# Annual Review | 2018

PEPPERDINE INFORMATION TECHNOLOGY

## Response Time

The Pepperdine IT team stood tall in keeping the community connected as the Woolsey fire burned in Malibu, **page 8**.

*John Figueroa surveys the damage in Pepperdine's Heroes Garden after the Woolsey fire.*

# Real-World Experience

The IT department's Internship Program gives students the opportunity to acquire relevant work experience before hitting the job market, and to create valuable applications that serve Pepperdine for years



*From l-r, the 2018-19 IT Interns Senior Emily Basse, Senior Blake Tinney, and Junior Derek Santolo.*

As graduates look for every available advantage in today's challenging job market, there is a vital asset available to Pepperdine students that always separates them from the competition.

Experience.

On-the-job training in application development has made the Information Technology Internship Program one of the best kept secrets at Pepperdine University. Students who have participated in the program have successfully leveraged their time in the department to earn positions at firms such as Amazon, Twitter, and Raytheon.

"We started this program back in 2014," said Client Services Associate Director Abrash Khanmalek. "This was a new partnership with the computer science program over in the Seaver Natural Science division. We realize that while we have a small computer science program, we do have some very talented students here and some really good computer science professors.

"With our own software development team and computer science program, we thought it could be a win-win if we got these two groups together," Khanmalek said. "We benefit as a department, and they benefit as a program.

"They're learning calculus, discrete structures, the theory of mathematics and software development," Khanmalek noted. "But they're not doing any actual applied work. So, they're taking their theories in this program and creating things that are actually going into a software development platform and coding and compiling and executing programs. We wanted to bring an applied approach to what they're doing. So, we spun up this Internship Program.

"Remember, while students are in the computer science program and they're learning all this theory, they've never actually written a line of code," Khanmalek noted. "They've never written C Sharp or Swift or SQL, so this is their first exposure to it.

"The interns have the opportunity to work with a full stack developer, who knows the full life cycle of the app," Khanmalek continued. "That means they know a little bit about server engineering and the server environment. They know a little bit about database structure and how database tables work. They understand how an app should be designed so that every user in every scenario can figure it out. And they understand why we have to write the code to execute that function.

"So, having full stack developers who know the environment inside and out is is a huge resource to the students," Khanmalek noted. "And they leave here with knowledge of every aspect of the software development life cycle."

## Practical Application

The program tends to recruit juniors and seniors, because they've been through their upper division classes. It also creates a natural transition from a part-time job in their targeted field to their chosen career.

"They can actually take what they've learned and immediately use it in the real world," Khanmalek said, "and the interns get two units for this program per semester. It's unlike most internship programs, because they're actually getting class credits and being graded on it."

At the program's outset in 2015, Pepperdine's computer science faculty recommended students for the internship program, and then IT staff held interviews before selecting two students. From inception, the program's initial success has blossomed into a fertile partnership between the IT department and the computer science students.

> ❝ *In the real world, you have to learn how to delegate responsibility, communicate, and compromise on various aspects of how the program should work.*

"It's a really good opportunity to get some real-world experience," Senior Blake Tinney noted. "We learn about a lot of different technologies in our classes, but we rarely work on large projects, which is what you expect to see in the field. You also get to work with a team, and the classroom structure is really based on what you yourself can do. In the real world, you have to learn how to delegate responsibility, communicate, and compromise on various aspects of how the program should work. I feel much better prepared for the job market now."

"I really feel like we're getting over that heavy learning experience and actually getting to develop on a much higher rate," said Junior Derek Santolo. "That's really rewarding, because we're seeing those unique aspects of our design come to fruition. That's my favorite part of the internship."

"I have been completely impressed with the caliber of students that we've gotten," said Senior Lead Developer for App Dev Operation Dustin Luck. "Every single one of them has just come in and picked things up really quickly.

"This is the first year where we're doing a group project with all of the interns: a bulk signing application," Luck added. "The idea was to come up with a process that would allow those responsible for signing many of the same documents at the same time to review them and then apply the same signature to a large batch of documents."

"This project can really make a difference," Luck continued, "and it's mostly going to affect people in higher positions here at Pepperdine who get multiple documents to be signed in batches. One of our goals in the Application Development department is to make processes simpler for people."

"I meet with our interns every week to go over the front-end and back-end design and how it's supposed to function, and we're going to get into beta testing soon," Khanmalek continued.

## Prepare to Launch

"Our interns have created some wonderful applications over the years," said Khanmalek. "One of our first-year interns helped one of our developers create eSign, the application Pepperdine uses for digital signatures. And the secure app that allows students to retrieve their pin codes to get into their dorm rooms was created by one of our interns.

"I was just messaged by one of our first-year interns, and he was so happy that an app he worked on was still being used here," Khanmalek smiled. "He said, 'I created that!' I'd say 90 percent of our interns go on to do some amazing things."

"I have learned a lot and feel like I'm much better prepared for the real world," said Senior Emily Basse. "The experience has been really helpful, and I have accepted a job with the satellite communications company I interned with last summer, so I will be moving to Austin, Texas in June. I'm super excited!"

# Say What?!

*The Business Intelligence department has been working with Pepperdine's five schools to find common language in their data reporting and usage, paving the way for people to improve their communication and administrators to leverage the data for insight and inspiration*

Going back to 2012, when Chief Information Officer Jonathan See launched the Business Intelligence (B.I.) team as one of the initiatives set forth in his '100 days memorandum,' finding common ground among Pepperdine University's five schools and their data usage has been a core goal. Specifically, B.I. has been working toward standardization across data and reporting for everyone.

"We want to get to a place where all five schools – Seaver College, the Graduate School of Education and Psychology, the Graziadio Business School, the School of Law, and the School of Public policy – use one central reporting tool and all data sources funnel into a single data warehouse through data governance," said Business Intelligence Director Lisa Welch.

It can be difficult to determine where the problem with data governance actually lies at Pepperdine, but the lack of standardization across data and reporting in the five schools is a good place to start.

"What happens frequently is that different departments or schools will go out and purchase new tools to report on the same bad data," said Welch. "And so they think that the problem is the tool, and that the tool is going to be the solution. It's not.

"So, this is why we have this cycle where people go out and get a tool and then are frustrated because it doesn't give them what they need to solve the problem," Welch continued. "And so data stewardship looks at the data that's in the source system. But, we don't just pull the data directly from the source system into our data warehouse without first addressing it. That's where data stewardship fits in.

## Data Warehousing

In a perfect world, all the university data – PeopleSoft, Sakai, Salesforce, HRL, Student Affairs, Payson Library, our Alumni, etc. – would be in a single database that all users could draw from for their individual needs. "That would be pretty amazing," said Welch. "But the five schools are so different, that it's not as simple as just dumping data into a warehouse and then trying to make sense of it with a reporting tool. We have five schools with five different ways of doing things, and that approach has always served the necessary operational purposes.

"But when an administrator needs to report a statistic for all five schools," Welch continued, "and they're all entering and defining their data differently, you're not comparing apples to apples anymore.

"That's where B.I. can analyze the data to see how everybody handles it," Welch noted. "A business school may do it differently than a liberal arts school, but is there a justification for the differences? We assess the data and the users' needs in creating a standard so that when you use our reporting tool, you know that the data is defined and consistent.

"We hash out all the details with our Data Partners who meet every month," Welch explained. "It's all schools, all departments with a really wide variety of input at that level. We come to agreement on a term such as 'actively enrolled.' How do we define that as an institution? What does that look like in the system? How would we get that data out of the system? So, for instance, we also create technical definitions. Where does that live in PeopleSoft? If I wanted to define this, what do I need to do to query that data?

"We define those answers and then pass it up to our Core Group," Welch continued, "which has individuals who are unaffiliated with a school – i.e. – neutral parties such as the Office of Institutional Advancement, Human Resources, Advancement, and Finance.

The Core Group assesses the work from the Data Partners, makes any necessary adjustments or edits, and sends the work on for the final level of approval to the Data Sponsors.

## Shifting Cultural Gears

"The Data Sponsors include all five Deans, the heads of HR, Student Affairs, Finance, Advancement, and Alumni Affairs," Welch noted. "They take a final look, and once they give it the stamp of approval it goes into our university data dictionary. After that, we have data standards that are attached to that definition that are also then in effect. It's a big cultural shift for the university."

"We have three tiers of data management," Welch explained. "The bottom tier is where data lives natively. Some good examples would be PeopleSoft, Salesforce, Sakai (Courses), and even something as simple as Excel spreadsheets. *This* is where we deal with data quality issues.

> " *We're seeing more people here at Pepperdine engaging with us and trying to improve how they handle data.*

"The middle tier is our master data warehouse where all the standardized data lives," Welch added. "This is essentially a physical representation of our data dictionary which provides structure and consistency so that the data can be modeled, linked and related.

"The top tier is the reporting platform which serves as a visualization tool," said Welch. "This is where you can explore the data and really learn more about what it can tell us to inspire meaningful actions."

The shift that data stewardship brings can completely change business practices, all based on the Business Intelligence department's data governance.

"Our job is to get the data from the sources into the warehouse," said Welch. "Our long-term goal is to create a self-service model so that people could create their own reporting dashboards. B.I. will always be the data stewards to ensure that the process flows as it should, but we're seeing more people here at Pepperdine engaging with us and trying to improve how they handle data.

"I have been very pleasantly surprised by the level of engagement," Welch said. "Now we get calls asking, 'We were thinking about adding this into our system, and we wanted to check with you guys first.' So the word is getting out. We're going on two years now and we have better levels of participation and attendance. People are really invested."

# Screen Tested

**Now Showing**

*The WaveNet experience was redesigned, with some popular functions made more prominent:*

**1. Popular Links**

**2. Student Convo Credits**

**3. Finances** – the red exclamation point only displays for an outstanding balance.

**4. Add/Submit/Edit Button** – provides a quick way for students to initiate enrollment from the shopping cart.

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The PeopleSoft system upgrade was a massive production that would have made Hollywood proud, requiring multiple teams years to plan, coordinate, and implement, before delivering a vastly improved WaveNet performance

When the IT department began the monumental project to upgrade PeopleSoft, a new, modern version of the four pillars within WaveNet premiered across thousands of screens in Malibu and around the world.

"First, you have the Portal, which controls what you can and can't see within the software," said Senior Director of Enterprise Information Systems Scott Bolan. "Then you have Human Resources, Finance, and Campus Solutions. So, we have three teams that control the pillars."

"This was the most major upgrade to our system since we went live in 2008 with PeopleSoft, and it went exceedingly well," said Associate Vice President and University Registrar Hung Le. "There were a lot of people involved, and our friends in IT worked tirelessly."

"Our upgrade project had many facets: some were behind the scenes, and some that were more evident such as self service," said Senior Lead Business Analyst Carly Struna. "Both Human Resources and Campus Solutions used to share a database and now they have split into two separate ones. That was quite a big effort, because part of the split required some configurations to be able to sync data between the two and to ensure that everything still worked correctly.

"After we split the systems, we also upgraded to the most current version of PeopleSoft," Struna continued. "That was significant for the University as it allows us to take advantage of advanced functionality.

"We partnered with a company called IntraSee to do a re-implementation of our Portal, and that came along with redesigning the look of our student self service piece," said Struna. "We also used this as an opportunity to highlight some things that our Registrar wanted to be a little more prominent for students."

## Special Effects

The real magic? IT pulled off the sophisticated task of the WaveNet Upgrades, including many back-end updates, as well as a complete refresh of the student WaveNet experience without disrupting the university's daily business operations.

"It's like they were digging up the foundation of our home while we were hosting dinners," said Le. "We worked uninterrupted while our friends in IT had lots of sleepless nights."
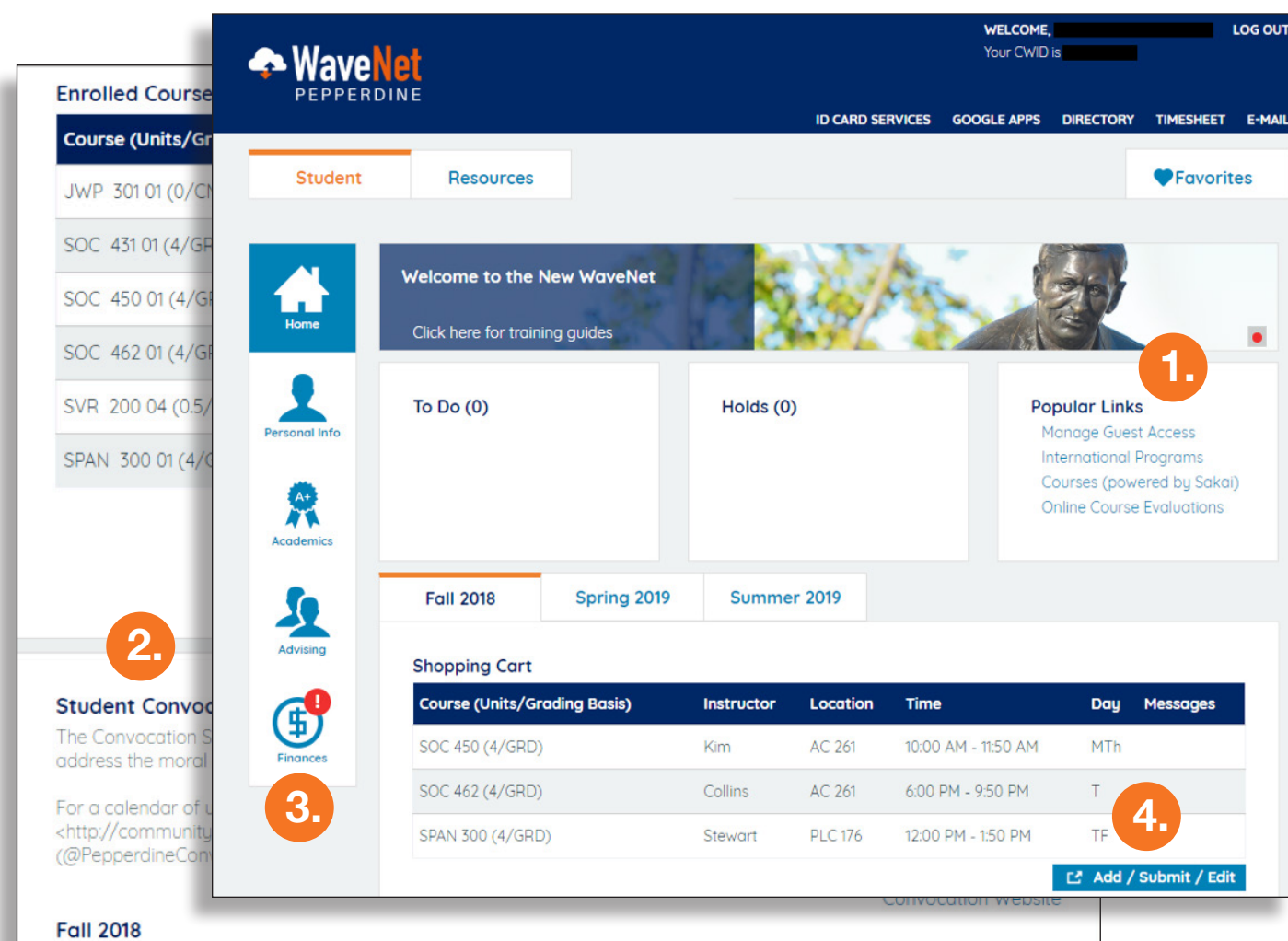
## Featured Presentation

"Our students are always interested in their convocation credits, financial aid, and academic information," Struna said. "Getting to that information in the old student self-service experience took a lot of clicks and wasn't very prominent. We worked with the Registrar to restructure functionality and make these areas more prominent.

"It also added more prominence to the registration functionality," said Struna. "Students can now view specific classes in their shopping cart, and conveniently trigger enrollment from right there on the homepage."

"We worked with IntraSee to pioneer an enhanced 'view-as-student' function which allows administrative staff to go in and provide a student's ID and then see exactly what the student sees within the portal," said Struna. "That was exciting, and I'm pretty sure that IntraSee is now going to deploy to other customers given how helpful it was to our institution.

"It's particularly helpful in the Student Services areas where a student could have questions about basic navigation within their portal," Struna continued. "You know, 'How do I pay?' 'How do I view my student account balance?' 'Where can I look at my financial aid or accept my financial aid awards?' This provides administrators with the ability to go in and see exactly what that student sees."

"From the students perspective, the look and feel changed a little bit, and it looks more intuitive," said Le. "But the functionality continues to be very, very good. We met our goal, and our students are

> **This was the most major upgrade to our system since we went live with PeopleSoft in 2008.**

very pleased that they continue to get to use the system and there was no disruption."

Behind the scenes was a different story.

## An Epic Saga

"We closely partnered with many areas within the University," said Bolan. "The Networking team played a role because of the necessary architecture. The Information Security team is involved in everything we do, and we also included IT Training. We froze all projects for months while we worked on this," said Bolan, "and we had multiple daily meeting for years, just for this project.

"We saved the University hundreds of thousands of dollars in additional support fees by upgrading to the current system," Bolan continued. "And the project came in on time and about 20 percent under budget. It doesn't get any better than that."

"Huge kudos to our IT staff," Le added. "I am so confident in our ability to serve our students, faculty, and staff because of the outstanding IT staff that we have here at Pepperdine. We are indebted to their incredible skill, their commitment to quality, and their commitment to service. I just want to say how grateful I am for that gift."

# Above & Beyond

*Long before the Woolsey fire began consuming Malibu on November 8, the Pepperdine University IT department had implemented a multi-tiered disaster response plan to protect the community and keep everyone connected*



> **"A**s I walked into the IT Leadership Council meeting in TAC, I remember it was a beautiful day in Malibu," said IT Project Manager Rita Schnepp, referring to November 8. "And less than an hour and a half later, the wind was blowing so hard that I couldn't open the door to PCC, let alone squeeze my body through it."

Schnepp was describing the drastic change in weather that preceded the historic fires that would significantly impact Southern California and the Pepperdine community.

"I checked my cell phone, and I had a message from a friend telling me, 'You need to come home right now: there's a fire headed for our neighborhood.'" Schnepp, who lives about 11 miles from the Malibu campus, was initially hesitant to act. "Then she texted me photos of the flames on the hillside coming toward my home, and I got out of Malibu pretty quickly."

When the Woolsey fire made its terrifying push into Malibu, reactions from the Pepperdine community exploded across social media. Students, faculty, staff, alumni and their extended families across the globe worried and waited for news from the university's main campus as the fire continued its march toward the Pacific coast and Pepperdine.

"I've been here at Pepperdine for 20 years and experienced several fires, but this was the first time that the City of Malibu evacuated which made some people nervous," said IT Network Services Manager John Figueroa. "That didn't change the planning and protections that went into our policies to protect a large group of students during a disaster, so we followed the plan and did our jobs."

As the fire moved closer to Pepperdine, the school's main switchboard started getting calls from parents, alumni, and others. Pepperdine's Emergency Operations Committee asked the IT department to provide 24-hour coverage until further notice.

### Answering the Call

"I wasn't going to feel comfortable leaving someone else to cover the phones overnight, so I said that I would cover from Encino," said Student Technologies Support Manager Lynn White-Stone. "Then Gerry (IT Administration and Client Services Senior Director Gerard Flynn) was displaced, so he said he would cover from West LA. We moved a polycom unit into the IT office in Encino so that we could watch the live reports on the fire and monitor what was going on.

"The news went off at one in the morning, and we were answering questions about the students on campus, sheltering in place, and there were media reports asking why we weren't leaving the campus," said White-Stone. "They didn't understand that it wasn't safe to send students out there when conditions could change at any moment. I had been through the fires here years ago, so I was able to tell people that the local fire personnel actually use Pepperdine as a command post, and that they draw water to fight fires from our pond.

"On Saturday morning, Gerry encouraged me to get some rest, so I went down the street from the Encino office and bought a sleeping bag so I could stay in the office," White-Stone indicated. "That way Gerry and I could tag-team the phones so that somebody was there to answer in case anyone called. We had concerned parents, people who were irate with us for sheltering in place, so we would just try to de-escalate the situation."

### Strike Up the Bandwidth

On Monday November 12, Network Engineering Team Leader Vic Suphasiri started holding daily 'state of the network' meetings at 11 AM to keep the team apprised of shifting challenges.

"That Monday evening Vic told us that our 10-gigabyte Internet capacity was under 10 percent of its capacity, and one of our disaster recovery connections was down as well," Schnepp noted. "Right away, I contacted our Spectrum service provider and asked what their E.T.A. (estimated time of arrival) for getting it back was," Schnepp said. "It didn't take long for them to come back and say, 'Eleven miles of fiber-optic cable melted, so we don't know...but we will keep you posted.'

"So, Vic was scrambling for extra bandwidth because he was concerned we might max out our resources," Schnepp continued. "But that never happened, as students, faculty and staff began accessing Pepperdine's network from their homes over time. Vic also noted that all the routing protocols that were in place worked exactly as they were supposed to," Schnepp added. "The internet traffic rerouted from our Malibu campus to our West L.A. and Calabasas campuses. This protocol was set up for situations just like this, and it worked perfectly.

> **"***It didn't take long for them to come back and say, '11 miles of fiber-optic cable melted...'*

While the IT team handled the technical aspects of keeping the community connected, Client Services continued to be the voice of Pepperdine as calls to Malibu continued.

"As I talked to people, I tried to put myself in their shoes as a parent," said Campus Operator Kenja Leverette. "Nobody was calling to criticize. Some people were concerned for the campus, and several callers wanted to know if they could help any displaced students. Some even offered donations."

Leverette also praised the communications systems in place that allowed the team to share information immediately and maintain a consistent message.

"It was amazing how the team had everything coordinated," Leverette noted. "When I came in, they were already using Google docs and Google Chat to stay current. So, whether you were answering

# Nolij Transfer

*Rolling out Etrieve – Pepperdine's new Enterprise Content Management system – was a top priority for IT's Client Services team, and the transition has been virtually seamless*



**Above,** *Softdoc's Lena Mason conducts an Etrieve training class.*
**Left,** *Rachel Hasselbring of Pepperdine's Office of Financial Assistance reacts after hearing about some of Etrieve's features.*

I n 2018, IT's Client Services department implemented Etrieve, virtually completing a two-year project to move to a new Enterprise Content Management (ECM) system and migrating every school over from the previous tool, Nolij.

"They are all officially on Etrieve," said Associate Director of Client Services Abrash Khanmalek. "We completed the Finance department in December and Advancement should be completed by February.

"All of the schools are officially live," Khanmalek continued. "We've also created onboarding forms as we have migrated the onboarding process for Pepperdine staff to Etrieve."

"We have a lot of onboarding forms in Etrieve," Khanmalek noted. "If you're a new employee and you need network access or a Cisco phone, it's all in Etrieve. There's a centralized location in Etrieve Central which allows you to initiate various onboarding forms.

"We're in the process of migrating the HR forms you see on the HR website," Khanmalek said. "And while Pepperdine employees just completed their mid-year reviews in Etrieve, we'll also have the complete Pepperdine annual assessment process ready next year.

Although the original project scope did not include project forms, onboarding forms, IT Service forms or the assessment process, Client Services has accommodated these requests and more in rolling out the new ECM system.

"Feedback from the community has been very positive," Khanmalek said. "Some folks have needed refresher courses or had to adapt to the environment, but people are noticing the functionality, the improved user interface, and the improvements in search."

## " I like that it's not 'one size fits all.' This product is customized for education...

"I love that you can save your searches: that's huge," said Pepperdine Financial Assistance Loan Officer Rachel Hasselbring. "It's the same effect as having custom reports run, because people who do the same processes often like to do them in a different way.

"We've been able to say 'this is not working' and they have gone in and built a solution for us three hours later," Hasselbring added. "I like that it's not 'one size fits all.' This product is customized for education, so they understand why we're asking for things like the need for redaction, authentication, and why we have to comply with FERPA (The Family Educational Rights and Privacy Act)."

"Etrieve has more tools, is more intuitive, and it makes working with documents much easier," said Human Resources Operations Manager Alex Howard. "Looking toward the future, Etrieve will be more than just a place to store files. It will become our main database, and that will make our office more efficient."

"Right now, we're set to decommission Nolij in July," Khanmalek said. "By February, Advancement will be the last department to come off of Nolij. We're only keeping it past February to protect against anything someone may have missed, or someone may need from it.

"This is really just the beginning," Khanmalek concluded. "I think that 2019 is going to be the year for Etrieve feedback."

*Above, Campus Operator Kenja Leverette relied on the strength of Client Services' information and her faith while answering calls from all over the world during the Woolsey fire. Below, visitors assess the Heroes Garden damage on Pepperdine's Malibu campus.*

phones in West LA, Encino, or Malibu, you had the same, up-to-date information to provide concerned callers."

"A lot of people came together in extraordinary ways," Schnepp added. "Spectrum managed to bypass all that melted wire to get us back up to full capacity in just five days. Needless to say that there has been a lot of strategizing and lessons learned, but all our routing protocols did exactly what they did, on their own without human intervention," said Schnepp.

The humans did pretty good too.

"We are grateful for John Figueroa and others on the Network team who were able to reset some phones on the fly so we could add some more operator stations," said Client Services Director Alan Regan. "We were also able to turn on the new Google Meet app with all the necessary support pages thanks to the IT Training and IT Communications teams. And the TechLearn team coordinated with Zoom to get free licenses of the web conferencing tool so that faculty could teach classes online.



"We had big, positive outcomes such as the strengthening of relationships," Regan continued. "With TechLearn and others reaching out to deans and associate deans and faculty, everybody in IT generated positive goodwill because we were in true partnership with everybody involved. I think that will probably open up even more doors to strengthening our bonds and connections which is a very positive outcome from a tragic and difficult situation.

"We are just very thankful for the Client Services staff's flexibility," said Regan. "Nobody said, 'That's not my job.' Whether it was development operations, AVT, Service Desk, or anybody else, we had plenty of people volunteering. We had people staying all night to get the job done in some cases. My heart really sings in relation to everybody's willingness to fulfill the mission in helping Pepperdine in any way possible."

# Classrooms Get Collaborative

Pepperdine University's TechLearn department worked with the school's stakeholders in 2018 to bring early adoption of Zoom, a web conferencing tool that will keep courses rolling even when circumstances interrupt the traditional classroom experience



When the TechLearn team started planning for their Adobe Connect contract to expire on July 31, 2019, the team used the opportunity to review the market and consider new different web conferencing platforms in 2018. And that meant gathering a lot of feedback from the Pepperdine community.

"So, we did backwards planning," said Senior Manager of Technology and Learning Kristin Bailey. "We looked at Google Hangouts, Webex, join.me, BlueJeans, and Zoom. We had demos come in through ETUG – our Educational Technology Users Group – and the vendors we selected came in to share their product with members of the schools, administration, and various departments."

After the TechLearn team received feedback on all the conferencing solutions from the Pepperdine community, they moved forward with Zoom.

"We looked through the lens of teaching and learning and recognized that some of the tools were great but just didn't fit our parameters," Bailey explained. "We narrowed it down and chose Zoom as our pilot in the summer and fall terms."

Next, the TechLearn team asked interested people to submit a request form and then gave them a trial Pro Zoom license.

"We were very intentional in ensuring that all schools had access to this opt-in process," said Bailey. "We had faculty teaching with it; some used it for their office hours; staff used it; and we also had IT people testing it internally.

"TechLearn lead a faculty steering committee with representation from all five schools," Bailey continued. "We shared the executive report with them, and everyone was essentially on board. "After receiving feedback from our stakeholders for Zoom and Adobe Connect, we documented the process and our recommendation to adopt Zoom."

## The Conferencing Call

After presenting those findings to the IT Leadership Council, the discussion focused on how to balance Google Meet – Pepperdine's existing web conferencing tool included with G Suite – and Zoom. "They're really used for different things," said Bailey. "Both are effective web conferencing platforms. In general, if you want to hold a meeting online, Hangouts Meet is quick and easy. Zoom is the natural choice for teaching a class or facilitating a robust meeting with polling, recordings, and other advanced features."

TechLearn's original launch date for Zoom was August 1, 2019, and they had successful pilots in the summer and fall terms in 2018. And then came the Hill and Woolsey fires in November.

"When the fires happened, I called our rep at Zoom, and she said, 'I'll give you 250 free licenses for your faculty to use because you're in this situation.' So, we offered Zoom to all of the schools."

Some schools took advantage of the offer and others continued using Adobe Connect. Every full-time faculty member at Seaver College received a free Pro Zoom account, though not all accepted the invitation. The Law School's Zoom usage had increased as well, and Dean Paul Caron asked for it for his faculty.

"As we managed our emergency plan, we recognized that the free Zoom license was a great opportunity," said Bailey. "With a December cut-off for that offer and the rainy season ahead, we decided to make an early Zoom adoption part of that plan.

"We are beginning in January 2019 as a soft adoption to ensure that our faculty, students, and staff have access," Bailey continued. "Now that we are going to teach on Zoom," Bailey noted, "the students can get comfortable with it and use it for their group work. Before, a professor might teach on Adobe Connect, but students would need to use Google or Skype to do their group work. The feedback we received showed that students wanted to use the same platform that they're learning on.

Having a university-wide license also requires less management, and that continuity in crisis situations paid immediate dividends.

"Zoom was particularly helpful when the Seaver College deans had to meet with all of their faculty to determine a plan of action," added Bailey. "We had a meeting with about 260 faculty members on it, and in the middle of the crisis there was just something about being able to see people's faces. That can be just as effective when there isn't a fire, because we need that human connection.

## Timely Connections

"Even though the Malibu campus was closed, the expectation was that faculty were still connecting and providing instructions to the students during that time," Bailey said. "They were providing reassurance. They were providing updates. They were answering questions. They were giving guidance. So, that was a very important call, because they could see each other as they were setting expectations.

"As one student said, 'We were learning together, and we were praying together,'" Bailey noted. "Having an easy-to-learn platform was vital, and now there's incredible energy and momentum around using Zoom."

"We hadn't experienced this before, but everybody jumped in and got it done," Bailey smiled. "We will be forever grateful that Zoom gave Pepperdine 250 free licenses in our time of need, and that was a lifesaver."

> *Even though this was my first time teaching with Zoom meeting, I was able to share slides, text, and photos quite easily, and we had a good discussion, despite being scattered across the country.*
>
> **– Seaver College Professor**

> *I used my phone to participate in my online class sessions. Zoom is easier and streams great even while on cell service.*
>
> **– GSEP Student**

> *Adobe Connect does not compare to Zoom. In my experience with Adobe, I could not connect my microphone to my computer so it damaged my learning experience for that session as I was trying to figure out the issue most of the time.*
>
> **– GSEP Student**

# Self Made



*Pepperdine's Class of 2022 was the first in the university's history to come to their New Student Orientation having submitted their own 'Selfie ID' photo, making the ID process more convenient and enhancing the student experience*

For anyone who has ever had to deal with an awkward license photo or had a bad hair day for their school pictures, Pepperdine's new Selfie ID program is the perfect solution.

"The Selfie Program began when IT's Chief Information Officer Jonathan See knocked on my door and said, 'Guess what we're doing?'" said Senior Lead Systems & Database Administrator Raphael Norton. "Giving the Pepperdine community the freedom to create a selfie image for their ID's has been years in the making, and it was just sort of a culmination of viability, convenience, and it's something the students had requested.

"The system we use to create the Pepperdine ID cards added the functionality to allow us to offer selfie ID photos," Norton explained. "Using the Get app, students can submit their own photos, and also monitor their points balance for things like the cafeteria or printing."

"I first heard about selfie ID's from the Student Government Association (SGA)," said Special Projects Manager and Executive Assistant to the CIO Brenda Pena. "Last year Lisa Welch (IT's Business Intelligence Director) and I were presenting the results of IT's annual TechQual survey to SGA, and a student asked if we had considered allowing students to submit selfies for their ID cards.

"So, I spoke with Chief Information Officer Jonathan See about it," Pena added. "I told him that the students had shared that their peers at other universities were using selfies for their ID cards, and Jonathan said, 'Let's do it.' That was in the fall of 2017, and we worked through the following spring to be prepared for the summer New Student Orientation (NSO) events."

> **This is something they asked for; they got it; they enjoy it; it's theirs. It's really about providing a more pleasurable experience...**

That preparation included securing the necessary licensing, communicating with Pepperdine's schools about functionality, running multiple tests, establishing standards for photo submissions, building the response emails, and creating a page on the IT website.

"We provided the language for the email communication for each of the schools to their students," said Pena. "We created instructions and user guides, and then brought IT Communications in to work on the language and implement the web support."

The team's preparation paid off. Over two days of the Seaver NSO in August, more than 70 percent of new student ID Cards for Seaver College were created using selfies the students submitted.

"It was shocking," Norton said. "No school I had communicated with had anything near that success rate in their third year, let alone their first year of doing this. I think it comes from us being persistent in encouraging the schools to communicate with their students about this program, and the schools following through and getting it done."

"There have been some students who have been challenging at times," Pena said with a smile. "They submit car selfies from Instagram, or photos of them with other people. Others submit the same poor photo multiple times, and so I reach out to them directly, explain why the photo doesn't meet the standards, and then direct them to the guidelines on our webpage."

"I think we can do an even better job of communicating with our students," Norton said. "This is something they asked for; they got it; they enjoy it; and it's theirs. It's really about providing a more pleasurable experience for them."

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# Defense Mechanism

*SecureConnect 's data protection and ease of use make the two-factor-authentication app a 'must have' for all Faculty and Staff by March 6, 2019*

In response to increasing global cyber attacks against Pepperdine, the school's University Management Committee (UMC) has asked the IT department to rollout SecureConnect – our multi-factor authentication system – to all faculty and staff by March 6, 2019.

Multi-factor authentication uses something in addition to your password to log you in. That 'something' is a considered a second authentication 'factor', in addition to your password. With SecureConnect, a stolen or compromised password is no longer enough to gain off-campus access to Pepperdine systems and student data.

Why the focus on securing off-campus access (i.e. access from outside the Southern California campus networks)?

"According to published research over the last five years, the majority of data breaches have occurred as a result of external attacks," said Pepperdine's Information Security Officer Kim Cary. "And one of the most popular external attacks is 'phishing'. Phishing messages impersonate an entity you're likely to trust and present you an urgent reason to respond with your password to access our systems or open a document that will install their malware to let them spy on your computer."

Security training statistics at Pepperdine since 2012 show faculty and staff have about a 12 percent rate of falling for simulations of real-world phishing scams. This rate falls within the industry average of 8-18 percent. Our 12 percent susceptibility creates a big risk to University and student data.

SecureConnect multi-factor authentication is a flexible and easy-to-use system that stops criminals from using your password to gain off-campus access to University and student data. They might steal a password, but they won't have your pre-enrolled DUO app, SMS or voice phone to authorize an off-campus log in.

"Because most data breaches come from external attacks, we've made on-campus multi-factor authentication easy by using your Southern California Campus network IP address as an authentication factor," Cary explained. "If your computer or mobile is connected to the campus network, you can use just your password to log in. But, if you're logging in from off campus, you need a pre-enrolled second factor such as the DUO smartphone app or an SMS or voice phone number in addition to your password to complete your login.

"For example, everyone who is using the virtual private Network (VPN) to access the local network from off campus is using SecureConnect," Cary continued. "Enrollment is easy, by following the instructions at https://secureconnect.pepperdine.edu. The IT Service Desk and your local IT support person are ready to assist if anyone has questions."

"Both the Board of Regents and the UMC are very interested in getting all faculty and staff onto SecureConnect so that we reduce the risk from cyber attack," said Cary. "With more than 1,000 regular SecureConnect users as of January 2019, we're off to a great start. Based on UMC's direction, we encourage all faculty and staff to enroll their account and some convenient factors in SecureConnect before March 6, 2019."

# PEPPERDINE
## Information Technology
# 2018

## PeopleSoft Processes

**9,167**
Enrolled Students

**21,494**
Student Applications

**86,329**
Class Sign-ups

## Email/Spam
Blocked Spam messages: **16 million**
Delivered email messages: **52 million**

## Staff Training
Training Classes: **157**
Total Attendance: **457**
Unique Attendees: **223**

## Sharp Copier Printing
Total prints: **8,527,519**

## Connections
SoCal Wireless Access Points: **1,594**
Upgraded Wireless APs: **833**
Wireless APs Left to Upgrade: **430**

## Document Management

**4,612,677**

The Client Services group successfully migrated 4,612,677 documents from Nolij to Etrieve while also transitioning the Pepperdine University enterprise to the new ECM system.

etrieve by Softdocs

## Device Management

**90,747**

In 2018, Device Management applied 90,747 software patches to community devices including almost 20,000 for Office for Mac, and 11,000 each for Firefox and Chrome for Windows.

PEPPERDINE Information Technology

## IT Service Desk

**20,057**

The IT Service Desk closed 20,057 support tickets for Pepperdine's faculty, staff, and student body in the 2018 calendar year.

## Community Service
### Top Web Page Visits

| Info Tech | Seaver College | Fac/Staff Directory | Housing Res Life | Int'l Programs | Graziadio |
|---|---|---|---|---|---|
| 695,025 | 544,200 | 497,903 | 247,495 | 222,985 | 128,360 |