Formal Planning Optimizes BYOE Opportunities

University of Florida

Case Study   **May 31, 2013**

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Highlights

Related ECAR Research Study: *The Consumerization of Technology and the Bring-Your-Own-Everything (BYOE) Era of Higher Education*

Case Study Institution: University of Florida

Issue: Handling the multiple facets of BYOE in a harmonized, institutionally advantageous fashion

Solution: Utilize planning, governance, and a framework to direct, fund, and coordinate activities

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"Bring-your-own everything" (BYOE) represents more than people using their own devices on campus and upgrading the institution's wireless network accordingly. It is a convergence of devices, services, and interaction that is causing significant change and creating new opportunities for how an institution conducts its academic, research, and administrative affairs. It's a strategic issue, not a tactical one, and planning for BYOE's many-sided implications requires the participation of not just central IT but the entire institution.

It's a complex proposition for any college or university to fully grasp and address BYOE's implications, and even more so for a large, decentralized institution such as the University of Florida (UF), a public doctoral institution serving over 45,000 FTEs. But the University of Florida Information Technology (UFIT) organization uses its inclusive and transparent strategic planning process and governance structure to understand UF's BYOE-related challenges and the opportunities to support UF's mission. The result is "University of Florida's Strategic Plan for IT: 2011–2013,"[1] which outlines a comprehensive response by weaving BYOE into various strategic action items. The plan's publication implies institutional buy-in because UFIT's governance structure and administration vetted and approved it.

Best Practices

- Conduct institution-wide BYOE planning
- Create a BYOE framework illustrating BYOE activities

Benefits

- Process creates awareness and buy-in about BYOE's multifaceted impacts, opportunities, and investment
- Framework facilitates coordinated use of central IT resources in tackling assorted BYOE projects

Case Study Inspiration

"Ideally a campus would have a strong sense of how it will accommodate increasingly complex computing demands regarding information, devices, and users—and would have the resources to fulfill these plans."[2] Yet only 18% of ECAR survey respondents said their institution has a formal planning strategy for user-provisioned technologies, and just 3% said they have a formal planning strategy and that it works well.[3] The University of Florida has such a plan, and this case study shows how it guides the University of Florida Information Technology organization's activities.

Planning and coordination enable UFIT to synchronize BYOE-related strategic action items, resulting in a framework involving infrastructure, services, policies, and other elements that benefits both UF and—through its work to mobile-enable Sakai—higher education. This case study examines UFIT's planning process and its framework of BYOE activities.

Background

Bring-your-own everything (BYOE) is straightforward yet complex. Its roots stem from the basic desire of students, faculty, staff, and others to use their own personally configured devices on their college or university campus. This seems logical, since they already use their smartphones, tablets, and laptops almost everywhere they go, so why not at their institution? However, actualizing this simple yearning is a complex endeavor, requiring supportive infrastructure; processes, applications, and services; and policies that enable everyone to use their devices securely on campus. Institutions should consider several key issues regarding BYOE:

- Strategically, institutions must determine BYOE's most beneficial uses and opportunities in supporting the institutional mission, and the answers to these questions could pull the institution in new and perhaps unplanned directions. BYOE is more than just connecting any device to the campus wireless network. For example, BYOE can open the door to new pedagogies, new resources, and more ways for faculty to connect with students. Alternatively, it can enable faster, on-the-fly, fulfillment of student services. But for this to happen, senior administrators must understand BYOE's implications and rethink historical and current technology and system-related practices and processes.[4]

- Operationally, addressing BYOE in a synchronized and integrated fashion can be problematic for an IT organization because BYOE touches so many different areas. For example, ensuring that service development and/or teaching and learning activities move in lockstep with infrastructure, policy, and security activities requires planning and coordination. The dispersed nature of large, central IT organizations and decentralized IT campuses compound this process. In addition, IT staff may require different skills.

- Adding to this complexity is the fact that BYOE is a moving target. Today's optimal strategy may be tomorrow's outdated plan in the wake of the ever-changing selection of mobile devices, cloud services, wireless technology, and security practices.[5] So BYOE-related actions require flexibility and adaptability.

- Last, but not least, is the issue of money. Optimizing BYOE will likely require investment, some of which is unanticipated. For example, many institutions discover they must upgrade their wireless networks to handle the access load of proliferating users and

devices. Investment ties back to an understanding of BYOE by senior administrators, who must approve funding allocations.

UF faces these challenges, as students, faculty, and staff embrace BYOE. The UFIT organization estimates that 98% of UF students have mobile devices, many of whom carry multiple devices on campus. Faculty use of iPads and tablets in courses is rising. For example, institutionally provided clickers are gradually giving way to apps to conduct quizzes and activities on smartphones and tablets in the classroom, and some faculty use their own devices when incorporating social media and other tools for course use. Access of academic resources via mobile devices is rising, too. Douglas Johnson, manager, learning support services, who manages UF's Sakai-based LMS, estimates about 15% of hits on the website leading into Sakai originate from a mobile device. Some UF colleges and departments—such as the College of Business and the College of Pharmacy—mandate student use of mobile devices in certain programs.

Information technology at this large university is relatively decentralized. For example, network services and IT security are managed centrally, but colleges and departments provide faculty members with computers that meet UF standards. Some faculty members, particularly in limited-funds departments, may purchase a smartphone or tablet with personal or grant funds in lieu of or to augment department-provisioned equipment. "Faculty have the flexibility to bring their own devices and do their work as they see appropriate," stated Elias Eldayrie, vice president and CIO. "Trying to standardize devices and technology is easier said than done. So instead, we are looking at how we can coordinate and facilitate the faculty's ability to use any device they choose, which gives them the ability to be as creative as they deem appropriate based on their chosen tools."

> *Classroom behaviors are developing out of the BYOE. In particular the faculty are coming to the realization that they can't really fight it, so they might as well make use of these tools in their courses.*
>
> —Jennifer Karen Smith, Manager, Instructional Design Services, on BYOE's impact in courses

Central IT organizations may tackle BYOE in an a piecemeal or ad hoc fashion, but UFIT has taken several steps to manage UF's evolving BYOE situation, weaving BYOE into its governance and strategic planning process to educate as well as to gain buy-in and investment for BYOE-related activities. A framework coordinates its various BYOE projects. This case study examines UFIT's planning process and framework of projects and practices to help other IT organizations manage BYOE's wide-ranging activities.

BYOE Planning

Elias Eldayrie undertook two activities when he became UF's IT leader in 2010. He organized a governance structure and a strategic planning initiative to direct UFIT activities. During these activities, BYOE-related concerns emerged, and this became the springboard to create awareness, buy-in, and investment in BYOE activities.

UFIT Governance Structure

Governance plays a major role in the selection of UF's technology investments, and UFIT's governance structure of topical committees reflects different aspects of IT investment: Education and Outreach, Research Computing, Administrative Systems, Web Services,

Information Security and Compliance, and Shared Infrastructure. Faculty, staff, and students participate in the committees, which are chaired by university leaders—not UFIT—to propose policy and investment priorities. For example, the dean of the College of Engineering chairs the Information Security and Compliance Committee; the provost's office leads the Education and Outreach Committee. The committees send their recommendations to the IT Policy Council, which consists of the chairs of the six topical committees and other senior administrators; the CIO chairs the council. If appropriate, recommendations move up to the president's cabinet for final approval.

Eldayrie stressed the governance structure's inclusive and transparent nature. "You have to be a part of the community—you can't just be a service provider," he explained. "Some IT shops are order takers, as opposed to figuring out what is best for the campus with the institutional community. Our organization continues to talk about the value that we bring back to the campus."

> *The business leaders [who participate in the governance committees] fully understand UFIT's direction. If they are not on board, it will not go forward. They take pride in the fact that it is their decisions, recommendations, and priorities, and the IT organization makes it happen. They drive the bus, and we are just passengers.*
>
> —Elias Eldayrie, Vice President and CIO, on the role of governance in IT direction and investment

UF Strategic Plan for IT

Eldayrie's other priority was to create a strategic plan to guide UFIT development and activities. The planning process was inclusive to solicit input, create general awareness of IT-related issues, and gain buy-in on UFIT direction. The process involved retreats with UF's business and technology leaders; a campus-wide "listening tour" of administrative and academic leaders, the faculty senate and student government, and professional staff associations and institutes; and work with Gartner to identify technology trends and institutional opportunities.

Eldayrie and UFIT discovered that BYOE-related issues popped up frequently throughout the information gatherings. For example, deans spoke of faculty's purchasing their own devices in response to budget cuts that curtail equipment provisioning, and of the need to connect and support these devices. Gartner's analysis identified the consumerization of devices as a user behavior that creates significant higher education IT opportunities. These sessions became forums for UFIT to understand the magnitude of BYOE's impact on the institutional community and, in turn, raise awareness among senior administrative and academic leaders about BYOE.

Over time, a strategic plan emerged, "University of Florida's Strategic Plan for IT: 2011–2013," which the governance topic committees and the IT Policy Council vetted. BYOE-related goals and actions figure prominently throughout the plan. In its introduction, UF President J. Bernard Machen sets the stage for BYOE, discussing the need for "quick and mobile information delivery" and for UF to be "attuned to a world of perpetually expanding technological possibilities and approaches to improve UF's student experiences and keep alumni connected."[6] Table 1 illustrates BYOE-related strategic plan action items for each of the six topic areas.

Table 1. UF Technology Strategic Plan: BYOE-Related Elements

Education and Outreach: Advance UF to the Forefront of Teaching	Provide support for UF's course management system • Enhance current Sakai features	Develop and implement mobile technology services	Create an innovative environment that encourages evaluation and continuous improvement • Generate opportunities for faculty to leverage new developments in technology and related pedagogy
Research Computing: Position UF as a Leader in Research Computing and Innovation	Collaborate with the Office of Research and Libraries to provide research faculty with information resources and services • Expand library technological resources in support of UF research community		
Information and Security: Develop a State-of-the-Art Security Environment	Develop an information security policy and standards framework • Create formal process for policies	Develop an education and awareness program	Develop a monitoring program • Develop an intrusion detection and prevention program
Web Services: Create Leading-Edge Web and Mobile Services	Develop mobile web applications • Develop a mobile web presence consistent with ufl.edu • Develop standards, recommended practices, and the tools for mobile web and for app content developers • Identify applications as significant, widely used, or critical in relation to support requirements and response times		
Administrative Systems: Deploy Advanced Technologies to Improve Administrative Processes	Improve the UFIT user experience • Make IT systems accessible through highly mobile devices		
Shared Infrastructure: Maximize Efficiency of UF's Information Technology Infrastructure	Improve the network and telecommunications infrastructure campus-wide • Expand campus wireless density in classrooms and public spaces • Install distributed antenna system to improve mobile access • Explore new technologies to improve network security		

Source: University of Florida's Strategic Plan for IT: 2011–2013

BYOE Framework

To support the strategic actions outlined in the strategic plan for IT, UFIT began to fashion a BYOE framework. (See "University of Florida BYOD Framework to Support the Mission," at the end of this case study.) The framework illustrates the broad scope of UFIT's BYOE activities, categorized by planning (Execution Strategy, Governance, Operational Strategy, and Vision) and implementation (Security and Compliance, Student Services, Support, Teaching and Learning, Training, and Communications). To review every activity would be a lengthy proposition, so this section highlights UFIT's noteworthy BYOE activities.

Execution Strategy

Execution strategy denotes high-level activities to guide the overall BYOE vision, including the gathering of relevant information, the creation of project plans, and the establishment of strategic partnerships across the university. This section highlights UFIT's financial activities.

Create Financial Model and Budgets

Supporting BYOE entails significant investment. For example, UFIT spends up to $1 million annually to upgrade its wireless network. (See the Enhanced Infrastructure section below.) Strategic planning and vetting processes introduced senior administrators to BYOE-related issues and requirements, which in turn assisted funding efforts. "When we approached business leaders about investment, they remembered they were part of the strategic planning process," explained Eldayrie. "More times than not, they will support [our funding requests for BYOE projects]."

Funding come from a number of sources, including reallocation of the UFIT base budget and student technology fees. Another funding source is the university strategic fund, which President Machen allocates for projects that help the university meets its strategic goals. Because senior administrators had designated a robust infrastructure as a strategic goal during the IT strategic planning process, there was agreement to use monies from the university strategic fund.

Over time, UFIT anticipates shifting funding models in response to the changes brought about by BYOE. For example, more robust and prevalent wireless connectivity could decrease demand for wired connections, shifting some investment from wired to wireless networks. As more people use their own devices on campus, institutional costs could shift from providing equipment to enhancing support services. UFIT has virtualized many desktop applications and is transforming some computer lab spaces to learning spaces, changing investment strategies in this area.

Operational Strategy

Operational strategy represents foundational UFIT activities that will in turn facilitate specific BYOE-related projects. The BYOE framework identifies four activities in this area.

Enhance Infrastructure

BYOE requires a robust and secure infrastructure. As at many institutions, BYOE's growth is placing a tremendous load on UF's wireless network. Not only are more students using more devices on campus, but faculty's use of BYOE in classrooms creates high-density pockets, especially in auditoriums that hold hundreds of students. When each student connects one,

two, and perhaps three or more devices to the wireless network in a classroom, suddenly a 500-student class becomes 1,000–1,500 connections to the wireless network.

UF found itself in catch-up mode in handling the increasing wireless access and density loads, and as a result, one of the UF technology strategic plan's action items is upgrading infrastructure. So UFIT embarked on a major expansion of its network infrastructure. It began with its wired network in order to support a planned increase in wireless network access points (APs). Over the past several years, wired network maintenance and funding have shifted from the colleges and departments to UFIT, which in turn, began to upgrade the wired network from 100 megabits per second (Mbps) to 1 gigabit per second (Gbps) to the desktop.

Using monies from the university strategic fund, UFIT is enhancing its wireless network capabilities to provide encrypted and authenticated service everywhere on the UF campus so that users won't need to repeatedly sign on as they move around the campus. UFIT is installing an 802.11n, WAP2-encrypted network, to be supported by 3,200 APs (up from just 800 APs five years ago). In addition, UFIT has a multiyear contract with AT&T to deploy a distributed antenna network across campus to enhance cellular coverage, with the aim of offloading voice communications from the wireless network.

Mobilize Self-Service

As BYOE exploded on campus, UFIT had to quickly adapt many of the university services to make them work in virtually any type of environment. This could be an overwhelming task, even for a large IT organization like UFIT. To manage this process, UFIT took a number of steps: It prioritized service mobilization, mining usage data from its student information, financial, and human resource administration systems to determine frequently accessed services, and targeted those services for mobilizing. In addition, UFIT deployed services—at least in the short term—in a way that can scale easily and maintain relatively commonly supported standards like HTML5. Finally, the organization outsourced projects when needed to augment its staff.

> *You need to take a high-level strategic approach to determine the breadth of services that people need to use as they interact with the university and the barriers that prevent them from utilizing them.*
>
> —Mark McCallister, Associate Director, on mobile service prioritization

Develop Staff Competency

The IT culture is one of constant change and staff retooling, and BYOE is no exception to this rule. To keep skills up to date, every UFIT director's annual plan contains a skills training component that is aligned with the UF technology strategic plan. "It is not different from what we done before," stated Eldayrie. "You just need the discipline and structure to fund the right priorities, including the right skills training for your staff." BYOE requires some new skills, including usability—concept-based web design to hide an application's complexity behind an intuitive, user-friendly interface. Another area is user support. The variety of devices used by students continues to expand, prompting support staff to hone on-the-fly diagnostic skills.

> *Training has to be done on a timely basis to deliver what the community is demanding as well as to take advantage of new opportunities that might occur. Staff development becomes a very important component of being successful in the long term.*
>
> —Fedro Zazueta, Associate CIO, Professor, and Director of Academic Technology, on the importance of developing BYOE staff competencies

Communicate Value to the Enterprise

"Communicating the value of these technologies is very important to get buy-in and truly achieve transformation so it does not become just the domain of a few innovative faculty and staff," stated Fedro Zazueta, associate CIO, professor, and director of academic technology. "This is not just one-way informational communication, but a two-way channel to identify the community's needs and wants, so we can provide satisfaction to their needs, and even point out appropriate opportunities." UFIT relies on a number of resources to communicate BYOE's value to all levels of the institution. One conduit is the inclusive governance structure; topical committee membership is representative of the university community, and information filters up and down between committee members and their constituencies. Another is the UF Faculty Senate's Infrastructure Council. UFIT's Communications and Outreach Group connects with the broader UF community using 16 communications channels that include Listservs, the web, and social media.

Security and Compliance

IT security is a monumental task when it comes to BYOE. In response, the strategic plan for IT directed UFIT to develop security policies and standards, as well as explore technologies to improve network security. The framework delineates several activities to protect UF's institutional data and services in BYOE's varietal environment, including policies and device management.

Device, Management, and Access Policy

UFIT cannot control what personal devices students, faculty, and staff bring on campus, but it can ensure that these devices meet certain security standards before they can access university resources. Consequently, UFIT promulgated mobile security policies in 2011, which build on UFIT's general IT security policies:

- **The Acceptable Use of Information Technology:**[7] This policy outlines general rules for all users of university IT resources.

- **Florida Computer Crimes Act:**[8] This is not a university-promulgated policy. But as a state entity, UF invokes state law to warn users of potential criminal consequences for not following university IT security policies.

- **Mobile Computing and Storage Device Standards:**[9] This outlines the minimum requirements—in areas including data encryption, authentication, disposal, backup, and physical security—that all mobile computing and storage devices must meet in order to access UF resources. For example, devices connecting to this wireless network must use 802.1x-based authentication and WPA2 wireless encryption. UFIT gave users a two-year grace period for their devices to comply with these standards, realizing that not everyone could immediately purchase compliant equipment. The grace period ends on the policy's second anniversary, August 17, 2013.

- **Mobile Computing and Storage Devices Policy:**[10] This policy requires all mobile computing and storage devices that access the UF resources and/or store UF-restricted data be compliant with UF Information Security Policies and Standards. Unlike device standards, there is no grace period for compliance if the device accesses and stores university-restricted data.

Device Management Infrastructure

In addition, UFIT uses a network access control/posture assessment (NAC/PA) system that scans Windows laptops to ensure they are clean of viruses and malware and that they are running up-to-date antivirus and other software before they are allowed to connect to the wireless network.[11] User devices that do not meet certain criteria are essentially quarantined—sent to a secondary wireless network and allowed access to the full-featured wireless network only when the issues are resolved. UFIT will expand the NAC/PA system to include Mac and Linux operating systems, Java, and smartphones as these capabilities become available.

Visitors' devices that do not store UF data need not adhere to UFIT policies and are relegated to the UF Visitor network. However, if the device stores any UF data, it falls within the UF jurisdiction and must adhere to all policies.

Student Services

Mobilizing web services is a focal point of UFIT's strategic planning efforts, and thus far, UFIT has concentrated on two areas: its mobile website and virtualized applications.

m.ufl.edu

Rather than developing specific mobile apps for each service, UFIT opted to mobilize each UF service's web interface in its m.ufl.edu mobile website.[12] "The difficulties explode very quickly when maintaining apps for multiple mobile operating systems and versions of mobile devices," explained Zazueta. Today the m.ufl.edu website offers a variety of web-enabled services (e.g., maps, bus schedules, payments).

apps.ufl.edu

UFIT introduced a suite of Citrix virtualized applications called UFApps in spring 2013.[13] It's a one-year pilot funded by student technology fees that enables students to access popular software applications like Microsoft Office, AutoCad, Matlab, and IBM SPSS remotely. UFApps makes computer classrooms and computer labs more quickly adaptable to course software needs, where students use similarly configured software apps. In addition, any device can deploy them, regardless of version or configuration.

Support

BYOE impacts the infrastructure, security, and services, but the elephant in the room is the support. There is no ambiguity in supporting university-owned devices, but personal devices blur the line on support responsibilities. In addition, the multitude of devices and help requests adds to staff members' workload.

Help Desk

The UF Computing Help Desk takes an inclusive approach to support—it tries to resolve any question, regardless of device or issue, either through the help desk or appropriate IT group. This may sound like an overwhelming task, but Ayola Singh-Kreitz, customer support manager, emphasized the mobile devices' commonalities. For example, UFIT standard computing requirements requires mobile devices to support 802.1x authentication. Even though BYOE entails many different devices, most comply with one of three operating systems—iOS, Android, or Windows. "Once you learn how to use one OS, you can handle the different variety

and flavors," stated Singh-Kreitz. "The differences in look and feel are very minute, but the fields and nomenclature are the same. We don't really have an issue with that. Once we get past the learning curve for each OS, we are fine."

Teaching and Learning

BYOE is pushing higher education toward significant pedagogical changes, and UFIT continues to prepare its faculty accordingly, as directed by UFIT's strategic plan.

Research/Modify Instructional Design Process and Tools

UF's teaching and learning goals are to improve the quality of learning and to reduce the cost of instruction. Zazueta believes that BYOE has already facilitated UF's strategies to achieve these goals by impacting the physical plant required for face-to-face teaching. For example, UFIT outfits general purpose classroom with more power outlets and better wireless connectivity to support mobile devices. "It does require up-front investment, but in the long term, the ROI is clear," he explained. "It is not so much about the device, but what we can do with the device in a secure way that allows us to perform our roles better."

Hand-in-hand with the classroom is course redesign, and the Center for Instructional Technology and Training (CITT) continues to work with faculty members to incorporate BYOE into their teaching. For example, the CITT created a collapsible online course template—initially for UF's master's program in mass communications—to display tools, functions, and content on tablets, smartphones, and laptops and has since repurposed it for common usage. In addition, CITT offers design advice and services as well as workshops that introduce web tools for laptops and tablets that allow for learning activities like collaborative writing in class.

Improve Faculty Awareness and Skills

BYOE opens the door for new ways of teaching, such as using mobile apps to move agriculture and forestry from the classroom to the outdoors, and the CITT works to expose faculty members to BYOE's possibilities. It hosted a "technology use in teaching" showcase in spring 2013, which generated considerable faculty interest in using BYOE to achieve learning outcomes.

Mobilize Course Management System

UF implemented Sakai in 2010–11[14] and is a strong Sakai supporter, with Douglas Johnson, manager, learning support services, serving on the board of the Apereo Foundation,[15] the nonprofit entity formed by the merger of Sakai and Jasig. Currently Sakai is only partially mobile-enabled, and in support of its strategic plan, UF is co-leading and co-funding efforts with the University of Cambridge, Indiana University, and Oxford University to make the LMS fully mobile compatible so institutions can build their own applications.[16] The project focuses on Sakai's core tools and select contributed tools. The group plans to release some of the easier tools to mobilize during the summer 2013 and then follow up with more complex tools, like testing and quizzing, by the end of 2013.

Training

Last, but not least, is the issue of training to ensure the UF community has the appropriate skills to take full advantage of BYOE opportunities.

Faculty and Teaching Assistants

The CITT continues to hone its faculty training on BYOE and recognizes this is a work in progress. CITT's Sakai training covers the LMS's mobile functionality, and its online instructor training covers teaching and interacting with students on their personal devices. But the center plans to do more. "The training has to be put in a framework of the instructional design process—what makes a good course, assessment, or learning materials, used either independently or in a social context," stated Zazueta. "The devices themselves are enablers. Connecting devices to the network makes us better educators, but the faculty and teaching assistants need to understand how those devices enable certain pedagogies."

Support Staff and Developers

UFIT continues to invest in training to retool its staff for BYOE. Help desk staff need a deeper understanding of mobile technology in order to troubleshoot problems for the expanding variety of smartphones, tablets, and computing devices. Developers in administrative and web services areas need to acquire the appropriate skills to create web pages and new delivery mechanisms for mobile applications.

Lessons Learned

Conversations with the UFIT staff highlight several lessons about BYOE:

- *Get in the game:* "If you are at an institution that is not struggling with BYOE, then you're in the wrong game because the technology is changing whether we want it to or not," stated Johnson. "We have to adapt that to be successful, to be functional, and to be productive with this emerging technology."

- *Cut the apron strings:* Historically, IT organizations have exerted considerable control over the devices used at institutions. But with BYOE, trying to control the devices by using standardized devices is probably not a sustainable strategy. "BYOE is a culture change," stated Eldayrie. "IT organizations have to focus less on the device and more on enabling the services, regardless of the device that people use."

- *BYOE takes an institution, not only an IT organization:* BYOE involves technology, but its impact is felt throughout the institution. As such, central IT needs institutional participation to understand the complete scope of its BYOE challenges and opportunities. "Central IT has to be perceived and act as a partner with the university community to enable these services," stated Eldayrie. "The more inclusive you are, and the more engaged you are with the university community about your BYOE plans, the easier it gets." UFIT used its inclusive strategic planning process and transparent governance structure to create awareness and buy-in on BYOE strategies at the large and distributed UF campus.

> *Let the needs be the driver, not the technology. Understand the needs and then find the technology that best addresses them. Invariably, for any given need, BYOE will play a very important role for us.*
>
> — Fedro Zazueta, Associate CIO, Professor, and Director of Academic Technology, on BYOE planning

- *BYOE is a vicious cycle*: With devices, operating systems, services, and security continually morphing, planning for BYOE is a moving target. "IT organizations like to be

proactive with products, vendors, and funding models, but you have to realize that you can't always be 'plan-fully' ahead of the game," explained Tim Fitzpatrick, director, Computing and Networking Services. "The students, faculty, and staff want new devices [or services] when they pop up, and you have to hustle to keep up. After you stabilize or catch up with the situation, something new comes along and you have to get 'plan-fully' ahead again."

BYOE represents a huge opportunity, spurring efficiency and creativity by allowing students, faculty, and staff to work with preferred devices and services anywhere, anytime. The key to achieving these benefits lies in identifying and addressing any stymieing needs and obstacles. Through UFIT's governance, strategic planning, and framework, UF is well on its way toward building and benefiting from its own device-independent environment.

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Notes

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