Our 2018 Information Technology annual report highlights some of the most visible and important work in division happening during the past year. The initiatives, projects, and accomplishments highlighted in this report reflect a team effort of nearly 200 IT professionals working to support our shared mission of providing excellence in technology and services needed to engage students in educational, research, and creative endeavors.

Our diverse portfolio of services serves every academic and administrative department, and we are constantly striving to provide these services in the most effective, efficient, secure and reliable manner possible. In reviewing this annual report, I hope you will come away with a view into the many services we provide, and the pride with which we deliver them to campus.

I would like to offer my most sincere thanks to the entire Information Technology team of professionals and student employees for their exceptional efforts and dedication over this past year.

The accomplishments in these pages are your story. Thank you for all you do!

Loren
KEY INITIATIVES FROM 2018

1. Supporting the Academic Mission
2. Supporting the Enterprise
3. Improving Customer Service
4. Securing Information & Privacy
5. Technology Innovation
6. Community Engagement
The Division of Information Technology has established these guiding principles as touchstones to management and strategic planning.

**Standardize to better organize our operations.** Agree to reduce custom-built technology environments whenever possible, instead selecting technologies that can be acquired elsewhere or achieved through leveraging what others have done (purchased, shared community, or freely available).

**Consolidate to reduce what we manage.** Agree to seek “core” components and processes which are accepted in the industry, ubiquitously supported, and easy to integrate. Agree to simplify management processes and avoid overly complex administrative overhead.

**Listen.** Agree to be collaborative and work toward shared institutional goals.

**Increase student, faculty, and staff involvement by providing the skills to participate in an open technology environment.** Agree to place the power of configuration, customization, and competency in the hands of students, faculty, and staff. Agree to provide students, faculty, and staff the ability to negotiate technical complexities.

**Aspire toward universal openness and accessibility.** Agree to work toward smaller footprints, easy to adopt processes or technology, and an environment where students, faculty and staff are richly empowered.

**Be open to constant review and evaluation of our efforts.** Agree to vigorously assess our processes to determine the educational effectiveness of choices, technologies, and systems.
The Division of Information Technology at Ball State University provides and supports technology, communication, information, and collaborative services to faculty, students, and staff in the pursuit of excellence in teaching, learning, and research. We serve as a catalyst to the campus community using technology in creative and innovative ways to advance and support the mission and goals of the university, as well as providing and supporting enterprise-level applications, websites, and other technologies across campus.

Our mission focuses on our four core services.

1. **Enterprise Systems & Support**
   Strategic planning of enterprise-wide systems and technologies, resources to support those technologies, and information security.

2. **Individual Technology & Customer Service**
   End-user support for computing devices and technology, access to individual and departmental technology purchases, and the voice of information technology to campus constituents.

3. **Technology Innovation**
   The promotion and use of technology, design & systems thinking, and the exploration of technology as a catalyst for improving the lives of the students, faculty, and staff; the people of the surrounding community, and the world at large.

4. **University Information Services**
   Access to information systems and data; exposure to information, culture, and thinking from outside the university, the country, and the world.
SUPPORTING THE ACADEMIC MISSION

1. Commitment to a New LMS

2. Achievements Platform

3. Student Relationship Management
Commitment to a New LMS

A
fter a successful pilot program for the Canvas learning management system, Ball State made the decision to switch fully from Blackboard to Canvas as the exclusive LMS for the university.

Information Technology, in collaboration with Academic Affairs and various academic colleges and departments, including Online and Strategic Learning, set up and managed the technology behind the Canvas pilot and in 2019 will fully implement Canvas as the official LMS for Ball State.

Since the commitment to Canvas, Information Technology has been working to create a smooth transition from Blackboard in three key areas.

1 Creating integrations between Canvas and Banner and ensuring the data feeds to and from Banner are accurate and work as needed to maintain the student’s record.

2 Collaborating with Online and Strategic Learning to help faculty and staff make the user experience transition as smooth as possible including setting up the university testing labs to accommodate tests in Blackboard and Canvas during the transition.

3 Partnering with Strategic Learning to provide support and training for Canvas to students, faculty, and staff. In addition, archiving and/or transferring historical Blackboard data into Canvas. IT has also set up 24/7 Canvas Tier 1 support with Instructure and Tier 2 support through the Technology HelpDesk during regular business hours.
 Spearheaded by Student Affairs and Scott Reinke, the Achievements platform is a mobile app for all Ball State University freshmen that rewards students for their engagement and success at the University. The Achievements App has tons of activities and goals which reward students with “Bennies,” allowing them to purchase real items from the Ball State Bookstore, Tech Store, and Rec Center.

The Information Technology Developing Technologies Team has worked closely with Scott during 2018 to help define the RFP for the external vendor development, review responses, gather and formalize requirements, communicate technical and functional needs with the vendor, test and identify issues with the vendor solution, and guide the overall development process.

They have also provided support for the existing system, assisted with the project management for the development efforts, collaborated with the Digital Corps on design and usability studies for the mobile app, and will be responsible for the development of the mobile app.
2018 saw Ball State commit to Slate as our official enterprise recruitment and admissions relationship management tool. Information Technology collaborated with Academic Affairs, Student Affairs, Business Affairs, and all of the admissions and enrollment areas—undergraduate, graduate, online learning, and international admissions—to develop requirements for and select a campus-wide recruitment and admissions solution. As a result, the committee chose Slate as the enterprise student relationship solution for recruiting and admissions.

Information Technology team members are also working with these academic and administrative areas as an integral part of the implementation and rollout process for the Slate application. This implementation team was also trained in the Slate application’s features and functionality in order to onboard the rest of the university personnel that will work with the system.

The Scene is a weekly public radio show produced by Ball State students in an immersive learning course in the School of Music with production assistance from Indiana Public Radio students and professional staff.

The Scene features music in performance from around the great Hoosier state. Each week listeners drop-in on an hour of live music performed in local venues catered by a team of people who simply love music.

The Scene, which will celebrate its 10th year of broadcasting in 2019, is produced at Indiana Public Radio in collaboration with Ball State’s Music & Media Production department and is made possible in part by the Office of the Vice President for Information Technology.
SUPPORTING THE ENTERPRISE

1. BSU Multisite Platform
2. ERP Systems Upgrade
3. Improvements in Classroom Technology
Coming off a successful partnership of analyzing and updating portions of the Ball State website, University Marketing and Communications asked the Digital Corps to assist with additional web tools for the campus community.

Through the interdisciplinary collaboration of designers, developers, user experience researchers, and communication strategists, the Digital Corps was able to deliver on this challenging new project.

The desire from the campus community was to build a suite of easy and professional web publishing tools, while also remaining loyal to brand guidelines set forth by University Marketing & Communications. Ultimately, a series of WordPress-based themes were created to feature individual faculty accomplishments, university centers or institutes, and other web initiatives that didn’t fit cleanly into the primary Ball State site.

The Digital Corps oversaw the creation of these “multisites” from start to finish. This included holding focus groups of early adopters who helped narrow down the scope and define the requested tools, designing brand-friendly web layouts with options for all types of content, implementing the required Wordpress tools and plugins to scale the initiative campus-wide, beta testing with a diverse group of campus collaborators, providing one-on-one support to guide early users through the new platform, and ultimately launching the platform with University Marketing & Communications for widescale adoption.
With the release of Banner 9, Ball State began to plan and implement the upgrade of our ERP system. In 2018, Information Technology upgraded the infrastructure to support the move to Banner 9, and worked with the HR and Finance areas to begin the implementation.

In general, the upgrade changes are user experience improvements, but also include moving Banner to a web-based application, giving it a more modern look and feel. In addition, the upgrade expands the web browser choice to any modern web browser, and it will now work on larger-screen mobile devices, such as iPads or other tablets.

In addition to the Banner 9 implementation, Information Technology collaborated with the University Data Stewards to test the application before placing it into a production environment, as well as creating training materials for end users.

Moving forward, the team will begin the process of updating the student and employee Self-Service modules, and will roll those updates out in 2019.
The Large Lecture Hall Refresh is a three year project to upgrade the technology in Large Lecture Halls across campus. Started during the summer of 2017, the project is now in its third year.

- Summer 2018 upgrades: AC 114, HP 200, LB 121, and LB 125.
- Planning is in progress for the next round of upgrades.

Along with other technology improvements, these upgrades will provide better support for faculty and staff who present in these lecture halls. Benefits include:

- Replaces dated computers with new high-end computers that offer both Mac OS X and Windows on a single all-in-one computer, allowing the user to select their desired system.
- Provides the ability to play and stream high definition video.
- Eliminates the need to replace batteries for new rechargeable wireless microphones.
- Offers the ability to play high definition Blu-ray discs as well as standard definition DVDs.
- Leaves more free space on the desktop by installing new document cameras with a smaller footprint.
- Provides easier interaction with the new classroom technology with an improved touch panel screen experience.
- Delivers higher video resolution, clearer pictures, and improved reliability through HDMI connectivity. (VGA connectivity will also continue to be available).
The Information Technologies Tech Center began a new initiative in 2018 to evaluate all viable computers that various departments normally send to Inventory Control for recycling. In this new program, any computer that is 4 - 5 years old or newer that appears to be in good condition and has solid specifications can be repurposed for use in areas where the need for technology is greater than the budget allows.

Each computer is run through hardware diagnostics. If the computer passes the diagnostic tests, it is deemed as a computer than can be repurposed. The Information Technology team then wipes the hard drive, installs a clean operating and sets-up each computer for a new user.

These repurposed computers have been placed in the Ball State Police Station, the Child Study Center, Strategic Learning, the Operations Control Center, Student Center Operations, Speech Pathology and Audiology, and the International Travel loaner laptop pool. In all, nearly 50 computers have been acquired and repurposed to various departments and organizations on campus.

In addition, the program has repurposed 42 computers from an academic department as part of a computer lab upgrade. These computers were then allocated to the Muncie Community Schools.
Ball State University has been a leader for many years in contributing to a safe and healthy environment. The Office of Information Technology and Business Affairs are proud to continue that tradition by creating a new Go Green Technology Recycling Program.

Beginning in March 2018, students, faculty and staff could bring their old and outdated technology hardware to the Tech Center in Bracken Library for recycling.

The program accepts desktop and laptop computers, monitors, printers, and networking hardware, along with personal devices such as cell phones, tablets, and music players.

Students, faculty, and staff fill out a recycling release form, and Information Technology disposes of the item in a convenient and environmentally friendly manner.
Customer Service Best Practice Training

To ensure the Tech Center student staff provide the best possible customer service to our clients, Information Technology personnel provide customer service training to all students in forward-facing job positions at the start of Fall and Spring semesters, and prior to general student orientation.

Each training session includes a presentation, in-session exercises, and a question and answer segment. Supervisors provide additional one-on-one instruction for their specific work areas/assignments.

The training focuses on best practices for customer service including:

- The importance and value of Information Technology services.
- An explanation of why customer service is essential and the expectations of an Information Technology employee.
- How to greet/welcome clients in person, via phone, and through email communications.
- The correct way to give directions and to walk with clients to destinations, if that is helpful.
- The importance of asking follow-up questions in order to insure directions or instructions meet the client’s needs.
- How to take complete messages.
- Proper posture while seated at the desk or their primary work area.
- Work attire requirements, including hygiene and “what not to wear.”
- Introductions to their department management (titles, view photos, work locations, org chart, etc.).
- How and when to seek assistance when they don’t have a response or if the client is challenging or difficult.
- General emergency and security procedures. More specific instructions are given by their immediate supervisor.
- How to thank clients upon exiting and how offer additional services or resources.
In order to further protect the Ball State community from information security threats, the Office of Information Security rolled out an enhanced account protection called “two-factor authentication,” to all current Ball State employees during 2018.

Using the Duo mobile application or security token, all Ball State employees must acknowledge a login to their BSU account after they enter their user name and password. This second factor reduces the threat of a malicious attempt to use a faculty or staff members login credentials to gain access to their personal information, or our campus networks and applications.

Information Technology and the Office of Information Security also plan to roll out this enhanced account protection to all students by 2020.
During 2018, Information Technology and the Office of Information Security began rolling out a centralized policy and procedure repository for all of campus. The software, Policy Tech, allows both academic and administrative departments to organize their policies and procedures, as well as establish authorship and approval workflows for them.

Information Technology presented Policy Tech features and capabilities to Student Affairs, Business Affairs, and other areas, and then collaborated with them to plan and implement Policy Tech in their areas.

Information Technology then trained key personnel in each area to allow them to author, review, and approve policies and procedures using Policy Tech’s workflows.
Information Security continuously strives to proactively prevent and address cyber security risks to the university. Our employees stay up to speed with cyber threats, technological advances, and address alerts related to vulnerabilities, threats, and unusual behaviors.

The information security landscape is constantly changing and evolving. As such, detection and mitigation of malicious activity must evolve as well. IT has made a strong commitment to meet the challenges of this changing landscape. In order to accomplish this, our employees have:

- Migrated over 50% of the university from traditional (file signature) to next generation (behavior) anti-virus.
- Moved all server local administrator accounts to our Enterprise Random Password Manager (ERPM) to better audit server administrator activity.
- Partnered with our peers at the Ball State Technology HelpDesk to provide enhanced device protection installation for our sensitive data users including our College of Health employees. Some of the enhanced device protection includes anti-virus, no local administrator access, encrypting workstations, and application whitelisting software that only permits approved software installation and execution (for example, coupon printing software would be stopped).
- Researched and learned ways to continuously identify and check unusual behaviors related to changed credentials, malicious connection attempts, threat detection and mitigation, and privileged account usage.
The David Letterman Learning Experience

The Loading Zone: WIPB/PBS Kids

BSU AthlEATS App
The David Letterman Learning Experience

The Information Technology Developing Technologies team and the Digital Corps collaborated with graduate and undergraduate students in the Emerging Media Design & Development (EMDD) program, led by Dr. Jennifer Palilonis, to create the David Letterman Learning Experience. Leveraging the rich narrative potential for items in the collection, this immersive learning class explored intersections between storytelling, technology, and art.

Additionally, the class worked to develop a model for ongoing immersive learning experiences related to the Letterman Collection that can provide faculty and students new opportunities in the future.

EMDD graduate and undergraduate students worked closely with Digital Corps to create two unique augmented reality experiences featuring items from the Letterman collection. The Digital Corps also assisted in video production for the “Learning with Dave” component of the experience.
Information Technology’s Digital Corps has been supporting the work of WIPB for years, but 2018 brought the first opportunity to produce and distribute an entirely new idea for young viewers of PBS Kids.

The challenge presented seemed simple: create short, easy-to-understand videos about technology that will fit seamlessly into the children’s television programming block each morning.

The reality, of course, was much harder! Complex subjects—from wifi to solar power, and prosthetics to saving energy—needed to be simplified for a very young audience and presented in under one minute per video. Plus, to fit into the animated programming of PBS Kids, there needed to be visually interesting “hosts” guiding viewers along the way.

In the end, the Digital Corps’ tech-savvy team crafted “The Loading Zone,” a series of one-minute interstitials explaining tech-related topics to a young audience. The series is “hosted” by Billy and Penelope, two curious robots who turn to their real-world friends at the Digital Corps to explain complicated ideas.

The series began airing on WIPB in December 2018 and has spread to numerous other outlets throughout Indiana.
In cooperation with Ball State Athletics and the department of Emerging Media and Digital Design, Information Technology’s Developing Technologies Group created BSUathlEATS, a three-part experience for Ball State athletes and coaches to gain the necessary knowledge and support to sustain good nutrition, encourage healthy eating habits, and promote a support culture.

The goal of the project is to provide athletes with nutritional support through a diverse media experience, capitalize on the athletes’ love for competition, and use existing dietetics and nutrition expertise to inform the project direction.

Developing Technologies has worked to create a mobile app to motivate athletes through competitions, challenges, and incentives. This includes the development of a custom backend database, administrative website, and native mobile app for Android and iOS.

Through the research conducted by the EMDD graduate students, this project has the potential for commercial success, as nutrition in college sports is not only a multi-million dollar industry, but a challenge many smaller to mid-sized universities are faced with as a competitive advantage.
Innovate WithIN Initiative

Ball State University built a unique relationship with the Indiana General Assembly, the Indiana Economic Development Corporation, the Indiana Department of Education, and several internal departments to create the Innovate WithIN initiative. Ball State was tasked with developing two unique types of programming: an innovation pitch competition for high school students, and a day-long workshop for Indiana educators.

Information Technology’s Digital Corps created the branding elements and brand guide for the entire initiative, developed unique and dynamic websites for the pitch competition and the conference, assisted in event planning and management, provided digital marketing strategies, facilitated online registrations and idea submission, and shot and edited video highlights from all of the programming.

The event gathered significant interest, including attendance at the state competition by the Superintendent of Public Education, the President of Ball State University, and the Governor of Indiana.
The Facing Project

The Facing Project is a new, locally produced IPR program that started in 2018. The show seeks to strengthen communities by connecting people through stories.

Hosted by the founders of The Facing Project non-profit organization, J.R. Jamison and Kelsey Timmerman, each month’s show carries a theme and features performances of stories that follow The Facing Project’s model.

Indiana Public Radio has also created a podcast of this program that features extended commentary on the stories, encouraging listeners to share their own stories and reinforcing the empathy to listen to others.
Muncie Community Schools

As part of Ball State’s commitment to Muncie Community Schools, Information Technology provided both equipment and expertise to expand and improve the schools’ technology capabilities.

• Our Hardware Repair department refurbished 42 computers previously used in a computer lab and provided them on loan to Muncie Community Schools.

• Information Technology personnel worked with Muncie Community Schools technology staff to provide new ID cards to the schools’ staff, with additional privileges such as access to Bracken Library materials and the ability to purchase Recreation Center memberships.

• The Office of Information Security Services met with Muncie Community Schools personnel to discuss technology security issues, performed a vulnerability assessment, and made recommendations for technology security tools and processes.

• Information Technology personnel continue to meet with Muncie Community Schools IT staff on a quarterly basis to share knowledge and provide guidance on technology issues.
2018 Information Technology Annual Review
©2019 Ball State University. All Rights Reserved.