organization.

Mitigation: To be successful, a shift in attitude must occur that values the whole organization first before respective areas. SM will build relationships throughout all areas of UTS to bridge gaps and help foster a feeling of “oneness” in the organization. Clear and concise communication, definitive roles and responsibilities, and efforts focused on employee satisfaction will be some of the strategies employed to accomplish this task.

Opportunities:

- Customer demand management
- Work and project governance
- Enhance customer service and experience
- Improve external and internal communications
- Streamline UTS operations through standardized processes and metrics/monitoring
- Efficiencies in front-facing service units to improve customer experience

Opportunities: Detailed Description:

Customer demand management: Through enhanced communications, direct customer interactions, and the ITSM tool, SM has the opportunity to understand customer wants/needs and focus on the planning and acquisition of products and services to meet those wants/needs where they have strategic importance to the university.

Initiatives: Standardize processes for UTS work, Communications and Marketing

Work and project governance: SM can assist in the development of a UTS governance model for all projects and work through the standardization of work processes and procedures. This model ensures UTS focuses on strategically important initiatives which ensures better utilization of available resources.

Initiatives: Standardized processes for UTS work

Enhance customer service and experience: The SM department offers UTS the ability to enhance customer service and experience. SM staff dedicated directly to service and experience ensures UTS technical staff can focus on operational activities while SM staff focuses on ensuring that desired service levels are met. This creates a uniform experience for customers.

Initiatives: Customer Service, Customer Experience
Improve external and internal communication: Adequate and timely communication both internally and externally are crucial to the success of any organization. Good communication ensures the intended message is received by staff and customers without any distortion in meaning. It allows staff to fully understand roles, responsibilities and direction as well as ensuring customers understand the direction of the organization, products and services.

Initiative: Communication and Marketing

Streamline UTS operations: ITSM provides standard processes/procedures and metrics to streamline operations. Results include:

- Decrease in service delivery times
- Increase in service quality
- Decrease is service cost
- Service metrics and monitoring
- Pro-active response to service disruptions
- Increased employee satisfaction

Initiatives: Standardize processes of UTS work

Service Unit efficiencies: Service units that are the frontline for customer service can be modified to create efficiencies in areas such as cost, training, and management. The resulting additional resources can be reinvested to create additional service offerings for our customers.

Initiatives: Customer Experience, Customer Service

Threats

- Resource constraints
- Conflicting priorities
- Organizational structure
- Resistance to change
- Rate of change

Threats: Detailed Description

Resource Constraints: UTS lacks the required resources to implement ITSM in a timely manner.

Mitigation: Aspects of ITSM will need to be prioritized, resources and assets identified, and timelines developed in accordance with the overall needs of our university community.

Conflicting priorities: Other UTS priorities may divert resources needed to implement the desired aspects of ITSM.

Mitigation: Senior Leadership will need to recognize these conflicts and prioritize initiatives in the best interests of our customers.

Organizational structure: Successful ITSM implementation may require UTS to further reorganize to better align resources and assets to accomplish the mission of Service
Management. Without these changes the goals and priorities of Service Management may be missed or not fully realized.

Mitigation: Organizational changes can be negotiated and resolved as issues are identified.

Resistance to change: In order for the Service Management team to achieve its goals, it must have assistance, input and acceptance from the entire UTS organization.

Mitigation: An attitude shift within UTS must take place that values the result of the organization and team greater than oneself. Rewards and programs, currently in development, will focus attention to promote teamwork. Another mitigation strategy will include the future development of employee and leader competencies to support the existing employee performance management system. Teamwork will be an expectation of the new system.

Rate of change: Rapidly evolving technology, social media, and market and cultural influences require UTS to change and adapt at rates much faster than previous practices allowed.

Mitigation: Introduction of streamlined and standardized processes for operations will allow us to address this increase in rate of change. Again, another mitigation strategy will include the future development of employee and leader competencies to support the existing employee performance management system.

Service Management – Goals/Priorities/Initiatives

Goals

- Service lifecycle management
- UTS governance of all projects and work
- Improve customer service and experience
- Improve service delivery through standardized processes, procedures, and metrics/monitoring for operational activities
- Improve communications and marketing

Priorities

- Improve customer service and experience
- Improve service delivery through standardization of processes and establishment of service metrics for operational activities
- Improve communications and marketing
- Create UTS governance model for all projects and work
- Resource management

Initiatives: (1 - 3 years)

<table>
<thead>
<tr>
<th>Priority</th>
<th>Initiative Description</th>
<th>Begin</th>
<th>End</th>
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</thead>
<tbody>
<tr>
<td>Area</td>
<td>Start Date</td>
<td>End Date</td>
<td></td>
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<tr>
<td>----------------------------------------------------------------------</td>
<td>------------</td>
<td>-----------</td>
<td></td>
</tr>
<tr>
<td>Standardized processes for UTS work (Incident, Problem, Demand, Change and Release)</td>
<td>7/1/2015</td>
<td>12/31/2015</td>
<td></td>
</tr>
<tr>
<td>- Design solution for processing demand, work and projects</td>
<td></td>
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<tr>
<td>- Define standard processes</td>
<td></td>
<td></td>
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<tr>
<td>- Deploy processes in tool(s)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Identify UTS Governance to review, approve and prioritize demand, work and projects</td>
<td></td>
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<tr>
<td>Knowledge Management</td>
<td>7/1/2015</td>
<td>6/30/2018</td>
<td></td>
</tr>
<tr>
<td>- Develop knowledge management process</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Define roles and responsibilities</td>
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<tr>
<td>- Develop plan to identify and implement in ITSM tool</td>
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<tr>
<td>- Develop plan to manage knowledge</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Yearly knowledge reviews</td>
<td></td>
<td></td>
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<tr>
<td>Digital Asset Management</td>
<td>7/1/2015</td>
<td>6/30/2018</td>
<td></td>
</tr>
<tr>
<td>- Develop digital asset management process</td>
<td></td>
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<tr>
<td>- Define roles and responsibilities</td>
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<td></td>
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<tr>
<td>- Develop plan to identify and implement assets in digital solution</td>
<td></td>
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<tr>
<td>- Develop plan to manage assets</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Yearly asset reviews</td>
<td></td>
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<tr>
<td>Product and Service Lifecycle Management</td>
<td>9/01/2015</td>
<td>11/30/2015</td>
<td></td>
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<tr>
<td>- Develop process to manage service lifecycle to include definition, review, approve, cost, rate, communication, and support of new/existing service</td>
<td></td>
<td></td>
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<tr>
<td>Identify and Deploy Standards and Service Metrics by area</td>
<td>10/01/2015</td>
<td>06/30/2016</td>
<td></td>
</tr>
<tr>
<td>- Identify metrics</td>
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<tr>
<td>- Review and standardize on metrics</td>
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<tr>
<td>- Implement metrics to acquire baseline stats</td>
<td></td>
<td></td>
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<tr>
<td>Release management and communication process</td>
<td>1/01/2016</td>
<td>6/30/2016</td>
<td></td>
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<tr>
<td>- Develop release management plan and a means to communicate plan to customers</td>
<td></td>
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<tr>
<td>Resource Management</td>
<td>3/01/2016</td>
<td>8/01/2016</td>
<td></td>
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<tr>
<td>- Implement time cards to capture resource expenditures on projects and work initiatives</td>
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<td></td>
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<tr>
<td>- Implement resource management to manage resources and forecast future resource needs</td>
<td></td>
<td></td>
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<tr>
<td>Communication and Marketing</td>
<td>4/01/2016</td>
<td>6/30/2018</td>
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<td>-------------------------------------------------</td>
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<tr>
<td>• Develop communication and marketing strategies to better promote products and services</td>
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<tr>
<td>• Develop communication strategies to gather customer demand</td>
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<tr>
<td>• Develop internal communications to keep employees aware of changes within the organization</td>
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<tr>
<td>• Develop social media strategy</td>
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<table>
<thead>
<tr>
<th>Configuration Management</th>
<th>05/01/2016</th>
<th>06/30/2018</th>
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</thead>
<tbody>
<tr>
<td>• Identify all UTS configuration items</td>
<td></td>
<td></td>
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<tr>
<td>• Develop plan to implement items in ServiceNow</td>
<td></td>
<td></td>
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<tr>
<td>• Develop plan to manage items</td>
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<table>
<thead>
<tr>
<th>Customer Experience</th>
<th>7/01/2016</th>
<th>6/30/2018</th>
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<tbody>
<tr>
<td>• Define the customer experience and keep it consistent across all touch points. Base the experience on individual customer needs</td>
<td></td>
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<tr>
<td>• Design and implement new visitor and iCARE center registration process</td>
<td></td>
<td></td>
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<tr>
<td>• Continually improve UTS website based on customer feedback</td>
<td></td>
<td></td>
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<tr>
<td>• Leverage technology to enhance the customer experience.</td>
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<td></td>
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<tr>
<td>o Survey customers for continual improvement of the UTS website and self-service portal</td>
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<tr>
<td>o Survey customers for continual improvement of the iCARE center and service desk.</td>
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<tr>
<td>o Develop social media strategy</td>
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<td></td>
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<tr>
<td>• Design and implement product and service showcase</td>
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<table>
<thead>
<tr>
<th>Customer Service</th>
<th>8/1/2015</th>
<th>6/30/2018</th>
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</thead>
<tbody>
<tr>
<td>• Design and implement new visitor and iCARE center registration process</td>
<td></td>
<td></td>
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<tr>
<td>• Continually improve UTS website based on customer feedback</td>
<td></td>
<td></td>
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<tr>
<td>• Identify and deploy customer service operations team responsible for managing customer service and expectations (TBD)</td>
<td></td>
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<tr>
<td>• Develop and implement customer service training program</td>
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<thead>
<tr>
<th>Continual Improvement</th>
<th>6/30/2016</th>
<th>6/30/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Yearly review of products and services</td>
<td></td>
<td></td>
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<tr>
<td>• Quarterly review of metrics</td>
<td></td>
<td></td>
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<tr>
<td>• Yearly review of business processes</td>
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</tr>
</tbody>
</table>
- Quarterly review of customer feedback
University Technology Services
University of South Carolina

University Information Security Office Strategic Plan
2015-18
Mission Statement

The mission of the University Information Security Office (UISO) is to support education and research by responding to security incidents and advocating secure practices.

Vision Statement

Become nationally recognized for our progressive and practical solutions.

UISO – Products and Services

- Security Program Administration
  - Design
  - Documentation
  - Reporting
- Security Consulting and Assessment
  - Risk Assessment
  - Vulnerability Assessment
  - Penetration Testing
  - Security Consulting
- Security Monitoring and Incident Response
  - Security Monitoring
  - Incident Management
  - Forensic Investigation
  - E-Discover Coordination
- Security Awareness, Training, and Outreach

Business Responsibilities

Functional

- Establish and maintain the university information security program
- Establish and maintain the university information security incident response program
- Serve internal and external stakeholders as the information security subject matter experts

Operational

- Design, install, and maintain hardware and software infrastructure in support of incident response and security monitoring efforts. This includes the following systems:
  - Vulnerability assessment tools
  - Security event and information management systems
  - Penetration assessment tools
  - Incident response and tracking tools
  - Intrusion detection tools
- Manage the university incident response activities
  - Address ServiceNow tickets assigned to the UISO
- Respond to externally/internally reported security incidents
- Coordinate incident response teams

- Provide security awareness and training, through various mediums, to university stakeholders

**UISO – SWOT Assessments – Strengths, Weaknesses, Opportunities and Threats**

**Strengths**

- Executive Support
- Momentum
- Resource Availability
- Quality Staff
- Strategic Partnerships
- Organizational Structure
- Solution Oriented

**Strengths: Detailed Description**

**Executive Support:** The UISO has gained significant executive support throughout the eight-campus system. Open lines of communication are established and often utilized with Columbia leadership, as well as with campus CIOs, Deans, and IT professionals.

**Momentum:** As a result of the SecureCarolina project and current events, information security topics are at the forefront of many university minds. The continued backing of the President and Board of Trustees (beyond the end of SecureCarolina) will help ensure the UISO’s forward momentum continues throughout the 2015-16 year.

**Resource Availability:** The UISO currently has all FTE positions filled. That staff is equipped with modern state-of-the-art security monitoring, detection, and forensic tools.

**Quality Staff:** The 10 members of the UISO staff represent over 125 combined years of experience in IT service. Eighty-five of those combined years are dedicated specifically to information security. Further, the UISO staff accounts for more than 40 professional certifications in the information security field.

**Strategic Partnerships:** The UISO maintains several high-value strategic partnerships. Our partnership with Audit and Advisory Services allows the UISO in confirming compliance with the Information Security Program. Partnering with Enterprise Risk Management allows the UISO to balance security needs with the business needs of the university, while the close relationship to the South Carolina Department of Information Security allows for smooth knowledge transfer and quick clarification of issues.
Organizational Structure: Organizationally, the UISO is on a peer level with many of the IT professionals our office strives to influence. This allows our team to make suggestions, and recommendations without being viewed as an authority figure.

Solution Oriented: While many of the strengths of the UISO are based in technology or policy, perhaps the most valuable strength is the ability of the staff to create innovative solutions to complex problems. This also allows our office to find ways to balance practical information security with business needs.

Weaknesses

- Sustainable funding model
- Operational maturity
- Prioritization
- Communication strategy
- Breadth of focus
- Enforcement

Weaknesses: Detailed Description

Sustainable Funding Model: The UISO is not a revenue-generating department. As such, we are currently unable to become self-sustainable. Our services are sometimes seen as non-value added, putting us at increased risk of budget cuts.

Operational Maturity: The UISO has introduced many technical monitoring solutions and has also sponsored several policy changes. However, with an intense focus on the SecureCarolina project and the absence of procedure to accompany new tools, these technologies and policies are not being effectively used at this time.

Prioritization: The UISO has deployed several technologies, various monitoring tools, and is faced with the need to incorporate more than 342 controls that are now required by the South Carolina Division of Information Security (DIS). It is also important to note that within the UISO, there are occasionally conflicting responsibilities between incident response and the operational needs of the office. In order to reach potential, the UISO will need to focus on effective prioritization of both tasks and technologies.

Communication Strategy: The UISO currently conducts notable communication efforts. From product documentation and web maintenance to annual National Cybersecurity Awareness Month efforts, communication is constantly flowing from the UISO. However, that communication is mostly absent a strategic plan, tying together all communication efforts and providing a means to evaluate effectiveness.

Breadth of Focus: During the last couple of years, obligations to the SecureCarolina project have forced the UISO staff to narrow focus. While the UISO staff has effectively focused on project tasks and incident response that limited focus has also represented an obstacle to other valuable opportunities in research and intellectual property issues.
Enforcement: Enforcement responsibilities primarily reside with Audit and Advisory Services. The UISO influences enforcement through a strategic partnership with Audit and Advisory Services. Due to the recent expansion of Audit staff, their office has not reached operational maturity. As such, enforcement as a whole may suffer. Additionally, the UISO itself is not backed in policy in regard to enforcement. Currently, there are limited consequences for deviating from the Information Security Program. This compromises the credibility of the Information Security Program, if exposed.

Opportunities

- Untapped potential
- Strategic partnerships
- Compliance catalyst
- Revenue growth
- Project integration

Opportunities: Detailed Description

Untapped potential: The UISO will have the opportunity to explore untapped potential as we approach the future. Several UISO staff members have formal training and experience in areas UTS has not explored. It is also important to access the untapped potential of the data and tools at our disposal.

Strategic partnerships: The UISO has many opportunities to grow, learn, and effectively protect university data through becoming more involved in strategic partnership. IBM’s arrival on campus provides one such opportunity, as does SANS’ interest in engaging the University of South Carolina in security awareness research.

Compliance catalyst: Regulatory compliance represents an opportunity for growth and influence. University departments must comply with Payment Card Industry (PCI), Health Insurance Portability and Accountability Act (HIPAA), and Family Educational Rights and Privacy Act (FERPA). Our office has the tools and expertise to help these departments accomplish that mission.

Revenue growth: The opportunity for revenue growth is an exciting way to counter the “sustainable funding model” topic, earlier identified as a weakness. The UISO should seek ways to generate revenue to the organization and become more financially self-sufficient. Primarily, the addition of new UISO staff may allow our office to generate revenue through log collection, monitoring services, HIPAA consulting, and security assessment.

Project integration: The UISO has the opportunity to become more involved in the project management process and system lifecycle. This may allow our office to strategically include security requirements and best practices into the project management process, ensuring all new university projects and systems have security at the front of their considerations.
Threats

- Continued investment
- Balancing operational with strategic
- Organizational challenges
- Acceptance of responsibility and ownership
- Evolving threat landscape

Threats: Detailed Description

**Continued investment:** Information security is a “journey,” not a “destination.” It can become an expensive journey as well. The never-ending evolution of cyber threats, combined with the evolution of infrastructure and the absence of a UIOS sustainable funding model, create a threat to the ongoing growth of information security at the University of South Carolina. It is important that the university become neither frustrated with expense nor intimidated by threat.

**Balancing operational with strategic:** It is essential that the UIOS improve in their ability to balance operational tasks with strategic tasks. This will improve as the staff develops new business processes and formulates improvements to some of the inefficient business processes in practice today.

**Organizational challenges:** There is a lack of recognition and acknowledgement of policy and responsibility as they pertain to the UIOS. IT professionals sometimes seem confused regarding their role locally versus the role of UIOS. This confusion results in a tension between the need to provide statewide support versus limiting support efforts to just SLA customers. Also, many external stakeholders hold a negative opinion about University Technology Services, perhaps developed in the past.

**Acceptance of responsibility and ownership:** The UIOS often struggles to get Organizational Units (OU) to accept responsibility and ownership for the security of assets. Our office has struggled to piece together a comprehensive list of security liaisons throughout the eight-campus system. Some identified liaisons are mostly disengaged from security discussion and practice. Some folks seem to express feelings that security is purchased, not worked for. Further, key responsibilities such as identity and access management, including multi-factor authentication support, lack clear operational ownership.

**Evolving threat landscape:** More information is digitized today than ever before and data is often referred to as the “new oil.” Cybersecurity threats will increase exponentially in both frequency and sophistication as criminals continue to seek ways to exploit data for profit. It is crucial that UIOS staff is provided opportunities to train for combat against the most modern threats with the most sophisticated tools available.
UISO – Goals/Priorities/Initiatives

Goals

- Coordinate the response to security incidents
- Report on the adoption of safeguards
- Provide the foundation for OUs to safeguard data and IT resources

Priorities

- Elevate and leverage stakeholder relationships and strategic partnerships
- Strategic alignment of security program with State of South Carolina requirements
- Support security liaisons with implementation, assessment, and validation services
- Implement security program maturity assessment & planning framework
- Mature university regulatory compliance program(s)
- Enhance enterprise security controls and drive system-wide adoption
- Integrate security program with enterprise risk management, audit functions, and project management
- Target security awareness and training efforts through adoption of a formal strategy
- Adopt continuous improvement methodology for UISO Security Operations

Initiatives (1 - 3 Years)

The following list represents key strategic initiatives that are pivotal for accomplishing the department’s Mission and achieving our Vision as stated in this plan. This plan will be reviewed and updated on an annual basis. Based on resource constraints and ongoing university priorities, initiatives will either be scheduled or deferred accordingly.

<table>
<thead>
<tr>
<th>Initiative Description</th>
<th>Begin</th>
<th>End</th>
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<tbody>
<tr>
<td>Elevate and Leverage Stakeholder Relationships and Strategic Partnerships</td>
<td>7/1/15</td>
<td>Ongoing</td>
</tr>
<tr>
<td>- Implement an information security advisory council with system-wide representation</td>
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<tr>
<td>- Collaborate with Audit and Advisory Services and Enterprise Risk Management to elevate the importance of the university’s information security program and to drive adoption through information sharing, audit engagements, and executive level risk management activities</td>
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<tr>
<td>- Actively engage the security liaison community to build a robust network for information sharing and the development of security guidelines, best practices, and implementation recommendations</td>
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</tbody>
</table>
### Strategic Alignment of Security Program with State of South Carolina Requirements

- Update USC policies to reflect alignment with state program
- Document exception process
- Create guidance documents that match state requirements to existing solutions
- Distribute notifications of new/updated documentation

| 7/1/15 | 1/1/16 |

### Support Security Liaisons with Implementation, Assessment, and Validation Services

- Define services offered by UISO
- Establish the identity of the Security Liaisons group
- Present support materials and available services to Security Liaisons and OU leaders

| 7/1/15 | 6/30/17 |

### Implement Security Program Maturity Assessment & Planning Framework

- Select/design initial maturity questionnaire
- Develop/deliver training for security liaisons to complete questionnaire
- Conduct first maturity assessment
- Analyze results and report trends

| 1/1/16 | 6/30/16 |

### Mature University Regulatory Compliance Program(s)

- Collaborate with university leadership to establish a formal HIPAA compliance structure including: validate the scope of compliance, assign roles and responsibilities, and develop and implement policies and standards
- Provide information security services to HIPAA and PCI covered units that assist them in their compliance efforts (i.e. SAQ validation, gap analysis, implementation consulting, annual risk assessments, customized training and awareness, etc.)
- Actively engage in the implementation and execution of a Payment Card Industry compliance steering committee

| 7/1/15 | 6/30/18 |

### Enhance Enterprise Security Controls and Drive System-wide Adoption

- Evaluate existing enterprise security controls to determine their effectiveness and develop strategic initiatives for improvement.

| 7/1/15 | 6/30/18 |
- Work with OUs to ensure their awareness of enterprise security controls; and, to assist them in their successful implementation and administration.

<table>
<thead>
<tr>
<th>Integrate Security Program with Enterprise Risk Management, Audit Functions, and Project Management</th>
<th>1/1/16</th>
<th>Ongoing</th>
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<tr>
<td>• Identify timelines for Cyber Risk Register generation and Audit’s annual planning to inform maturity questionnaire timeline</td>
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<tr>
<td>• Compare results of first maturity questionnaires to items on Cyber Risk Register</td>
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<tr>
<td>• Identify most useful means for IT Audit to obtain results from maturity questionnaires</td>
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<tr>
<td>• Develop and implement a plan for integrating information security practices into the system development lifecycle and project management processes</td>
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<tr>
<th>Target Security Awareness and Training Efforts Through Adoption of a Formal Strategy</th>
<th>7/1/15</th>
<th>6/30/18</th>
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<tr>
<td>• Conduct risk assessments to efficiently target awareness</td>
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<tr>
<td>• Perform SANS’ Human Risk Surveys to identify key issues</td>
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<tr>
<td>• Charter a SecureCarolina Awareness Steering Committee</td>
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<tr>
<td>• Implement a security awareness program for newly hired employees</td>
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<tr>
<th>Continuous Improvement Methodology for UISO Security Operations</th>
<th>7/1/15</th>
<th>6/30/18</th>
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<tbody>
<tr>
<td>• Integrate newly deployed security infrastructure into standard operating procedures</td>
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<tr>
<td>• Review existing processes and update to improve their effectiveness and efficiency</td>
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<tr>
<td>• Improve the collection, taxonomy, and reporting of security operation metrics</td>
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<tr>
<td>• Increase the capacity of existing security infrastructure and expand coverage to include remote campuses</td>
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University Technology Services
University of South Carolina

Data Center Services Strategic Plan
2015-18
Mission Statement

The mission of Data Center Services is two-fold as we have two separate business responsibilities that overlap. The two areas are Client Services and Infrastructure Services. Client Services encompasses three areas within the Data Center, which are Desktop Support, iCARE Center and Service Desk. These areas are in direct contact with university faculty, staff, and students. Infrastructure services provide support for the university that involve mainframe support (until 2016), enterprise and departmental storage and servers, desktop infrastructure, enterprise email, and active directory along with a variety of enterprise level services.

It is the mission of Data Center Services to provide the best service possible to our customers through prompt, professional, accurate, and standard processes. We will provide and promote the same care and professionalism, whether it is in person or by technology for students, faculty, and staff on a 7x24x365 basis.

Vision Statement

The vision of Data Center Services is to provide a level of expertise and efficiency that makes information technology easy for the customer. We will provide solutions and services that are understandable, competitive, and sustainable that promote trust through communication, responsibility, respect, teamwork and transparency.

Client Services – Products and Services

- **iCARE Center** – Provide technical service and support for students
  - Wired and wireless network connections for Mac, PC, and gaming consoles
  - Malware removal (viruses, spyware, adware, etc.)
  - Software installs
  - OS patches
  - System troubleshooting
- **Desktop Support** – Service Level Agreements (SLA) and fee-based services for faculty and staff
  - Support for desktops, laptops, mobile tablets, and smartphone (Mac and PC)
  - Wired and wireless network connections
  - Malware removal (viruses, spyware, adware, etc.)
  - Software installs and troubleshooting for installed products
  - OS patches
  - System troubleshooting
  - Support for scanners, printers, and peripheral
  - Central file and print server
  - Administrative support of accounts, group memberships, and access privileges
- **Service Desk** – Single point of contact for computer, technology and IT-related questions and support
  - Central number for technical support weekdays from 8:00am to 6:00pm
  - After hour support for critical system reporting
- Authentication support for Enterprise systems (email, banner, finance, blackboard, etc.)
- Self-service portal for requesting new services and support
- Universitywide monitoring and escalation for critical systems
- Software distribution for enterprise and individual software

**Infrastructure Services** – Manages the UTS data centers at 514 Main and 1600 Hampton. Around-the-clock support for UTS enterprise computing activities.
- Enterprise email and support (Active Directory, Exchange, Office 365, Alias, and listServ, SonicWall anti-SPAM)
- USC domain name system support
- Network username support (new/rename accounts, etc.)
- OS support (Windows, Linux, iOS)
- Enterprise SAN support
- Backup services support
- Server monitoring system
- Windows and Linux patch management system
- SSL certificate management
- SLA services
- Mainframe jobs for HR, Payroll, IBM On Demand, IBM Content Manager
- Scanning and microfiche services

**Business Responsibilities**

**Functional**

- Business continuity
- IT support
- Backup and restore
- Responsive IT support services
- Email and SPAM
- DNS
- SSL certificates
- Adequate disk storage space and compute power
- Data center space, cooling, and power
- Security and patch management
- Monitoring and escalation
- Critical system escalation
- Software distribution
- Scanning

**Operational**

- Standard processes and procedures for service delivery
- 7x24x365 operations online
- Server, desktop, mainframe, laptop, mobile support
- Cost-effective solutions
- Event resolution
- Monitoring and escalation

**Data Center – SWOT Assessments – Strengths, Weaknesses, Opportunities and Threats**

**Strengths**

- Dedicated and customer oriented
- Collaborative
- Knowledgeable (field of work)
- Flexible and adaptable
- Experienced

**Strengths: Detailed Description**

Our staff are characterized as dedicated and customer oriented. We strive to have a positive, proactive attitude towards teamwork and provide the resources our customers need. Many staff are willing to step up to the task and take on the next hard assignment.

We have a wide range of knowledge and skills and have found ways to share that knowledge for the benefit of the organization. Our dedication to completing a task or project is found in all our teams.

Many times we do not have a straight path or solution and must uncover facts as we work through scenarios. Our teams must adapt to the changing environment, technologies and our customer needs. The ability to adapt quickly is not a luxury, but necessary to keep pace with future direction and to be able to meet customer needs rapidly.

We are committed to continually upgrading the skill sets as newer technologies emerge and our staff continue to grow their problem solving techniques.

**Weaknesses**

- Staffing levels and one deep scenarios
- BTTWWADI/Coping with change
- Lack of feedback loop and/or continuous process improvement cycle
- Communication across the organization
- Lack of standard procedures/inconsistent processes
- Capacity planning for compute and storage
- Inconsistent SLA model
- Billing and cost recovery for funding
Weaknesses: Detailed Description

The lack of depth in technical staff has always been a concern. In many cases, technical knowledge is held by a single individual. This hurts the organization, as well as the individual. We are working to prevent this situation, but need to keep it at the forefront when managing our teams.

With the rapid changing of our environment, we must be ready to embrace change. Gone are the days that we know exactly what is going to happen day in and day out. Our vendor created systems, technologies and our customers are a constantly moving target. We have to move with it and can no longer do it the way we used to.

Many times our teams are in the middle of break fix problems or large numbers of requests and we tend to keep our heads down to resolve. We must take time to look above this cycle and provide a way to have a continuous improvement cycle and feedback loop. We should always be thinking about how we can make this better the next time and have tools in place to capture. Our move to ITIL standards and tools will aid in this.

We have to continue to communicate across groups at UTS. It is easy for individuals to see how something impacts them, but we must communicate to gauge the impact on the entire organization. Management has to encourage and allow for this movement of information. Developing and using good communication skills, encouraging staff to discuss issues with others, and asking for help has to be the standard.

We have to be able to predict trends on resources and be able to communicate this in order to deliver more consistent and predictive services. As we develop, we must include a cost recovery model that is sustainable.

Opportunities

- Enterprise consolidation (economies of scale)
- Strengthen customer service and expand partnerships
- Cloud computing (bubble/bursting)
- VDI for campus
- Office 365 faculty and staff roll out
- Departmental communication
- New tools for consistent processes (SN-CMDB)
- Automation and self-service
- Work force planning, team building, and cross training
- Professional and technical training
- Multiple systems with dashboards
- Metrics and monitoring
Opportunities: Detailed Description

Strengthening our relationships with our teams, vendors, and customers is an opportunity that will allow us to move forward together efficiently and effectively. Once we establish trust and show the benefits, we can pool monies to create opportunities that will allow for economies of scale. Cloud computing is an expensive proposition for standard data centers, but being able to satisfying peak needs for short durations are very attractive once we find the right combination.

We want to continue to expand our service offerings such as virtual desktop infrastructure (VDI) for campus, Office 365, automation and self-service. By bringing such offerings to our community we can establish a needed best practice approach and handle demand without increasing work staff (work smarter, not harder). We are working to ensure that staff members are assigned to areas that will allow them to best utilize their training and skill sets.

The use of ServiceNow will help to move our teams to consistent and standard ways to have requests entered and routed. We have just touched the surface with what is capable with ServiceNow, as we progress this year with population of CMDB, reports and dashboards we hope to see higher efficiency and productivity.

Threats

- Uncoordinated distributed IT
- Poor capacity planning tools
- Data growth rates (55% yearly since 2012)
- Security patching
- Inconsistent processes
- Non-standard equipment
- Loss of time due to malware, viruses, phishing, and compromised accounts
- Rate of change

Threats: Detailed Description

Many times our organization has to support technologies that are purchased without our prior knowledge. This can create problems with standard implementation processes.

Our tools today have not been adequate in predicting trends in the data center for power, storage and computing resources. We are beginning to grow this area to get relief and more strategic planning.

In storage space alone we have seen growth rates of 55 percent a year, as well as unplanned new systems. It is very difficult to get our customers to bring accurate sizing information.

Loss of work time and productivity is always a problem. Many things contribute to this including improperly patched systems, inconsistent and manual processes, non-standard equipment, malware, viruses, and other problems with compromised accounts. It can sometimes take days to research and remediate a problem such as a phishing scam that got us blacklisted. It
is also common to spend 50 percent more time troubleshooting drivers for non-enterprise level equipment. We are working to establish processes, SLAs and patch management to help in this area. We have a good process for our Windows servers, but a consistent plan for LINUX is still being developed. We need to complete this plan and implement it if we are to stop potential compromises.

We work in a rapidly changing technology landscape that can be difficult to keep knowledgeable while handling operational duties. We are trying many techniques to bring the knowledge into the organization and communicate to cross functional teams.

Data Center – Goals/Priorities/Initiatives

Goals

- **Short-term and continuous**
  - Keep our services online and functioning efficiently
    - Deliver services that are reliable, cost effective, and constantly evolving to support innovation and future technology.
    - Managed, monitored, patched, and sustainable
  - Effective communication to our customers and teams
    - Service level agreements, transparency and change management
    - Improve collaboration, responsiveness and accountability
  - Effective management of our resources and staff
    - Develop clear and consistent processes that make it easy to follow through and get things done
    - Career pathing, cross training, mentoring, tech training
  - Effective staff development to become more effective in their job roles

- **Long-term**
  - Plan for providing a modern data center
    - Sustainable models for managing growth via capacity planning
    - Plan for Network Operations Center
    - Disaster recovery and data protection (backup) systems and processes
    - Process improvement with documentation, standardization, automation and self-service
  - Refine and expand services to create a more secure IT environment
  - Investigate cloud computing and hosted services

Priorities

- Deliver converged technology for compute and storage
  - Establishment of sustainable, reliable, cost effective, and evolving solutions for compute and storage
    - POD Technology, VDI, DR, tier 1 storage, archive and cold storage
• Establish a more effective monitoring and management of system resources (SLAs, processes, procedures, automation, metrics, reporting, capacity management etc.)

• Move faculty and staff to Office 365 with added features for faculty staff by June 2016
  – Mail, calendaring, Onedrive, Skype, encrypted email, delve, yammer, DLP, eDiscovery, holds, rights management, spam

• Establish Patch Management Standard and Procedure
  – Creation, management, and enforcement

**Initiatives (1 -3 Years)**

The following list represents key strategic initiatives that are pivotal for accomplishing the department’s Mission and achieving our Vision as stated in this plan. This plan will be reviewed and updated on an annual basis. Based on resource constraints and ongoing university priorities, initiatives will either be scheduled or deferred accordingly.

<table>
<thead>
<tr>
<th>Initiative Description</th>
<th>Begin</th>
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<tbody>
<tr>
<td><strong>Virtual Desktop Pilot Completion</strong> - testing and pilot phase have closed. Rates have been approved to the Board of Trustees. Infrastructure is full. Planning for expansion for new service offering.</td>
<td>9.27.2013</td>
<td>12.15.2015</td>
</tr>
<tr>
<td>Virtual image management for Virtual Desktops - Migration to new image management techniques with VMware enterprise licensing will resolve management issues when we expand the service offering.</td>
<td>1.1.2015</td>
<td>12.15.2015</td>
</tr>
<tr>
<td><strong>Windows 10 Rollout</strong> - Testing of Windows 10 for Enterprise support has been completed so we can support users starting to upgrade. A formal project to fully test impact of rolling out the OS in our SLA image is underway.</td>
<td>9.1.2015</td>
<td>12.31.2015</td>
</tr>
<tr>
<td><strong>PC Refresh for UTS</strong> - Updated inventory and refresh spreadsheet to include items received back from IBM employees and what is already in stock. (Assuming no reuse and replacement of all out of warranty)</td>
<td>5.1.2015</td>
<td>10.30.2015</td>
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<tr>
<td><strong>Mainframe Decommission</strong> - The completion of OneCarolina project phase 1 and phase 2 will remove the use of the mainframe for Student, HR, Finance and Payroll software. As we continue to implement Banner and PeopleSoft, we will be phasing out the mainframe. During this period the project team is executing the communication plan as well as identifying enterprise replacement solutions and consultation for departments that need to migrate function and data.</td>
<td>6.1.2014</td>
<td>6.30.2016</td>
</tr>
<tr>
<td><strong>ServiceNow CMDB</strong> - The coordination of planning, design, and implementation of a configuration management database</td>
<td>1.1.2015</td>
<td>6.30.2016</td>
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</table>
(CMDB) within our ServiceNow software. A CMDB is a repository that is intended to hold a collection of IT assets that are commonly referred to as configuration items (CI), as well as descriptive relationships between such assets. Having this in place will help identify problems in our critical systems and their relationship to other systems.

**DNS refresh** - This is a project to replace the eight Physical servers that operate our internal DNS and TIME services. These servers are 5+ years old.

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**Office 365 transition** - We have begun the project planning for the migration to Office 365 in the cloud. This will allow the merging of faculty, staff and students as well as open the use of many online products Microsoft offers. Part of this project will be to evaluate our SPAM systems that are in place. (Estimated from Microsoft Scope of work)

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**UPS project** - Install three new UPS systems and replace existing PDU’s – connect remainder of Annex on generator

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<td>1.15.2015</td>
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**Enterprise storage upgrade** - We have installed the new storage options with EMC’s XtremIO, VNX 5600, and Isilon. We are currently migrating from old storage to new.

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<td>1.20.2015</td>
<td>11.30.2015</td>
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**Backup strategy** - We are reviewing our backup strategy for the enterprise and will be determining the most cost effective and flexible approach. This will evaluate additional products as well as a review of our existing use of CommVault.

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<td>6.1.2015</td>
<td>3.30.2015</td>
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**POD compute and storage** - This project is the combination of the XtremIO and UCS Server upgrade and storage upgrade project. This has been undertaken to bring needed storage and server capacity online. It is a new “Converged” architecture that will help us better define storage and compute resources.

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<td>6.15.2015</td>
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**Purchase UCS servers to replace DELL servers going out of maintenance.** - These new servers will replace servers that run PRODVC (OC Production Servers)

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<td>12.31.2015</td>
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**Tape library upgrade** - This solution will either replace the current LTO3 drives with LTO6 drives or we might go to IBM 3592 10TB Library and Drives

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<td>6.15.2015</td>
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**Knowledge base project** - Scope of project has changed. We are looking at completely overhauling the current KB and implementing a new ITIL/KCS based KB structure within Service Now taking advantage of some of the new features available within Fuji. The next project meeting is scheduled for mid-September.

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<td>1.2.2015</td>
<td>12.22.2015</td>
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</table>
Building a better data center – efficient, protected, and secure data center for administrative, academic and research computing, re-evaluate and design for system administration, backup and recovery. Enterprise data storage and compute facility that is offered as a **self-service option**. Establish an adequate **disaster recovery** site that supports the identified business continuity of the university.

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<th>1.1.2015</th>
<th>12.31.2018</th>
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University Technology Services
University of South Carolina

Business Office Strategic Plan
2015-18
Mission Statement

To provide financial, administrative, and operational leadership and support to help ensure the success of all areas within University Technology Services.

Vision Statement

To be recognized by our internal and external customers as leaders in the quality and effectiveness of the business support services we provide.

Business Office – Products and Services

- Billing customer services
- Repository for UTS financial documents and contracts
- Procurement management
- Daily operational administration
- Financial management and reporting

Business Responsibilities

Functional

- Billing
- Contract management
- Payables
- Procurement
- Quality Assurance

Operational

- Budget administration
- Financial management and reporting
- Document repository (financial only)

Business Office – SWOT Assessments – Strengths, Weaknesses, Opportunities and Threats

Strengths

- Institutional knowledge
- Internal communication and customer service
- Financial controls
Strengths: Detailed Description

- Business Office team is comprised of several members with longevity at UTS who have substantial history of UTS’s experiential dealings and relationships.
- Within the Business Office, internal communications are good. Bi-weekly staff meetings are held and team members consistently communicate face-to-face and by email. Also, the team has a strong desire to provide excellent customer service by taking pride in work.
- The Business Office has financial controls in place to mitigate risk of loss and assist the DCIO with fiduciary responsibility for resources.

Weaknesses

- Lack of system integration
- Need for development of skills (i.e. accounting, analytical and technology skills)
- Interdepartmental collaboration and partnering

Weaknesses: Detailed Description

- Multiple systems used for billing a) Pinnacle, b) Mr. Bill, and c) IMS as well as other auxiliary systems utilized to accomplish tasks
- Need for development of problem resolution, analysis, and systems thinking skills
- Understanding and familiarity with relational database technology and business best practices.
- Inter-departmental communications suffer as often it is perceived that the Business Office is only here to provide support thus, our judgement or recommendations are downplayed—not perceived as partnering.

Opportunities

- Financial analysis and reporting
- Continued process improvement
- Financial management awareness and collaboration

Opportunities: Detailed Description

- Financial analysis with PeopleSoft and Pinnacle to better interpret financial data and project trends to lead to better financial management
- Continue to update processes for new environments and provide training on processes
- Better understanding of true work capacity with the resources in the department.

Threats

- Attitudes toward change and developing skills
- Historical organizational culture
• Appropriately aligned resources with needs

**Threats: Detailed Description**

• With competing changes and priorities often enhancements, conversions, and clean-up of data isn’t possible. We need time to accomplish this with existing staff and will need to augment skills that are still developing in some staff.
• Change is inevitable yet many employees feel challenged by change. Many employees do not have the initiative to develop new skills.
• The Business Office still has a limited voice in decisions that impact business operations. Often, we are engaged after a decision has been made.

**Business Office—Goals/Priorities/Initiatives**

**Goals**

- Improve financial reporting and ability to provide metrics to UTS (through PeopleSoft)
- Improve contract management system
- Integrate into one billing system
- Update and improve internal processes to yield greater customer service and cost recovery

**Priorities**

- PeopleSoft Implementation/Conversion
- Billing Integration
- Update Internal Processes and Workflows

**Initiatives (1-3 Years)**

The following list represents key strategic initiatives that are pivotal for accomplishing the department’s Mission and achieving our Vision as stated in this plan. This plan will be reviewed and updated on an annual basis. Based on resource constraints and ongoing university priorities, initiatives will either be scheduled or deferred accordingly.

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<tbody>
<tr>
<td>Billing - Continue to integrate billable services into the Pinnacle system</td>
<td>Q3 2015</td>
<td>Q4 2016</td>
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<tr>
<td>Billing - Develop and implement key integration points between ServiceNow and Pinnacle</td>
<td>2016</td>
<td>2018</td>
</tr>
<tr>
<td>Billing - Assist in developing cost/billing models for services in compliance with audit and budget requirements</td>
<td>2016</td>
<td>2018</td>
</tr>
<tr>
<td><strong>Contract Management</strong> - Migrate contract management chart of accounts to SharePoint</td>
<td>Q3 2015</td>
<td>Q2 2016</td>
</tr>
<tr>
<td><strong>Contract Management</strong> - Standardize templates and process for setting up and pricing a new service (service life cycle management)</td>
<td>Q3 2015</td>
<td>Q2 2016</td>
</tr>
<tr>
<td><strong>Contract Management</strong> - Explore how to manage contracts in PeopleSoft</td>
<td>2017</td>
<td>2018</td>
</tr>
<tr>
<td><strong>Financial Management and Reporting</strong> - Develop costing model for UTS to utilize in costing all services</td>
<td>2016</td>
<td>2017</td>
</tr>
<tr>
<td><strong>Procurement / Vendor Management</strong> - Improve skills and competencies surrounding relationship and management of vendors to ensure timely invoicing and quality to include proper contract preparation and planning through the business office and procurement area.</td>
<td>ongoing</td>
<td></td>
</tr>
<tr>
<td><strong>Operational</strong> - Update internal processes to align with billing integration and PeopleSoft financial system</td>
<td>ongoing</td>
<td></td>
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<tr>
<td><strong>Customer Service</strong> - Provide greater assistance to UTS departments</td>
<td>ongoing</td>
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<tr>
<td><strong>Continuing Education</strong> - Continue to develop analytical skills</td>
<td>ongoing</td>
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Facilities Strategic Plan
2015-18
Mission Statement

UTS facilities is committed to operating, maintaining and continually improving assigned space to meet the current and long-term needs of the division. To do so, UTS facilities operates and maintains a management space plan that includes planning, design, construction, maintenance, inventory, transportation, etc.

Vision Statement

To maintain a safe and secure workplace for University Technology Services and the Office of Information Technology.

Facilities– Products and Services

- Facilities management
- Special projects for management
- Inventory and asset management
- Fleet management
- IT approval

Business Responsibilities

Functional

- USC monthly billing statement
- Inventory quality control
- IT approvals for UTS and USC
- Maintain state reports for automobile usage

Operational

- Annual inventory
- Inventory and asset management
- Policies and procedures related to facilities and security

Facilities– SWOT Assessments – Strengths, Weaknesses, Opportunities and Threats

Strengths

- Significant experience and institutional knowledge
- Relationships outside of the university
Strengths: Detailed Description

- Significant experience and historical institutional knowledge. Have planned for succession of key resources to maintain continuity of knowledge.
- UTS facilities maintains good relationships with outside vendors

Weaknesses

- Need to strengthen relationships with university divisions including: Facilities, Parking, Law Enforcement, Fire Marshal and Risk Management
- Lack of funding

Weaknesses: Detailed Description

- Build relationships outside of UTS with key leaders in areas such as facilities, parking, law enforcement, fire marshal and risk management.
- Lack of funding prevents certain projects from being accomplished quickly and may require UTS to defer critical needs.

Opportunities

- To standardize processes and procedures for inventory and asset management across UTS
- Central facilities relationship and communication
- Project planning for network and infrastructure
- Establish a governance process

Opportunities: Detailed Description

- To standardize processes and procedures for inventory and asset management by implementing the Pinnacle inventory modules for UTS.
- Improve relationship and communications with central facilities by various means to include attending regular project meetings, integrated project planning and improved status reporting.
- Review processes to plan, track and procure inventory and supplies for major network and infrastructure projects.
- Define a governance process for facilities and work with Service Management team to coordinate implementation in connection with UTS-wide governance process implementation.

Threats

- Risks to UTS and Data Center
- Lack of resources
- Inventory space
Threats: Detailed Description

- A list of risks to the Data Center has been created and is in the process of being prioritized based upon available funding. The list covers potential problems such as weather events, HVAC, and electrical issues.
- We have a limited staff for each function. Should we lose any staff, business operations could be hindered and customer services may be impacted.
- Currently, UTS does not have a space large enough to combine the Law Center and annex inventories.

Facilities– Goals/Priorities/Initiatives

Goals

- Implement one inventory and asset tracking system for UTS.
- Inventory process improvement, enhanced reporting and improved service.
- Implement lockdown procedures to control access during an emergency.
- Work with Data Center to address security and business continuity risks identified.
- Address Law Center and IBM relocation needs.
- Address sufficiency of facilities for inventory storage post Law School completion.

Priorities

- USC Data Center security and business continuity needs
- Establishing consistent inventory procedures and processes within UTS
- Enhancing UTS preparedness during emergencies
- UTS space needs for staff and inventory

Initiatives (1 -3 Years)

The following list represents key strategic initiatives which are pivotal for accomplishing the Department’s Mission and achieving our Vision as stated in this plan. This plan will be reviewed and updated on an annual basis. Based on resource constraints and ongoing university priorities, initiatives will either be scheduled or deferred accordingly.

<table>
<thead>
<tr>
<th>Initiative Description</th>
<th>Begin</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement inventory and asset management processes for network/infrastructure operations</td>
<td>Q4 2015</td>
<td>Q2 2016</td>
</tr>
<tr>
<td>IBM move to Horizon II</td>
<td>Q1 2016</td>
<td>Q2 2016</td>
</tr>
<tr>
<td>Move from Law Center</td>
<td>2016</td>
<td>2016</td>
</tr>
<tr>
<td>Warehouse facilities for Law Center inventory</td>
<td>2016</td>
<td>2016</td>
</tr>
<tr>
<td>Implement inventory and asset management processes for UTS</td>
<td>2H 2016</td>
<td>1H 2017</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Data Center – UPS, fire suppression, other continuity needs</td>
<td>2016</td>
<td>2017</td>
</tr>
<tr>
<td>Emergency management processes</td>
<td>2016</td>
<td>2017</td>
</tr>
<tr>
<td>Space utilization and planning study</td>
<td>2017</td>
<td>2018</td>
</tr>
</tbody>
</table>
University Technology Services
University of South Carolina

Human Resources Strategic Plan
2015-18
Mission Statement

To provide University Technology Services with reliable and creative Human Resources services and solutions in partnership with the USC Division of Human Resources.

Vision Statement

University Technology Services Human Resources will deliver quality strategic services and expertise to enable UTS to gain a competitive advantage through our collaborative efforts with the Division of Human Resources to make UTS a great place to work.

Human Resources – Products and Services

- Benefits
- Communications
- Compensation
- Compliance
- Employee Management
- Recruitment and staffing
- Talent management
- Training and development
- Workforce planning and analytics

Business Responsibilities

Functional

- Compensation and Benefits
- Employee Relations
- HR Compliance
- Recruitment and Retention
- Training and Development

Operational

- Administration
- Business Acumen
- Communication
- Compliance Management
- Job Analysis
- Relationship management
- Time and Labor
Human Resources – SWOT Assessments – Strengths, Weaknesses, Opportunities and Threats

Strengths

- Building coalitions
- Change management and problem solving
- Customer focus
- Managing for results
- Strategic partner

Strengths: Detailed Description

- **Building coalitions** – UTS HR continues to be an effective partner in developing networks and alliances that enable the organization to best serve its customers. UTS HR assist other IT departments on campus to recruit and hire for their IT positions. UTS HR also participates in job fairs and works with the HRSM - IT student programs to recruit candidates for UTS positions.

- **Change management and problem solving** - UTS has had continual organizational changes due to the OneCarolina and IBM projects and this trend will continue. With the changing work environments, UTS HR has worked proactively to assist with the staffing needs and changes. UTS HR continues to find new ways to increase operational efficiencies in HR processes while also supporting the ERP project which will overhaul how HR operations.

- **Customer focus** – UTS HR continues to build good relationships will all levels of employees, as well as potential employees, while providing responsive and courteous services.

- **Managing for results** – UTS HR continues to take responsibility for their area and works to develop and implement efficient and reliable processes for the customer. They readily assume accountability for their area and hold others accountable to ensure UTS is in compliance and meets HR business requirements.

- **Strategic partner** - UTS developed a strategic partnership with USC Human Resources in 2011 for recruitment. The partnership has expanded over the years and continues to be a strong resource in providing Human Resource services to the UTS leadership and staff. The UTS HR staff has over 60 years of experience and knowledge in the HR field. This service module has provided strategic and timely support for UTS.

Weaknesses

- Developing talent
- Effective communication
- Competitive salary and state band system
• Human Resources operational efficiency

Weaknesses: Detailed Description

• **Developing talent** - We need to train existing and/or hire new employees with skills needed to support new technologies. We need to be able to assess our current staff’s skills to determine training required for future technology needs.

• **Effectively communicate** HR services and functions to our employees. The UTS Insider is currently decommissioned and employees use a work around to submit SPUR nominations and feedback suggestions.

• **Competitive salary** in recruiting the right people with the right talent for a competitive salary in order to meet the business needs of the future technologies. Competition and compensation continue to be one of the top obstacle for attracting talent for the industry.

• **Human Resources operational efficiency** - current HR operational processes are manual and very time consuming. The onboarding of new hires is a long process and not very welcoming. As we prepare for the PeopleSoft ERP implementation, we will increase efficiency and eliminate manual administrative work while improving the time to fill a position and the onboarding process.

Opportunities

• Developing talent
• Operational technology solutions
• Recruitment and retention of talent
• Workforce planning
• Work/Life balance

Opportunities: Detailed Description

Developing Talent:

• Assess the IT skills of current staff and support the talent development to meet the business needs of future technologies
• Provide managers and supervisors the training related to HR best practices by requiring leadership training initiatives: Leadership Zone, USC LEAD program, Skillport, professional development, career development, safety training
• Provide staff with professional development opportunities such as Skillport, professional development, career development, safety training

Operational technology solutions:

• Prepare for the implementation of the USC new ERP system by participating in meetings and providing input that will assist HR to improve processes in 2016
• Leverage the implementation of the ERP system to eliminate the manual processes.
Train managers and staff on the updated HR ERP processes

**Recruitment and retention of talent:**

- Create a culture that attracts the most qualified, talented and diverse employees to the organization
- Recruit employees with the increasingly specialized IT skills to meet the business needs of the organization
- Remain competitive in the talent IT market place
- Stay abreast of the newest recruitment methods and technologies to recruit, attract and reach the best candidates for UTS positions

**Workforce planning:**

- Collaborate with leadership in developing effective workforce solutions and aligning the HCM plan with the strategic plan
- Prepare for a comprehensive workforce planning initiative by developing a succession plan for UTS

**Work/life balance:**

- Improve work environment, wellness, employee recognition, flexible schedules
- Provide employees the opportunity for feedback by climate surveys and 360 evaluations

**Threats**

- Organizational structure
- Organizational funding
- Competitive IT job market

**Threats: Detailed Description**

**Organizational structure** - UTS has had several organizational changes over the past two years. In technology, new products and needs will constantly change, therefore, the organizational structure will always be a risk as leadership evaluates future partnerships, staffing needs and operational efficiencies. UTS HR continues to work with leadership to assist proactively and strategically with these changes.

**Organizational funding** – Funding will have an impact on all of the HR opportunities. It will determine the level of recruitment, hiring, training and development, along with the organizational structure.

**Competitive IT job market** – in the IT field change is constant. New products are introduced every day, old IT products are updated and/or eliminated. The challenge is recruiting and retaining employees to meet the business needs of the future technologies and our customer needs.
Human Resources – Goals/Priorities/Initiatives

Goals
- Assist UTS in getting the right people in the right roles and ensuring that they are well-equipped to perform their jobs
- Assist with the Division of Human Resources implementation of change management initiative to help our employees adapt to new HR/Payroll business processes
- More effectively communicate the role of UTS HR with our customers.
- Leverage the new HR/payroll technology solutions to improve the business processes
- Improve work environment and increase job satisfaction for UTS employees

Priorities
- Organizational change management – processes and systems
- Workforce planning
- Developing talent
- Leadership training
- Improve work environment

Initiatives (1 -3 Years)

The following list represents key strategic initiatives that are pivotal for accomplishing the department’s Mission and achieving our Vision as stated in this plan. This plan will be reviewed and updated on an annual basis. Based on resource constraints and ongoing university priorities, initiatives will either be scheduled or deferred accordingly.

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</tr>
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<tbody>
<tr>
<td>Assist UTS in getting the right people in the right roles and ensuring that they are well-equipped to perform their jobs</td>
<td>Ongoing</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Recruitment</td>
<td></td>
<td>Q4- 2016</td>
</tr>
<tr>
<td>- Leverage the new HR/Payroll system to improve the time to fill positions and onboarding of employees</td>
<td>Current</td>
<td>Q2 – 2016</td>
</tr>
<tr>
<td>- Recruit, attract, retain and support a diverse workforce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Explore the new technologies of mobile and video interviewing to interview potential candidates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workforce Planning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Complete the development and implementation of a comprehensive succession plan for UTS</td>
<td>Current</td>
<td>Q2 – 2016</td>
</tr>
<tr>
<td>Developing Talent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Gartner Skills assessment of IT staff</td>
<td>Q4 - 2016</td>
<td></td>
</tr>
<tr>
<td>- Leadership Training</td>
<td>Ongoing</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Leadership Zone</td>
<td>Ongoing Ongoing</td>
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<td></td>
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<tr>
<td>360 Surveys</td>
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</tr>
</tbody>
</table>

| Communicate more effectively UTS HR services and functions to our customers |
| -------------------- |-----------------|----------------|
| Current             | Q2 - 2016       |
| Redesign the UTS Insider site and utilize the site to improve UTS HR communications and HR business processes. |
| Provide easy access to the SPUR and Feedback Center for employees to make nominations and give suggestions/feedback |
| Provide a HR repository for managers to access the UTS career development plan, new hire checklist, and other related HR items |

| Leverage the new HR/payroll technology solutions to improve the UTS HR business processes |
|------------------------------------------|-----------------|----------------|
| Q3-2015                                 | Q4-2016         |
| Assist with the Division of Human Resources implementation of the comprehensive change management initiative to help our employees to understand, adopt and leverage the capabilities of the new HR/Payroll system for UTS |
| Streamline and eliminate HR manual processes. |
| Streamline the HR onboarding process |
| Train managers on the new HR onboarding and exiting processes. |

| Improve the work environment for University Technology Services employees |
|---------------------------------|-----------------|----------------|
| 7-1-2015                        | Ongoing         |
| SPUR program                    |
| Morale-boosting events          |
| Annual 360 surveys              |
| Climate surveys                 |
| Wellness Ambassador events      |
Project Management Strategic Plan
2015-18
Mission Statement

Support the mission and goals of UTS by utilizing industry best practices in the implementation of IT projects to ensure they are completed within scope, budget, and on schedule.

Vision Statement

To be recognized as the leader within the university community in the delivery of quality IT projects through the application of systematic and proven best practice project management methodologies.

Products and Services

- Certified project managers to facilitate planning and execution of IT projects
- Facilitate assessment, validation and documentation of business processes and functions
- Provide project management related consulting services to UTS and USC IT communities

Business Responsibilities

- Manage IT projects employing industry standard project management best practices
- Facilitate definition and documentation of project requirements, scope and priorities
- Execute process controls to manage project budget, schedule and quality of end deliverable(s)
- Oversee the planning process for project implementation and transition to operations
- Leverage communication channels to effectively report project status, risks, and issues
- Substantiate management of project requirements and deliverables through appropriate project artifacts
- Facilitate development of governance process for internal UTS projects

SWOT Assessments – Strengths, Weaknesses, Opportunities and Threats

Strengths

- Certified, professional and experienced project managers
- Diverse background in project management environments
- Documented project methodologies specific to UTS environment
- Executive UTS and university support of project management methodologies
- Strong relationships with university leadership and staff

Strengths: Detailed Description

The project management office is staffed with experienced professionals familiar with both private and state organizations. All but one of the project managers have been in the field for 10 or more years. Currently, the PMO is comprised of seven employees of whom:
• Five are PMP certified
• Two are PMP Agile certified,
• Two are ITIL Expert certified, and
• Five are ITIL Foundations certified

All of the project managers have built strong relationships with many departmental leaders and staff throughout the university. Recent examples are the Space Reservation and Calendaring, PCI Compliance, English for Internationals and the USC Connect DegreeWorks projects. All of these projects interact with numerous departments on campus and require a high level of professionalism and political savvy in navigating successful project completion.

In addition the executive leadership in the Office of Information Technology strongly supports the principles and processes inherent in applying proven project management methodologies in the implementation of IT projects. This support is demonstrated in the ongoing efforts of leadership to push out these practices within the entire organization.

The UTS PMO staff are also heavily involved in the SC GMIS (Government Management Information Sciences) organization that promotes the exchange of ideas and information that foster application of best practices and process improvement within the State government.

**Weaknesses**

• Inconsistent execution of controls in managing project budget, schedule and deliverable quality in projects across the organization
• Nonstandard requirement gathering and documentation processes
• Lack of maturity in adhering to change management and issues escalation processes
• Effective management of project resources within a matrixed environment

**Weaknesses: Detailed Description**

Although the PMO is staffed with experienced and highly professional project managers, there is room for growth. PMO maturity is ranked by defined processes and standards that are repeatable and consistently deployed throughout the organization. At this point, the UTS PMO has defined processes and standards that are known and accepted throughout the organization. However, adherence to the controls defined within these processes to manage basic project success is not consistent within all projects nor understood across the organization. In addition, project managers are not consistent in following established change request and issue escalation processes.

Project Managers are typically not trained in business analyst techniques used to gather and record project requirements. Project managers currently use various methods and templates to gather requirements without the benefit and assistance of trained business analysts. Standardizing requirement collection templates and training would enhance the ability of the PMs to effectively compile project requirements.

UTS project managers face the challenge of acquiring, assigning and managing resources required to accomplish project tasks due to a lack of transparency into technical resource
availability whether in house or contractor. Resource management processes and tools would significantly enhance the ability of PMs and leadership to assign and monitor resource requirements in the implementation of project deliverables.

Opportunities

- Lead UTS in defining core project processes and deliverables across the organization
- Support UTS Executive Leadership initiatives to transform service delivery
- Governance process for internal UTS projects
- Develop consistent and understandable requirements process

Opportunities: Detailed Description

A mature PMO seeks to add value not only by adhering to standard project management methodologies but also by optimizing opportunities to transfer knowledge in project management best practices within all organizational units. PMs have the opportunity to educate technicians and departmental staff with whom they work to understand the methodology and process in successful implementation and delivery of IT projects.

Delivering quality IT services is one of the primary goals of UTS. Consistently applying project management methodologies supports the ability of UTS to fulfill this mission.

The PMO is uniquely qualified to support UTS efforts to transform service delivery by engaging functional leadership in defining and mapping governance processes to prioritize and resource internal projects.

Threats

- High priority projects exceeding available PMs
- Reduction in projects requiring PM services
- Lack of enterprise-wide governance process

Threats: Detailed Description

High profile enterprise projects such as the USC Space Reservation and Calendaring normally consume a full-time project manager and often require some additional project management support. Given the increasing student population and the drive to enhance our technological capabilities within the university, there is the potential threat of having more enterprise projects on the docket than PMs that can be fully dedicated to a single project.

On the other hand, with the completion of OneCarolina, there is the opposite threat that the need for professional PM services may decline. In the current UTS environment, many smaller projects do not utilize project managers. Utilizing PMs for these smaller efforts would enhance the ability of the PMO to add value to delivery of all IT services and products.

The presence of an enterprise-wide governance process would increase the efficiency and effectiveness of managing projects. A governance body that decides and communicates USC
and UTS priorities, budget constraints and resource availability would enable project managers and functional units to more effectively schedule, manage and deliver services as requested.

**Goals/Priorities/Initiatives**

**Goals**
- Consistent application of best practices in the delivery of PM services
- Reliable delivery of project objectives
- Focus on project agility and effective stakeholder engagement
- Drive process improvement and business transformation
- Solidify core PM skills and enhance business leadership skills

**Priorities**
- Boost organizational performance across UTS by moving the PMO from its current maturity level (2 - Defined PM processes-practices used inconsistently) to level 3 (Standardized PM processes-practices used across the enterprise)
- Increase the awareness of the PMO value throughout the university by identifying, defining and promoting PMO services and products.
- Enhance project manager core skills of planning, reporting, issue escalation, communication and project execution through professional development opportunities.
- Support the OneCarolina effort through completion of the project.

**Initiatives (1-3 Years)**

The following list represents key strategic initiatives which are pivotal for accomplishing the Department’s Mission and achieving our Vision as stated in this plan. This plan will be reviewed and updated on an annual basis. Based on resource constraints and ongoing university priorities, initiatives will either be scheduled or deferred accordingly.

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<tbody>
<tr>
<td>Support the OneCarolina Initiative and Mainframe Decommissioning</td>
<td>Current</td>
<td>Q4 2017</td>
</tr>
<tr>
<td>Support major UTS process improvement initiatives (e.g. Resource Management)</td>
<td>2016</td>
<td>2017</td>
</tr>
<tr>
<td>Develop project management methodology tailored to IT Planners</td>
<td>2016</td>
<td>2016</td>
</tr>
<tr>
<td>Develop flexible project management process/methodology for non-standard projects</td>
<td>2H 2016</td>
<td>2017</td>
</tr>
<tr>
<td>Build awareness of PMO services throughout the university community</td>
<td>2016</td>
<td>2018</td>
</tr>
</tbody>
</table>
University Technology Services
University of South Carolina

Enterprise Applications Strategic Plan
2015-18
Mission Statement

The mission of Enterprise Applications (EA) is to provide reliable, sustainable, efficient, and secure Information Technology application solutions and services in support of the mission of University of South Carolina.

Vision Statement

The vision of Enterprise Applications is to modernize, mobilize, innovate, integrate, and manage the University’s applications, driving value for students, faculty, and staff.

Enterprise Applications – Products and Services

- Application administration, development, and support
- Microsoft SharePoint site hosting and support
- Hosting of web applications and websites
- Enterprise reporting
- Integration services

Business Responsibilities

Functional

- Work with functional leadership to provide the needed enterprise application services
- Work with functional leadership to prioritize and balance demand across available resources

Operational

- Manage the processes associated with fulfilling customer requests (defining, designing, estimating, scheduling, developing, testing, and deploying)
- Research, recommend and implement new solutions to maintain and improve service offerings
- Assist the Security Office in protecting the confidentiality, integrity and availability of University computing and information assets
- Identify and/or resolve issues that arise when services do not function as originally designed

Enterprise Applications – SWOT Assessments – Strengths, Weaknesses, Opportunities and Threats

Strengths

- Quality staff
- Knowledge, skills, and experience
• Working relationships
• Problem solving

**Strengths: Detailed Description**

• Quality staff - Our staff members are characterized as dedicated, enthusiastic, thorough, reliable, friendly. They have a “do whatever it takes” attitude.
• Knowledge, skills, and experience – The staff have a wide range of knowledge and skills including: web programming; Java; SharePoint; Windows; SQL Server; Oracle; Linux; Active Directory/Exchange; and XML to name only a few.
• Working relationships – There is a good working relationship between front-line analysts and business analysts in the departments we service.
• Problem solving - Our staff have excellent problem solving skills and enjoy the challenge of finding a solution. There is a willingness to try new technologies as well as open source solutions.

**Weaknesses**

• Cross training – Depth of support – Single point of failure
• Expectation Management - Service level agreements
• Resource management
• Complex technology dependencies
• Lack of benchmarking, metrics, and monitoring
• New technologies
• Knowledge management
• Change/release management

**Weaknesses: Detailed Description**

• Cross training – Depth of support – Single point of failure - Limited staff in some critical areas. The skills we lack are those of application business and process knowledge – not skills we can hire “off the street.”
• Expectation Management - Not having a clear understanding of service expectations leads to customer confusion and frustration.
• Resource management - Due to the lack of effective resource management, disproportionate workloads are sometimes created, resulting in mixed levels of utilization and contribution.
• Complex technology dependencies - Most of the application services that are supported are dependent on services provided by other UTS departments (Data Center Operations, Networking, etc.). These dependencies are not often clear and one department’s actions may affect another department and its customers. Not having a clear understanding of these dependencies translates to unplanned outages.
• Lack of benchmarking, metrics, and monitoring - Lack of a method to measure the performance of our services limits our ability to make effective decisions and communicate clearly with our customers.
• New technologies - We have limited time and resources to invest in researching new technology solutions to existing and upcoming problems. We find ourselves supporting new technology due to customer movement to address their problems without prior review and assessment.

• Knowledge management - Managing our knowledge assets is something that has always been a significant challenge for EA. The amount of time required to replace resources can cause problems.

• Change/release management - Every time a change is made to a production service, a new instability risk is added to the service. We need to improve our change/release management processes so that we manage this risk and communicate accordingly. We have done a decent job in some areas in EA to manage this risk but in other areas it is somewhat ad hoc.

Opportunities

• Our new partnership with IBM
• New UTS Service Management model

Opportunities: Detailed Description

• Our new partnership with IBM - Our partnership with IBM brings many opportunities to EA. The depth of experience IBM has in service delivery is extensive and EA has the opportunity to rely on this experience to provide better service to customers.

• New UTS Service Management Model - UTS has made some recent organizational changes that included forming a Service Management team. This team works across the organization to assist in streamlining processes, improving customer relations, and providing a consistent customer experience. EA works with this team to build processes that are standardized and repeatable, thus improving efficiency. EA and Service Management will work together in communicating with customers, to ensure that the customer needs are paramount which will lead to improved customer relations. As the organization adopts the same methods of taking in and doing work, UTS will provide a consistent customer experience.

Threats

• Single points of failure in key skillset areas
• Number of applications and technologies continue to increase
• Complexity of architecture (Technical Debt)
• Security and privacy
• Rapidly changing technology
• Ever increasing demand for 100% uptime

Threats: Detailed Description

• Single points of failure in key skillset areas - We have too many single points of failure in skillsets that are critical to supporting our most important services.
• Number of applications and technologies continue to increase - The number of customer applications that EA supports continues to increase and our resource capacity remains the same.
• Complexity of architecture (technical debt) - Due to the continuous increase in the number of the applications and technologies EA is required to support, the complexity and number of integrations involved increases as well.
• Security and privacy - Our application services are under continuous attack. We must ensure our standards and practices continue to protect our students, faculty and staff privacy, identities and data. Keeping up with all of the operating system, middleware, and application patches requires significant coordination and communication.
• Rapidly changing technology - Our technology landscape changes very rapidly. It is challenging for a team our size to proactively shift skillsets quick enough to respond to new technologies before they are demanded by our customers.
• Ever increasing demand for 100 percent uptime - The IT service industry is moving toward an expectation that all services are available 100 percent of the time. To accomplish these availability expectations, a lot of the time, retooling and redesigning of a services support model is required.

Enterprise Applications – Goals/Priorities/Initiatives

Goals
• Process improvement
  • Improve the data security of our Enterprise Applications by implementing a Patch Management Strategy for all EA application services
  • Improve operational support and development processes and procedures
    ▪ Incident management
    ▪ Change and release management
    ▪ Configuration management
    ▪ Resource management
    ▪ Service request management
    ▪ Software development lifecycle management
  • Implement metrics to measure performance of our resources, processes, and services
  • Develop and validate an estimating model for all work to improve planning and customer transparency
  • Integrate documentation management into all service implementation and support processes
• Customer service improvements
  • Improve customer communication by providing clear estimates related to effort and delivery schedules
  • Work with customers to implement a governance model to help prioritize work backlogs

Priorities
• Improve availability, quality, and security of existing products and services
University Technology Services

Strategic Plan 2015-2018

- Improve the alignment of resources to the needs of our customers
- Mature operational support and development processes and procedures
- Support ongoing UTS initiatives

Initiatives (1 -3 Years)

The following list represents key strategic initiatives which are pivotal for accomplishing the Department’s Mission and achieving our Vision as stated in this plan. This plan will be reviewed and updated on an annual basis. Based on resource constraints and ongoing university priorities, initiatives will either be scheduled or deferred accordingly.

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<tr>
<td>Improve availability, quality, and security of existing products and services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design and implement a Patch Management Strategy with its associated performance metrics and support documentation</td>
<td>2015-Q3</td>
<td>2016-Q1</td>
</tr>
<tr>
<td>Design and implement an Incident Management Process with its associated performance metrics and support documentation</td>
<td>2015-Q1</td>
<td>2015-Q4</td>
</tr>
<tr>
<td>Support the implementation of a UTS Configuration Management Process with its associated performance metrics and support documentation</td>
<td>2016-Q1</td>
<td>2016-Q4</td>
</tr>
<tr>
<td>Continue to enhance our enterprise reporting service offerings</td>
<td>On-going</td>
<td></td>
</tr>
<tr>
<td>Align resources to the needs of our customers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work with UTS and USC leadership to implement a new UTS Governance Model</td>
<td>2015-Q4</td>
<td>2016-Q1</td>
</tr>
<tr>
<td>Design and implement an effort reporting process for all enhancement requests with its associated performance metrics and support documentation</td>
<td>2015-Q1</td>
<td>2015-Q4</td>
</tr>
<tr>
<td>Design and implement a Demand Management process with its associated performance metrics and support documentation</td>
<td>2015-Q1</td>
<td>2016-Q1</td>
</tr>
<tr>
<td>Design and implement a Estimating Model with its associated performance metrics and support documentation</td>
<td>2015-Q3</td>
<td>2016-Q1</td>
</tr>
<tr>
<td>Mature operational support and development processes and procedures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design and implement a unified Change/Release Management process with its associated performance metrics and support documentation</td>
<td>2015-Q3</td>
<td>2016-Q1</td>
</tr>
<tr>
<td>Design and implement an Enhancement Management process with its associated performance metrics and support documentation</td>
<td>2015-Q1</td>
<td>2016-Q1</td>
</tr>
<tr>
<td>Support ongoing UTS initiatives</td>
<td></td>
<td></td>
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<tr>
<td>---------------------------------------------------------------------</td>
<td>------------------------------</td>
<td></td>
</tr>
<tr>
<td>Continue to support the OneCarolina implementation team as they</td>
<td></td>
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<tr>
<td>implement a new HR system</td>
<td>Until complete</td>
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<tr>
<td>Continue to support the Mainframe shutdown project</td>
<td>2015-Q1</td>
<td></td>
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<td></td>
<td>Until complete</td>
<td></td>
</tr>
</tbody>
</table>
Teaching & Technology Services Strategic Plan
2015-18
Mission Statement

The mission of Teaching and Technology Services is to provide exceptional training and support for instructional software and course design to the university community.

Vision Statement

The vision of Teaching and Technology Services is to be a leader in innovative and collaborative approaches to faculty and staff training and support by researching and promoting best practices in educational technology.

Teaching & Technology Services – Products and Services

- Blackboard
- Adobe Connect
- Adobe Presenter
- Voice Thread
- Listserv
- Campus Pack wikis, blogs & podcasts
- i>Clicker
- Consultation & Training
- ICPSR (Inter-University Consortium for Political & Social Research)

Business Responsibilities

Functional

- Serve as instructional technology subject matter experts for the university community
- Administer the instructional technology systems of the university
- Coordinate the maintenance of Blackboard with Blackboard Managed Hosting

Operational

- Provide training and support for supported instructional technology tools
- Perform system administrator duties and support for the USC Blackboard system and other supported instructional technology tools
- Resolve ServiceNow tickets assigned to TTS
- Respond to incidents related to the university instructional technology systems
- Collaborate with other campuses in the USC system to provide training and support for instructional technology tools
- Consult with faculty on the best practices for the use of instructional technology systems
- Consult with faculty on instructional design
Teaching & Technology Services – SWOT Assessments – Strengths, Weaknesses, Opportunities and Threats

Strengths

• Knowledgeable & committed team
• Strong internal collaboration
• Strong working relationship with customers
• Strong collaboration with other units in the USC system
• CIO and UTS Executive support

Strengths: Detailed Description

TTS has a knowledgeable and committed team that has a strong desire to provide the highest possible level of support to the university community. The team works as a cohesive unit to resolve issues with instructional technology that affect our customers. TTS has developed a strong reputation for customer support and works closely with other units in the USC system to meet the instructional technology needs of the faculty, staff and students. TTS enjoys strong support from the university CIO and DCIO in accomplishing its mission.

Weaknesses

• Communication with larger university audience
• No representative body to provide advice and guidance on instructional technology tools

Weaknesses: Detailed Description

The inability to use the university mass email system has hindered TTS’s ability to keep the larger university community aware of the services it provides. TTS needs to work with UTS PR to do a better job of communicating with the larger university audience. While TTS receives input from the university community on instructional technology, there is no representative body to provide advice and guidance on the direction the university should go in regards to instructional technology.

Opportunities

• Increase awareness of our services
• Continue to build relationships with other USC system campuses
• Continue to build relationships with USC staff and students on instructional technology
• Create LMS Faculty Advisory Committee

Opportunities: Detailed Description

TTS plans to increase awareness of our services by continuing to build on our relationships with the university system wide. We are also interested in increasing the input our customers have in
the direction the university takes with the instructional technology tools we support. TTS, in coordination with the Office of the Provost, is interested in creating a Faculty LMS Advisory Committee. The committee would provide advice and guidance on the current and future state of the university LMS and possibly other instructional technology.

**Threats**

- No representative body to provide advice and guidance on instructional technology tools
- Managing customer expectations
- Limited timeframe to apply major updates to Blackboard
- The inability to get detailed usage reports from Blackboard

**Threats: Detailed Description**

Without a representative body to provide advice and guidance on instructional technology, there is the increased risk of not meeting the needs of the university community.

Customers sometimes assume that technology upgrades can be completed relatively quickly and do not realize all that is involved in implementing an upgrade. Even a minor upgrade such as adding a third party building block to Blackboard requires approval by Legal and Purchasing. This can take time, especially if Legal needs to make changes to the vendor agreement.

We are currently limited to upgrading Blackboard in December after the end of the fall semester. Due to the university course schedule there is little, if no time, to upgrade any other time of year. This can prevent us from adding new features to Blackboard in a timely manner. This issue may be resolved with Blackboard moving to a Software as a Solution model that allows upgrades to be made without any downtime. This would allow us more opportunities to implement upgrades throughout the year.

We have never been able to get reliable usage statistics from Blackboard. The numbers of active users and classes, for example, are highly inflated. TTS is exploring the possibility of using the university Google Analytics account to determine the number of users that access Blackboard.

**Teaching & Technology Services – Goals/Priorities/Initiatives**

**Goals**

- Expand offering of training courses
- Increase the number of training courses offered to four year and two year campuses
- Improve communications with USC community

**Priorities**

- Improve communications with USC community
- Create a faculty LMS advisory committee
- Increase training options for USC community
**Initiatives (1-3 Years)**

The following list represents key strategic initiatives which are pivotal for accomplishing the department’s Mission and achieving our Vision as stated in this plan. This plan will be reviewed and updated on an annual basis. Based on resource constraints and ongoing university priorities, initiatives will either be scheduled or deferred accordingly.

<table>
<thead>
<tr>
<th>Initiative Description</th>
<th>Begin</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Creation of a faculty LMS advisement committee</strong></td>
<td>Fall 2015</td>
<td>Spring 2016</td>
</tr>
<tr>
<td>• Coordinate with the Office of the Provost to set up an LMS Advisory Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Identify faculty and ex officio members for committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Meet with advisory committee to get input and guidance on the current and future state of the university LMS system</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Offer increased training opportunities to Palmetto College faculty</strong></td>
<td>Fall 2015</td>
<td>1/1/16</td>
</tr>
<tr>
<td>• Coordinate with Palmetto College to best determine training needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Set up a regular series of training sessions based on faculty needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Increase student support of Blackboard through the Student Success Center</strong></td>
<td>Fall 2015</td>
<td>1/1/16</td>
</tr>
<tr>
<td>• Coordinate with Student Success Center to provide training to staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• SCS staff can help students with basic Blackboard issues when they are at the center</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Create Adjunct Faculty training program</strong></td>
<td>Fall 2015</td>
<td>1/1/16</td>
</tr>
<tr>
<td>• Coordinate with departments to best determine adjunct faculty needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Create a standardized evening/weekend training schedule for adjuncts based on need</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Increase awareness of TTS training programs and events</strong></td>
<td>Fall 2015</td>
<td>1/1/16</td>
</tr>
<tr>
<td>• Coordinate with UTS PR to increase awareness of TTS training and events</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
• Reach out to contacts at other system campuses to keep them informed of TTS training and events
Communications Infrastructure & Collaborative Services

Strategic Plan

2015-18
Mission Statement

The mission of Communication Infrastructure & Collaborative Services, under the direction of University Technology Services, is to provide reliable underlying infrastructure and services to support voice, video, data and applications for research and educational purposes to support the needs of the students, faculty and staff of the University of South Carolina.

Vision Statement

The vision of Communication Infrastructure & Collaborative Services is to continue to be the recognized campus leader in providing reliable, innovative and cost effective infrastructure, technology and academic services in alignment with the changing needs of our students, faculty, and staff of the University of South Carolina.

Products and Services

Collaborative Technology and Academic Support

- AV Engineering Services – consultation and design services
- AV Integration Services - systems integration and support
- Collaborative Technologies – video conferencing and digital signage services
- Media Services – video/audio production services
- Media Services – National Advocacy Center (NAC) media support services
- Media Services - media & classroom support services
- Media Services – photography services
- IT Infrastructure Support Services – voice, data, cable television

Telephony

- Analog, digital and IP voice services
- Voice mail
- Conferencing
- Call center design, implementation and reporting
- Campus operator services
- E911 pinpoint location services

IT Infrastructure Planning

- IT infrastructure planning, design and consultation

Network Services

- Wired network services
- Wireless network services
- VPN services
- DHCP service
- Firewall services
- Network Access Control (NAC) Services
- Data Center network services

**Business Responsibilities**

**Collaborative Technology and Academic Support**

**Functional**

Collaborative Technology and Academic Support provides services in centralized and distributed communications and infrastructure for enterprise video conferencing, studio and digital media, photography, pedagogical technologies for academic, research and administrative use to support and meet the needs of the students, faculty, and staff at the University of South Carolina.

- AV systems design and integration
- Distance learning delivery
- Enterprise video conferencing
- Enterprise digital signage
- Classroom technology
- Media production & photography

**Campus Wide Cable Television**

**Operational**

- Support of AV technology in classrooms
- Support for distance learning technologies
- Support of media productions and photography
- Support of NAC media services
- Support of enterprise video conferencing
- Support of enterprise digital signage
- Voice, data and cable TV infrastructure support

**Telephony**

**Functional**

The telephony group provides and supports voice and unified communications services for the university. Services provided include basic analog, digital and IP telephone service, voice mail, Conference Bridge and call center with reporting.

- Provide voice and unified communications to the university and regional campuses
- Voice mail services
- Call Center services
• Call reporting services
• Conference Bridge services

Operational

• Provide, provision and maintain voice services via UTS supported Avaya Communications Manager
• Provide, provision and maintain voice mail services via Avaya Aura
• Provide, provision and maintain Call Center vectoring according to customer needs
• Provide, provision and maintain Conference Bridge services
• Manage and maintain call reporting system for 13,000+ stations
• Manage and maintain E911 database

IT Infrastructure Planning

Functional

The IT Infrastructure Planning team provides project management and design for IT infrastructure related initiatives for the university, to include new construction, renovations and departmental moves.

• Design IT infrastructure for the university to include departmental moves, renovations and new construction
• Project management for IT infrastructure

Operational

• Run path design including conduit and manholes for university fiber optic backbone
• Entrance and communications closet design
• Manage vendors for outside plant fiber optic
• Document, manage, maintain and troubleshoot fiber optic backbone
• Solicit quotes from various vendors for data, voice and cabling infrastructure
• Maintain PUPS Location Database for university buried infrastructure

Network Services

Functional

Networks Services provides secured network infrastructure for IP connectivity to university resources, commodity Internet and Internet 2, while supporting the core infrastructure providing voice, video and data services for faculty, staff and students.

• Wired/wireless network design and implementation
• Network security design and implementation
• Remote/off campus access to university resources
• IP addressing strategy and assignment
• Data Center network design and implementation

Operational

• Manage and maintain the redundant core, redundant distributed and access layers of both the wired and wireless network connectivity.
• Manage and maintain firewall integrity for the internet border and enterprise applications and services.
• Manage and maintain VPN system and services to allow for secured encrypted connectivity for students, faculty and staff to university resources from remote locations.
• Manage and maintain DHCP services for assignment of IP network addressing for all university departments.
• Manage and maintain firewalls and load balancing services in support of Data Center operations.

CICS – SWOT Assessments – Strengths, Weaknesses, Opportunities and Threats

Collaborative Technology and Academic Support

Strengths

• Institutional knowledge
• Customer service & customer relationships
• Skilled workforce
• Understanding and identifying customer needs
• Communications
• Teamwork

Strengths: Detailed Description

Institutional Knowledge: The Collaborative Technology and Academic Support team has many long-term employees that have gone through many changes within the university and the central IT department. This historical knowledge allows us the opportunity to learn from our predecessors’ mistakes and therefore implement changes more successfully.

Customer Service & Customer Relationships: Good customer relationships are required for good customer service. Collaborative Technology and Academic Support staff maintain professional relationships with our customers that span many years and in some cases, decades.

Skilled Workforce: The Collaborative Technology and Academic Support team is comprised of workers with acquired skills, training and knowledge that combined creates a diverse workforce prepared to address practically any task.

Understanding and Identifying Customer Needs: Understanding your customers is important if you want to be able to provide them with excellent products and services they need. Our staff’s
ability to listen and understand our customer’s needs allows them to provide the consultation and apply knowledge to accommodate what it is our customers are asking for us to provide.

**Communications:** Good communication between our staff members, project team members, and our customers is one key to providing successful services. Effective communication is a critical component of customer service. In dealing with customers, communication is essential, whether it is face-to-face, over the phone, via email or, increasingly, through online channels.

**Teamwork:** Teamwork allows us to work collaboratively with a group of people in order to achieve a goal. Through teamwork our assignment can be expedited at a level that ensures quality is maintained while productivity is increased.

### Weaknesses

- Inconsistent resources for clients campus wide

### Weaknesses: Detailed Description

**Inconsistent resources for customers campus wide:** There are multiple departments and areas across campus that provides varying methods of communicating with customers. Faculty sometimes become confused as to which department they should be contacting and what to expect relative to their request.

### Opportunities

- Flip classroom model
- New Provost
- Changes in technology

### Opportunities: Detailed Description

**Flip classroom model:** The flipped classroom is a pedagogical model in which the typical lecture and homework elements of a course are reversed. Short video lectures are viewed by students at home before the class session, while class time is devoted to exercises, projects, or discussions. Many of the university classroom space issues could be resolved through the use of technology, and this classroom model.

**New Provost:** New leadership provides an opportunity for new perspectives, ideas and innovations.

**Changes in technology:** Changes in technology allow the department to leverage existing infrastructure and expertise to provide additional services or enhance current offerings, and to become more effective and efficient.

### Threats

- Sustainable funding model/source for non-billed services
- Resource constraints
- Deferred maintenance
Threats: Detailed Description

**Sustainable funding model/source for non-billed services**: Developing a funding strategy that leads to financial sustainability is central to any university's ability to increase its impact on video services that support both the executive administration as well as the academic mission of the institution.

**Resource constraints**: Resource constraints refer to the limitations on staffing, equipment and other resources that are necessary to complete a project. Examples of resource constraints include limited staff and equipment availability because of other ongoing projects within the university or a lack of proper planning and distributed allocations.

**Deferred maintenance**: Several services are relying on legacy and outdated equipment. This infrastructure supports many of the core business aspects of UTS. Primarily, but not limited to, the area of Distributed Learning support.

Telephony

**Strengths**

- Institutional knowledge
- Customer service & customer relationships
- Understanding and identifying customer needs
- Communications
- Telephony Administration

**Strengths: Detailed Description**

**Institutional Knowledge**, Customer service, relationships, requirements and communication all stem from the experience gleamed working with university schools and departments over many years and iterations of their ever-changing voice requirements. The telephony team works with customers on a daily basis to ensure their current and future voice requirements are met.

**Telephony Administration**: The telephony team has several years of experience administering voice services on an Avaya platform and are very proficient in the daily administration required to meet customer needs.

**Weaknesses**

- Telephony engineering
- Resource constraints

**Weaknesses: Detailed Description**

**Telephony engineering**: In the previous strategic plan, Hosted Voice Services (HVS) were heavily considered and the need for a telephony engineer was not a priority. During that time the telephony team lost its onsite telephony support engineer to the private sector. With UTS telephony services ultimately remaining in-house on an upgraded Avaya platform, the need for an onsite telephony support engineer needs to be revisited.
**Resource constraints:** In addition to the loss of telephony support engineer, the telephony team is being subsidized by a temporary employee previously retired.

**Opportunities**

- Training for advanced unified communications features
- Gain experience in new Avaya platform and unified communications

**Opportunities: Detailed Description**

Training on unified communications advanced feature sets will benefit both the telephony team and its supported customer base in anticipation of its release. **Acquire experience:** A telephony sandbox will be established in order to gain the required experience of the advanced features that were not available to our customers in the previous Avaya platform.

**Threats**

- Converged network

**Threats: Detailed Description**

- **Converged network:** As the voice services continues to move towards a true IP solution, there has to be some concern as to all services running on a converged network. Plans have been discussed to isolate voice services behind its own firewall, but the majority of the VoIP would still remain on a converged network along with data and video.

**IT Infrastructure Planning**

**Strengths**

- Institutional knowledge
- Customer service & customer relationships
- Understanding and identifying customer needs

**Strengths: Detailed Description**

**Institutional knowledge:** This knowledge has been gained with the experience of working with Facilities, Deans, IT Managers, outside contractors and architects in the design and implementation of various technologies over the course of many years. **Customer service & customer relationships:** IT Infrastructure Planning team meets regularly with customers, vendors, and contractors in order to provide reliable customer service and build relationships. **Understanding and identifying customer needs:** Identifying customer needs versus customer wants is key to providing the most cost effective solutions for the University of South Carolina in regards to any IT Infrastructure project.
Weaknesses

- The need for universal project management processes

Weaknesses: Detailed Description

- **Project management processes:** It is our strategy to work with UTS PMOs to align processes and tools required to accomplish this effort.

Opportunities

- Track and document all IT infrastructure
- Establish and implement a naming convention for all communications closets and fiber connected circuits across campus.
- Continue to build relationship with university divisions

Opportunities: Detailed Description

- **Track IT infrastructure:** The university has an extensive fiber optic backbone with thousands of cross connects throughout campus. The updated version of Pinnacle has the ability to thoroughly document all fiber optic paths end-to-end and will allow us to manage our fiber plant more efficiently.
- **Standardized naming convention:** Establishing a naming convention including the numbering of isles, racks and RUs gives UTS the ability to document equipment throughout campus.
- **Building partnerships:** Continue to meet and communicate with university divisions to assist us in understanding processes, requirements and challenges from all perspectives.

Threats

- Resource constraints

Threats: Detailed Description

**Resource constraints:** The overall work load has increased exponentially with unprecedented renovations and new construction across the university landscape. The current constraints jeopardize timeline deliverables and timely communication between multiple university departments.

Network Services

Strengths

- Institutional knowledge
- Skilled workforce
- Problem resolution
- Teamwork

**Strengths: Detailed Description**

**Institutional knowledge:** The Network Services team has several employees that have gone through many changes within the university, the central IT department and technologies in general. This experience and knowledge allows us to troubleshoot issues in a timely manner and to make informed recommendations due to the detailed knowledge of the functional requirements of the various systems within the university.

**Skilled workforce:** The Network Services team is comprised of workers with many years of experience in their field of work. This vast experience and knowledge allows our staff to make informed recommendations to meet our customers’ needs.

**Problem resolution:** The Network Services team has a good mix of talent and expertise that allows our staff to determine and resolve network and non-network related issues.

**Teamwork:** The Network Services team works well as a team, but has also worked together long enough to challenge each other in order to bring about the necessary results in an ever changing field of Information Technology. This is also true when working with multiple teams within UTS and the university.

**Weaknesses**

- Documentation and processes

**Weaknesses: Detailed Description**

- **Documentation and processes:** The Network Services team is diligent in its effort to complete projects in a timely manner and on schedule. While this makes the team very efficient at getting work completed, but at times are negligent in properly documenting processes and completing follow up documentation.

**Opportunities**

- WiFi remediation and redesign
- Changes in technology

**Opportunities: Detailed Description**

- **WiFi remediation and redesign:** With the growing WiFi requirements on campus, Network Services has the opportunity to enhance our WiFi capabilities to support our customer base. The current design was implemented when WiFi was just beginning to mature as a technology. Things have grown greatly over the last five years to a point that the whole concept of how to provide this service has changed. Network Services has many opportunities to enhance our current service and stay abreast of new technologies as required to meet our customers’ growing needs.
• **Changes in technology**: Changes in technology allow the department to leverage existing infrastructure and expertise to provide additional services or enhance current offerings to become more effective and efficient.

**Threats**

- Resource constraints
- Deferred maintenance
- Available maintenance windows
- Independent non-enterprise supported services

**Threats: Detailed Description**

- **Resource constraints**: Resource constraints refer to the limitations on staffing, equipment, and other resources that are necessary to complete a project. Examples of resource constraints include limited staff and equipment availability because of other ongoing projects within the university or a lack of proper planning and distributed allocations.
- **Deferred maintenance**: Several of the services that Network Services provides is relying on old and outdated equipment. This infrastructure supports many of the core business aspects of UTS. We need to establish a comprehensive refresh rate for equipment in this area.
- **Available maintenance windows**: As the university and the services provided to the university continue to grow, maintenance windows continue to dwindle.
- **Independent non-enterprise supported services**: Some departments on campus have expressed interest in having the flexibility to provide their own services. UTS cannot ensure that proper measures are taken to secure networks or services that are supported by other departments.

**CICS – Goals/Priorities/Initiatives**

**Overarching Goals**

- Improve customer service
- Increase operational efficiencies
- Improve employee job satisfaction

**Goals**

**Collaborative Technology and Academic Support - Short Term Goals**

- Increase high-definition for Gamecock Cable TV
- Increase enterprise video conferencing customer base
- Implement classroom technology embedded and zoned support model with the reallocating of current support staff
Collaborative Technology and Academic Support – Long Term Goals

- Replacement of legacy master control with unified VNOC
- Expand classroom technology support model with the additional support staff to finalize campus wide five zone approach

Goals

Telephony - Short Term Goals

- Migrate off of traditional PRIs to SIP trunking
- Stand up geo-diverse survivable site for voice services

Telephony – Long Term Goals

- Leverage session border controllers for remote, mobile and video connectivity services
- Move exclusively to pure IP voice solution

Goals

IT Infrastructure Planning - Short Term Goals

- Upgrade legacy inside/outside plant fiber optics to support WiFi remediation for residence halls, Russell House and TCL
- Adopt UTS PMO processes

IT Infrastructure Planning – Long Term Goals

- Upgrade legacy inside/outside plant fiber optics to support WiFi remediation campus wide
- Secession plan for two experienced IT infrastructure planners nearing retirement

Goals

Network Services - Short Term Goals

- WiFi remediation for residence halls, Russell House and TCL
- Enhancement or replacement of network access control solution
- Turn up AT&T managed internet services with DDoS mitigation
- Implementation of dual-stack IPv6 on student network

Network Services – Long Term Goals

- WiFi remediation campus-wide
• Implementation of dual-stack IPv6 campus-wide
• Implement DDoS mitigation and additional security measures on all border interfaces

Priorities

Collaborative Technology and Academic Support

• Expand AV classroom technology support model to a zoned, embedded support model
• Improve overall support for Distance Learning, by expanding the support for capture and delivery throughout campus independent of legacy studios
• Expand Enterprise Video Services, by increasing port count capacity to accommodate the growing needs of both academic and administrative use of video conferencing

Telephony

• Migrate off traditional PRIs to SIP trunking
• Leverage the session border controllers for mobile and video connectivity
• Standup disaster recovery/survivability site for voice services

IT Infrastructure Planning

• Expand training efforts to align with industry standards and best practices
• Upgrade legacy fiber infrastructure to support network upgrades

Network Services

• WiFi redesign and remediation
• Increased network bandwidth capabilities
• Improve network security capabilities

Initiatives

Collaborative Technology & Academic Support

<table>
<thead>
<tr>
<th>Initiative Description</th>
<th>Begin</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>New cable TV head-end in Annex Data Center</td>
<td>Sept 2015</td>
<td>Jan 2016</td>
</tr>
<tr>
<td>Implement new classroom support model</td>
<td>June 1015</td>
<td>June 2017</td>
</tr>
<tr>
<td>Digital media management</td>
<td>June 2015</td>
<td>June 2018</td>
</tr>
<tr>
<td>Unified NOC to replace master control</td>
<td>July 2016</td>
<td>July 2018</td>
</tr>
</tbody>
</table>
### Telephony

<table>
<thead>
<tr>
<th>Initiative Description</th>
<th>Begin</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhanced voice feature sets</td>
<td>Dec 2015</td>
<td>July 2016</td>
</tr>
<tr>
<td>VoIP rollout, reduced analog &amp; digital dependency</td>
<td>Jan 2016</td>
<td>Dec 2018</td>
</tr>
<tr>
<td>Decommissioning of EPNs</td>
<td>Dec 2015</td>
<td>Dec 2018</td>
</tr>
<tr>
<td>Unified NOC</td>
<td>July 2016</td>
<td>July 2018</td>
</tr>
<tr>
<td>Establish EMT Call Center</td>
<td>Dec 2015</td>
<td>July 2016</td>
</tr>
</tbody>
</table>

### IT Infrastructure Planning

<table>
<thead>
<tr>
<th>Initiative Description</th>
<th>Begin</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilize Pinnacle to track university infrastructure</td>
<td>Mar 2016</td>
<td>Mar 2018</td>
</tr>
<tr>
<td>Adopt a naming scheme</td>
<td>Dec 2015</td>
<td>Mar 2016</td>
</tr>
<tr>
<td>Create point-to-point circuits and track them in Pinnacle</td>
<td>June 2016</td>
<td>Dec 2016</td>
</tr>
<tr>
<td>Have all projects in a portfolio management system</td>
<td>Sept 2015</td>
<td>Jan 2016</td>
</tr>
</tbody>
</table>

### Network Services

<table>
<thead>
<tr>
<th>Initiative Description</th>
<th>Begin</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless 802.11ac capabilities campus-wide</td>
<td>July 2015</td>
<td>July 2018</td>
</tr>
<tr>
<td>10GE network capabilities campus wide with 40/100GE backbone</td>
<td>July 2015</td>
<td>July 2018</td>
</tr>
<tr>
<td>Implement enhanced feature set Network Access Control (NAC) solution</td>
<td>March 2016</td>
<td>May 2016</td>
</tr>
<tr>
<td>Enhanced Denial-of-Service (DOS) mitigation capabilities on all Internet connections</td>
<td>Dec 2015</td>
<td>July 2016</td>
</tr>
<tr>
<td>Project Description</td>
<td>Start Date</td>
<td>End Date</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>------------</td>
<td>----------</td>
</tr>
<tr>
<td>Data Center switching enhancements to support growing requirements</td>
<td>Jan 2016</td>
<td>Dec 2017</td>
</tr>
<tr>
<td>Next generation firewall to provide enhanced application layer security</td>
<td>July 2016</td>
<td>July 2017</td>
</tr>
<tr>
<td>Intrusion Detection/Intrusion Prevention Services (IDS/IPS) to enhance threat protection</td>
<td>July 2016</td>
<td>July 2017</td>
</tr>
<tr>
<td>Implementation of dual stack IPv6</td>
<td>Jan 2016</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Research/science network for the enhanced requirements of these departments</td>
<td>July 2017</td>
<td>July 2018</td>
</tr>
<tr>
<td>Unified Network Operation Center (NOC)</td>
<td>July 2016</td>
<td>July 2018</td>
</tr>
<tr>
<td>Self-service provisioning</td>
<td>Jan 2017</td>
<td>July 2017</td>
</tr>
<tr>
<td>Disaster recovery site</td>
<td>Dec 2015</td>
<td>Ongoing</td>
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</table>
Appendix B - UTS Strategic Planning Diagram

The following diagram shows the process for strategic planning at UTS. The process begins with the mission of the University of South Carolina, compliments the plans of the Provost, and aligns with the Blueprints developed by the Chief Information Officer. Once at the UTS level, the diagram outlines how the plan flows through the values, mission, vision and goals for each department and ultimately each member of the UTS team.
Appendix C – UTS Roadmap Diagram

The UTS Roadmap provides a visual timeline of projects, initiatives and operational efforts categorized by the type of business effort. The types of business efforts are Academic – Business Systems, Technology – Hardware Infrastructure, and Quality and Process Improvement.
## UTS Roadmap 2015 - 2018

### 2015
- Project End: Stabilize and Mature End Point Controls and Security
- Project End: Awareness & Training Regulatory Compliance Program Assessments
- Finance & HR Project End: Banner 9 Upgrade
- Instructional Learning: Evaluate Interactive Web Meeting
- Office Upgrade: Office 365

### 2016
- Hardware - Software Retirement: Data Conversion
- Virtualization: Virtual Desktop Infrastructure (VDI) and Virtual Server Service Offerings
- Connectivity and Email Support: WP2.11 AC Upgrade Throughout Campus
- Classroom Wireless: Classroom High Density
- Expiring Analytic: Digital
- Migrating to Voice Over Internet Protocol (VoIP)

### 2017
- Cloud Infra - Onsite: OneDrive Cloud Storage Options
- Desktop Operating Systems: Windows Version 10 Upgrade
- MAC Version 05 X 10.11 Upgrade
- Research: Enterprise Storage - Self Service & Cloud
- Email Online with Office 365

### 2018
- Exchange: Email Online with Office 365
- Configuration Management Database (CMDB)
- Identity and Access Management: Identity and Access Management
- Data Center Generation: Off-Site Recovery

## Quality and Process Improvement
- Customer Service: Adoption of ITIL Standards
- Service Level Management: Performance Management Reporting
- Dashboards: Adopting Performance Management and Reporting - ITIL
- Student Feedback: Utilize results of IT Input and iCare Surveys to Continuously Improve Customer Experience
- Faculty Staff Feedback: Utilize results of IT Input Survey to Continuously Improve Customer Experience
- Process Improvement: Standardize Incident, Problem, Change, Release & Demand
- Resource Management: Streamline use of tools for CMDB, Asset Management & Resource Management

## Deferred Efforts
- Lecture Capture
- Digital Data Management
- Enterprise Portal
- Disaster Recovery
- Security - Enterprise Platform Management
- Network Operations Center
- Enterprise Data Warehouse