



University of Hawai'i
Strategic Directions Progress Report:
The First Three Years (2015-2017)

January 2018

In January 2015, the University of Hawai'i (UH) Board of Regents endorsed the University of Hawai'i's Strategic Directions, 2015-2021, four overarching strategic initiatives set forth by President David Lassner to better position UH to help meet the social, economic and environmental needs of the state.

Hawai'i Graduation Initiative (HGI)

Increase the educational capital of the state by increasing the participation and completion of students, particularly Native Hawaiians, low-income students and those from underserved regions and populations and preparing them for success in the workforce and their communities.

Hawai'i Innovation Initiative (HII)

Create more high-quality jobs and diversify Hawai'i's economy by leading the development of a \$1 billion innovation, research, education and training enterprise that addresses the challenges and opportunities faced by Hawai'i and the world.

21st Century Facilities (21CF)

Eliminate the university's deferred maintenance backlog and modernize facilities and campus environments to be safe, sustainable and supportive of modern practices in teaching, learning and research.

High Performance Mission-Driven System (HPMS)

Through cost-effective, transparent and accountable practices, ensure financial viability and sustainability to ensure UH's ability to provide a diverse student body throughout Hawai'i with affordable access to a superb higher education experience in support of the institutional mission of the university, which includes commitments to being a foremost indigenous-serving university and advancing sustainability.

As UH nears the halfway point of this strategic effort, it is an opportune time to summarize the accomplishments of the first three years and to provide recommendations for mid-course adjustments for the remaining three years of the UH Strategic Directions, 2015-2021. This report describes the steps taken and successes achieved over the 2015-17 period. A separate report with recommendations for adjustments of action strategies and tactics will be completed in summer 2018.

Two years after the Board of Regents endorsed the UH Strategic Directions, the Board approved the UH System Academic Integrated and Facilities Plan (IAFP) in April 2017, a foundational document that serves as a framework for future academic and facilities planning. The framework provides a strategic vision that aligns and leverages the unique mission, capabilities and resources of each campus while reducing unnecessary duplication and increasing collaboration. Likewise, the planning framework is intended to guide discussions on which programs belong on each campus and which buildings should be prioritized for construction or modernization. The components of this structure include a six-year academic master plan, an enrollment management action plan, a distance learning strategic plan, and a six-year facilities plan. The IAFP is discussed in further detail in the HPMS section, under Action Strategy 1. The six-year facilities plan, entitled *6-Year Capital Improvement Program Plan for 2018 through 2023*, is discussed in

the 21CF section, under Action Strategy 1. The IAFP, which impacts three of the four Strategic Directions (HGI, 21CF, and HPMS), will guide our system planning and priorities, in concert with the four Strategic Directions.

Hawai'i Graduation Initiative (HGI)

INTRODUCTION

An educated labor force and engaged citizenry are essential in today's global, knowledge-based economy. Across the nation, states have set ambitious goals to boost college completion rates. Hawai'i's own *55 by '25* campaign goal focuses on increasing the percentage of working age adults (25-64 years old) with two- or four-year degrees to 55 percent by 2025. According to the most recent data available, 43 percent of Hawai'i's working age adults hold a postsecondary degree. At the state's current rate of degree production, that percentage is expected to reach only 47 percent in 2025, resulting in a shortage of 57,000 degree holders. As the state's sole public higher education system, the UH is committed to doing its part to close the state's projected educational attainment gap.

UH plans to address this gap through expanded access to postsecondary education and training throughout the state and strengthened support for student success. Targeted and strategic support for Native Hawaiians, low-income students and underrepresented and underserved populations and regions remains a top priority for the university.

ACCOMPLISHMENTS

UH has intentionally focused its efforts on increasing student completion of degrees and certificates for the past decade. In 2008, the Hawai'i Graduation Initiative (HGI) became a central part of the *Strategic Outcomes and Performance Measures, 2008-2015*, and was driven by the Hawai'i P20 goal of achieving 55% of working-age adults with a degree or certificate by 2025 (*55 by '25*). Starting at 5,978 degrees and certificates awarded by UH in 2008, the goal has been to increase its number of graduates to 13,268 by 2025.

By 2010, UH had analyzed information about the successes and barriers in curricula and student support systems to initiate system-wide and campus-based changes that would increase the number of students who graduated from UH with a credential or degree. Key accomplishments between 2010 and 2015 include:

- Establishment of systemwide automatic admission for Associate of Arts (AA) students to transfer to four-year campuses
- First system in the nation to full implement Reverse Credit Transfer, a process which awards AA degrees to students who transferred to four-year campuses before completing AA degree requirements
- Shifted the norm of time-to-graduation from six years for baccalaureate degrees (three for AAs) to four years (two for AAs). A nationally recognized *15 to Finish* communication campaign and the work of academic advisors shifted the norm of students who took at least 15 credits per

semester, or 30 credits per year — the number needed to achieve the new on-time norm. Data indicates that students who did so had better academic performance and made better progress toward their degree.

- Development of semester-by-semester academic plans that allow students to see what courses they should take in order to stay on track to earn their degrees on time.
- Establishment of Early College programs to give high school students the opportunity to enroll in college classes taught in their schools.

By 2015, when the UH Strategic Directions 2015-21 goals were set, UH had established a national reputation for developing effective strategies that increased graduation success. UH expanded on existing successful initiatives, integrating efforts across campuses and identifying ways for programs to reinforce one another. Much of the effort has focused on four strategic areas within HGI: encouraging more students to attend college, increasing the number of students who stay in college and graduate, linking academic success with workforce needs, and increasing UH's institutional capacity to deliver programs to students.

HGI Action Strategy 1: Strengthen the pipeline from K-12 to the university to improve college readiness and increase college attendance.

UH has a connection with Hawai'i high schools through Hawai'i P-20 Partnerships for Education (Hawai'i P-20), which works to ensure that policies and programs along the entire educational pipeline from K–12 to UH are seamless and aligned. Collaboration among the Hawai'i P-20 partners has accomplished the following:

Implemented statewide communications for 55 by '25 campaign

The 55 by '25 media efforts have promoted messages about the value of attending two- and four-year colleges, the need to complete the Free Application for Federal Student Aid (FAFSA), and the Hawai'i Promise scholarship program. This campaign has included radio and television advertisements, as well as outreach through the Hawai'i P-20 Executive Council, the Hawai'i State Legislature, the Hawai'i Business Roundtable and the Hawai'i Chamber of Commerce. Hawai'i P-20 has also spearheaded student-led 55 by '25 college pledge days at middle schools statewide to build college aspirations.

Provided direct services to low-income students in public high schools focused on college readiness and awareness

Hawai'i P-20's federal GEAR UP grant has targeted low-income middle and high schools throughout the state by providing informational workshops and events for applying to college, financial aid, and college success; campus visits; financial aid advising or application support events; and, mentorship workshops and peer mentor programs. Hawai'i P-20 also supports summer bridge programs between the high school senior year and the first year of college to build academic preparation, college and career readiness skills, STEM enrichment, and transition support from middle to high school and high school to college. Summer bridge programs have been adopted by several campuses as a way to increase student preparation for college.

Piloted, scaled, and institutionalized early college programs

Early College data shows that economically disadvantaged students who participate in dual credit are almost as likely as their non-disadvantaged peers to attend college especially when completing nine or more credits. Early College programs have grown from eight classes in 2012 to approximately 270 classes this year. The percent of high school graduates participating in dual credit and the percent earning at least six credits are steadily increasing. In 2017, UH celebrated the first Early College graduate – a Waipahu High School student who completed her associates degree from Leeward Community College. As a result of the success of various partnerships statewide that were privately funded, the Hawai'i State Legislature appropriated \$1M in 2017 for each year of the biennium to support early college courses. In collaboration with the ten UH campuses, Hawai'i P-20 is creating a handbook that would standardize important aspects of early college implementation.

Aligned high school graduation requirements with college entrance requirements

The Hawai'i State Board of Education changed its graduation requirements to expect more rigor from all graduating seniors, beginning with the class of 2016. The college and career ready *Common Core Standards in English Language Arts and Mathematics* have been officially adopted and implemented throughout the public school system, and the Smarter Balanced Assessment, which assess mastery of the *Common Core*, have been adopted and is used as the standardized test within the public school accountability system. Further, student scores on the Smarter Balanced Assessment are now used to place students within the UH System in English and math. The UH System has adopted a policy to use multiple measures for placement in addition to standardized test scores, such as course taking course and grade point averages, to more accurately place students in college-level courses. Hawai'i P-20 has facilitated the development of 12th grade transition math and English Language Arts (ELA) courses to prepare students for college-level courses at the UH campuses. In the 2017-18 school year, 15 schools are offering the mathematics course, and five schools are offering the ELA course—numbers are expected to grow in the coming years.

Expanded outreach to facilitate the completion of college applications and Free Application for Federal Student Aid (FAFSA) financial aid applications

Hawai'i P-20 coordinates college application events at 15 high schools statewide. UH campuses play an integral part in these events with admission representatives to assist students in completing their college applications. The MyFutureHawai'i (MFH) web portal allows students to apply to any of the ten UH campuses, answering admission questions students and families may have. MFH allows student demographic and academic data to be transferred automatically (vs. self-report) to the UH application system making the application process simpler. Use of MFH continues to grow, with 32 out of 45 public high schools using the portal.

Hawai'i P-20 coordinates various outreach efforts to raise awareness about the affordability of college and encourage more students to complete the FAFSA. Beginning in 2017, UH provides monthly student-level FAFSA data to 45 high schools statewide to help high school counselors identify students who have not completed the application.

Enhanced professional development for K–12 administrators, teachers and counselors in support of student preparation for higher education

The 6-16 College and Career Guidance program has recently been initiated, with the intent of developing a comprehensive college and career guidance program from grades 6 to 16. Participants are working with their feeder middle school, high school and UH campuses to create a smoother educational pipeline, where students receive consistent information and assistance in planning for their college and career aspirations. Five partnership teams of middle school/high school/UH campus have been selected to participate in this program.

Strengthened partnership with Kamehameha Schools UH collaborated with Kamehameha Schools to launch Makalapua Na‘auao, a four-year pilot scholarship program at UH Mānoa, UH Hilo, UH West O‘ahu, and UH Maui College aimed at increasing the four-year graduation rates of Native Hawaiian students. Makalapua Na‘auao scholars are provided intensive support services, including peer mentoring, tutoring, cultural enrichment opportunities, networking with faculty and researchers and career exploration and planning. A total of 137 recipients received \$1.18M in scholarships; 132 returned in Fall 2017, resulting in a 96 percent retention rate.

UH’s Hui Ho‘opili Āina partnership with Kamehameha Schools, and the Early College program in particular, has expanded its reach to public schools throughout the state. It continues to examine opportunities to increase Native Hawaiian student success, as well as to advance Hawaiian culture, language and knowledge at UH.

Improved college going rates and student success

It is clear that accumulating dual credits while in high school positively affects enrollment in college – as 78% of students with dual credit from public high schools enroll in college versus 50% of those who finish high school without any dual credit. Likewise, 78% of low-income students who participate in dual credit programs attend college, compared to 82% of their non-economically disadvantaged peers. Low-income students who participate in dual credit programs are clearly attending college at a rate higher than the statewide average of 55%.

Creating policies and programs that facilitate seamless transitions between high schools and UH has resulted in significant improvements for students, especially those from low-income backgrounds. The percentage of students from Hawai‘i’s public high schools in remedial courses in college decreased significantly over the past few years, from 36% in remedial English and 34% in remedial math in 2011 to 23% and 18%, respectively in 2016. In addition, first-time freshman with six or more earned college credits are retained at 88% between their first and second year, compared to 74% for first-time freshman with no credits.

Chart 1: More Hawai'i public school graduates enrolled in college and fewer need remediation

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|------|------|------|------|------|------|
| % Enrolled in college immediately after high school (HIDOE going rate) Total | 53 | 54 | 54 | 56 | 56 | 55 |
| % Enrolled in college immediately after high school (HIDOE going rate) 4-year | 26 | 26 | 28 | 30 | 31 | 32 |
| % Enrolled in college immediately after high school (HIDOE going rate) 2-year | 27 | 28 | 26 | 26 | 25 | 23 |
| % Enrolled at UH and took remedial or developmental courses - Math | 36 | 36 | 32 | 31 | 28 | 23 |
| % Enrolled at UH and took remedial or developmental courses - English | 34 | 31 | 31 | 30 | 25 | 19 |

HGI Action Strategy 2: Implement structural improvements that promote persistence to attain a degree and timely completion.

Increasing the number of students admitted to college is, in itself, not sufficient to increase the number of graduates to reach Hawai'i's 55 by '25 goal. Students must return each semester and continue to make progress towards their degrees. Much of UH's accomplishments have focused on helping students complete their degrees in a timely fashion and more efficiently with fewer credits, saving students time and money. The *15 to Finish* campaign was successful at changing UH's culture and emphasizing the value of on-time completion. Other structural changes and innovative practices reinforced the importance of taking 15 credits in a semester or 30 in a year and completing on time. Highlights include:

Established pathways for all degree programs, transitioning from a course-based to a curriculum pathway-based registration system with improved scheduling of classes

The STAR Guided Pathway System (STAR-GPS) is a home-grown registration and advising tool developed by UH Mānoa that allows students to track their course-taking progression through graduation and make informed decisions along the way. Course pathways have been established for all undergraduate degree programs with a default of 15 credits per semester or 30 credits per year.

The Hawai'i State Legislature provided two one-time general fund allocations in FY16 and FY17 to expand the original advising tool to include student registration capabilities. Through this added functionality, students registering through STAR-GPS are offered curriculum pathways, or the most efficient sequence of courses to degree completion. Students receive the information they need to remain on track automatically, augmenting the work of academic advisors. They are able to track their progress toward completion, review degree requirements and milestone courses along their academic pathway, and explore the impact of graduation based on scheduling decisions and changes in major.

In Fall 2017, all UH undergraduate students registered through STAR-GPS with significant results. The percentage of freshmen taking 15 credits jumped from Fall 2016 to Fall 2017 for UH Hilo (from 62% to 68%) and UH West O’ahu (from 41% to 58%). UH Mānoa’s large increase occurred in 2012 (from a pre-campaign average of 37% to 56%) when the campus instituted an early registration program for freshman who agreed to take 15 credits to coincide with the launch *15 to Finish* campaign. The share of freshmen enrolling in 15 or more credits at the UH Community Colleges has been steadily increasing.

Chart 2: The share of first-time freshmen taking 15 or more credits increased as a result of strategies like the 15 to Finish campaign and guided registration through STAR-GPS.

% ≥15 Credits Attempted
First-time Freshmen, Fall Cohorts

| Unit | 2009-11 (Pre-campaign) | 2012 | 2016 | 2017 |
|---------------|---------------------------|------|------|------|
| UH Mānoa | 37% | 56% | 62% | 62% |
| UH Hilo | 37% | 47% | 62% | 68% |
| UH West O’ahu | 14% | 42% | 41% | 58% |
| UHCCs | 8% | 11% | 16% | 19% |

Perhaps more importantly, the share of credits taken that counted toward students’ degrees increased from 78% prior to Fall 2015 to 91% in Fall 2017. The national average continues to be 78%. This significant increase will reduce unnecessary credits taken by students, ultimately saving money and time to graduation. In recognition of the impact STAR-GPS has had on students’ success, UH received the Complete College America President’s Award in 2016.

Increased the availability of information resources for campuses to schedule courses strategically

Creating course pathways for degrees has increased the importance of scheduling courses, often from different departments, so they can be taken together in a semester.

In 2016, UH partnered with Ad Astra to conduct an analysis of instructional capacity and course offerings for the ten campuses called the *Strategic Scheduling CheckUp*. The report provided recommendations to the campuses on possible course or section reductions and eliminations, additional courses or sections to be added to address bottlenecks for students, and considerations to better utilize course scheduling time blocks. Honolulu Community College was particularly successful in using the results of this analysis and reduced the number of sections offered, saving over \$1M.

These early results demonstrate the value of strategic scheduling of courses. Campuses are examining other areas where strategic scheduling will remove barriers to student progress towards their degrees.

Strengthened developmental education initiatives that increased preparation, improved placement methods and reduced time spent in developmental education

The UH Community Colleges have made enormous changes that sharply reduce the time spent by students in developmental education. In the past, it could take a student three semesters before they were eligible to take college-level English or math. Since Fall 2016, all students placed at two levels or more below college-level can complete college-level English and math in one year and all others can complete it in one semester.

Students are also encouraged to complete English and math in their first year. The percentages of newly entering students completing college-level math in one year increased from 14% in AY 2013-14 to 30% in AY 2016-17. The share of students completing English in one year increased from 36% in AY 2013-14 to 53% in AY 2016-17.

Placement has been improved to allow for multiple measures so students are not placed with only one high-stakes test. As a result, more students were placed in college-level classes. Further improvements are expected over the next few years as campuses build on what they have learned in the initial program phases.

Improved student support services for Native Hawaiians, veterans, returning adults and part-time students; and reduced gaps in college completion for Native Hawaiians, low-income and under-represented groups

The gap between the percentage of enrolled students and the percentage of graduated students is an important metric for HGI. Particular attention was given to gaps in college completion for Native Hawaiian students and for Pell Grant recipients. Native Hawaiian gaps have been eliminated at UH Mānoa, narrowed at UH Hilo and UH Community Colleges, and continue to fluctuate at UH West Oʻahu. The enrollment to degree gap is either nonexistent or close to parity for Pell students, indicating that Pell students do as well or better than the general population in graduating with a degree or certificate. For more detail, refer to page A8 in Appendix I.

Native Hawaiian student support services programs are established at all UH campuses. Native Hawaiian students are able to access advising, career, personal, and financial aid counseling; information on campus and community resources; and cultural workshops, events, and activities. In collaboration with Kamehameha Schools, UH is collecting quantitative and qualitative data from the Makalapua Naʻauao program to assess and improve upon system processes, student support, and funding services for Native Hawaiian students matriculating from high school through the UH System.

The Veterans Serving Committee has reconvened to address needs of veteran students. This committee will review best practices and capabilities of UH campuses and other institutions, review and propose changes to current policies, and recommend actions to improve veterans' access to UH programs and support for student success.

The Returning Adults initiative began in 2017, with a full-time hire to focus on Returning Adults. Kickoff is planned for 2018 with a Spring 2018 pilot.

Strengthened and aligned financial aid resources, policies and practices for increased access and completion

In 2017, the Legislature granted a \$1.8M request by UH to provide scholarships for UH Community College students with need. Known as the Hawai'i Promise Scholarship Program, it provided \$2M to an expected 2,000 students in Fall 2017 and Spring 2018, helping to ensure that financial need is not a barrier to higher education. Initial awards to scholarship recipients have been completed and integration of Hawai'i Promise Scholarships with other aid programs are beginning in Spring 2018.

A combination of structural improvements implemented throughout the UH System resulted in tangible results involving student completion. Most notably, UH awarded a record number of degrees and certificates, reaching an all-time high of 11,680 in FY 2015-16. UH exceeded its 2021 goals for on-time graduation rates at UH Mānoa and UH Hilo. At UH Mānoa, 34.0% of Fall 2013's first-time freshmen cohort graduated in four years (2021 goal was 32.4%). At UH Hilo, 20.9% of Fall 2013's cohort graduated in four years (2021 goal was 19.4%). Six year graduation rates for four-year campuses (150% graduation rates) and three year completion or transfer out times for UH Community College certificates and degrees have also shown steady improvement. For more detail, refer to pages A1 to A5 in Appendix I.

HGI Action Strategy 3: Anticipate and align curricula with community and workforce needs.

Data shows that students are more successful if they understand how they can utilize the degree to start (or continue) a career. Carefully done, this can also help UH better meet emerging workforce needs. UH is a national leader in developing tools to meet both objectives simultaneously.

Integrated accurate, timely information about workforce needs and employment opportunities in a platform that allows students to understand how they can use their degrees

UH is building resources to help students link their career aspirations with specific degrees and majors and plan for degree offerings that meet emerging needs in the state. The Hawai'i Industry Sectors website, which was created by the UH Community Colleges and won the 2017 Bernice Joseph Award from the Western Interstate Commission for Higher Education, has made a substantive impact on the economic and education sectors in the state (<http://uhcc.hawaii.edu/workforce/index.php>). The website provides a comprehensive overview of all sectors in the state's economy, combining information on current employment and future openings for each sector. This information resource is as valuable to students seeking careers as it is to companies in each economic sector track changing needs in their areas.

The website was developed for people interested in a particular field to quickly and easily survey the types of jobs that exist as well as the qualifications required for employment. It has been shared widely within UH, middle school counselors in the DOE, directors of state departments, and several national organizations have discovered the value of the tool in supporting their work. Recently, the UH Community Colleges have added a student portal and a clickable map of Hawai'i that provides detailed job information by zip code, by DOE district and by political districts.

As a primary partner of the Hawai'i Data Exchange (DXP), UH is helping to produce issue briefs (<http://hawaiidxp.org/research/index>) that show how data is being used to improve educational and workforce outcomes. DXP has also developed a comprehensive website (http://hawaiidxp.org/quick_data/transition_metrics?category=Postsecondary%20to%20Workforce) to show various metrics using the data – including UH graduates found in Hawai'i's workforce and UH graduates median wage earnings using unemployment insurance data from the State Department of Labor and Industrial Relations (DLIR).

Followed up with graduates and employers regarding UH students' preparation for the workforce and community

In 2017, a Gallup alumni survey was administered to better understand how successful graduates are in work and life and the role UH played in that success. Developed by Gallup with Purdue University, the survey has been administered across the nation and looks at the satisfaction of alumni with their university experience and evaluates the impact of their experience on their lives. UH results will be available in 2018. Additionally, the sector partnerships have given UH a way to obtain more information on graduates and is exploring the use of Economic Modeling Specialists International alumni data to track alumni in the workforce.

Engaged systematically with community-based groups to inform program offerings and curricula and developed new programs responsive to community needs

In addition to the Hawai'i Industry Sectors website, UH has partnered with the Chamber of Commerce of Hawai'i to undertake a series of sector convenings to learn about the educational and workforce preparation needs within specific sectors of the economy. Each convening holds a roundtable comprised of CEOs and industry experts within a major sector of the state. To date, convenings have been held in tourism, health care, banking, IT, food manufacturing and energy sectors. Facilitated by an outside professional, CEOs engage in a focused discussion about emerging trends and needs they anticipate. Support agencies like UH, DLIR, the State offices of Career and Technical Education, Department of Business, Economic Development and Tourism, and workforce development and economic development boards listen without participating as the needs of the private sector are revealed, clarified, and documented. Workgroups are then formed to address the most urgent areas identified by industry. Supporting agencies staff these workgroups to collaboratively solve issues identified by business.

The banking sector is a showcase example of how this type of engagement can work. Based on the discussion at the convening, the follow-up workgroup created a certificate program that was implemented and offered within one year. The program was designed to prepare people for a new type of position emerging as a result of online banking trends. Other programs that have been created based on industry needs include soft-skills training and training for food processing manufacturers.

UH has established analogous, internal groups in engineering, mathematics, biology, and informational technology to improve course pathways from the UH Community Colleges to the UH four-year campuses and to improve workforce relevance. Many participants in the internal groups have listened to a sector convening, closing the loop between industry input and curricular design.

HGI Action Strategy 4: Solidify the foundations for UH West O‘ahu, and Hawai‘i CC at Palamanui, our “startup” campuses, and establish large-scale student support services for Native Hawaiians, low-income students, and the under-represented populations they serve.

Solidified the presence and role of UH’s newest campuses in their respective communities

The two newest UH campuses—Hawai‘i Community College at Pāalamanui and UH West O‘ahu—now have a solid foundation of programs, faculty and staff. Enrollments and offerings at both campuses are increasing.

Hawai‘i CC at Pāalamanui has grown to serve 526 students in 108 classes. The University Center at Pāalamanui is now serving more than 150 students who are pursuing a range of programs from certificate through master’s degrees through distance education. In 2017, 31 degrees were granted at Pāalamanui.

Enrollment at UH West O‘ahu is now the fastest-growing in the UH System, exceeding 3,000 for the first time in Fall 2017. Its interdisciplinary academic structure allows UH West O‘ahu to develop programs quickly to respond to local community needs, including community food systems, financial management and applied mathematics. The campus has actively developed Early College programs with neighboring high schools.

UH West O‘ahu is completing an overall campus development plan, which will chart a course for both campus program facilities and compatible revenue-generating activities.

Hawai'i Innovation Initiative (HII)

INTRODUCTION

The economy of Hawai'i is currently highly dependent on tourism and military spending. The creation of a third economic sector based on research and innovation has been identified as a community priority. As the largest research enterprise in the state, the University of Hawai'i is absolutely essential to achieving this economic diversification. The university, in partnership with the business community, is working to create innovation clusters that link fundamental scientific discovery with applied research and economic development. The university is also working to provide the training required for technological innovation and economic development to enable Hawai'i's citizens to lead and participate in this sector. With an emphasis on UH's responsibility to the community, the Hawai'i Innovation Initiative (HII) will focus on the following hubs: astronomy and space exploration, ocean and climate sciences, health sciences and wellness, digital economy and civil infrastructure security, sustainable ecosystems and energy.

ACCOMPLISHMENTS

HII Action Strategy 1: Sustain and advance the UH research enterprise.

A few steps were taken to establish the framework for sustaining and advancing the research enterprise. We believe that they are essential in providing guidance in our future endeavors under this action strategy. Some highlights are:

Established Board of Regents Committee on Research and Innovation

Although research and innovation is one of UH's four Strategic Directions, it was previously included under the Board Committee on Academic and Student Affairs – which did not provide adequate time for consideration of the Administration's long range plans, strategies, and performance measures for advancing research and innovation at UH. Thus, a separate Board Committee on Research and Innovation (R&I Committee) was formed with the charge to:

1. Evaluate and approve long range plans that establish the strategic goals and objectives for research, innovation, and technology transfer at UH.
2. Review and make recommendations regarding investments, policies, and practices relating to UH research, innovation, and technology transfer programs.
3. Review and make recommendations on proposals to establish or terminate Organized Research Units (ORU) and research centers.
4. Work in concert with the Administration to establish performance goals and metrics to evaluate process against the strategic goals and objectives.

The R&I Committee has adopted quarterly reporting on the Strategic Directions performance metrics, as well as analyses of extramural awards.

Formed a Research Policy Task Force

One of the first items on the Administration's agenda is to review and update UH's policies and procedures —some of which haven't been updated since the 1980s. To assist with strategies for addressing the research policies and procedures, obtaining faculty input early in the process, and setting up the process to properly vet the proposed changes, the Office of the Vice President for Research and Innovation (OVPRI) established a Research Policy Task Force (RPTF). The RPTF is comprised of senior staff in central offices such as the Office of the Vice President for Research and Innovation and Office of the UH Mānoa Vice Chancellor for Research, as well as select senior faculty appointees. One of the early successes of the RPTF and the R&I Committee was updating several of the Regents Policies (RP) on research:

- RP 12.201 – Ethical Standards of Conduct
- RP 12.202 – Principal Investigator
- RP 12.203 – Right to Investigate & Disseminate
- RP 12.207 – Research Corporation of the University of Hawai'i
- RP 12.208 – Regents Awards for Excellence in Research

This included abolishing the Hawai'i Administrative Rules Chapter 20-3 on UH patents and copyrights and establishing placeholder policies in RP 12.205 and Executive Policy 12.205 on patents and copyrights.

The next step is working on updating the UH's patent and copyright policies and procedures. After that, the task will begin to review and update all research Executive Policies and Administrative Procedures.

Formed a Research Compliance Task Force

One of the issues that has been on the forefront with UH faculty for quite some time is the current support structure and processes for addressing research compliance in areas such as human studies, animal research and biosafety. To address these and other issues, the Vice President created a faculty advisory group called the Research Compliance Task Force (RCTF) to survey the faculty and to propose recommendations for improving service in these areas.

The RCTF report identified three overarching recommendations to: 1) improve the culture of research compliance, 2) improve efficiency and reduce administrative burden, and 3) reorganize to remove barriers to collaboration between central research administration units.

One of the recommendations from the RCTF report has already been acted on. The Office of Research Compliance (ORC), which was originally under the UH Mānoa Vice Chancellor for Research, was reorganized under OVPRI. The reorganization fosters better collaboration between the Office of Research Services (ORS) and Office of Research Compliance and leads to system integration.

Streamlined UH federal priorities and initiatives process

Effectively communicating UH's priorities to our Congressional delegation is vital to their understanding of UH's current and future needs to advance the research enterprise. The OVPRI worked on the internal communications process with the various campuses to ensure that requested information from each of our senators and representatives can be furnished on a well-coordinated and timely basis. This streamlined process will aid the university in coming years.

Produced a Long Range Plan Roadmap and Implementation Guide

Although Strategic Directions succinctly described the Administration's goals for research and innovation, the R&I Committee wanted a more descriptive long range plan for advancing research and innovation. Instead of prescribing where and how to direct their efforts, OVPRI produced a Long Range Plan (LRP) Roadmap, which can be used by the campuses to develop their own long range plans that would be more suited to their strengths and aspirations. This was followed by an Implementation Guide that suggested strategies and performance measures that the campuses could choose from to implement their own long range plans. The LRP Roadmap and implementation guide are described in more detail under Action Strategy 3.

Reduced administrative burden for principal investigators (PIs) and collaborators

The Office of Research Services and the Office of Research Compliance implemented changes to address administrative burden for PIs and collaborators, which are summarized below. They encompass ideas such as process changes to reduce steps or time involved, replacing paper based processes with electronic systems, centralizing processing of tasks to improve consistency and quality, or providing more direct assistance.

Office of Research Services

- ORS took over preparation, follow-up and execution of subaward documents.
- ORS S-1 subrecipient commitment form was converted from a paper to an electronic form.
- A Conflict of Interest (COI) module was implemented, allowing faculty with extramural projects to submit and receive approval of their COI disclosures electronically.
- Proposal questions in the *myGRANT* proposal development module were revised extensively and consolidated.

Office of Research Compliance

- The Institutional Biosafety Committee (IBC) simplified several policies and procedures, including employing exemption procedures when possible.
- The Institutional Animal Care & Use Committee (IACUC) implemented administrative processing of several types of protocol reviews as an alternative to full-board review.

- IACUC post-approval monitoring and Veterinary reviews are combined to reduce the amount of time required of PIs for inspections.
- The Institutional Review Boards (IRBs) and the Human Studies Program (HSP) implemented electronic protocol submission and review through eProtocol.
- The Office of Export Controls (OEC) increased individualized consultation to support compliance with export control regulations, including the preparation of Technology Control Plans.

HII Action Strategy 2: Advance innovation and entrepreneurship within UH and the community.

Several accomplishments advanced innovation and entrepreneurship within UH and the community. Here are examples of what has been accomplished:

Generated significant entrepreneurial activity through XLR8UH and Maui Food Innovation Center

Although these programs were underway before January 30, 2015, they have made significant strides. Over the past three years, XLR8UH has guided over 40 start-ups with 24 matriculating into companies that have generated more than \$5 million in revenue and raised over \$30 million in funding.

XLR8UH won the U.S. Small Business Administration (SBA) Growth Accelerator Fund competition for the third year in a row (2015, 2016, and 2017). The annual competition includes a \$50,000 cash award. It was also named one of the top 30 accelerators in the country by *Forbes* magazine in 2017.

The Maui Food Industry X-Celerator Program has received 47 applications and graduated 24 businesses in two cohorts – of which 90 percent are women entrepreneurs. The Maui Food Innovation Center is also a two-time winner of SBA Growth Accelerator Fund competition (2015 and 2016).

Positioned strategically with Acts 38 and 39

On June 19, 2017, Governor David Ige signed two legislative measures that will help UH aggressively pursue technology transfer and commercialization of UH-based research. Act 38 exempts UH technology transfer activities from the scope of certain sections of the State Ethics Code and confers regulatory and oversight responsibilities to UH such as conflicts of interest. Act 39 provides UH with broad statutory authority to engage in activities to support UH-based start-up companies, including direct or indirect financing of a start-up, providing strategic marketing and networking services, and offering instruction/mentoring to new entrepreneurs. With the new laws, UH is now better positioned to strengthen its contributions to build a thriving innovation and research innovation enterprise in Hawai'i.

Started next phase for IP policy modernization

Work has started on updating UH's patent and copyright policies and procedures to reflect current operations as well as bargaining unit agreement provisions such as royalty sharing. In addition, work is being done to bring the policies and procedures in line with up-to-date, best practices at other research

universities and will involve determining how to best use the new authorities granted by Acts 38 and 39. The revised policies and procedures will be vetted through the RPTF and consultations with stakeholders.

In addition to the policies and procedures, UH Ventures, a new UH entity, is being incorporated and is responsible for licensing intellectual property and developing commercial partnerships to drive and stimulate economic growth and opportunities. By spinning this off from the former Office of Technology Transfer and Economic Development, UH believes that the new business model will be instrumental in building the innovation enterprise in Hawai'i.

Launched i-Lab and sPACE

One of the elements that helps stimulate innovation on university campuses is to provide space for like-minded individuals to meet and exchange ideas. For those that have more practical, hands-on solutions, these spaces provide equipment to build and re-work prototypes to prove concepts. A third element is to provide space and resources to explore entrepreneurship possibilities.

The opening of i-Lab and sPACE on the UH Mānoa campus provides opportunities to UH students, faculty and alumni to immerse themselves in innovation and entrepreneurship outside the class room. The next great idea may come from these interactions at UH.

The UH System plans to furnish other campuses with their own innovation and entrepreneurship spaces tailored to the needs of the campus and surrounding community. Because UH Mānoa and UH Maui College have activities underway, other UH campuses will be considered for expansion.

Provided outreach through Noelo and Future Focus conferences

UH is actively communicating about the exciting and timely research and STEM education being conducted on its campuses through *Noelo*, an annual UH System Research Magazine. Since its inaugural issue in 2016, a wide range of topics that involve UH researchers were covered, such as climate change research, energy, sustainable community food systems, multiethnic cohort cancer study, and creative media.

In addition, in partnership with the Hawai'i Business Roundtable, UH has been conducting *Future Focus* conferences to provide opportunities for people to learn more about emerging technologies, business models, and other ways to engage in and contribute to Hawai'i's growing innovation and technology industry. Below is a table providing information on the number of participants and the major topics discussed at each *Future Focus* conference:

| Year | Participants | Major Topics Discussed |
|------------------|--------------|--|
| 2017 | Over 290 | Astronomy, Space Exploration & Cybersecurity |
| 2016 | Over 200 | Medical Research & Cybersecurity |
| 2015 (Inaugural) | Over 200 | Energy & Cybersecurity |

This outreach enables UH to create discussion and awareness of the issues, which is needed to help focus efforts to grow research and innovation in Hawai'i.

HII Action Strategy 3: Invest internal resources and seek external resources for strategic infrastructure requirements and hires that leverage our location and strengths as well as address critical gaps.

Developed a Long Range Plan Roadmap and Implementation Guide

As mentioned under Action Strategy 1, the Office of the Vice President for Research and Innovation developed a Long Range Plan Roadmap with the philosophy that it sets the overall vision for research and innovation and provides the tools, policies and processes for the campuses to achieve their missions. Thus, the Roadmap suggests a path forward, but the individual campuses are responsible for choosing their goals and implementing plans to achieve those objectives.

The Roadmap highlighted five priority innovation hubs that leverage our location and strengths and also represent growth opportunities. These identified hubs are: ocean and climate sciences, astronomy and space exploration, health and wellness, digital economy and civil infrastructure security, and sustainable ecosystems and energy.

To support these efforts, the Roadmap also described areas in which UH could help develop the innovation workforce and cultivate a dynamic innovation and entrepreneurial ecosystem. In addition, it described steps that the administration could take to become more efficient and effective in supporting faculty and other stakeholders in growing the UH research portfolio.

An Implementation Guide was produced by OVPRI to supplement the Roadmap, with a similar intent that it not be prescriptive, but could be used by campuses in implementing their plans. The guide identified best practices in five areas: 1) strategic hiring; 2) strategic investments of facilities and administrative costs (F&A) recovery (a.k.a., RTRF); 3) space management; 4) grants development offices; and 5) innovation spaces.

Improved campus positioning for pursuit of long range plans

The campuses have initiatives underway that will better position themselves for pursuing their long range plans. The following are some examples:

UH Mānoa is working on a means for UH faculty to identify potential collaborators and funding opportunities by developing an online tool; a research administration business process committee to identify ways to streamline processes; a clearinghouse for research core facilities (a.k.a. recharge centers) to reduce duplication and increase utilization; and a research administration support committee, which will ultimately provide support to investigators with inadequate administrative infrastructure. In addition, UH Mānoa is working on addressing workload concerns for research faculty. For example, new hires might be on a plan to accept teaching load during time periods where grant activity has stalled.

UH Hilo is pursuing the use of grant funds to meet its goals. Some of their plans include developing a cadre of R-01 researchers with expertise in rural health science and a center for Hawaiian natural products using National Institutes of Health (NIH) funds. Others include hiring data sciences faculty and obtaining a data visualization system through National Science Foundation (NSF) Established Program to Stimulate Competitive Research (EPSCoR) funding.

UH West O'ahu is taking steps to engage in more extramural activity with other UH campuses and community partners. UH West O'ahu is working on its academic policies to encourage research activity and developing its grant writing and support capabilities. A key initiative in its addressing the innovation workforce is the siting and construction of the Academy for Creative Media (ACM) building at UH West O'ahu. The facility will provide a working environment for students to learn their craft in areas such as film, animation and music/sound design with the goal of making UH West O'ahu a hub for creative media baccalaureate.

21st Century Facilities (21CF)

INTRODUCTION

The University of Hawai'i must eliminate the substantial deferred maintenance backlog and modernize facilities to meet 21st century needs for learning, teaching and research. This systemwide problem exists on all but the newest campus, and is particularly acute at the flagship UH Mānoa campus. In 2015, the university's deferred maintenance backlog for general funded facilities is just over \$500 million for its nearly \$5 billion dollar capital plant.

University of Hawai'i students, faculty and staff need and deserve well-maintained and up-to-date facilities that support modern teaching, learning, innovation and scholarship. Facilities and campus environments must be safe, sustainable and support 21st century higher education expectations and practices. The university's facilities must be fully digitally enabled; flexible in use; maintainable at low cost; energy, water and waste efficient; and supportive of deep collaborations with partners across the state, nation and the world.

ACCOMPLISHMENTS

21CF Action Strategy 1: Adopt model policies and practices for development and management of UH buildings and campuses.

Developed and adopted efficient and effective processes and organizational structures for construction, renewal and maintenance of facilities

To increase efficiency throughout the construction procurement process, the Facilities Contracts Office was created within the Facilities Business Office to focus on all construction and facilities-related procurements and contract administration. This change streamlined the process for these important procurements to promote aggregation of requirements so that UH could more easily realize economies of scale and efficiency. Previously, all goods and services procurements were handled by the Office of Procurement and Real Property Management.

The University's construction and professional services in support of construction policy (Administrative Procedure 8.281) was completely reorganized and revised to provide a user-friendly, step-by-step guide to complying with procurement-related laws, rules, and regulations for construction and facilities-related improvements. The revised policy also identified the responsibilities of the new Facilities Contracts Office.

The University has adopted two capital program initiatives, e-Builder and the Hawai'i eProcurement System (HePS) to increase its capital program transparency, efficiency and effectiveness.

e-Builder is a web-based capital program management solution that captures project data and utilizes electronic workflow to track business processes and generate reports. The system provides visibility into the status of projects so all stakeholders can access project in real-time and ensure projects are delivered on-time and on-budget.

HePS is an online procurement system that broadens the UH's access to quality contractors by utilizing an online solicitation environment. By implementing HePS, paperwork and paper management is greatly reduced as only final contract documents require paper and wet signatures. All bid documents can be electronically accessed and contractors are emailed solicitations. This offers a simpler, more efficient and more transparent procurement process.

Developed comprehensive multi-year capital improvement plans for construction, renewal and modernization

In Fall 2016, the University of Hawai'i prepared a 6-Year Capital Improvement Program Plan for 2018 through 2023 (6-Year CIP Plan) that set forth a new approach for prioritizing capital projects at UH. Recognizing UH's high deferred maintenance backlog, declining enrollment, and limited resources, the 6-Year CIP Plan attempts to address these issues through a facilities modernization and space strategy. By focusing on ways to rethink space as *University* space, rather than *departmental* space, the institution can begin to repurpose and consolidate areas to support priority programs and address facility needs through flexible and adaptable space management. Not only will this foster interdisciplinary collaboration and communication, it maximizes the efficiency of both the capital and operational dollar. The plan also emphasizes evaluating existing classroom and laboratory space to determine whether it's the right size, quality and configuration to meet current and future enrollment trends.

Traditionally, UH's CIP consisted of five categories: Planning; Major CIP; Minor CIP; Health, Safety & Code Requirements (HSCR); and Capital Renewal and Deferred Maintenance (CRDM). The categories of HSCR and CRDM were consolidated into a new class called Renew, Improve and Modernize Projects (RIM Projects). This is consistent with the 6-Year CIP Plan by incorporating the principles of flexible space, shared programming, and modernization while addressing annual renewals and deferred maintenance in one grouping. RIM Projects prioritize ailing facilities with a focus on improving the learning and research environment by upgrading interior/exterior structures, building roofs, mechanical & electrical systems, pedestrian pathways, and roadways. This CIP structure shifts the conversation away from one-dimensional views that focus only on deferred maintenance, capital renewal, and health & safety priorities. Instead, the RIM Project category takes into consideration multiple factors that target improving the quality of our learning and research environments through the lens of UH students, faculty and staff.

Developed a financial plan that responsibly leverages state and UH financial capacities to execute capital improvement plans and meet ongoing operating, maintenance and renewal requirements

The University of Hawai'i received authority to issue revenue bonds to support capital improvement and deferred maintenance projects. Additionally, the UH administration is developing public-private partnership capabilities to provide financing, construction, operations and maintenance by third party developers.

21CF Action Strategy 2: Improve the sustainability and resource conservation of the built environment including facilities and grounds by reducing energy consumption, greenhouse gas production, water use and waste production.

Implemented improvements for energy metering and monitoring of campus buildings

Mānoa Green days was expanded to include large lecture halls, and the formation of the operations group will continue to expand this program back into its full potential. There are an additional 81 meters to be replaced in 2018 with the digital versions. In addition, BTU meters to track where the cooling is often produced at a central plant are being planned so facilities can track, not only the electricity used at a building but additionally the energy used for cooling of that building (when the building is on a shared cooling loop). All of this metering information was integrated into a systemwide energy management system which has been integrated at UH Mānoa and UH West O'ahu.

UH Hilo has expanded the network of electrical demand meters from 84 to 100. The most recent phase of installation includes the addition of meters to record the electrical demand from exterior parking lot lighting. Meters record and report solar photovoltaic (PV) production for all PV installations on campus. For many buildings, there are multiple meters that record electrical demand for discrete sub systems that include lighting, heating, ventilation, and air conditioning (HVAC) systems, pumps and chillers. Recorded electrical consumption data from the meter network is reported on a monthly basis and reviewed to ensure consistency and to address spikes in usage. Reports also allow UH Hilo to assess and calculate savings achieved through PV to continue reinvestment in energy saving initiatives.

Improved energy efficiency at UH campuses and facilities

There have been several LED lighting retrofits including three parking lots, the physical plant building at UH Mānoa and several buildings at UH Hilo. Energy Star Compliant -80-degree freezer replacement program replaced 11 of 95 freezers; and between UH Mānoa and UH Cancer Center, improved their efficiency by over 30% each. Also, the HVAC replacement of the Stan Sheriff Center resulted in a 30% improvement in efficiency. Energy Savings Performance Contract (ESPC) phase 1 complete and Phase 2 started for eight buildings on or near the Holmes Hall cooling loop. Two brand new Net Zero buildings (FROGs) were constructed to leverage Hawai'i's temperate climate, natural lighting, ventilation and solar energy. The principles that went into building the FROGs were also formalized into the Building Design Performance Standards which has been adopted for all new construction and major renovation projects.

Increased the percentage of UH energy generated from renewable sources

UH campuses added 1.11 megawatts (MW) of photovoltaics (PV) and executed a contract for an additional 1.76MW. Approximately 7MW of rooftop solar PV are slated over the next 10 years in conjunction with

roof replacement plans (analysis indicates potential for approximately 17MW rooftop PV at UH Mānoa). The University is currently in conversation with multiple utility-scale solar PV developers to submit proposals to HECO competitive RFP for approximately 64MW of potential solar PV at the UH West O’ahu mauka lands (to be bid out in 2018).

Chart 3: This graph shows the status of PV implementation relative to achieving net zero energy across the system.

| | UH System | UH Mānoa | UH Hilo | UH West O’ahu | Hawai’i CC | Honolulu CC | Kapi’olani CC | Kaua’i CC | Leeward CC | Maui College | Windward CC |
|--------------------|-----------|----------|---------|---------------|------------|-------------|---------------|-----------|------------|--------------|-------------|
| Planned | 35.0% | 7.7% | 11.1% | 5.4% | 0.0% | 62.2% | 42.5% | 25.9% | 55.6% | 58.8% | 52.0% |
| Existing Installed | | 0.8% | 8.0% | 27.1% | 16.0% | 4.5% | 3.1% | 5.2% | 24.0% | 41.2% | 0.7% |
| Need to Plan | 65.0% | 91.5% | 80.9% | 67.4% | 84.0% | 33.3% | 54.4% | 68.9% | 20.4% | 0.0% | 47.3% |

Reduced costs of energy consumed on/by UH campuses and reinvested cost savings from energy conservation and efficiency projects into sustainability projects

Utility rates are not in UH control, however, UH did use less energy this year than it did last year, and each addition of solar units lowers the cost of energy consumed. For more detail, refer to page A13 in Appendix I.

A Green Special Fund (GSF) account was established and a law was passed to allow the UH System CFO to capture avoided utility cost into the GSF. Over \$86K was collected from the Hawai’i Energy Rebate Program and deposited into the GSF. These funds were used to purchase four of the 11 replacement freezers. The energy consumption of the freezers were monitored before and after the swap and the avoided utility cost will be deposited into the GSF.

21CF Action Strategy 3: Provide safe, healthy and discrimination free environments for teaching, learning and scholarship for students, employees and visitors.

Established centralized services for Title IX and Violence Against Women Act (VAWA)

In 2015, the University of Hawai’i opened the Office of Institutional Equity (OIE) under the Office of the Vice President for Administration to oversee the University’s centralized initiatives for preventing, reporting and responding to sex discrimination, including sexual and gender based harassment, sexual exploitation, sexual assault, domestic violence, dating violence and stalking.

As a system office, OIE provides technical assistance and support to all of the University’s ten campuses and centers in relation to complying with Title IX and VAWA. OIE also contributes subject matter expertise when drafting University policy and establishing initiatives designed to maintain and promote healthy campus environments for University students, employees, and third parties that are free from sex discrimination and gender-based violence.

Additionally, in 2015 the University of Hawai'i also opened the Community College System Office of Compliance & Title IX (CC System Compliance Office) under the Office of the Vice President for Community Colleges. The CC System Compliance Office provides direct support and assistance to the Title IX Coordinators and their teams at the seven UH community colleges. OIE and the CC System Compliance Office collaborate regularly to ensure a centralized approach across all campuses.

Each campus has a designated Title IX Coordinator who is responsible for complying with and carrying out the responsibilities under Title IX and VAWA. The Title IX Coordinator also has Deputy Title IX Coordinators to assist with their responsibilities. The Title IX Coordinators and their deputies are overseen by OIE and the CC System Compliance Office.

Applied best practices in promoting safety and response to incidents, such as conducting student climate surveys and implementing a systemwide case management system

Conducting climate surveys to measure attitudes and perceptions of a campus community is a national best practice in higher education. Accordingly, UH contracted with OmniTrak Group Inc. to create a climate survey to measure the extent of gender-based harassment and violence experienced by students, both on- and off- campus; how well UH responds to these experiences; and students' awareness of services and programs offered by UH. The results of the survey will serve as a baseline for key indicators for campus safety and accountability moving forward.

The University of Hawai'i, in collaboration with the Distance Course Design and Consulting Group based in the College of Education at the UH Mānoa, developed a homegrown, centralized case management system. The Case Management System was developed with oversight by OIE and consultation from the campus Title IX Coordinators. UH is implementing the systemwide case management system to ensure UH's effective response to incidents of sex discrimination and gender-based violence. The case management system has multiple permission tiers so that data can be selectively shared and privacy of all involved people can be maintained to the extent practicable. Case data is stored for pattern tracking, case review, and report generation.

Case-specific data is divided in the case management system into a series of categories to efficiently capture detailed case information. Additionally, the case-specific data is represented in a visual timeline for ease of reference, with each icon on the timeline clickable, so that authorized users can directly access specific details on the visual timeline. The following image is a sample screenshot from the Beta Version of the UH case management system, using fictional names and test data for illustration purposes.



MAN 2017-00000100

Adrian Davis vs. Zelenia Gardner

New Case Group

Protect Case

Edit Case Properties

Action was successfully created.



Profile People Incidents Documents Communications Actions Assignees Blocked

Updated systemwide policies and guidelines to ensure compliance and to promote safety and security

The University of Hawai'i is committed to ensuring a safe, civil, learning and working environment in which the dignity of every individual is recognized and respected.

In 2015, UH developed interim Executive Policy EP1.204, *Interim Policy and Procedure on Sex Discrimination and Gender-Based Violence*. Interim EP1.204 establishes an integrated and consistent approach to preventing, reporting, and promptly responding to sex discrimination and gender-based violence across all campuses and centers at UH. Per Interim EP 1.204, once UH has notice of alleged prohibited behavior, the Title IX Coordinator, the EEO/AA Office, and/or other appropriate UH office is obligated to take appropriate action.

In 2016, UH developed Executive Policy EP1.203, *Policy on Consensual Relationships*. EP1.203 was developed to address the issue of consensual relations within the working and/or learning environment at UH. Per EP1.203, UH prohibits initiating or engaging in a new consensual relationship between employees and between employees and students wherein a power and control differential exists, including but not limited to situations in which one member has an evaluative and/or supervisory responsibility for the other.

Ensured availability and accessibility of high-quality confidential resources for victims

UH also developed community partnerships so that local service providers could offer their services on UH campuses, improving access to resources. Community partnerships include:

- O'ahu: Domestic Violence Action Center
- Maui: Child and Family Services
- Hawai'i Island: YWCA
- Hawai'i Island Kaua'i: YWCA of Kaua'i

Services provided by community partners include safety planning, court accompaniment, crisis intervention, and risk assessments. Advocates also provide survivors with information on how to file a complaint or report misconduct to the University and/or local law enforcement.

Provided appropriate safety and awareness education for responsible officials and all students and employees

The University of Hawai'i provides both online and in-person training on sex discrimination and gender-based violence for its students and employees. This training program is part of a university-wide approach to educate the University community on everyone's rights and available resources. The curriculum also covers important information on Title IX, VAWA and relevant University policies. Over 5,000 UH employees have taken the employee online training, with an average training satisfaction rating of 4.24 out of 5. Additionally, the University has provided almost 250 hours of in-person training to students, employees and community members.

UH also provides specialized in-person training to UH Title IX Personnel. Since the establishment of a centralized office to oversee Title IX efforts across the 10 campuses in 2015, the University has provided 144 hours of specialized Title IX personnel training and trained 303 personnel.

Through the UH's community partnerships, community service providers have also been invited to provide educational presentations to students and faculty on campus and bring awareness to issues of gender violence, prevention and safety strategies, and the resources available in the community.

Ensured that clear and useful information was readily available when needed

In collaboration with the Distance Course Design and Consulting Group based in the College of Education at the UH Mānoa, UH has developed a website to further ensure information on sex discrimination and gender-violence in higher education is widely available to the public. The website includes a customized system-wide directory of services available both on and off campus. The website and online directory also contain crosslinks to the respective campus websites, to further ensure access to important information. The website is available at www.hawaii.edu/titleix.

A system-wide, comprehensive brochure was developed to improve access to system-wide resources. This brochure was produced by the Office of the Vice President for Community Colleges in partnership with the UH System Office of Institutional Equity. This brochure further assists with the system-wide availability of resource information, and the contact information for all resources identified in the brochure is periodically updated, with the cover noting the publication date. The brochure is available at uhcc.hawaii.edu/titleIX/docs/TitleIXBrochure.pdf.

High Performance Mission-Driven System (HPMS)

INTRODUCTION

The University of Hawai'i is committed to accountability, transparency and managing costs by leveraging our unique status as a unified statewide system of public higher education. Strategies for achieving higher performance will include: providing a diverse student body with multiple entry points and educational pathways across the state; streamlined administrative and support processes; efficient utilization of facilities; exploration and implementation of new instructional approaches; and enhanced use of metrics for productivity and efficiency.

These objectives are achieved with a deep commitment to the institutional mission of UH as a foremost indigenous serving university that advances sustainability at UH and for Hawai'i.

ACCOMPLISHMENTS

HPMS Action Strategy 1: Employ best practices in management, administration and operations.

Implemented world-class business practices to advance efficiency, transparency and accountability with sound risk management and improved reporting capabilities

The University of Hawai'i has implemented governance practices regarding budgeting and fiscal oversight utilizing the Board of Regents as the approach to increase greater public transparency into UH's financial reporting. Starting in FY16, UH administration began working with the Board of Regents to develop an intra-year financial reporting format that would provide periodic fiscal reporting at the Board-level. Since FY16, UH administration has continually refined and annually evolved the reporting tool to incorporate meaningful metrics and increase management accountability. Quarterly financial status reporting incorporates financial metrics that are useful for the Board, executive-level administration, and campus' leadership to measure mid-year progress on expense, revenue and reserve balances against pre-year targets. As an example, credit agencies have identified UH's reporting efforts to increase periodic financial governance as a positive credit strength of management. Such increased transparency and fiscal resource coincides with strong year-over-year-over-year growth in aggregated financial reserves within the UH System.

Chart 4: Current fund balances are healthy and exceed the executive policy requirement of a minimum 5% operating reserve.

| Unit | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------------|-------|-------|-------|-------|-------|
| UH Mānoa | 2.8% | 1.6% | 4.4% | 8.1% | 8.4% |
| UH Hilo | 19.0% | 17.8% | 15.8% | 22.1% | 19.2% |
| UH West O‘ahu | 0.6% | 13.8% | 6.7% | 21.9% | 21.9% |
| UH CCs | 3.2% | 3.1% | 8.2% | 15.3% | 13.5% |
| UH Systemwide | 7.1% | 8.9% | 11.2% | 15.6% | 18.3% |

UH has created an Enterprise Risk Management (ERM) program to identify and evaluate the major risks at UH and minimize their impact on its finances, operations, reputation and strategic mission. Over the past two years, UH officers have assembled on multiple occasions to assess eight identified risk areas, report on mitigation and monitoring activities for key risk areas, and develop a risk heat map which visually presents the impact and probability of each risk area on a scale from low to high.

In June 2016, UH launched a confidential whistleblower hotline to further advance its commitment to encourage and enable any member of the UH community or the general public to make good faith reports of misconduct. The hotline, managed by EthicsPoint, is available 24 hours a day via telephone and online, and received 137 reports in its inaugural year. Cases are investigated, addressed and closed fairly quickly, with 87% of all cases closed within two months of the initial report.

UH launched its first ever human resources intranet in August 2017 to serve as a centralized resource for its over 10,000 employees and advance efficiency and transparency in the human resources realm. The intranet was necessary to establish a self-help culture for employees regarding basic human resources matters. Previously, many human resources staff were inundated with the same “how to” questions from employees, which left them unable to devote time to other, more complex matters. The intranet establishes a user-friendly, accessible resource for employees to find answers to frequently asked questions and commonly used forms. Numerous stakeholder interviews were conducted to create the optimal user experience and subject matter experts reviewed, revised and created countless policies, guidelines, forms and other written materials. This project was also a necessary step toward creating efficient and transparent human resources processes at the UH by standardizing human resources practices system-wide, as different campuses and departments often utilize different procedures to produce the same outcome.

Created effective and efficient organizational structures that leverage the advantages of centralization and decentralization to maximize efficiency and responsiveness to internal and external stakeholders

Leadership for the UH System and UH Mānoa believed efficiency and improved performance would be achieved through the consolidation of the following UH Mānoa operations into the Office of the Vice President for Administration (OVPA): Facilities and Capital Projects, Communications, and Human Resources. More specifically, the perceptions and realities of duplication between the UH System and campuses, particularly between the UH System-level officers and UH Mānoa officers, are impeding the efficiency of the University of Hawai‘i writ large. In February 2017, a reorganization consolidated UH

Mānoa facilities and communications with the UH System. By consolidating personnel, a larger pool of resources is now available to support similar needs in both areas. Additionally, alignment of goals and objectives ensure the strategic deployment of limited resources to deliver 21st century facilities.

Maximized efficient use of facilities and classrooms

Efficient space utilization is an integral element of the capital improvement program. This is achieved through developing strategies to align facilities with future program needs, which begins with understanding the current facility utilization. In 2017, UH Mānoa completed a comprehensive space utilization assessment to develop data-driven tools and metrics for space condition, utilization and scheduling. The space utilization tool identified that classrooms and class labs occupy 6.5% of the total campus, and identified right-sizing rooms with modest renovations so that rooms are 80% occupied and would effectively increase capacity by 60% without the construction of new buildings. Further, the plans for the Life Sciences Building currently in construction prioritize flexible, interdepartmental spaces that emphasize university space over departmental space. By rethinking space as university space, UH is maximizing the use of its facilities through flexible and adaptable space management.

Provided professional and leadership development for UH faculty and staff

Since its inception in 2007-08, the President's Emerging Leaders Program (PELP) has identified potential future leaders of UH and provides a year-long program of professional development. The experience gives emerging leaders a base of knowledge about higher education and tools for leadership, and qualified internal applicants for positions. PELP aims to bring together faculty and staff from across UH, with a mix of departments and functions, and includes women and underrepresented groups. In the past three years, program participants have engaged in projects on topics that matter to UH such as monetization of land assets, student transfers and cultivating philanthropy.

To date, six cohorts with a total of 183 participants have participated in the program from all 10 campuses and the UH System offices. Participants have been: 39% staff and 61% faculty, and 68% female. PELP alumni are currently serving as chancellors, deans, directors and in a variety of other positions. PELP planning with Hawai'i Papa o Ke Ao interweaves the University's focus on its Strategic Directions with its commitment to being a foremost indigenous-serving institution.

Used metrics effectively to advance goals and objectives

UH has made a concerted effort to share its Strategic Directions measures, performance-based funding measures, and campus scorecards on a consistent basis to internal and external stakeholders to raise awareness of UH's broad goals and objectives.

The Strategic Directions measures are publicly reported, and is included in an annual update to the state legislature. They are included in Appendix I. Additionally, UH tracks another set of measures internally that are more suited for system and campus reviews. Performance-based funding measures were established in 2015 and overlap with the Strategic Directions metrics. Annual updates of campus scorecards provide the UH community with information on indicators of student success. Specific

initiatives are also driven by the use of metrics, such as 15 to Finish, Early College and Co-requisite Remediation, and are shared within the UH community.

In addition to sharing broad metrics widely to advance UH goals and objectives, UH is developing tools which can easily access detailed information and reports for program improvement. An integrated warehouse of student, human resources, and financial data is being developed using SAS Analytics software. The goal is to provide users with better data visualization through dashboards such as those on graduation and success, STEM awards and enrollment, and interactive enrollment and degree reporting. The graduation and success dashboard will allow users to slice and dice graduation and success rates by selected cohort characteristics. A STEM-centric dashboard will highlight degrees awarded, semester-by-semester enrollment, graduation and retention rates for students who enroll in a STEM major at entry, and STEM transfers after receiving a degree. The interactive enrollment and degree reports dashboard will provide interactive views of enrollment and degree data. The development of a financial dashboard and a new data training and reference website are also being developed.

The UH Community Colleges' Program Review has a new interface that disaggregates data down to the program level and displays measures of effectiveness, including enrollment, workforce demand, class size, etc. Providing the UH community with greater access to data from the program to the system level will enable better decision making within campuses as well as across the system.

HPMS Action Strategy 2: Increase opportunity and success for students and overall cost-effectiveness by leveraging academic resources and capabilities across the system.

Expanded student-centered distance and online learning to create more educational opportunities through use of technology and by leveraging University Centers on all islands

The University of Hawai'i campuses have been offering distance delivered courses since the early 1990s using multiple technologies (interactive television, public access cable and the Internet). In Fall 2017, 1,656 courses were offered at a distance. However, the majority of students enrolled in these courses are students who prefer these instructional modes and are not true distance learners. The University of Hawai'i will focus on identifying distance learners, at the point of admission, and work to provide targeted educational opportunities and necessary support services for their success.

Developed degrees and certificates, including with distance delivery, as part of integrated pathways for students enrolled across the UH system

The University of Hawai'i System has a wide variety of courses available at a distance, using multiple technologies. The percent of degrees completed by distance increased from 12.5% in Fall 2013 to 16.7% in Fall 2017.

However, there is a need for distance delivered, regularly available degrees, including those using a 2+2 model to build on an Associate in Arts (AA) degree to provide a seamless transition toward a baccalaureate degree. In addition, the traditional semester schedule is not always optimal for working adults or adults returning to complete degrees at a distance. Therefore, UH Distance Learning will offer complete online degrees in high priority areas that will be available statewide using a 5-week course model allowing students to concentrate on one course at a time, utilizing technology and scheduling to maximize student success and contain costs.

Promoted stronger and more comprehensive transfer and articulation policies that are student-centered, transparent and well communicated in order to support student mobility and success throughout the system

Automatic Admission allows students completing their AA degree to be automatically admitted to a four-year campus without submitting an application or paying an application fee. Based on program's success, it was expanded to include the Associate in Science (AS) in Natural Science and selected articulated programs. Over 8,500 students have benefitted from this initiative. Effective Fall 2017, students will be waived from paying a tuition deposit and will be allowed earlier registration times.

For students that transfer from a UH Community College to a UH four-year campus before earning their associate's degree, Reverse Credit Transfer has been successfully implemented at all community college campuses, resulting in over 3,000 degrees awarded. In Fall 2015, the AS in Natural Science was added to the list of eligible degrees and in 2018, the eligible degrees will be further expanded to include select articulated programs.

The final consultation to update Executive Policy EP 5.209 *UH System Student Transfer and Inter-Campus Articulation*, which will allow transfer students without a break in enrollment to maintain the catalog year for their major requirements, will be completed in 2018. This will reduce excess credits at graduation due to program requirement changes, maximize the use of STAR-GPS to determine optimal time to transfer and ultimately allow students to graduate sooner.

Ka'ie'ie, a degree pathway partnership agreement for dual admission and dual enrollment for students seeking to transfer to UH Mānoa from Honolulu CC, Kapi'olani CC, Leeward CC, UH Maui College and Windward CC, has been successfully implemented. Transfer advisors from UH Mānoa are on the UH Community Colleges' campuses to help advise students, and barriers such as application fees and tuition deposits have been removed to allow for smoother transfer.

Promoted mission differentiation through the review of academic offerings to identify unnecessary duplication and opportunities for improved collaboration

The Integrated Academic and Facilities Plan (IAFP) was approved by the Board of Regents in April 2017 and is a foundational document underlying the formation of a future framework to guide academic and facilities planning. The purpose of this planning framework is to provide a strategic vision that aligns and leverages the unique mission, capabilities and resources of each campus while reducing unnecessary duplication and increasing collaboration. The IAFP makes it clear that not every part of UH can or should engage in every part of this mission across every disciplinary area and that it must work collaboratively and efficiently to meet the diverse needs of the state. In addition, the planning framework is intended to identify which programs belong on each campus and which buildings should be prioritized for construction or modernization.

The components of the IAFP structure include:

1. A six-year academic master plan which will facilitate holistic reviews and discussions of all current and future program offerings by campuses, UH officers, and the UH Board of Regents. The development of an academic master plan is currently underway.
2. An enrollment management action plan which establishes future enrollment targets and retention by unit and specialty groups (e.g., first-time freshmen, transfers, etc.). The action plan was created in August 2017 and is going through its first annual update in spring 2018.
3. A distance learning strategic plan which is being developed.
4. A six-year facilities plan, entitled "6-Year Capital Improvement Program Plan for 2018 through 2023," was developed in Fall 2016 and is discussed in the 21st Century Facilities section, Action Strategy 1.

In addition to these four components, UH will prioritize its investment of fiscal resources based on the principles and priorities set forth in the IAFP. Policies related to the UH mission and academic and facilities planning will be updated in spring/summer 2018.

Nurtured instructional innovations and institutionalize high impact educational practices

Research has shown that high impact practices such as learning communities, mandatory advising, summer bridge programs, etc., can have a significant impact on student retention and completion.

All campuses have instituted new student orientation and most have mandatory advising for new students. Windward CC, in particular, has a very strong mandatory First Year Experience Program and is taking steps to expand program offerings to more students. UH Mānoa's New Student Orientation (NSO) program hires current students to help new students and includes representatives from various departments and offices at a resource fair. UH Hilo has reduced the fee for participation in new student orientation which tremendously increased participation. UH Hilo also has mandatory advising for all freshmen.

Living learning communities have also been used to help students acclimate to college life with the support of peers. UH Mānoa and UH Hilo have established communities where students with similar majors or interests live together and learn from each other. The link to academic programs is also fostered.

Summer bridge programs also are used to give at risk students a head start. UH West O'ahu has established a summer bridge program on math and student success. Hawai'i CC has begun a college credit bearing Summer College and Career Exploration program for high school students. Honolulu CC created Summer Bridge programs for Construction Academy, Auto Academy, Engineering Academy, Trio Student Support Services (TRiO-SSS), and cyber programs.

All campuses have adopted early alert systems. These systems allow instructors/professors to identify students who are not attending classes or doing poorly in classes to campus support teams. Advisors and others can then contact students to offer tutoring or other services. The systems are also effective in providing students with "kudos" praising them for work well done.

Standardize, centralized and collaborated on shared services to improve operating efficiencies and effectiveness in student support areas such as transcript evaluation, financial aid processing, admissions, monitoring of student progress, early alerts and intervention strategies

Significant steps have been made toward coordination and systemization of financial aid procedures for all ten campuses. Most notably, UH System Financial Aid Office is fully staffed and operational. In addition to centralized support for all campuses and financial aid processing for the community colleges, the office made significant improvements to the systemwide common scholarship application and completed a consumer information and disclosures project, which involved a detailed assessment of campuses' current statuses and the creation of a new template to ensure compliance.

Nine campuses are currently on one early alert system (Starfish). Having most campuses on one system reduced costs, eases the data burden, and allows for tracking students across the system.

Reduced cost of textbooks

Honolulu, Kapi'olani, and Leeward Community Colleges have been providing open educational resource (OER) textbooks at no cost to students. In Spring 2016, 313 classes provided textbooks at no cost to close to 6,000 students. UH Maui College is also aggressively moving to adopt Open Educational Resources (OERs) across disciplines and programs. The following programs and disciplines are providing students with OER resources:

- English
- Psychology
- History
- Agriculture
- Hawaiian Studies
- Construction Technology
- Chemistry
- Spanish
- Sociology

HPMS Action Strategy 3: UH aspires to be the world's foremost indigenous serving university and embraces its unique responsibilities to the indigenous people of Hawai'i and to Hawai'i's indigenous language and culture. To fulfill this responsibility, the university ensures active support for the participation of Native Hawaiians and supports vigorous programs of study and support for the Hawaiian language, history and culture. In addition to the Native Hawaiian student success agenda within the Hawai'i Graduation Initiative, the following tactics align with the thematic areas set forth in Hawai'i Papa O Ke Ao, UH's plan for a model indigenous serving university.

Prepared more Native Hawaiians to assume leadership roles within UH and the community

There have been notable gains in Native Hawaiians in leadership roles across the UH System over the past five years. In Fall 2016, Native Hawaiians are appointees in over 12% of all executive managerial (EM) positions and comprise almost 10% of all faculty. Over a one-year period, Native Hawaiian EM increased by 37% and faculty by 5%.

The UH System Hawai'i Papa O Ke Ao (HPOKA) Task Force continues to make progress in addressing the goals and objectives under three themes: Leadership Development, Community Engagement and Hawaiian Culture and Language Parity. Preliminary discussions on the development of a system-wide leadership training program was initiated, and through a collaboration, a subcohort group of the 2016-2017 President Emerging Leaders Program developed and administered a system-wide HPOKA-PELP survey with Native Hawaiian students to assess their perspectives on making UH a Hawaiian place of learning. Results indicated an ongoing need for UH to commit to HPOKA initiatives, and to provide resources to support these initiatives.

Developed community and public-private partnerships locally and globally that advance UH's indigenous serving goals and share practices globally

The University of Hawai'i has been a higher education partner with the Polynesian Voyaging Society (PVS) in support of Mālama Honua, the worldwide voyage of the canoe Hōkūle'a to create curriculum and strengthen work in STEM education, sustainability and Native Hawaiian language and culture. More than 50 UH students, administrators, faculty, and staff from across ten campuses were directly involved with the voyage.

Advanced the utilization and understanding of the Hawaiian language and culture throughout the UH System, including through articulated programs of study as well as through informal learning

The UH Board of Regents approved the permanent status of the Associate of Arts in Hawaiian Studies degree on behalf of the seven community colleges in January 2017. Graduates in the program are prepared for a baccalaureate degree in Hawaiian Studies at UH four-year campuses and/or have a good foundation in Hawaiian culture and values to be able to pursue other baccalaureate or career pathways.

The ten campuses are examining student learning outcomes and program learning outcomes in Hawaiian language to better advise students enrolling in Hawaiian language courses as they transfer from two- to four-year campuses.

Imparted a Hawaiian sense of place on campuses through landscaping, signage and the creation of Pu‘u Honua

Seven UH campuses have an identified pu‘uhonua or cultural gathering space for academic and co-curricular activities and events for Native Hawaiian students, faculty and staff and the broader Native Hawaiian community. Kaua‘i CC, UH Maui College and UH West O‘ahu are developing plans for similar gathering spaces on their campuses. Many of the UH campuses have developed a process to name buildings and spaces in Hawaiian, create signage in Hawaiian and incorporating Hawaiian plants into the campus landscape.

HPMS Action Strategy 4: UH will be a global leader in the integration of sustainability in its teaching, research, operations and service. The university must embrace both indigenous practitioners and global experts to advance Hawai‘i’s stewardship and use of energy, food, water, land and sea for the well-being of the state and the world.

Integrated sustainability across the curriculum using common criteria such as an ‘S’ designation

Shared criteria have been developed across UH campuses to identify sustainability-focused courses, which have been formally adopted into the UH’s course catalog to help students to identify courses and programs with a “primary and explicit focus on teaching sustainability.”

The shared criteria provide coherence across curricula to: support interdisciplinary dialogue among and between faculty in all areas; inspire research and community engagement on local sustainability issues; and teach sustainability principles, skills, and attitudes with consistency, rigor and hope.

The UH Sustainability Curriculum provides an understanding of: 1) genealogies of self and place to cultivate broader/deeper perspectives, 2) the basics of climate change science and anticipated climate change impacts, and 3) key concepts and terms to establish basic sustainability literacy. These are taught in the context of action: applied research, service to community and civic engagement.

Developed academic programs in sustainability sciences collaboratively throughout the system

Beginning in Fall 2018, Kapi‘olani CC will offer a Sustainability Minor-equivalent (Academic Subject Certificate) for first-year college students. The Sustainability Minor-equivalent is designed to be achievable during students’ first year, and to increase recruitment, retention and engagement by creating opportunities for early success.

Students can explore a range of disciplines through the lens of sustainability, and will complete an online introductory learning module available across all 10 campuses to provide a consistent introduction to understanding sustainability.

Initial discussions with the Hawai‘i P-20 indicate the potential to adopt sustainability-focused courses for early college credit to engage with millennials and create cohorts of incoming freshmen with a shared

perspective and sense of purpose. This could positively impact not only our persistence rates but also the social, cultural, ecological and economic well-being of communities throughout Hawai'i.

Upper-level programs continue to develop sustainability courses, programs and certificates as appropriate to their discipline and the communities they serve.

Supported research and service around issues of sustainability

In 2017, the UH Mānoa campus established the Institute for Sustainability & Resilience (ISR) and awarded eight multi-disciplinary projects addressing various cultural, social, ecological and economic sustainability challenges under its inaugural Strategic Investment Initiative.

The University of Hawai'i is currently benchmarking world-class cross-disciplinary research institutes to design a sustainability in higher education enterprise that supports large-scale, cross campus, transdisciplinary and outcomes-based research which advance statewide sustainability goals to address the complex and interconnected challenges of climate change, sustainability and resilience.

Incorporated sustainability practices, including those derived from indigenous wisdom, throughout the university

The University of Hawai'i institutionalized its commitment to incorporate sustainability practices derived from indigenous wisdom throughout UH via Executive Sustainability Policy EP 4.202. EP 4.202 directs UH to create a sustainable living and learning environment that honors its cultural foundation and addresses the challenges and opportunities of its location while recognizing the unique and respected Hawaiian host culture, the geographic remoteness of the islands and the rich diversity of cultures in Hawai'i. This will be accomplished by: 1) embracing the culture, wisdom and fundamental values of the indigenous people of Hawai'i to advance sustainability, and 2) cultivating an inclusive University community with varied characteristics, ideas, cultures and world-views through which our students, faculty and staff celebrate difference and respect tradition and wisdom.

Exploring the meeting of wisdoms between indigenous knowledge systems and Western empirical sciences is a rich and emergent dialogue which recognizes that indigenous ways of knowing hold key concepts, strategies and information that are necessary to meet the challenges of global climate change.

The "meeting of wisdoms" is a phrase now used across UH to describe how Native Hawaiians sustained a population without imports, and how indigenous cultural practices and western empirical science can each contribute to sustainable futures.

Encouraged alternate modes of transportation

Nine EV charging stations have been installed across the UH Community Colleges, and three have been installed at UH Mānoa. Five "Biki" bike share stations are planned for the UH Mānoa campus.

Additional EV fast chargers are being installed by Hawaiian Electric Company at suitable locations as a pilot project. Electrification of transportation is being incorporated into the Master Energy Resource

Planning initiated by the Office of Energy Management as a mechanism not only to encourage alternate modes of transport, but to potentially provide Demand Response and other grid services, which can contribute to the overall stability of Hawai'i's electric grid.

Supported Hawai'i's local food economy

UH West O'ahu's Bachelor of Applied Sciences Sustainable Community Food Systems (SCFS) program offers experiential learning and applied research projects focused on sustainable farming systems, ecosystem services, food security and nutrition, climate change adaptation, and doubling food production in the State of Hawai'i to address pressing issues in food and agriculture facing the West O'ahu community, the state and region. Increased student interest in the SCFS Program (47.6% increase from year 1 to year 2) and a regional and national request for the expansion of educational programs that develop graduates with world-class agriculture science and research capabilities suggest that program demand will continue to be strong.

The Hawaiian Center for Sustainable Community Food Systems (currently under development) will provide the much needed education, training, community engagement, production, food processing infrastructure and applied research needed to support the transition to an ecologically sound, economically viable, resilient and culturally appropriate food and agricultural system for O'ahu, Hawai'i and the Pacific. The center will provide key infrastructure, education and training opportunities, practitioner knowledge and the institutional support needed through production, education, farmer training, food processing infrastructure and applied agroecology research to increase local production of sustainably produced food and to enhance the resiliency of Hawai'i's food system.

Researchers at UH West O'ahu's SCFS program are forming a statewide coalition to assess the vulnerabilities of Hawai'i's existing food systems to anticipated climate change impacts, so that a localized, data-driven Climate Change Adaptation Plan for Hawai'i Food Systems can be developed and implemented for the state.

HPMS Action Strategy 5: Diversify resource base beyond state appropriations and tuition to support public higher education in Hawai'i.

Executed a successful fundraising campaign across all campuses to provide additional support for students, faculty, facilities, priorities and programs

The University of Hawai'i has incorporated the UH Foundation into its direct fundraising efforts at the programmatic level. UH Foundation fundraisers work closely in concert with campus chancellors, faculty, and staff to specifically target donors for funding support of programs. The result has been that UH Foundation has met fundraising targets each year and average in excess of \$60 million each year.

Chart 5: UH Foundation has consistently met or exceeded its fundraising goals for the past six years.

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------|---------|---------|---------|---------|----------|---------|
| Fundraising Goal | \$45.0m | \$50.0m | \$56.0m | \$61.0m | \$66.0m | \$66.0m |
| Actual Amount Raised | \$46.7m | \$66.9m | \$66.3m | \$98.6m | \$129.0m | \$66.1m |

Managed UH land assets to generate revenue, reduce costs and support UH’s mission activities statewide

The University of Hawai’i has begun to establish a proactive approach to real asset development with the objective of generating residual revenue on under-utilized property. The objective also seeks to explore new approaches to finance the capital construction of facilities. Administration is developing the organizational infrastructure based on best practices learned from other universities who have been successful at implementing similar strategies. Projects on land at UH West O’ahu, UH West O’ahu-University Village, UH-Mānoa Atherton YMCA, Mānoa Innovation Center, and others throughout the UH System are already within 12-24 months of materializing tangible progress to demonstrate UH’s ability to monetize property.

Administration has coordinated its efforts with the UH Board of Regents to improve executive governance and policy-level decision making. In FY16-17, Administration coordinated with the formation of a UH Board of Regents’ task group on Real Estate Development. In mid-FY17, the UH Board of Regents established a task group on Public-Private Partnerships (P3), to focus on that as the specific effort towards real property development.

Executed a coherent strategy for international and non-resident recruitment and enrollment, including through partnerships, that advances revenue goals as well as the educational benefits to Hawai’i students of a globally diverse student body

The economic impact of international students at UH increased in 2017 from the previous year, according to a report by the Department of Business, Economic Development, and Tourism (DBEDT). Despite an overall decline in the economic impact of international students within the whole state, the UH System saw an upward trend, primarily in the growth of short-term (primarily noncredit) programs. DBEDT reported a total of more than \$133M (includes spending on tuition and fees and living expenses), in direct economic impact for the State of Hawai’i from long- and short-term international students at the UH System in 2017.

Because of the unusual compliance and risk issues associated with international transactions, the Office of General Counsel and System Office of International and Strategic Initiatives framed the international agreements section of the new Executive Policy on Contracts and Signing Authority, EP8.200. Issued in November 2017, the policy aims to identify high risk and make uniform approvals and signing authority.

Conclusion

UH has made tremendous progress in each of the four Strategic Directions in the past three years. Through HGI, UH has increased student participation and completion through communications campaigns like 15 to Finish and 55 by '25, programmatic initiatives such as early college and developmental education reform, and structural improvements such as development of curriculum pathways, guided registration through STAR-GPS, and career and workforce tools.

Through HII, UH has positioned itself to advance its research enterprise through organizational restructuring (establishment of the Board of Regents Committee on Research Innovation, Research Policy Task Force, Research Compliance Task Force, etc.). It has also streamlined processes and established roadmaps, guidelines, and programs that promote innovative and entrepreneurial activities.

Through 21CF, UH has redesigned facilities management through organizational restructuring and adoption of tools such as e-Builder and the Hawai'i eProcurement System, the development of multi-year capital improvement plans, and implementation of projects dedicated to improving energy consumption and sustainability efforts.

Through HPMS, UH has improved system efficiencies and performance in a variety of areas, including budget/fiscal and facilities reporting, space utilization, leadership development for faculty and staff and Native Hawaiians, distance learning, transfer and articulation, financial aid centralization, sustainability, and others.

The accomplishments cited in this report are the result of extensive system and campus collaborations as well as individual campus efforts. In the past three years, system and campus groups are working closer than they ever have been, building on past and new synergies and leveraging the power of the system to effectuate positive changes that benefit the students and the state. Much has been accomplished at this mid-point review of UH's Strategic Directions, however there is much more to do over the next three years. As a first step, UH will update the action strategies and tactics of the Strategic Directions that have evolved since 2015, including the addition of comprehensive IAFP framework. With a newly revised Strategic Directions serving as a guide, UH will continue to combine its resources and talents as a system to achieve its 2021 goals.

UH Strategic Directions, 2015-21 Midterm Report

Appendix 1

Hawai'i Graduation Initiative

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Degrees and Certificates Earned, UH System

The degrees and certificates earned has steadily increased since 2008, reaching an all-time high of 11,680 in FY2016.

UH Degrees and Certificates of Achievement Earned

| | 2008 Actual | 2009 Actual | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Actual | 2014 Actual | 2015 Actual | 2016 Actual | 2017 Actual | 2017 Goal | 2018 Goal3 | 2019 Goal | 2020 Goal | 2021 Goal |
|-----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|---------------|--------------|--------------|--------------|
| UH System | 7,996 | 8,084 | 8,291 | 8,988 | 9,628 | 10,001 | 11,278 | 11,104 | 11,680 | 11,408 | 11,799 | 12,340 | 12,908 | 13,500 | 14,122 |

Year= Fiscal Year (FY)

Slide 4

4-Year Graduation Rate, UH Mānoa

UH Mānoa's 4-year graduation rate has increased dramatically from 17.2% in 2008 to 34.0% in 2017.

4-Year Graduation Rate Target, UH Mānoa and Comparison Groups

| | 2008 Actual | 2009 Actual | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Actual | 2014 Actual | 2015 Actual | 2015 Goal | 2016 Actual | 2016 Goal | 2017 Actual | 2017 Goal | 2018 Goal | 2019 Goal | 2020 Goal | 2021 Goal | 2022 Goal | 2023 Goal | 2024 Goal | 2025 Goal |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|----------------|--------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| UH Mānoa | 17.2% | 18.4% | 17.5% | 18.6% | 19.8% | 21.2% | 24.7% | 27.9% | 23.6% | 32.2% | 24.8% | 34.0% | 26.2% | 27.6% | 29.1% | 30.7% | 32.4% | 34.1% | 36.0% | 37.9% | 40.0% |
| Peer Group | 28.5% | 28.9% | 30.0% | 32.3% | 33.1% | 35.2% | 35.7% | | | | | | | | | | | | | | |
| Benchmark Group | 51.4% | 53.6% | 54.1% | 55.6% | 57.0% | 59.3% | 59.4% | | | | | | | | | | | | | | |

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4-Year Graduation Rate, UH Hilo

UH Hilo's 4-year graduation rate has increased dramatically from 11.4% in 2012 to 20.9% in 2017.

4-Year Graduation Rate Target, UH Hilo and Comparison Groups

| | 2008 Actual | 2009 Actual | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Actual | 2014 Actual | 2015 Actual | 2015 Goal | 2016 Actual | 2016 Goal | 2017 Actual | 2017 Goal | 2018 Goal | 2019 Goal | 2020 Goal | 2021 Goal | 2022 Goal | 2023 Goal | 2024 Goal | 2025 Goal |
|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|----------------|--------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| UH Hilo | 12.1% | 12.2% | 10.7% | 8.2% | 11.4% | 11.7% | 11.0% | 13.6% | 13.3% | 18.7% | 14.1% | 20.9% | 15.1% | 16.1% | 17.1% | 18.2% | 19.4% | 20.7% | 22.0% | 23.5% | 25.0% |
| IPEDS Group | 24.4% | 23.6% | 23.2% | 25.6% | 25.6% | 25.0% | 26.0% | | | | | | | | | | | | | | |

Slide 6

4-Year Graduation Rate, UH West O’ahu

Despite fluctuations due to small numbers, UH West O’ahu’s 4-year graduation rate has been about 8-10%.

4-Year Graduation Rate Target, UH West O’ahu and Comparison Groups

| | 2008 Actual | 2009 Actual | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Actual | 2014 Actual | 2015 Actual | 2015 Goal | 2016 Actual | 2016 Goal | 2017 Actual | 2017 Goal | 2018 Goal | 2019 Goal | 2020 Goal | 2021 Goal | 2022 Goal | 2023 Goal | 2024 Goal | 2025 Goal |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| UH West O’ahu | | | | 6.3% | 8.0% | 9.8% | 0.0% | 16.7% | 11.0% | 9.9% | 11.7% | 8.9% | 12.4% | 13.2% | 14.0% | 14.9% | 15.8% | 16.7% | 17.8% | 18.8% | 20.0% |
| IPEDS Group | 18.2% | 18.8% | 19.3% | 19.9% | 19.8% | 18.3% | 20.2% | | | | | | | | | | | | | | |

Note: First GRS cohort was Fall 2007 so 100% is AY2011.

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6-Year Graduation Rate, UH Mānoa

UH Mānoa’s 6-year graduation rates have been close to meeting its annual goals.

6-Year Graduation Rate, UH Mānoa and Comparison Groups

| | 2008 Actual | 2009 Actual | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Actual | 2014 Actual | 2015 Actual | 2015 Goal | 2016 Actual | 2016 Goal | 2017 Actual | 2017 Goal | 2018 Goal | 2019 Goal | 2020 Goal | 2021 Goal |
|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|
| UH Mānoa | 50.6% | 48.2% | 50.3% | 55.0% | 55.7% | 56.6% | 56.2% | 57.1% | 58.6% | 58.2% | 59.6% | 59.9% | 60.7% | 61.7% | 62.8% | 63.9% | 65.0% |
| Peer Group | 54.8% | 55.9% | 56.5% | 57.2% | 58.0% | 60.0% | 60.8% | 61.5% | | 61.1% | | | | | | | |
| Benchmark Group | 75.2% | 75.9% | 76.7% | 77.6% | 78.3% | 78.9% | 79.8% | 81.0% | | 80.4% | | | | | | | |

Slide 8

6-Year Graduation Rate, UH Hilo

Aside from a dip in 2016, UH Hilo’s 6-year graduation rate is on track.

6-Year Graduation Rate, UH Hilo and Comparison Groups

| | 2008 Actual | 2009 Actual | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Actual | 2014 Actual | 2015 Actual | 2015 Goal | 2016 Actual | 2016 Goal | 2017 Actual | 2017 Goal | 2018 Goal | 2019 Goal | 2020 Goal | 2021 Goal |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|
| UH Hilo | 32.4% | 31.0% | 33.3% | 36.9% | 39.1% | 36.4% | 38.4% | 38.9% | 39.4% | 34.9% | 41.0% | 41.0% | 42.7% | 44.4% | 46.2% | 48.1% | 50.0% |
| IPEDS Group | 42.3% | 40.6% | 41.9% | 40.9% | 40.4% | 42.7% | 42.7% | 43.4% | | 43.2% | | | | | | | |

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6-Year Graduation Rate, UH West O’ahu

UH West O’ahu’s graduation continues to fluctuate.

6-Year Graduation Rate, UH West O’ahu and Comparison Groups

| | 2008 Actual | 2009 Actual | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Actual | 2014 Actual | 2015 Actual | 2015 Goal | 2016 Actual | 2016 Goal | 2017 Actual | 2017 Goal | 2018 Goal | 2019 Goal | 2020 Goal | 2021 Goal |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|
| UH West O’ahu | | | | | | 25.0% | 40.0% | 29.3% | 28.1% | 13.8% | 29.8% | 38.9% | 31.6% | 33.5% | 35.6% | 37.7% | 40.0% |
| IPEDS Group | 38.3% | 36.1% | 36.1% | 36.7% | 36.9% | 38.1% | 37.3% | 34.6% | | 37.7% | | | | | | | |

Note: First GRS cohort was Fall 2007, so 150% is AY2013.

Slide 10

150% Graduation + Transfer Out Rate, UH Community Colleges

UH Community College’s graduation and success rates have remained in the mid-30% range.

6-Year Graduation and Success Rate, UHCC Average and Comparison Groups

| | 2008 Actual | 2009 Actual | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Baseline | 2014 Actual | 2015 Actual | 2015 Goal | 2016 Actual | 2016 Goal | 2017 Actual | 2017 Goal | 2018 Goal | 2019 Goal | 2020 Goal | 2021 Goal |
|-----------------|----------------|----------------|----------------|----------------|----------------|------------------|----------------|----------------|--------------|----------------|--------------|----------------|--------------|--------------|--------------|--------------|--------------|
| UH CCs | 34.4% | 33.8% | 34.5% | 33.1% | 32.1% | 32.5% | 33.0% | 34.7% | 35.9% | 33.6% | 38.0% | 35.8% | 40.1% | 42.4% | 44.8% | 47.3% | 50.0% |
| IPEDS Group | 40.0% | 39.2% | 40.1% | 39.9% | 39.2% | 39.6% | 40.1% | 39.9% | | 43.5% | | | | | | | |
| Benchmark Group | 39.2% | 40.5% | 40.8% | 36.7% | 35.0% | 36.6% | 36.8% | 39.3% | | 38.4% | | | | | | | |

Note: Year is Cohort graduation year.

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Student Achievement Measure (SAM), UH Mānoa

71% of students who started at UH Mānoa in Fall 2011 graduated within six years, 12% were still enrolled in college, and 17% were unaccounted for as of FY2017.

UH Mānoa First-Time, Full-Time Students Starting Fall 2011

| | Within 4 Years | Within 5 Years | Within 6 Years |
|--|----------------|----------------|----------------|
| Graduated: Reporting Institution | 28% | 52% | 59% |
| Transferred and Graduated: Other Institution | 5% | 10% | 12% |
| Enrolled: Reporting Institution | 40% | 14% | 5% |
| Transferred and Enrolled: Other Institution | 15% | 10% | 7% |
| Current Status Unknown | 12% | 14% | 17% |

Note: SAM do not have goals. However, they are included as an HGI metric because they provide a more comprehensive look at student completion by taking into account students who transferred and enrolled or graduated elsewhere.

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Student Achievement Measure (SAM), UH Hilo

61% of students who started at UH Hilo in Fall 2011 graduated within six years, 13% were still enrolled in college, and 26% were unaccounted for as of FY2017.

UH Hilo First-Time, Full-Time Students Starting Fall 2011

| | Within 4 Years | Within 5 Years | Within 6 Years |
|--|----------------|----------------|----------------|
| Graduated: Reporting Institution | 13% | 32% | 40% |
| Transferred and Graduated: Other Institution | 10% | 18% | 21% |
| Enrolled: Reporting Institution | 38% | 15% | 5% |
| Transferred and Enrolled: Other Institution | 21% | 11% | 8% |
| Current Status Unknown | 18% | 24% | 26% |

Student Achievement Measure (SAM), UH West O'ahu

56% of students who started at UH West O'ahu in Fall 2011 graduated within six years, 16% were still enrolled in college, and 28% were unaccounted for as of FY2017.

UH West O'ahu First-Time, Full-Time Students Starting Fall 2011

| | Within 4 Years | Within 5 Years | Within 6 Years |
|--|----------------|----------------|----------------|
| Graduated: Reporting Institution | 17% | 33% | 39% |
| Transferred and Graduated: Other Institution | 3% | 11% | 17% |
| Enrolled: Reporting Institution | 42% | 17% | 8% |
| Transferred and Enrolled: Other Institution | 19% | 14% | 8% |
| Current Status Unknown | 19% | 25% | 28% |

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Student Achievement Measure (SAM), UHCCs

Between 38%-56% of students who started at UH UHCCs in Fall 2011 graduated within six years, 15%-31% were still enrolled in college, and 22%-37% were unaccounted for as of FY2017.

UH 2 Year First-Time at Institution, Full-Time Students Starting Fall 2011 Within 6 Years

| | Graduated: Reporting Institution | Enrolled: Reporting Institution | Transferred: Other Institution | Current Status Unknown |
|---------------|----------------------------------|---------------------------------|--------------------------------|------------------------|
| Hawai'i CC | 48% | 4% | 11% | 37% |
| Honolulu CC | 38% | 4% | 25% | 33% |
| Kapi'olani CC | 56% | 4% | 18% | 22% |
| Kaua'i CC | 56% | 4% | 15% | 25% |
| Leeward CC | 42% | 7% | 24% | 27% |
| Maui College | 54% | 4% | 11% | 31% |
| Windward CC | 42% | 2% | 29% | 27% |

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Enrollment to Degree Gap: Native Hawaiian Students

Native Hawaiian gaps have been eliminated at UH Mānoa, narrowed at UH Hilo and UH Community Colleges, and continue to fluctuate at UH West O'ahu.

Enrollment to Degree Gap: % Native Hawaiian (NH) Students vs. % NH of Total FY Degrees Awarded

| | 2013 % Enrolled | 2013 % Degrees Awarded | 2013 % Difference | 2014 % Enrolled | 2014 % Degrees Awarded | 2014 % Difference | 2015 % Enrolled | 2015 % Degrees Awarded | 2015 % Difference | 2016 % Enrolled | 2016 % Degrees Awarded | 2016 % Difference | 2017 % Enrolled | 2017 % Degrees Awarded | 2017 % Difference |
|---------------|--------------------|------------------------------|----------------------|--------------------|------------------------------|----------------------|--------------------|------------------------------|----------------------|--------------------|------------------------------|----------------------|--------------------|------------------------------|----------------------|
| UH Mānoa | 14% | 14% | -0.3% | 14% | 14% | -0.3% | 14% | 14% | -0.2% | 14% | 14% | +0.2% | 14% | 15% | +0.6% |
| UH Hilo | 25% | 24% | -1.6% | 25% | 20% | -4.5% | 26% | 22% | -4.3% | 27% | 23% | -4.3% | 29% | 26% | -3.0% |
| UH West O'ahu | 25% | 21% | -4.4% | 26% | 20% | -6.6% | 27% | 26% | -1.5% | 27% | 24% | -2.4% | 28% | 21% | -7.2% |
| UH CCs | 29% | 24% | -4.8% | 28% | 25% | -3.2% | 28% | 26% | -2.0% | 28% | 26% | -2.0% | 28% | 25% | -2.6% |
| Hawai'i CC | 43% | 38% | -4.6% | 41% | 37% | -3.7% | 43% | 44% | +0.9% | 42% | 39% | -3.3% | 44% | 40% | -3.6% |
| Honolulu CC | 26% | 25% | -1.8% | 26% | 28% | +1.6% | 25% | 23% | -1.8% | 26% | 27% | +1.4% | 24% | 25% | +1.2% |
| Kapi'olani CC | 18% | 12% | -5.6% | 18% | 15% | -2.2% | 17% | 14% | -2.4% | 17% | 14% | -3.1% | 17% | 14% | -2.9% |
| Kaua'i CC | 32% | 18% | -13.8% | 31% | 24% | -6.8% | 31% | 34% | +3.9% | 29% | 29% | -0.2% | 31% | 27% | -4.4% |
| Leeward CC | 27% | 25% | -1.5% | 27% | 23% | -3.4% | 28% | 24% | -4.1% | 27% | 25% | -2.5% | 26% | 26% | -0.4% |
| Maui College | 33% | 26% | -7.5% | 32% | 25% | -6.5% | 30% | 27% | -3.0% | 32% | 27% | -4.6% | 33% | 26% | -6.5% |
| Windward CC | 42% | 39% | -2.9% | 42% | 38% | -3.6% | 42% | 42% | +0.3% | 41% | 41% | -0.3% | 41% | 38% | -2.6% |

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Enrollment to Degree Gap: Pell Recipient Students

Compared to the general population, Pell recipient students do as well or better when it comes to degree completion.

Enrollment to Degree Gap: % Pell Recipients vs. % Pell Recipients of Total FY Degrees Awarded

| | 2013 % Enrolled | 2013 % Degrees Awarded | 2013 % Difference | 2014 % Enrolled | 2014 % Degrees Awarded | 2014 % Difference | 2015 % Enrolled | 2015 % Degrees Awarded | 2015 % Difference | 2016 % Enrolled | 2016 % Degrees Awarded | 2016 % Difference | 2017 % Enrolled | 2017 % Degrees Awarded | 2017 % Difference |
|---------------|--------------------|------------------------------|----------------------|--------------------|------------------------------|----------------------|--------------------|------------------------------|----------------------|--------------------|------------------------------|----------------------|--------------------|------------------------------|----------------------|
| UH Mānoa | 30% | 35% | +4.2% | 32% | 34% | +2.4% | 33% | 36% | +3.5% | 33% | 39% | +6.2% | 33% | 39% | +6.5% |
| UH Hilo | 52% | 55% | +3.5% | 53% | 51% | -1.7% | 53% | 54% | +0.3% | 54% | 52% | -1.9% | 53% | 54% | +1.0% |
| UH West O'ahu | 42% | 51% | +8.8% | 45% | 55% | +9.8% | 45% | 57% | +11.9% | 47% | 56% | +8.9% | 46% | 61% | +14.2% |
| UHCCs | 47% | 51% | +3.4% | 48% | 53% | +4.5% | 49% | 53% | +4.3% | 47% | 55% | +8.7% | 46% | 52% | +6.6% |

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Hawai'i Innovation Initiative

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Invention Disclosures

The number of invention disclosures has been exceeding annual goals.

Number of Invention Disclosures

| Measure | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Actual | 2014 Actual | 2015 Actual | 2016 Actual | 2016 Goal | 2017 Actual | 2017 Goal | 2018 Goal | 2019 Goal | 2020 Goal | 2021 Goal |
|-----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|----------------|--------------|--------------|--------------|--------------|--------------|
| Invention Disclosures | 54 | 53 | 53 | 35 | 39 | 59 | 50 | 43 | 52 | 45 | 47 | 50 | 52 | 55 |

Source: UH Office of Technology Transfer.

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U.S. Patents

The number of U.S. patents issued have continued to fluctuate.

Number of U.S. Patents

| Measure | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Actual | 2014 Actual | 2015 Actual | 2016 Actual | 2016 Goal | 2017 Actual | 2017 Goal | 2018 Goal | 2019 Goal | 2020 Goal | 2021 Goal |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|----------------|--------------|--------------|--------------|--------------|--------------|
| U.S. Patents | 9 | 1 | 6 | 10 | 14 | 8 | 11 | 15 | 8 | 16 | 17 | 18 | 19 | 20 |

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License/Option Agreement Executed

For the past two years, the numbers of license/option agreements executed have exceeded its targets.

Number of License/Option Agreement Executed

| Measure | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Actual | 2014 Actual | 2015 Actual | 2016 Actual | 2016 Goal | 2017 Actual | 2017 Goal | 2018 Goal | 2019 Goal | 2020 Goal | 2021 Goal |
|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|----------------|--------------|--------------|--------------|--------------|--------------|
| License/Option Agreements | 7 | 14 | 10 | 3 | 9 | 2 | 12 | 10 | 12 | 10 | 11 | 11 | 12 | 12 |

UH Startup Companies

The number of startup companies have continued to fluctuate.

UH Startup Companies

| Measure | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Actual | 2014 Actual | 2015 Actual | 2016 Actual | 2016 Goal | 2017 Actual | 2017 Goal | 2018 Goal | 2019 Goal | 2020 Goal | 2021 Goal |
|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|
| Startup Companies | 1 | 3 | 4 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 3 | 3 | 3 |

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Total Extramural Funds, UH System

Extramural funds have remained flat due to decreased availability of federal funds.

Total Extramural Funds

| | 2008 Actual | 2009 Actual | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Actual | 2014 Actual | 2015 Actual | 2015 Goal | 2016 Actual | 2016 Goal | 2017 Actual | 2017 Goal | 2018 Goal | 2019 Goal | 2020 Goal | 2021 Goal |
|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|
| UH System | \$367.5 | \$414.0 | \$452.4 | \$488.6 | \$435.9 | \$409.8 | \$392.3 | \$425.6 | \$411.9 | \$391.3 | \$432.5 | \$387.0 | \$454.2 | \$476.9 | \$500.7 | \$525.7 | \$552.0 |

\$ million

Source: Office of Research Services. Includes awards recorded in ORS extramural fund award database for the UH system offices.

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STEM Degrees Awarded, UH System

The number of STEM degrees and certificates awarded continue to exceed annual goals.

UH STEM Degrees and Certificates of Achievement Awarded

| | 2009 Actual | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Actual | 2014 Actual | 2015 Actual | 2015 Goal | 2016 Actual | 2016 Goal | 2017 Actual | 2017 Goal | 2018 Goal | 2019 Goal | 2020 Goal | 2021 Goal |
|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------|-------------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|
| UH System | 972 | 957 | 989 | 1,051 | 1,264 | 1,221 | 1,482 | 1,322 | 1,743 | 1,379 | 1,700 | 1,439 | 1,501 | 1,565 | 1,633 | 1,703 |

Fiscal Year

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21st Century Facilities

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Deferred Maintenance, UH System

Deferred maintenance continues to be a challenge.

| | FY2009 Actual | FY2010 Actual | FY2011 Actual | FY2012 Actual | FY2013 Actual | FY2014 Actual | FY2015 Actual | FY2015 Goal | FY2016 Actual | FY2016 Goal | FY2017 Actual |
|-----------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------|---------------|-------------|---------------|
| UH System | \$368.4 | \$334.1 | \$455.0 | \$460.8 | \$486.9 | \$444.8 | \$502.7 | \$480.5 | \$577.3 | \$420.2 | \$694.4 |

Note: 2016 shift to include modernization.

Source: Office of Capital Improvements.

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Cost of Utilities: Electricity (kWh) Purchased, UH System

Energy use has been trending downward over the past few years.

kWh Purchased per Square Foot Per Year

| | FY2009 Actual | FY2010 Actual | FY2011 Actual | FY2012 Actual | FY2013 Actual | FY2014 Actual | FY2015 Actual | FY2015 Goal | FY2016 Actual | FY2016 Goal | FY2017 Actual | FY2017 Goal | FY2018 Goal | FY2019 Goal | FY2020 Goal | FY2021 Goal |
|--------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------|------------------|----------------|------------------|----------------|----------------|----------------|----------------|----------------|
| UH System | 122.5 | 116.8 | 111.3 | 109.9 | 117.0 | 114.8 | 109.8 | 112.2 | 112.0 | 109.7 | 105.4 | 107.2 | 104.7 | 102.3 | 100.0 | 97.7 |

Source: Campus records. Note: Based on gross square footage. UH Mānoa gross square footage based on FY 2013 information. Accurate historical GSF not available. UH West O’ahu also includes landscaped square footage.