



Supporting the University of Florida

2015-2016 UFIT CONTRIBUTIONS

OneIT for the #GatorGood

UF | UNIVERSITY *of* FLORIDA

*We seek to put in place exceptional services that
facilitate UF's rise to top ten.*

Charles E. "Charlie" Lane, Ph.D.

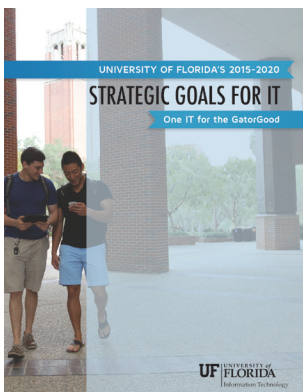
Senior Vice President and Chief Operating Officer

2015-2016 UFIT CONTRIBUTIONS

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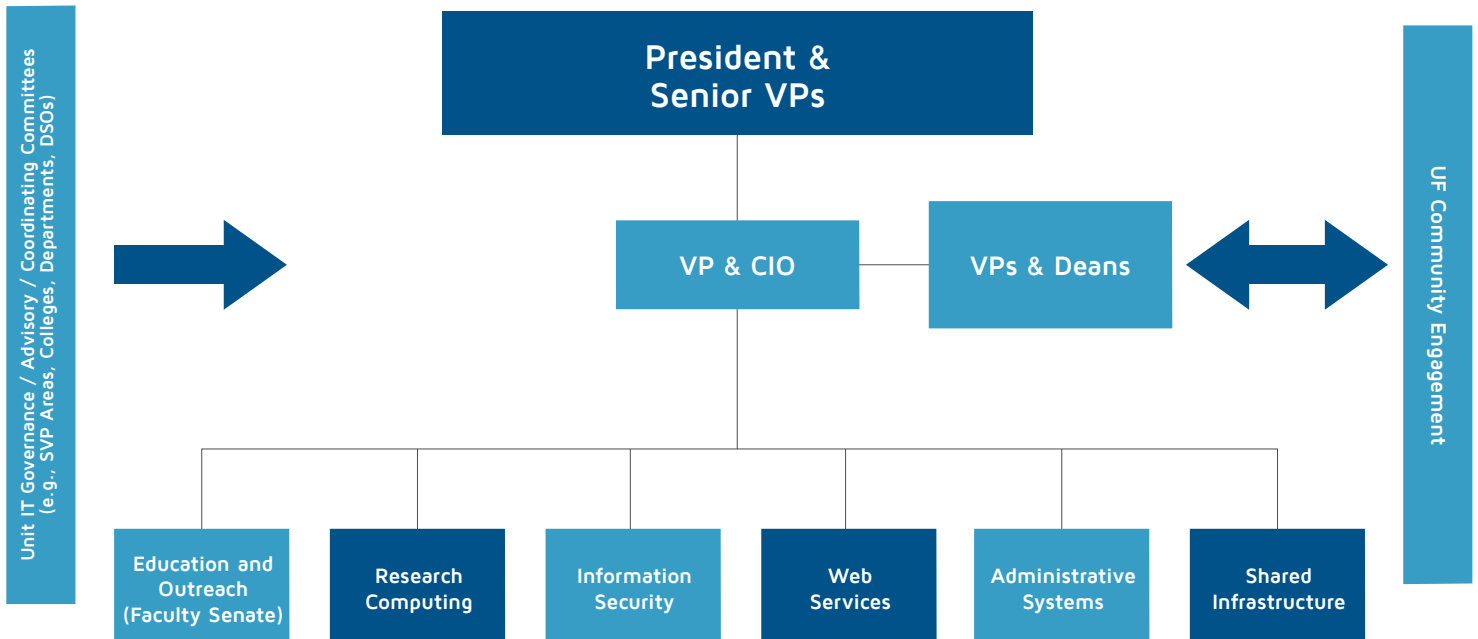


To view the [University of Florida's Strategic Goals for IT 2015-2020](http://www.it.ufl.edu/vp-cio-office/strategic-plan) online or to learn more about UFIT's governance process, visit:

<http://www.it.ufl.edu/vp-cio-office/strategic-plan>

UF Information Technology Governance Overview

INNOVATION, RESPONSIVENESS, AND EFFICIENCY



UF Information Technology governance is a well-defined, transparent process. These topical advisory committees provide recommendations and guidance on policies, standards, and priorities in support of the university's mission and business goals. Information about the six advisory committees can be found at:

www.it.ufl.edu/governance/advisory-committees/

CIO's Welcome

EXCEPTIONAL IT SERVICES IN SUPPORT OF UF'S MISSION

This fall UF is implementing its learning analytics strategic plan. UF, through a partnership with the Unizin consortium, will improve the learning experience with technology, leveraging data to increase the instructor's predictors for student success. There is much to be excited about in bringing learning analytics to the UF undergraduate academic experience, but one important outcome of implementation is that it will benefit those students struggling in a course with early intervention activities. Multiple studies demonstrate that:

1. Students benefit from early intervention and multiple channels of notification and support
2. Awareness of comparative activity levels and associated grades produce higher engagement, and;
3. Student engagement strongly correlates with academic success

Who wouldn't be excited about leading the way on a project that can positively impact so many students for a lifetime? Learn more about UFIT's role in learning analytics on page 4.

Another major initiative this year began this spring: the COMPASS program. COMPASS is a multi-year program that will change the way we interact with student data, from initial application through graduation, and beyond. There are some IT projects that can truly transform the lifeblood of a university, and COMPASS is one of them. Information on the goals of COMPASS may be found on page 10.

Our efforts to support research and innovation have resulted in national and international recognition for the university. Last fall, HiPerGator was judged to be the second most powerful supercomputer among U.S. public universities. UF was also honored with Dell's 2015 Impact Award at the 2015 *DellWorld* summit, given our innovative approaches to curating and storing Big Data.

It is a great time to be a Florida Gator!



ELIAS G. ELDAYRIE

**Vice President &
Chief Information Officer
@Eldayrie**

Education and Outreach

ADVANCE THE UNIVERSITY OF FLORIDA TO THE FOREFRONT OF TEACHING

GOAL #1: CREATE A TECHNOLOGY-SUPPORTED ECOSYSTEM

Outcomes:

- Completed transition of all active courses into the Canvas course management system
- Established UF Learning Analytics governance subcommittee

GOAL #2: TRANSFORM LEARNING SPACES

Outcomes:

- Upgraded the technology in 33 additional classrooms to help support new pedagogies
- Provisioned more than 2 million presentation views in Mediasite
- Provided support for 247 high-definition classrooms

GOAL #3: MOBILIZE TEACHING & LEARNING SERVICES

Outcomes:

- Offered numerous workshops, at times convenient for faculty, on collaborative technologies so instructors could maximize in-class mobile device use
- Supported 200 videoconferencing endpoints across campus used for collaboration and teaching

GOAL #4: OFFER SERVICES FOR RICH MEDIA PRODUCTION

Outcomes:

- Built the One Button Studio in Library West, allowing students to easily create their own videos

- Expanded faculty instructional design toolbox options for rich media production in teaching and learning
- Enabled 10,449 multimedia presentations to be created in Mediasite

GOAL #5: PROVIDE MULTIPLE TECHNOLOGY TRAINING CHANNELS

Outcomes:

- Reallocated staff to bolster UFIT's Training group to better meet UF's technology training needs
- Added many online, on-demand, and face-to-face workshops to the UFIT Training catalog

GOAL #6: ENGAGE WITH LEADING INSTITUTIONS AND ORGANIZATIONS TO FOSTER PARTNERSHIPS AND COLLABORATION

Outcomes:

- Supported staff efforts to take leadership roles in national forums and with leading higher education organizations, including Unizin, EDUCAUSE, and IMS
- Utilized resources from leading organizations to extend knowledge-base on IT topics relevant to higher education

GOAL #7: SUPPORT AND ENCOURAGE AN INNOVATIVE ENVIRONMENT AND CONTINUOUS IMPROVEMENT

Outcomes:

- Collaborated with faculty across the university to implement a learning analytics program



IMPROVING STUDENT OUTCOMES



Project Spotlight – Learning Analytics

Analytics is the use of data, statistical analysis, and explanatory and predictive models to gain insights and act on complex issues. The University of Florida recently began developing and deploying analytics with the goal of improving learning outcomes. The research into—and application of—analytics in higher education is relatively new. UFIT started the Learning Analytics Initiative to improve teaching and learning as well as become a leader in the field of learning analytics research.

Learning analytics is of critical strategic importance for the University of Florida, aligning with three of the goals in President Fuch’s *Goal-Setting Task Force Report*. Learning analytics is also aligned with three goals in the *University of Florida’s 2015-2020 Strategic Goals for IT*. Working closely with UF’s Faculty Senate and the newly launched Learning Analytics governance subcommittee, these are the goals for UFIT’s Learning Analytics Initiative:

1. Improve learning outcomes.
2. Increase student success.
3. Decrease time to graduation.
4. Improve quality of teaching resources.
5. Achieve wide adoption of the use of learning analytics at UF.

Research Computing

POSITION UF AS A LEADER IN RESEARCH COMPUTING AND INNOVATION

GOAL #1: EXPAND HPC, DATA STORAGE, AND RESEARCH NETWORK CAPACITY, PERFORMANCE, AND USABILITY

Outcomes:

- Delivered ResearchShield, the University of Florida FISMA-compliant environment, in summer 2015
- Upgraded the network authentication platform to allow seamless connections to wireless and VPN systems
- Expanded HiPerGator capacity and capability: UF's supercomputer now has 51,000 compute cores and three petabytes of storage
- Deployed ResearchVault ("ResVault") for research on restricted data that can be prioritized quickly for projects as needed

GOAL #2: ENHANCE AND EXPAND SERVICES THAT USE HIGH-PERFORMANCE COMPUTING, DATA STORAGE, AND NETWORK RESOURCES

Outcomes:

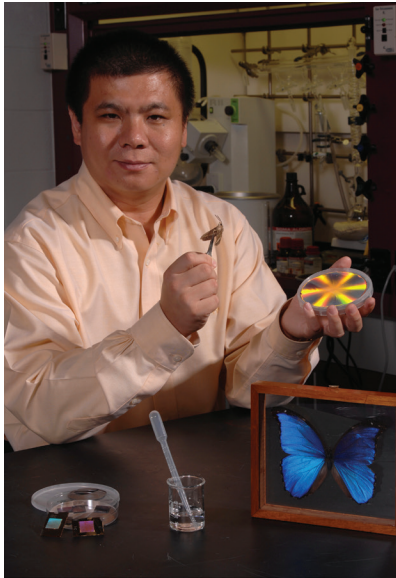
- Launched *UFApps for Faculty* and a *UFApps for Research* pilot, enabling access to high-performance software applications from any device, anywhere in the world
- Increased self-service and managed-data storage options for faculty (see opposite page for details)
- Deployed online web form to streamline purchase of compute storage and capacity

GOAL #3: IMPROVE FACULTY AWARENESS AND ACCESS TO USE OF RESEARCH COMPUTING SERVICES

Outcomes:

- Started a "lunch and learn" series for users of the restricted data computing environment
- Increased presence of Research Computing staff at Health Science Center and UFIT outreach events and at national and international conferences

Empowering Faculty



Project Spotlight – Building a FISMA-Compliant Environment

UF's FISMA-compliant environment went live in summer, 2015. The environment, known as UF Research Shield or "ResShield," was fast-tracked to meet the FISMA and NIST standards deadline associated with UF Principal Investigator Dr. Betsy Shenkman, who was awarded a \$40 million contract from the State of Texas for UF's Department of Health Outcomes and Policy (HOP). The required standards, developed to protect sensitive research data, were met ahead of the June 30, 2015, deadline.

By demonstrating that UF can manage the significant hardware and security protocols required to meet the FISMA standard has enabled our faculty to be more competitive when applying for federal funding.

The Federal Information Security Management Act (FISMA) establishes security guidelines for federal agencies or those providing services to federal agencies. The mandates include specific requirements for security programs, along with extensive documentation, policies, and clearly defined processes be in place in accordance with the national security standard (NIST 800-53). Creating a security environment of this level for UF researchers—while not impeding their ability to collaborate and analyze their data—has been recognized in the national higher education community and by federal agencies.

Information Security and Risk Management

LEVERAGE IT RISK MANAGEMENT AND INFORMATION SECURITY PRACTICES TO REDUCE ADVERSE IMPACTS TO THE INSTITUTION

GOAL #1: INTEGRATE BUSINESS AND INFORMATION SECURITY PRACTICES

Outcomes:

- Evaluated 100+ proposed technology implementations to determine if it's a duplication of effort with current enterprise systems and if appropriate IT controls are in place
- Assisted the COMPASS program by defining general security requirements for its projects
- Continued educating units about the risk assessment process and their roles and responsibilities, and helped them to define the overall scope of projects from a security perspective
- Completed the evaluation, selection, and purchase of a new system to facilitate the risk assessment process, and implemented major improvements to the assessment intake process
- Generated metrics on risk assessments to evaluate efficiency with the assessment process and gauge current risk assessment efforts

GOAL #2: INCREASE AWARENESS OF SECURITY RELATED POLICIES AND STANDARDS

Outcomes:

- Attained approval for six new UF policies related to security and privacy. All were developed in coordination with the Information Security Advisory Committee (ISAC)
- Utilized the UF/UFHealth Jacksonville campus screensaver to instill persistent security awareness
- Continued to ensure campus constituents understand the UF risk assessment reports and reinforce that they are accountable for all residual risks

- Gave numerous security awareness presentations to faculty, students, and staff to facilitate stakeholder understanding of their responsibilities relating to UF data and information systems

GOAL #3: ENHANCE INFORMATION SECURITY ANALYTICS TO BETTER PREVENT, DETECT, RESPOND, AND PREDICT THREATS TO UF'S INFORMATION SYSTEMS AND DATA

Outcomes:

- Completed more than 70 risk assessments in 2015-2016, and improved processes for evaluating and managing risks with the creation of a mitigation database for residual risks
- Scanned the university's entire IP address space every 30 days and notified system administrators of critical vulnerabilities
- Established a process for notification and blocking of hosts running end of life (EOL) software, notifying system owners in advance of an EOL event
- Added new vulnerable software versions to the UF detection processes to minimize compromised systems
- Implemented blocking mode testing with the intrusion prevention system to block command and control traffic for hosts that have downloaded and executed malware



SECURING UF DATA



Project Spotlight – Cybersecurity 2.0

Higher education is an early adopter of the 'bring your own everything' (BYOE) environment. While BYOE provides an enhanced level of device connectivity for the university community, privacy issues, data protection concerns, and authenticating system access is an ever-increasing challenge for UF.

UF is obligated to manage risk in order to meet its legal, contractual, regulatory, and moral issues. To continue succeeding in our global information security climate, UFIT is now planning and deploying **Cybersecurity 2.0**. This project continues our information security mandate to predict, detect, defend, and respond to threats to UF data, networks, and hardware. Data can seem like a remote concept but, apply it to what UF creates and stores—that's your medical chart data, your personally identifying information and tuition payment data, and your favorite professor's transformational research study data.

UFIT partners with campus on a variety of initiatives to underscore the fact that information security isn't just an IT issue—it's everyone's responsibility. In furtherance of this partnership, investments in the information security staff continue, as well as to dedicating significant time and resources to communications, training, and outreach activities.

Administrative Systems

PROVIDE ROBUST, RELIABLE, AND TRUSTED ADMINISTRATIVE IT SERVICES

GOAL #1: MODERNIZE LEGACY SYSTEMS AND UNDERLYING TECHNOLOGY

Outcomes:

- Deployed and provided user training and support for OnBase, a new, centrally-supported enterprise document management solution (EDM). Utilizing EDM can help reduce operating costs, expedite business processes, and minimize risks associated with audits and other information requests
- Sunsetted Remedy, a limited service-request system, and moved to the enterprise-wide myIT service request portal
- Secured executive sponsorship, established leadership and governance, and launched the COMPASS program (see opposite page for details)

GOAL #2: IMPROVE USER EXPERIENCE

Outcomes:

- Created and launched a mobilized UF time approver application, allowing all supervisors at UF to approve time and leave from their smartphones and other mobile devices
- Implemented additional student self-service applications in the mobile ONE.UF portal, enhancing the user experience

GOAL #3: PROVIDE PERFORMANCE ANALYTICS TO CLIENTS

Outcomes:

- Created HR Analytics Dashboards for the Vice President of Human Resources displaying key HR and Workforce metrics including Job Actions, Headcount/Demographics, Age Breakdown, Salary Breakdown, and DROP Analysis for the university population
- In collaboration with the Office of Research, created research dashboard displaying key research administration and compliance information including items such as cost transfers, effort compliance, and Cost Accounting Standard research expenditures

GOAL #4: COLLABORATE WITH BUSINESS UNITS TO IMPLEMENT BUSINESS PROCESS MANAGEMENT

Outcomes:

- In collaboration with the Office of Research, the ongoing UFIRST application implementation included a complete redesign of business processes for the Office of Research, Contracts and Grants Accounting, and colleges and departments with research activity
- Introduced new workflows, approval processes, and reporting data for performance metrics related to the research administration enterprise



UF COMPASS



Project Spotlight – COMPASS

As a preeminent university at the forefront of online teaching and learning, the University of Florida needs agile and modernized student services systems. UF's existing platforms are increasingly difficult to support, due to new opportunities like UF Online and other innovative degree programs. The technological advances, consumer demands, and constant threats to data security have made the modernization of its student systems a critical need for our university.

In spring 2016, the University of Florida launched the multi-year COMPASS Program. COMPASS is the acronym for 'Campuswide Modernization Program to Advance Student Services.' The COMPASS Program incorporates nine projects that, when fully implemented, will transform UF by unifying its students systems and data.

COMPASS will be implemented in staged releases based on the student lifecycle: Academic Structure, Admissions, Enrollment/Registration/Room Scheduling, Advising/Student Records/Degree Audit, Student Financials, and Financial Aid. COMPASS also includes implementation of a modern Constituent Relationship Management tool. Visit <https://compass.ufl.edu> to follow the progress of the COMPASS Program.

Shared Infrastructure

PROVISION AND OPERATE EFFECTIVE AND EFFICIENT SHARED IT INFRASTRUCTURE

GOAL #1: CREATE A HIGH-PERFORMANCE INFRASTRUCTURE THAT IS RESPONSIVE, AGILE, AND SCALABLE TO MEET UF NEEDS

Outcomes:

- Increased campus wireless density of available wireless access points, enhancing the UF community's ability to access information at any time and nearly any place on campus; extended the wireless access to the Gainesville Regional airport. With these additions and other upgrades, UF's wireless bandwidth has been increased by 50%
- Enhanced UFIT's ability to support the university's interests by upgrading the UF Data Center network to enable virtualized networking. The hardware for this upgrade has been spec'd, ordered and received; and planning is underway for its implementation and eventual migration from the current network
- Created a secure ecosystem for very high-speed networking, storage, and computing

GOAL #2: ADOPT NEW TECHNOLOGIES AND STANDARDS THAT LEAD TO IMPROVED SERVICES AND HIGHER EFFICIENCY

Outcomes:

- Reviewed and implemented cloud infrastructure to house FISMA-related backups for the Division of Sponsored Research
- Enhanced six network environments (Health, Academic, Science DMZ, Administrative, ISN/PCI, and External) to allow specific security posture to like end-points, thus making UF's network infrastructure more secure

- In 2015, Cherwell Service Management was implemented to improve the process whereby the campus community requests IT services and support

GOAL #3: RATIONALIZE COMPUTING AND NETWORK INFRASTRUCTURE

Outcomes:

- Completed the evaluation of UF's Unified Monitoring requirements and potential best fits, and submitted recommendations for moving forward
- Created a new 'UFNet2' governance subcommittee of the Shared Infrastructure Advisory Committee, to review and implement network standards
- Developed a Wireless Standards Working Group with all major providers of wireless on campus
- Began work with the Office of Housing and Residence Life to consolidate VoIP phone system, UF AD, and Exchange
- Started a new project with UFHealth to unify VoIP phone systems

EXPANDING CAMPUS CONNECTIVITY



Project Spotlight – UF's Distributed Antenna System (DAS)

With the completion of Phase III of UF's Distributed Antenna System (DAS) project, the University of Florida's DAS is now the largest in higher education. It's also the largest DAS project ever undertaken in the U.S. by AT&T. The project, begun in 2012, increases the call volume capacity, cell phone coverage, and wireless performance that tens of thousands of students, faculty, staff, and campus visitors rely on each day. The expansion also provides a major boost of connectivity and performance for 90,000+ Gators who descend on The Swamp for gameday Saturdays. The university DAS expansion now provides increased coverage for UF's public safety needs as well as for the medical personnel, patients, and their visitors across 11 buildings of UFHealth.

By the numbers:

- 1,427 antennas installed on the UFHealth campus
- 312 antennas installed at Ben Hill Griffin Stadium
- 33 wide-coverage outdoor antennas covering the Main campus

The next phase of the DAS project focuses on the University's East Campus and the O'Connell Center. Work is slated to begin in 2017.

Web Services

PROVIDE LEADERSHIP IN WEB AND MOBILE SERVICES AND TECHNOLOGIES

GOAL #1: PROMOTE A COMMON, HIGH-QUALITY USER EXPERIENCE ACROSS THE UF WEB DOMAIN

Outcomes:

- Enabled improved management of websites for distributed IT and departments by deploying and managing universal web content management (WCM) system
- Provided the training and expertise to allow colleges, departments, and units to manage their own web pages
- Provided a more consistent user experience across the university's web presence by upgrading nearly 20 of the critical path websites with the new UF template

GOAL #2: ENSURE AN ENVIRONMENT OF ADA/SECTION 508 COMPLIANCE AT THE UNIVERSITY OF FLORIDA

Outcomes:

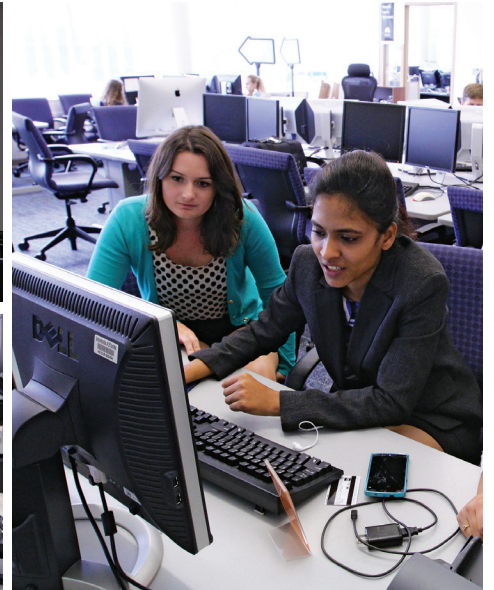
- Updated the Web Accessibility resources page, and undertook an ADA and Section 508 awareness campaign with UF's web managers, IT directors, and academic and administrative personnel
- Provided training and updated resources to enable compliance
- Work is ongoing to update and socialize all university policies related to Accessibility

GOAL #3: DEVELOP STATE-OF-THE-ART MOBILE WEB APPLICATIONS

Outcomes:

- Worked with the Web Services Advisory Committee (WSAC) and UFIT's leadership to prioritize applications in relation to their need for mobilization
- Developed standards and recommended practices for UF's app developers; work and outreach towards this objective will continue in 2015-2016
- Efforts underway to increase staff competencies in web and mobile application development. Additional training will be scheduled in 2015-2016

ENABLING ACCESS



Project Spotlight – Online Accessibility at the University of Florida

All of UF's electronic information technologies, like e-Learning, online services such as payment systems and course scheduling tools, and UF websites must comply with the Americans with Disabilities Act's Section 508 standards. Section 508 outlines web accessibility requirements. Making University of Florida online resources accessible to everyone, regardless of physical limitation, is not only important to UF's mission of teaching, research and scholarship, and service—it's the law.

The University of Florida is committed to ensuring all of its electronic information technology resources are ADA-compliant. This spring, UFIT's Center for Instructional Technology and Training (CITT) developed "Accessible Online Environments," a new course in e-Learning. The course is designed to teach faculty how online content components that are not accessible or non-compliant can present problems for learners with vision, hearing, cognitive, or motor impairments. The CITT also increased their online toolbox with additional resources for instructors wanting to improve their classroom accessibility skills. More information was also added to UFIT's Web Services Accessibility Recommendations page (<http://webservices.it.ufl.edu/about/accessibility-recommendations/>) for web content managers' use across the university.



MEDIASITE

LARGEST CATALOG OF
STREAMING VIDEOS IN
HIGHER EDUCATION



ANTENNA SYSTEM

LARGEST DISTRIBUTED
ANTENNA SYSTEM IN U.S.
HIGHER EDUCATION



HIPERGATOR EXPANSION

GENERATED STORY PLACEMENTS
FOR UF IN MORE THAN 20 NATIONAL
NEWS OUTLETS



ONLINE PROGRAMS

RANKED 1ST IN BEST ONLINE
PROGRAMS – 2015 US NEWS &
WORLD REPORT

on For UF

AT THE NATIONAL LEVEL



HIPERGATOR - WORLD RANKINGS

RANKED 2ND IN U.S. PUBLIC
EDUCATION TOP500 LIST
NOVEMBER 2015



BIG DATA

UF AWARDED 2015
DELLWORLD IMPACT AWARD



MYINVESTIGATOR

UF AWARDED SACUBO 2015
BEST PRACTICE AWARD



SC'15 DELL VILLAGE VIDEO

FEATURING THE UNIVERSITY, ITS
RESEARCHERS, AND HIPERGATOR

UFIT Strategic Timeline

2010-2015

2015 marked the first five years of VP & CIO Elias Eldayrie's tenure. Supporting the university's mission has always been--and will remain--the priority of UFIT. Some of the strategic actions implemented since 2010 that advance the mission of the University of Florida include:

2010



Established the new UFIT division under the VP & CIO, consolidating IT departments and unifying service delivery for campus

Launched new governance committees and established monthly meetings with campus IT directors, all to advise and inform the decision-making of UFIT

Hired UF's first institution-wide Chief Information Security Officer, elevating the university's commitment to data and network security

2011



Introduced an investment matching program for research faculty, strengthening UF's ability to receive grants and conduct research

Distributed the *University of Florida's Strategic Plan for IT: 2011-2013*, a comprehensive goals document built around the six areas of governance

Made substantial investment to expand online course production, increasing capacity by 400% and enabling Florida to be an acknowledged leader in online education delivery

2012



Teamed with the Office of the Provost to enhance the <http://teach.ufl.edu> website, providing a more robust portal for instructors to enhance teaching skills and efficiencies

Connected to Internet2, expanding UF computing power tenfold and offering a network found in (at the time) only three other U.S. locations



2013

2014

2015

Opened the UF Data Center, providing continuity of operations and greatly expanded capacity for research, academic, and administrative services

Launched UFApps service, providing 24/7/365 access for students to more than 70 software packages from anywhere, on any device

Introduced HiPerGator, the state of Florida's first supercomputer

Renovated the collaborative learning spaces in Marston Science Library, providing next-gen technologies in the commons area and in meeting spaces

Partnered with other top public universities to form the Unizin consortium, leveraging technology costs and curating information on best uses of IT in higher education

Launched the [ONE.UF](#) portal, providing a mobilized, modern look that is fully accessible for accessing UF systems and resources

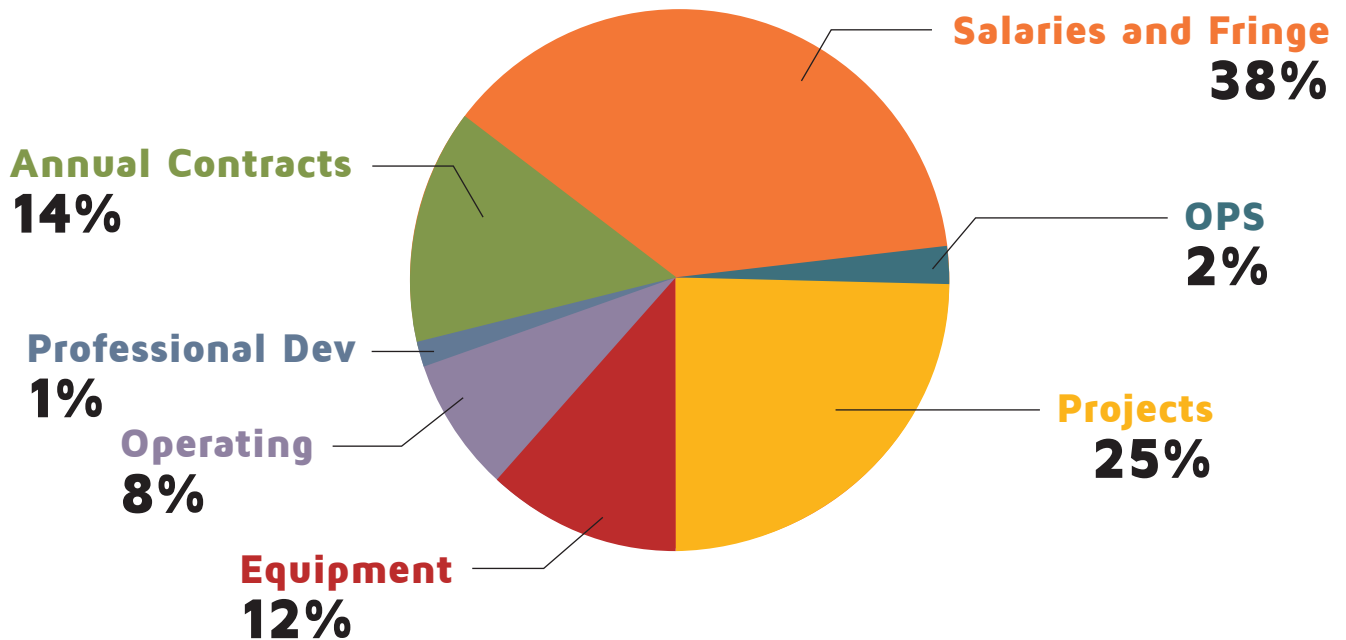
Created ResShield, a FISMA-compliant secure storage environment enabling UF to secure the largest grant in its history

Completed UF's Distributed Antenna System, a provider-agnostic service that is the largest in U.S. higher education

Achieved a #2 ranking in U.S. public higher education with expansion of HiPerGator, impacting institutional perception and garnering extensive national press for the University of Florida

UFIT Budget and

FY 2016 BUDGET



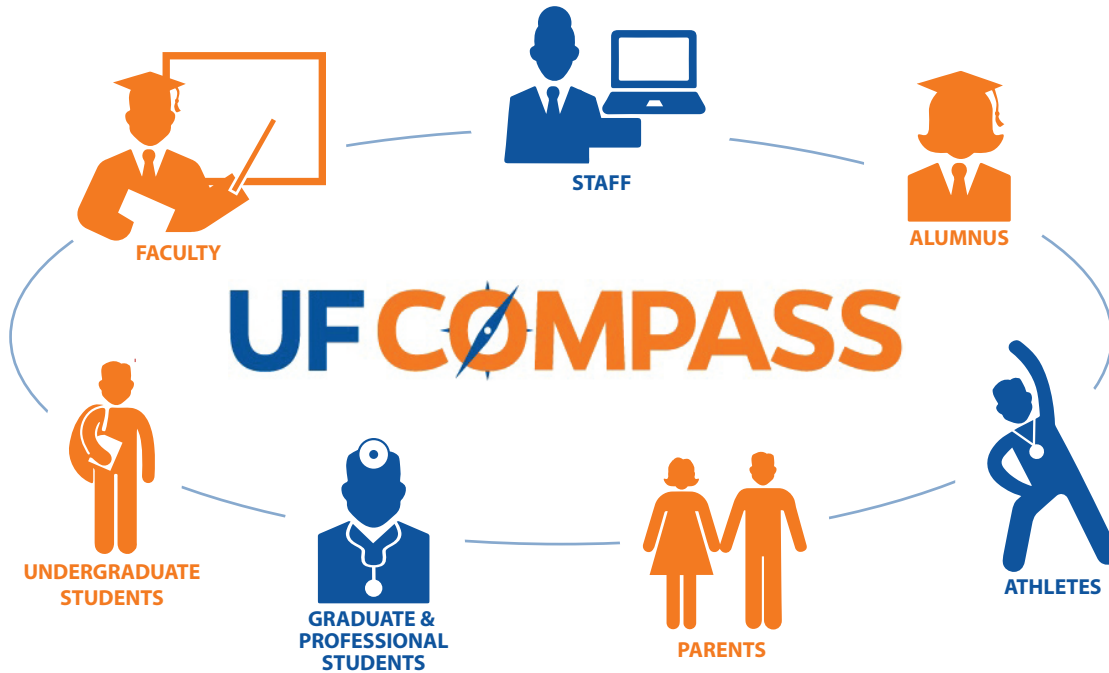
NIMBLE STAFFING: LEARNING ANALYTICS



Faced with the challenges of improving learning outcomes and reducing students' time to graduation, UFIT developed a strategy to achieve these goals using learning analytics. Assembling a learning analytics team required new staff competencies, which were realized by investing in staff development—not by adding staff. Individuals with topical expertise were identified and supported while they acquired high-level proficiencies in learning analytics.

Staff Overview

THE COMPASS PROGRAM: COMMUNITY-WIDE IMPACT



BY THE NUMBERS: TOP-10 PROJECTS BY EFFORT IN FY 2016

| Projects: | Total Hours of Effort: |
|--|------------------------|
| Student Information Systems Implementation (COMPASS) | 48,211 |
| Federal Information Security Management Act - Texas (FISMA) | 10,124 |
| University of Florida Integrated Research Support Tool - Phase 3 Awards (UFIRST) | 8,082 |
| Enterprise Document Management - (COMPASS) | 6,103 |
| HiPerGator 2.0 | 5,358 |
| ONE.UF Registration (COMPASS) | 3,268 |
| Sakai to Canvas Migration | 2,632 |
| Identity and Access Management - Account Management (COMPASS) | 2,353 |
| ONE.UF Student and Faculty Self-Service (COMPASS) | 2,264 |
| Enterprise Information Management - Platform Implementation (COMPASS) | 2,011 |

