

Notice of Meeting

UNIVERSITY OF HAWAI'I

BOARD OF REGENTS COMMITTEE ON PLANNING AND FACILITIES

Members: Regent Stanford Yuen (Chair), Ben Kudo (Vice Chair), and Regents Moore, Putnam, Shinsato, and Wilson

Date: Wednesday, February 7, 2018

Time: 9:00 a.m.

Place: University of Hawai'i at Mānoa
Information Technology Building
1st Floor Conference Room 105A/B
2520 Correa Road
Honolulu, Hawai'i 96822

AGENDA

I. Call Meeting to Order

II. Approval of Minutes of November 1, 2017 Meeting

III. Public Comment Period for Agenda Items: All written testimony on agenda items received after posting of this agenda and up to 24 hours in advance of the meeting will be distributed to the board. Late testimony on agenda items will be distributed to the board within 24 hours of receipt. Written testimony may be submitted via US mail, email at bor@hawaii.edu, or facsimile at 956-5156. Individuals submitting written testimony are not automatically signed up for oral testimony. Registration for oral testimony on agenda items will be provided at the meeting location 15 minutes prior to the meeting and closed once the meeting begins. Oral testimony is limited to three (3) minutes. All written testimony submitted are public documents. Therefore, any testimony that is submitted verbally or in writing, electronically or in person, for use in the public meeting process is public information.

IV. Agenda Items

A. Information & Discussion

1. University of Hawai'i at West O'ahu Mauka Lands Photovoltaic Developer Briefing
2. Update on University of Hawai'i at Mānoa Campus Space Utilization Study and Master Physical Plan
3. University of Hawai'i Repair & Maintenance Operating Budget Overview
4. FY18 Q2 Major Projects Update

V. Adjournment



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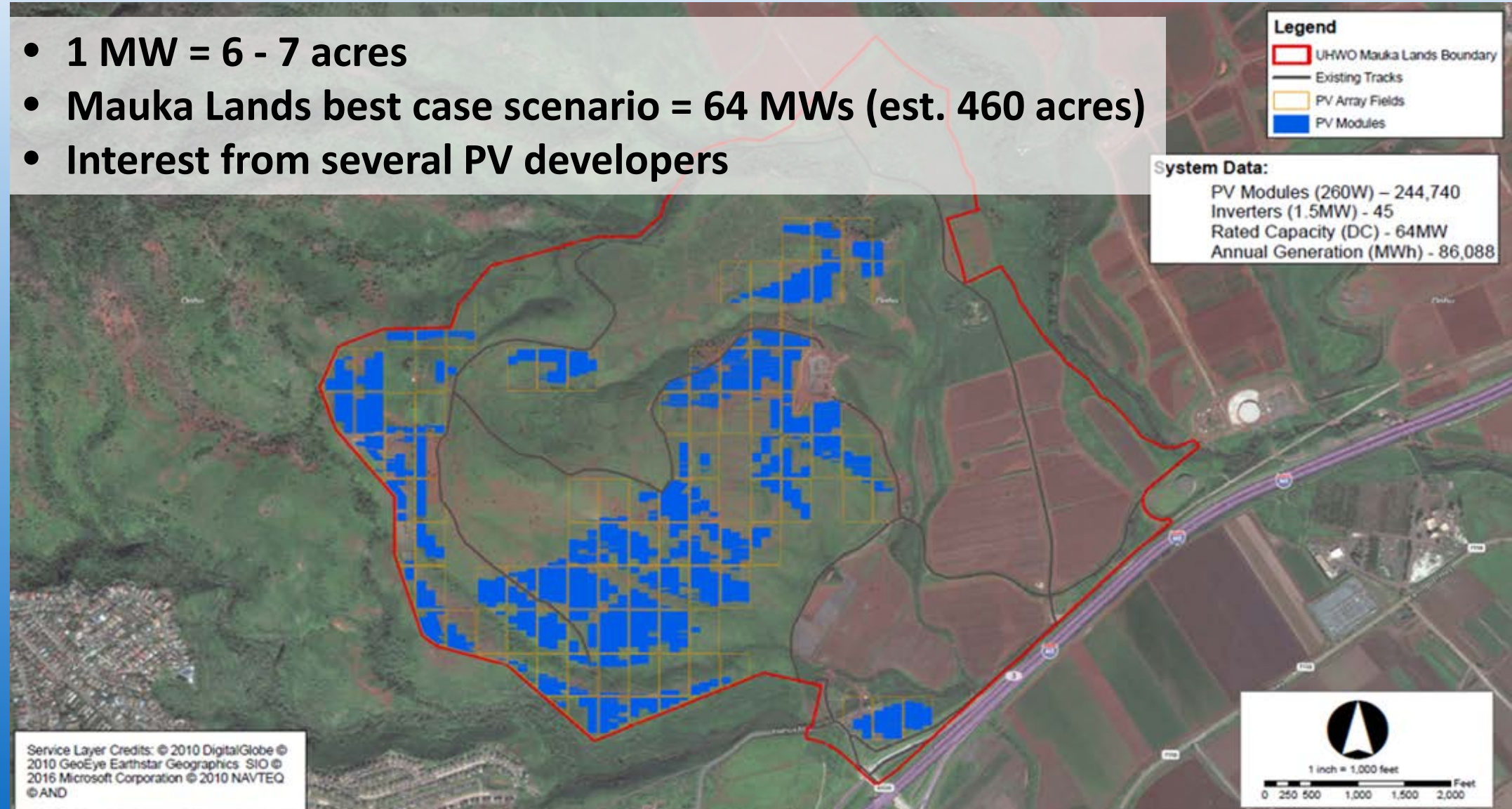
University of Hawai'i at West O'ahu Mauka Lands Photovoltaic Developer Briefing

Planning & Facilities Committee
February 7, 2018



HECO RFP (PHASE 1) SEEKS PROPOSALS FROM PHOTOVOLTAIC DEVELOPERS TO PROVIDE UP TO 180 MWs TO HECO'S GRID

- 1 MW = 6 - 7 acres
- Mauka Lands best case scenario = 64 MWs (est. 460 acres)
- Interest from several PV developers



CRITICAL MILESTONES & TIMELINE

**UH EXECUTES BINDING
LETTERS OF INTENT
WITH MULTIPLE PV
DEVELOPERS**

**FINALIZE DEVELOPERS'
POWER PURCHASE
AGREEMENT PROPOSALS**

*ESTABLISH LAND &
CONSTRUCTION COSTS*

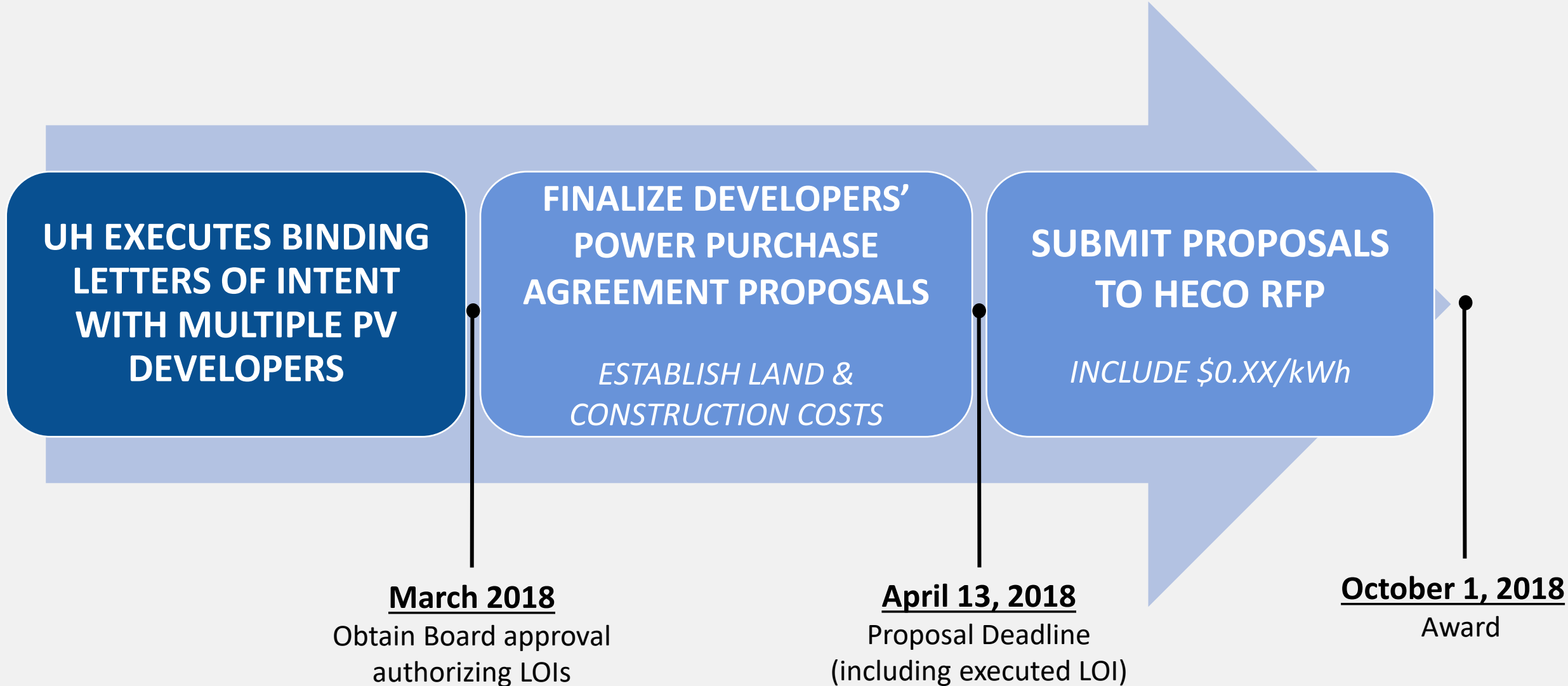
**SUBMIT PROPOSALS
TO HECO RFP**

INCLUDE \$0.XX/kWh

BINDING LETTER OF INTENT KEY TERMS

- The greater of:
 - Guaranteed Annual Base Rate Schedule **OR**
 - Percent share of gross revenue
- Payments calculated and paid annually
- 20 years with 2 optional 5 year renewal terms
- Developer responsible for all infrastructure, installation, operation and maintenance costs associated with PPA
- Upon award by HECO:
 - One successful PPA Provider will execute final documents with UH
 - Unsuccessful PPA Providers = LOI with UH is null and void

CRITICAL MILESTONES & TIMELINE



THiNK^{MK}



Update on University of Hawai'i at Mānoa Campus Space Utilization Study & Master Physical Plan

BOR Planning & Facilities Committee
Feb 7, 2018

Jan Gouveia, Vice President for Administration
Donna Kiyosaki, Associate Vice President for Administration
Jimmy Kurata, Director of Planning and Project Development
Matthew Lynch, System Sustainability Coordinator
Miles Topping, Director of Energy Management
Blake Araki, Director of Campus Operations and Facilities
Christine Sorensen, Professor, Dept of Learning Design & Technology
Daniel Friedman, Dean, School of Architecture



Feb 7, 2018

THiNK^{MK}
All content is proprietary

Process Overview



DEFINITIONS

- IAFP¹: Integrated Academic Facilities Plan
- LRDP²: Long Range Development Plan
- PRU³: Plan Review Use
- CIP⁴: Capital Improvement Plan



Baseline Utilization Study



DEFINITIONS

- IAFP¹: Integrated Academic Facilities Plan
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- PRU³: Plan Review Use
- CIP⁴: Capital Improvement Plan



Baseline data will support university planning processes...

Transactional

- Use as analytic tool to answer questions about space and utilization

Projects

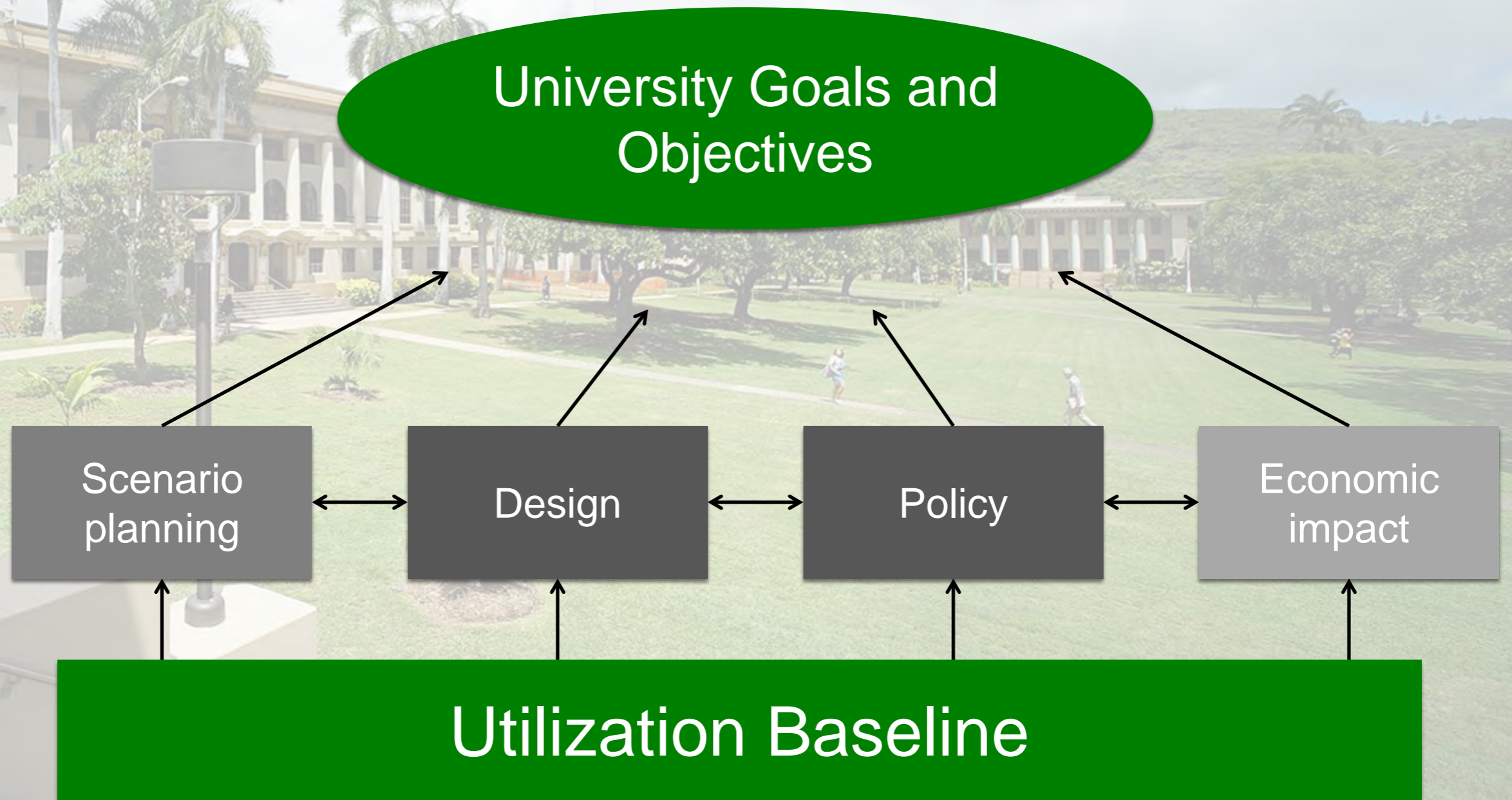
- Support current planning and design initiatives through scenario modeling and testing

Institutional

- Develop institutional metrics to support policy development

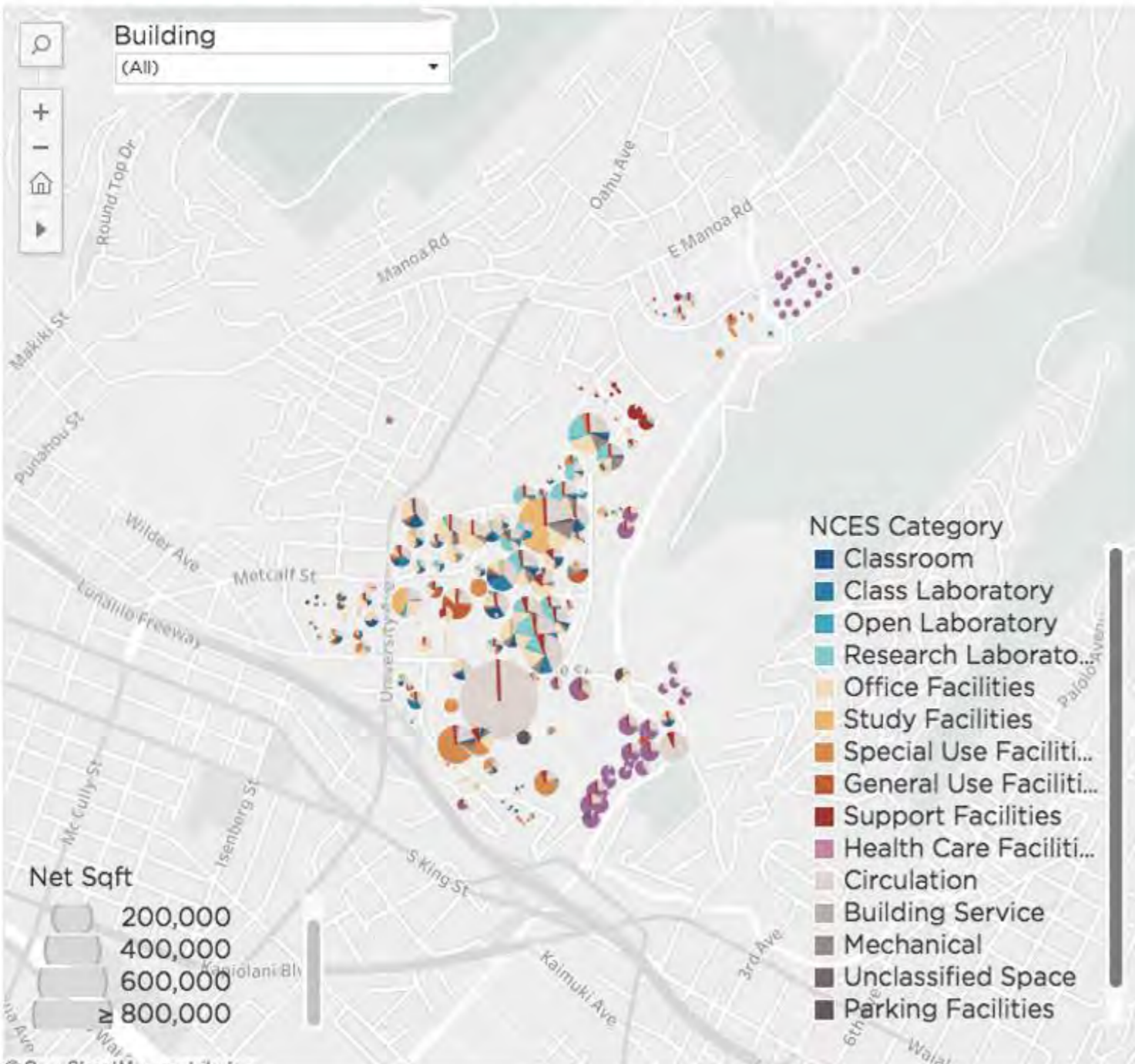


... And Provide a Foundation for Decision Making and Risk Management

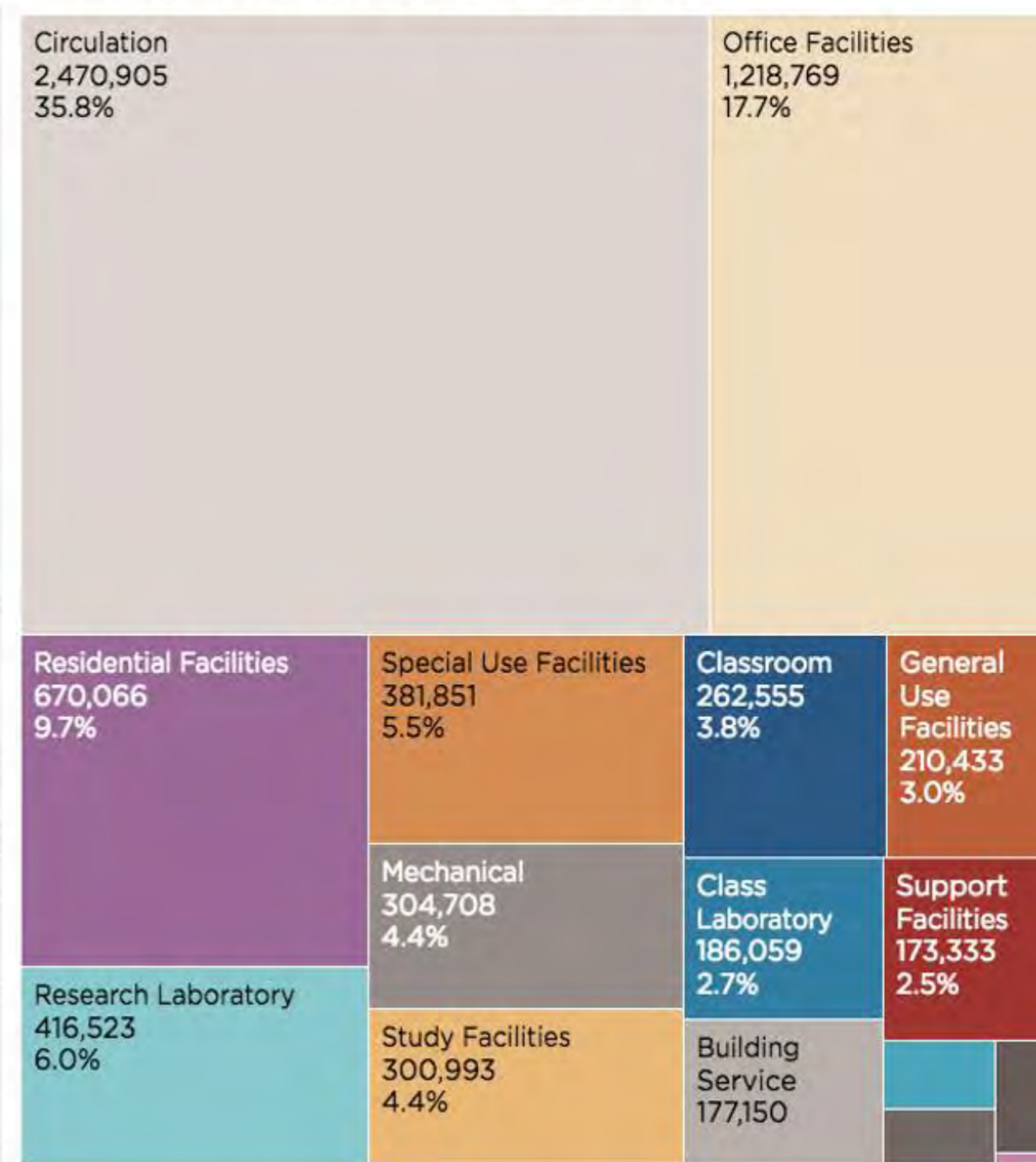


UH Mānoa has almost 7 million sf of space in 311 buildings (does not include off-campus facilities)

UH Mānoa Building Area By NCES Category



UH Mānoa Total Area By NCES Category

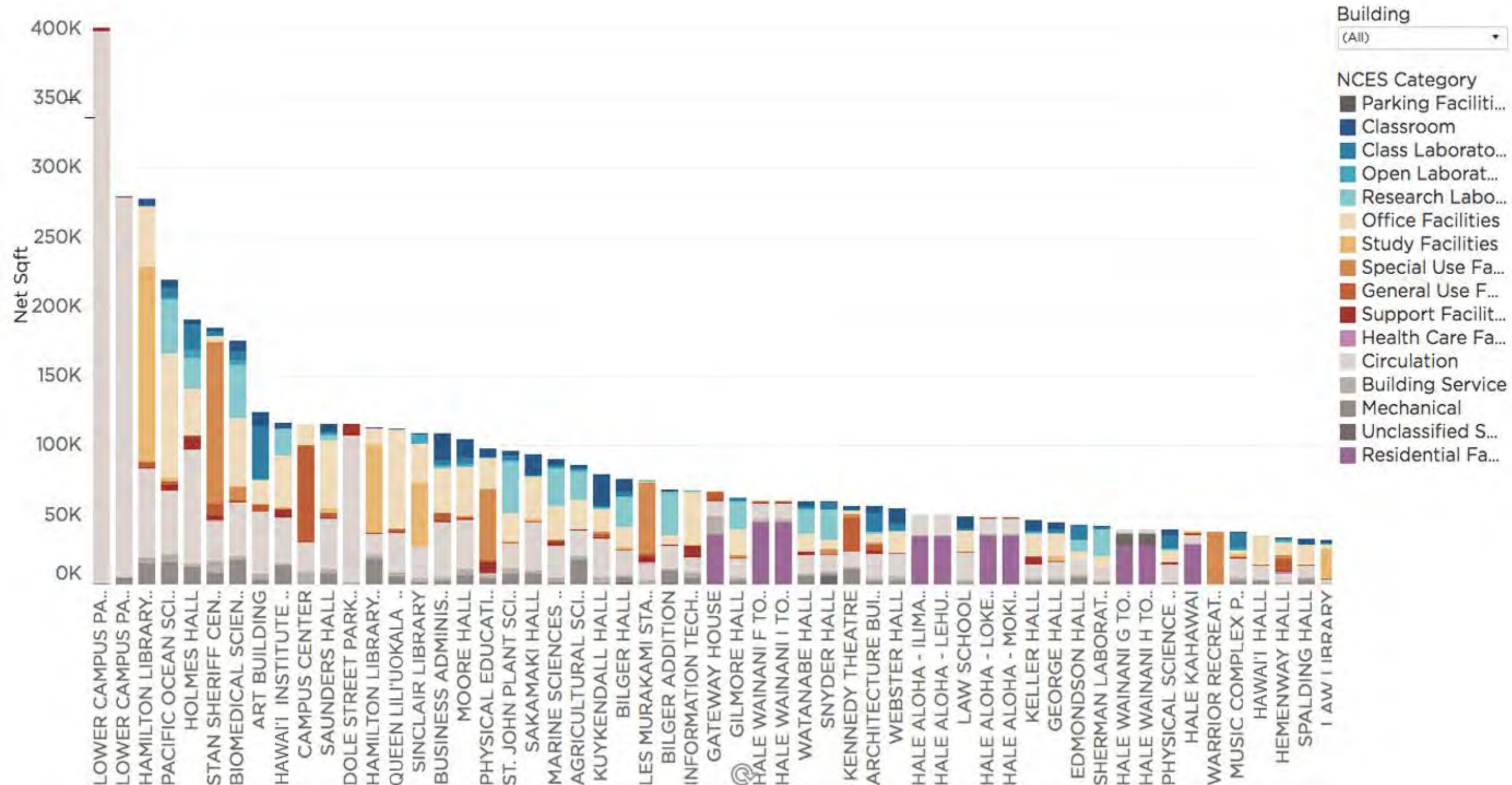


Source: Field-Validated AIM Database



Inventory by Building

Buildings Range from over 400,000 sf to under 20,000 sf

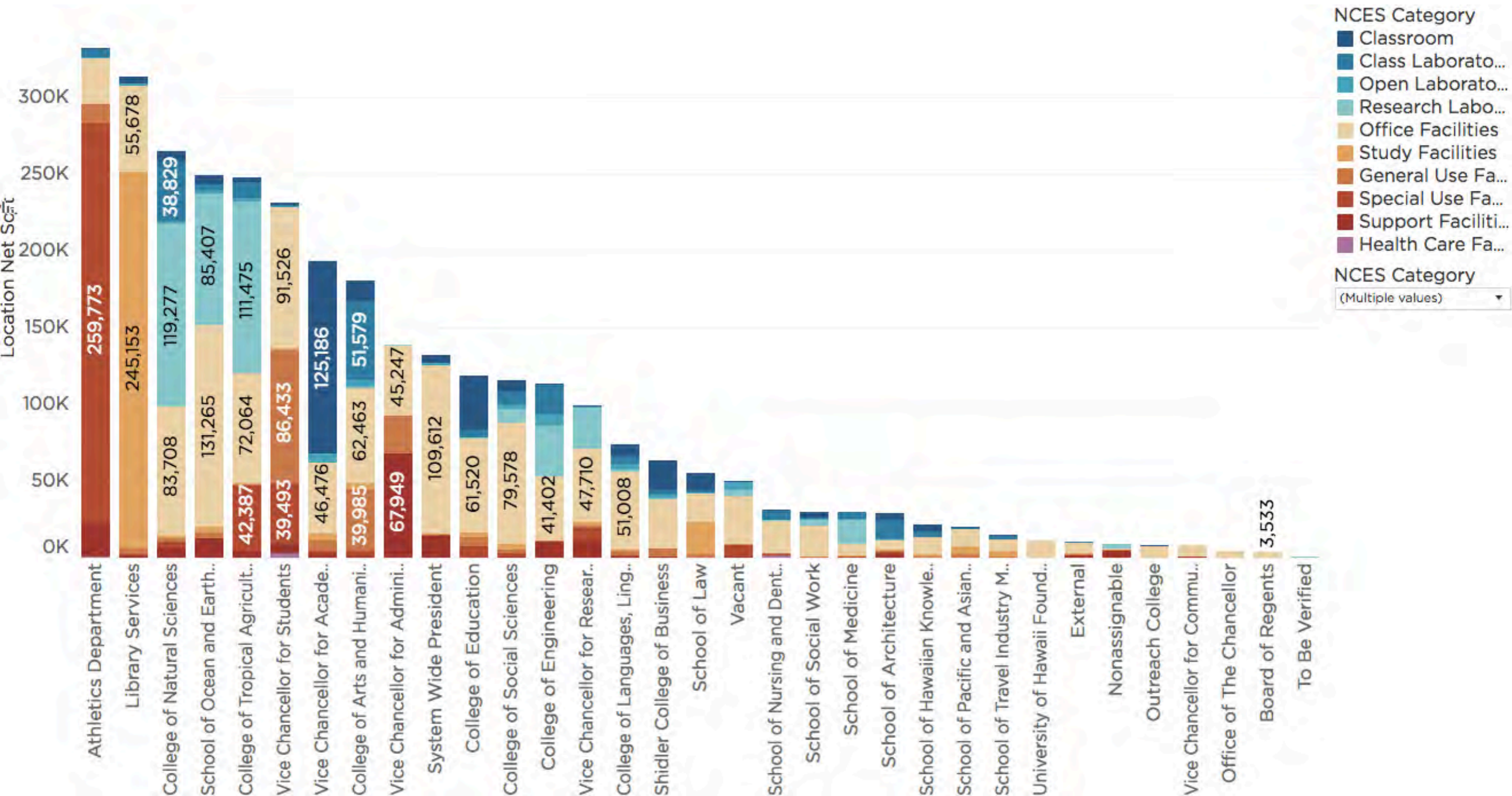


- The 2 largest buildings are the lower parking structures, followed by Hamilton Library, POST and Holmes Hall



Inventory by Administrative/Academic Unit

Athletics and Library Services have the Highest Program SF



- Athletics and Library Services have the most space, followed by academic groups with major research facilities (Natural Sciences, SOEST, CTAHR)

Source: Field-Validated AIM Database



Individual Room Level: High Degree of Variance

- High performing: Webster Hall 112, 30.5 hrs/week, 68% utilization

- What are the attributes of a highly utilized classroom?

WEBSTER HALL ✕



112

AIM DATABASE

Floor Level:	1
Room SqFt:	928
Instr. Capacity:	40
NCES Use Category:	(100) - Classroom
NCES Use Detail:	(110) - Classroom
Org Assignment (1):	Office of the Chancellor
Org Assignment (2):	CCVPCC
Org Assignment (3):	-
Org Assignment (4):	-
Org Assignment (5):	-
Org Assignment (6):	-
Org Assignment (7):	-
Org Assignment (8):	-

SURVEY ASSESSMENT (SP 2017)

Survey Record:	surveyed @ 1/30/2017 0:00
Passive Vent. Quality:	none
Active Vent. Quality:	limited (a/c or fans present, but room is uncomfortable)
AC Systems:	central
Fan Systems:	none
Fenestration:	manual window shades

- Low performing: Keller 314, 8.33 hrs/week, 19% utilization

KELLER HALL ✕

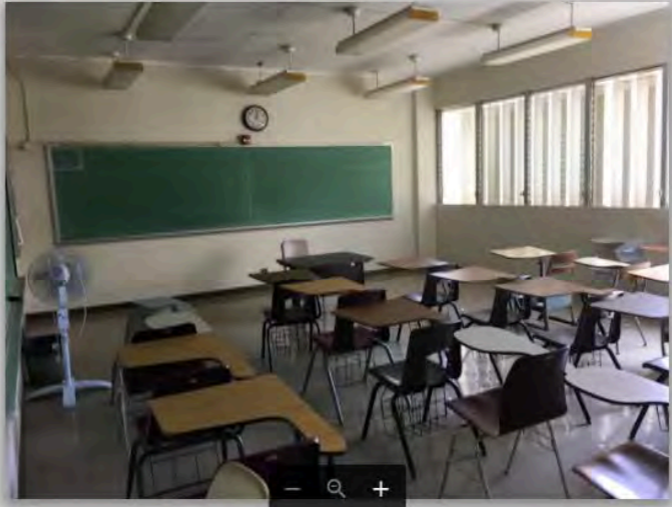

314

AIM DATABASE

Floor Level:	3
Room SqFt:	586
Instr. Capacity:	25
NCES Use Category:	(100) - Classroom
NCES Use Detail:	(110) - Classroom
Org Assignment (1):	Office of the Chancellor
Org Assignment (2):	CCVPCC
Org Assignment (3):	-
Org Assignment (4):	-
Org Assignment (5):	-
Org Assignment (6):	-
Org Assignment (7):	-
Org Assignment (8):	-

SURVEY ASSESSMENT (SP 2017)

Survey Record:	surveyed @ 2/2/2017 0:00
Passive Vent. Quality:	limited
Active Vent. Quality:	limited (a/c or fans present, but room is uncomfortable)
AC Systems:	none
Fan Systems:	desk/oscillating fan(s)
Fenestration:	manual window shades

Source: MKThink field survey

...Leading to low formal scheduling of the 331 classrooms and 167 class labs

- Average formal scheduling for Classrooms/Class Labs: 34.1% (15.4 hrs week out of 45 available hour)

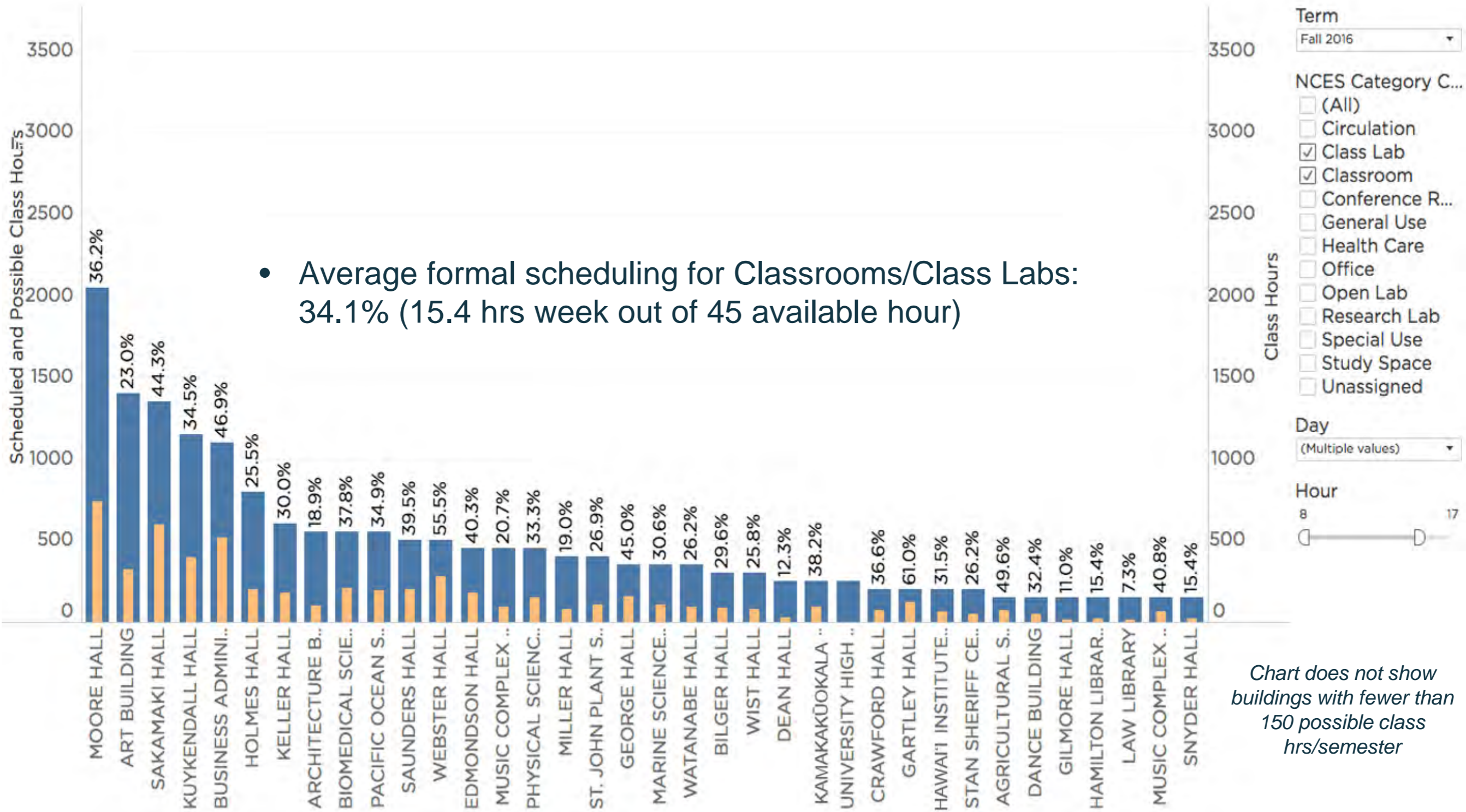


Chart does not show buildings with fewer than 150 possible class hrs/semester

Source: Banner/R25 Scheduling System

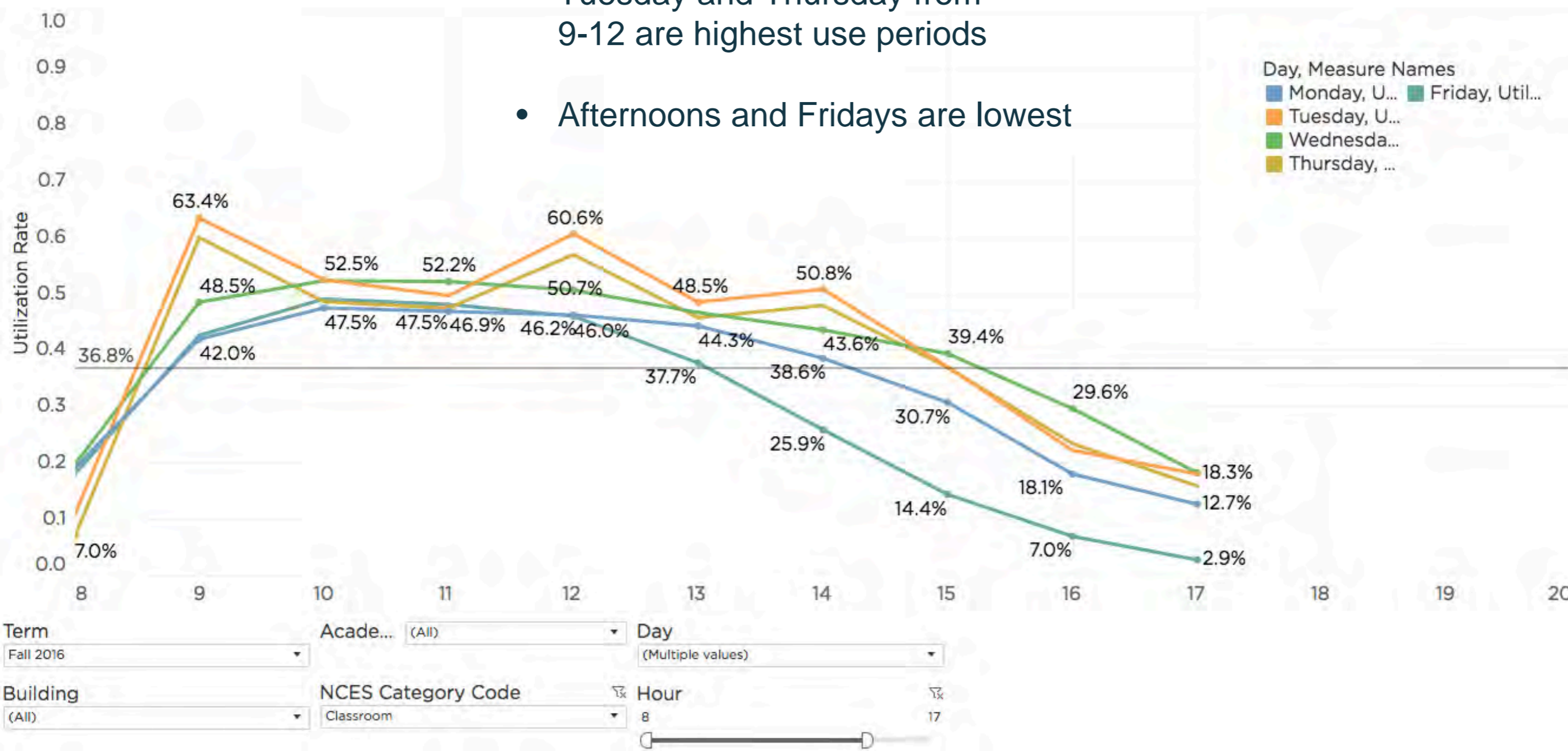


Feb 7 2018



Classroom utilization varies significantly over the course of the day and day of the week

- Tuesday and Thursday from 9-12 are highest use periods
- Afternoons and Fridays are lowest



Term:
 Acade...:
 Day:

Building:
 NCES Category Code:
 Hour: to

Source: Banner/R25 Scheduling System

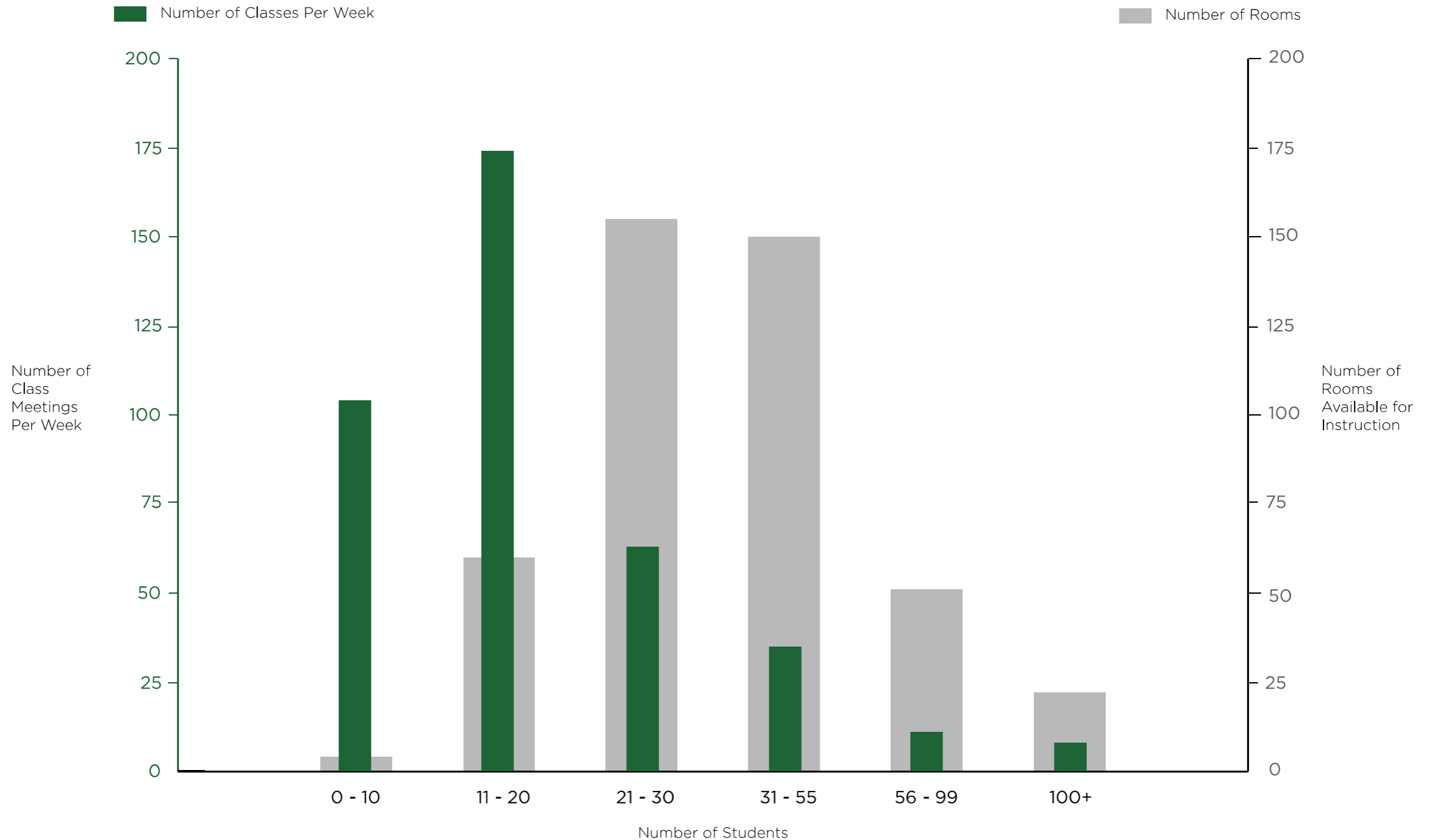


...Resulting from room sizes that don't match today's class sizes

Distribution of Room Sizes and Enrollment, Fall 2016 Semester

Number of Classes Based on an Average Week Calculated from Banner Database

Number of Room Capacities from R25 Database



Note: Data provided by University Scheduler. Includes rooms in database regardless of room type (classroom, class lab, conference room, etc.) except for 15 classrooms with unvalidated capacities. Also excludes 5,630 classes, 56.8% of total classes offered, with rooms yet to be assigned or categorized with "TBA" room assignment.

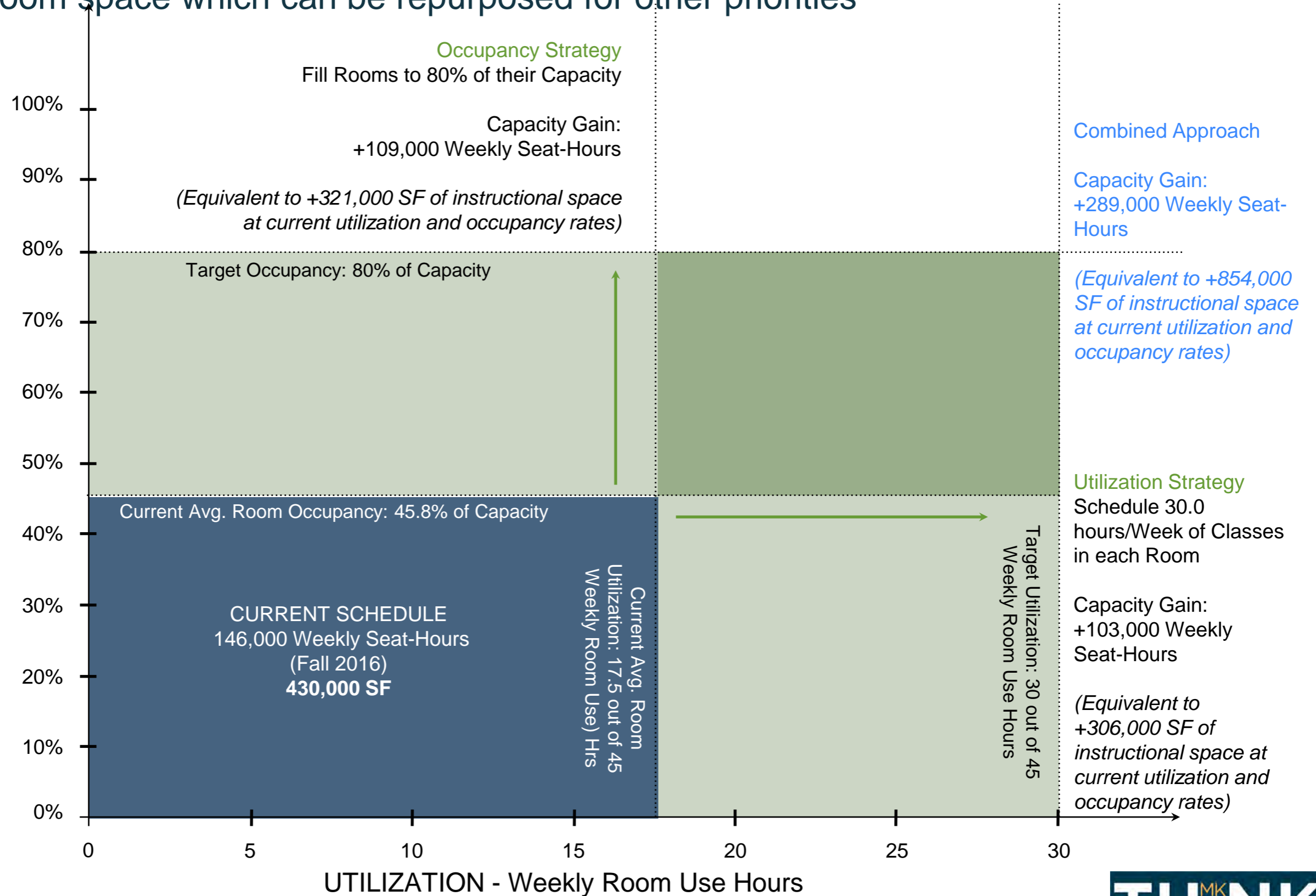
Source: Banner/R25 Scheduling System



Quantifying the opportunity

Improvements in both utilization and occupancy yield an additional 200% effective classroom space which can be repurposed for other priorities

ROOM OCCUPANCY - % of Seats Filled



Examples of applicability

- Transactional – classroom R&M (matrix)
- Projects – College of Engineering, Comm/ACM (PBS Building)
- Institutional – Classroom master planning, campus master plan



Transactional: Classroom Matrix

Room Name	Room Info		Renovation		Scores											Total Score
	Building	Room Type	Room SqFt	Potential CIP Impact year	User Score	Size Score	Distance Score	Room Condition Score	AC Score	Tech Score	Weighting	Weighting	Weighting	Weighting	Weighting	
		AIM NCES Code			Scheduler controlled = 1	0	Core Zone: 1 Middle Zone: .5 Outer Zone: 0	Lower ratings = higher score	None=1 Window= .5 Central=0	More Tech = Lower Score	1.0	1.0	0.5	1.0	1.0	1.0
KELL 404	KELLER HALL	Classroom	653	2022	1	1	1.0	0.5	0.5	1	1	1	1	1	1	4.97
KELL 303	KELLER HALL	Classroom	1279	2022	1	1	1.0	0.5	0.3	1	1	1	1	1	1	4.83
KELL 301	KELLER HALL	Classroom	632	2022	1	1	1.0	0.5	0.7	0.5	1	1	1	1	1	4.67
KELL 402	KELLER HALL	Classroom	648	2022	1	1	1.0	0.5	0.6	0.5	1	1	1	1	1	4.60
KELL 401	KELLER HALL	Classroom	632	2022	1	1	1.0	0.5	0.5	0.5	1	1	1	1	1	4.53
KELL 413	KELLER HALL	Classroom	586	2022	1	1	0.5	1.0	0.5	0.5	1	1	1	1	1	4.53
KELL 403	KELLER HALL	Classroom	648	2022	1	1	1.0	0.5	0.5	0.5	1	1	0.5	1	1	4.47
KELL 414	KELLER HALL	Classroom	586	2022	1	1	0.5	1.0	0.5	0.5	1	1	1	1	1	4.47
KELL 302	KELLER HALL	Classroom	1279	2022	1	1	1.0	0.5	0.4	0.4	0.5	1	1	1	1	4.40
KELL 314	KELLER HALL	Classroom	586	2022	1	1	0.5	1.0	0.4	0.4	1	1	1	1	1	4.40
KUY 302	KUYKENDALL HALL	Classroom	620	2020	1	1	1.0	0.5	0.5	0.5	0.5	1	0.5	1	1	4.03
DEAN 105	DEAN HALL	Classroom	457		1	1	0.5	1.0	0.3	0.3	1	1	0.75	1	1	4.02
HIG 311	HAWAII INSTITUTE OF GEOPHYSICS	Classroom	497	2022	1	1	0.5	1.0	0.5	0.5	0.5	0.5	1	0.75	1	3.78
KELL 313	KELLER HALL	Classroom	586	2022	1	1	0.5	1.0	0.3	0.3	0.5	1	1	1	1	3.77
KUY 313	KUYKENDALL HALL	Classroom	621	2020	1	1	1.0	0.5	0.5	0.5	0	0	0.75	1	1	3.72
MOORE 423	MOORE HALL	Classroom	677		1	1	1.0	0.5	0.7	0.7	0	0	0.5	1	1	3.67
KUY 401	KUYKENDALL HALL	Classroom	188	2020	1	1	0.5	1.0	0.6	0.6	0	0	1	1	1	3.60
KUY 401A	KUYKENDALL HALL	Classroom	176	2020	1	1	0.5	1.0	0.6	0.6	0	0	1	1	1	3.60
ART 117	ART BUILDING	Class Laboratory	1211		0	0	1	1.0	0.5	0.5	1	1	0.5	1	1	3.53
KUY 209	KUYKENDALL HALL	Classroom	1255	2020	1	1	1.0	0.5	0.5	0.5	0	0	0.5	1	1	3.53
KUY 210	KUYKENDALL HALL	Classroom	938	2020	1	1	1.0	0.5	0.5	0.5	0	0	0.5	1	1	3.53
KUY 213	KUYKENDALL HALL	Classroom	611	2020	1	1	1.0	0.5	0.5	0.5	0	0	0.5	1	1	3.53
KUY 303	KUYKENDALL HALL	Classroom	622	2020	1	1	1.0	0.5	0.5	0.5	0	0	0.5	1	1	3.53
KUY 304	KUYKENDALL HALL	Classroom	620	2020	1	1	1.0	0.5	0.5	0.5	0	0	0.5	1	1	3.53
KUY 306	KUYKENDALL HALL	Classroom	1291	2020	1	1	1.0	0.5	0.5	0.5	0	0	0.5	1	1	3.53
KUY 301	KUYKENDALL HALL	Classroom	1569	2020	1	1	1.0	0.5	0.5	0.5	0	0	0.5	1	1	3.47
KUY 305	KUYKENDALL HALL	Classroom	934	2020	1	1	1.0	0.5	0.5	0.5	0	0	0.5	1	1	3.47
KUY 307	KUYKENDALL HALL	Classroom	1265	2020	1	1	1.0	0.5	0.5	0.5	0	0	0.5	1	1	3.47
KUY 308	KUYKENDALL HALL	Classroom	622	2020	1	1	1.0	0.5	0.5	0.5	0	0	0.5	1	1	3.47

- Data from the Baseline Utilization Study has helped to identify classrooms that would provide the most value to the University if renovated.



Projects: College of Engineering

SPACE PROGRAM SCENARIOS SUMMARY

PAGE

SCENARIO 1 (3yrs)

- Optimize existing COE facilities
- Improve conditions
- Lowest cost intervention
- Increase effectiveness, utilization, and occupancy
- Address under-staffing if funding allows

67	Faculty
344	Grad Students & Researchers
1,375	Undergrad students
40	Admin
1,826	Total

1:5:20

Faculty:Grad:Undergrad
Ratio

Total GSF needed 243,856

SCENARIO 2 (5yrs)

- Continue to increase utilization and occupancy as available
- Provide COE access to additional existing spaces across campus to complement updated core facilities
- Move toward target ratio of 1:5:20 as funding and enrollment allow

80	Faculty
400	Grad Students & Researchers
1,600	Undergrad students
40	Admin
2,120	Total

1:5:20

Faculty:Grad:Undergrad
Ratio

Total GSF needed 284,714

SCENARIO 3 (20yrs)

- Provide requisite space through a combination of the optimized existing assets, additional assets across campus, and new building(s)

100	Faculty
500	Grad Students & Researchers
2,000	Undergrad students
54	Admin
2,654	Total

1:5:20

Faculty:Grad:Undergrad
Ratio

Total GSF needed 335,868

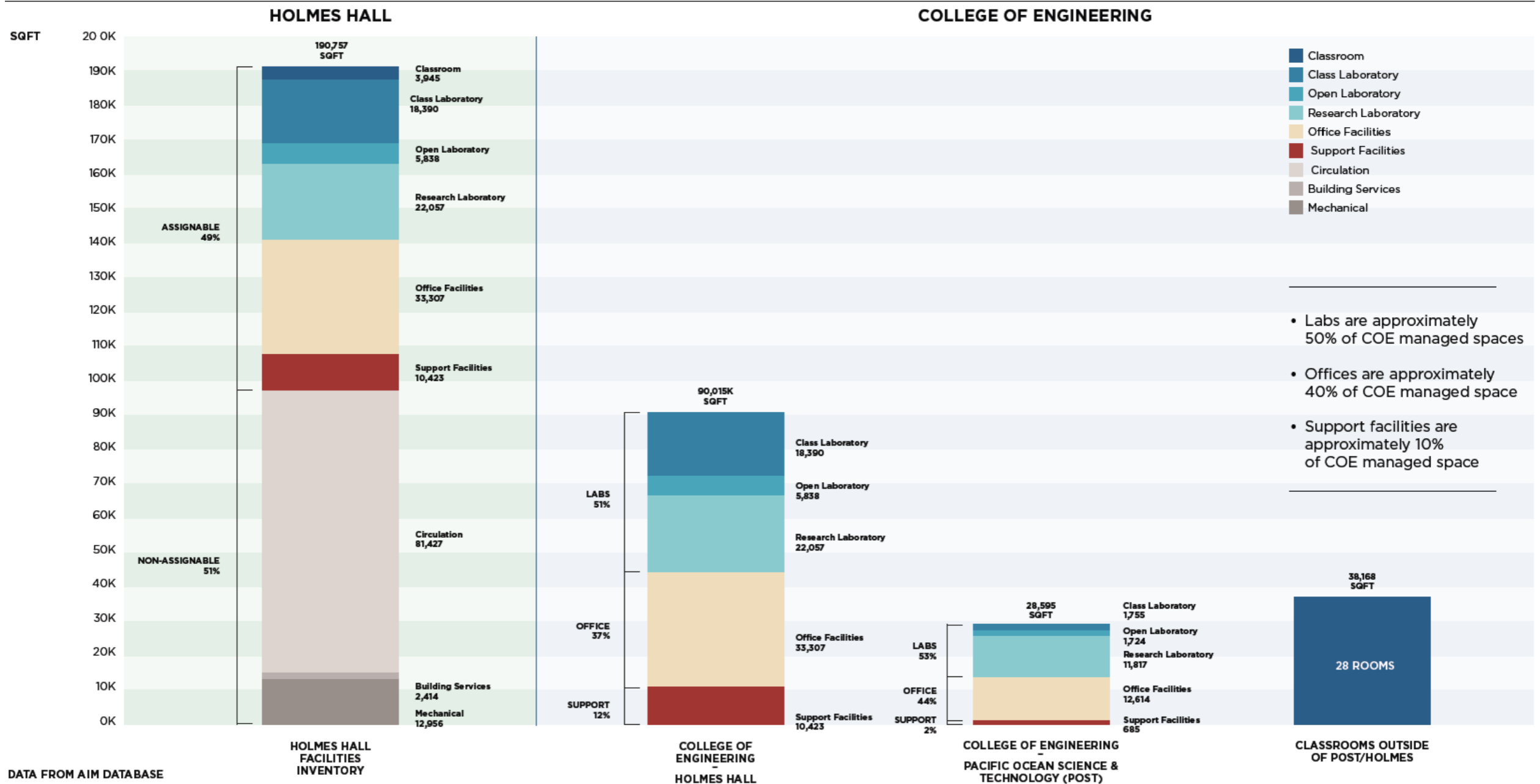
- Focused on college needs relative to teaching and research goals
- Increase in utilization and occupancy levels of teaching and research space reduces overall need for physical square footage
- Scheduling of classes and non-engineering activities in other locations on campus
- Reuse of existing spaces prioritized to lower cost
- Estimate currently in progress; initial range \$45-\$75MM



Projects: College of Engineering

COLLEGE OF ENGINEERING FACILITIES INVENTORY: HOLMES HALL & POST

DRAFT
PAGE 16



Cost savings could be over \$50MM

- Emphasis on meeting program needs through better use of space, not building more space
- Willingness of college to adapt needs to use existing space when possible, relocate certain activities outside of main building hub

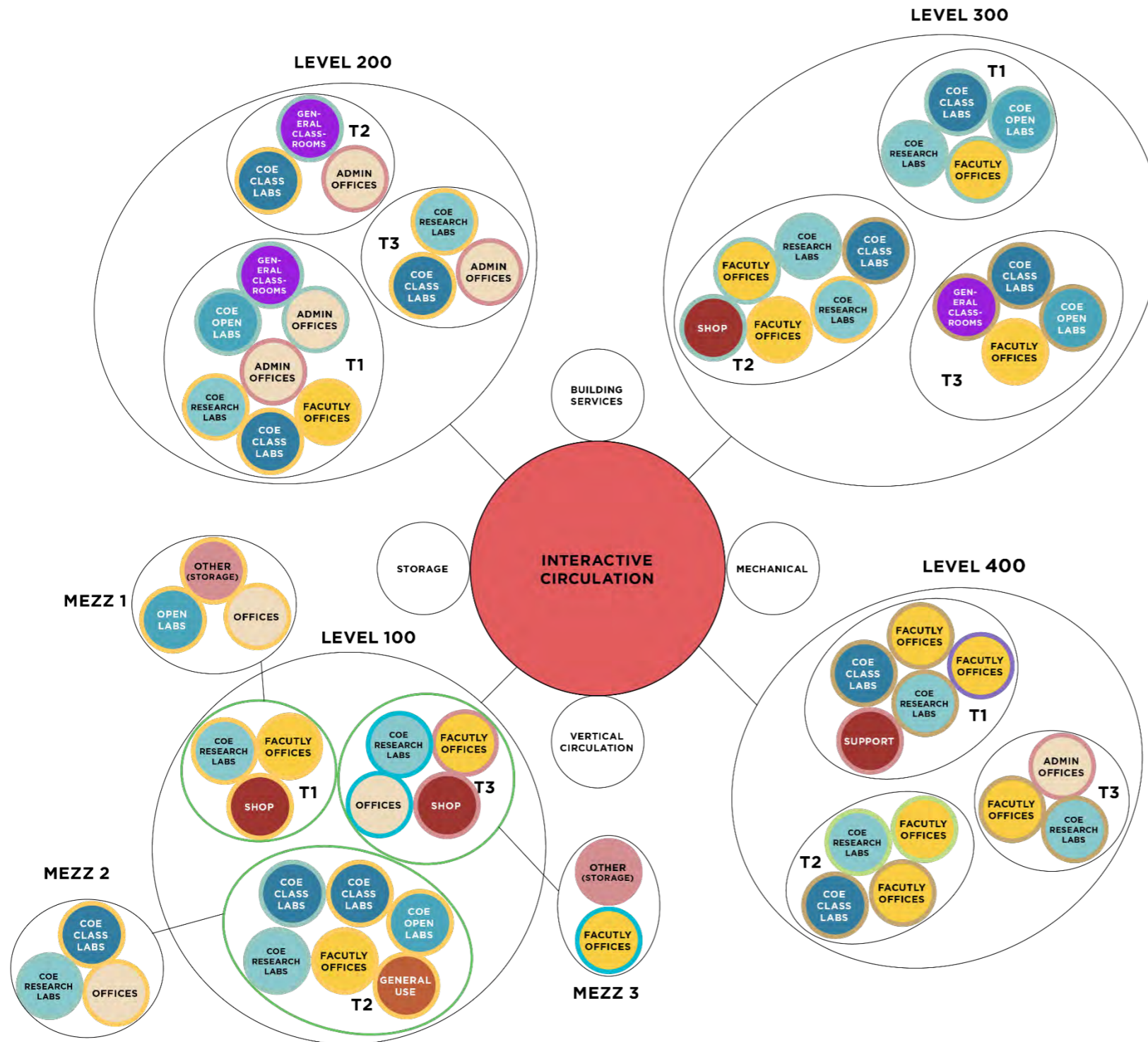


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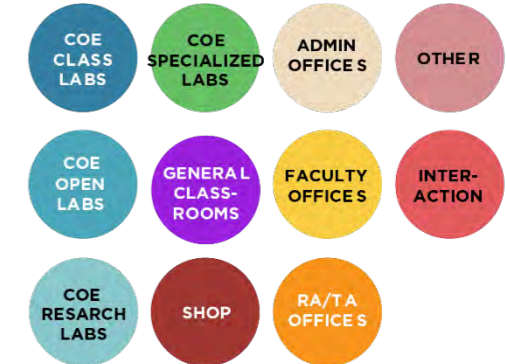


Projects: College of Engineering

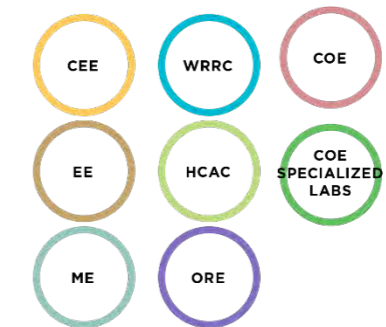
Existing Conceptual Organization Model



USE TYPES



DEPARTMENTS



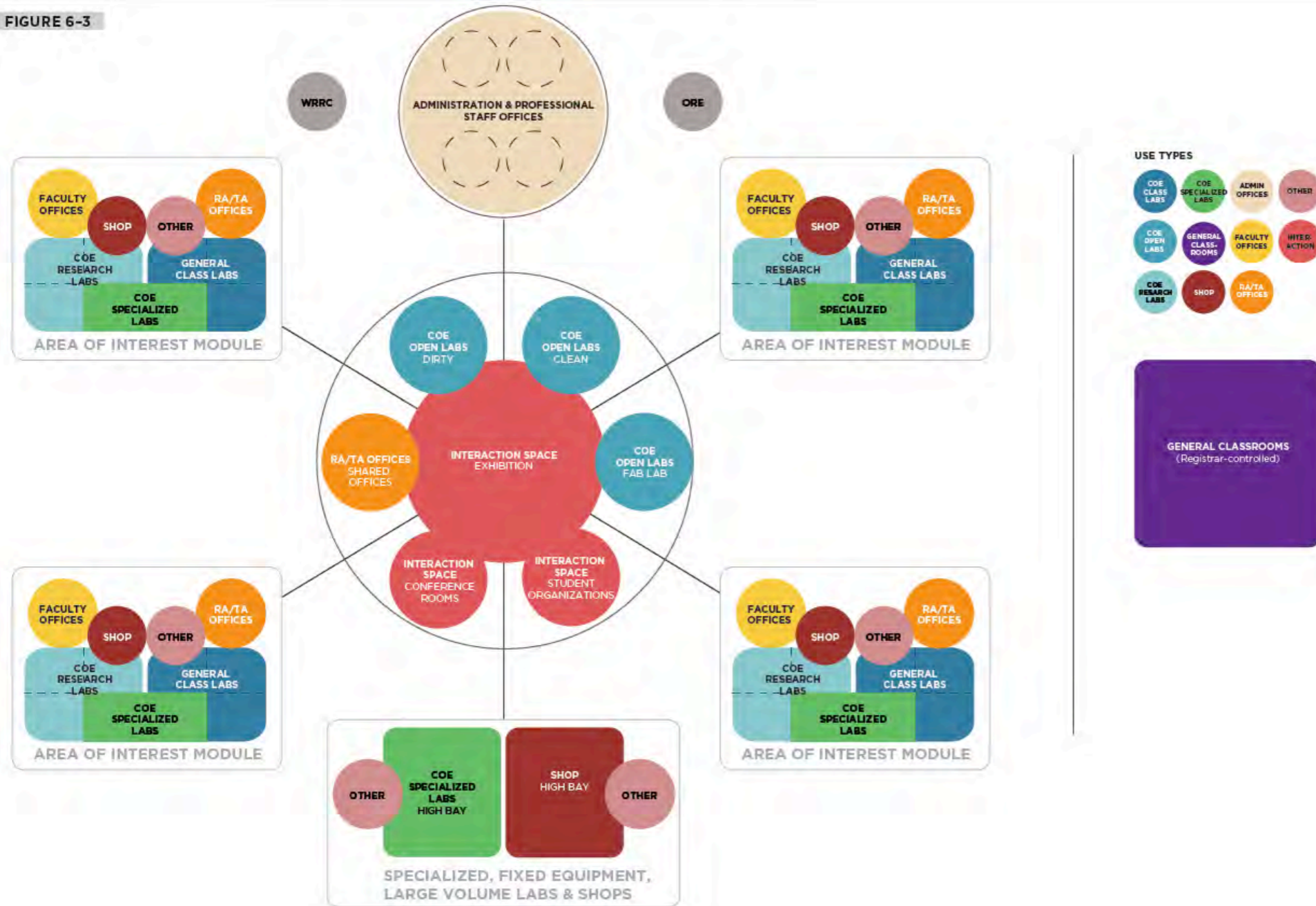
T1 = TOWER 1
 T2 = TOWER 2
 T3 = TOWER 3
 T4 = TOWER 4
 MEZZ = MEZZANINE



Projects: College of Engineering

Future Conceptual Organization Model

FIGURE 6-3



- Organizational Model integrates the best of the three precedents (organize by functional requirements, organize by program, and organize by layer of activity)
- Densest intensity of activity is in central shared spaces, promoting COE culture
- Shops and Specialized Labs requiring double-height spaces are co-located (functional requirement)
- Area of interest modules co-locates research teams in dynamic groupings that can change over time

Sustainability impact

- Building reuse vs. building replacement
- Lower SF requirements through higher utilization of space
- Upgrade of old mechanical system to more efficient environmental management will yield additional energy cost savings



Faculty Survey



DEFINITIONS

- IAFP¹: Integrated Academic Facilities Plan
- LRDP²: Long Range Development Plan
- PRU³: Plan Review Use
- CIP⁴: Capital Improvement Plan



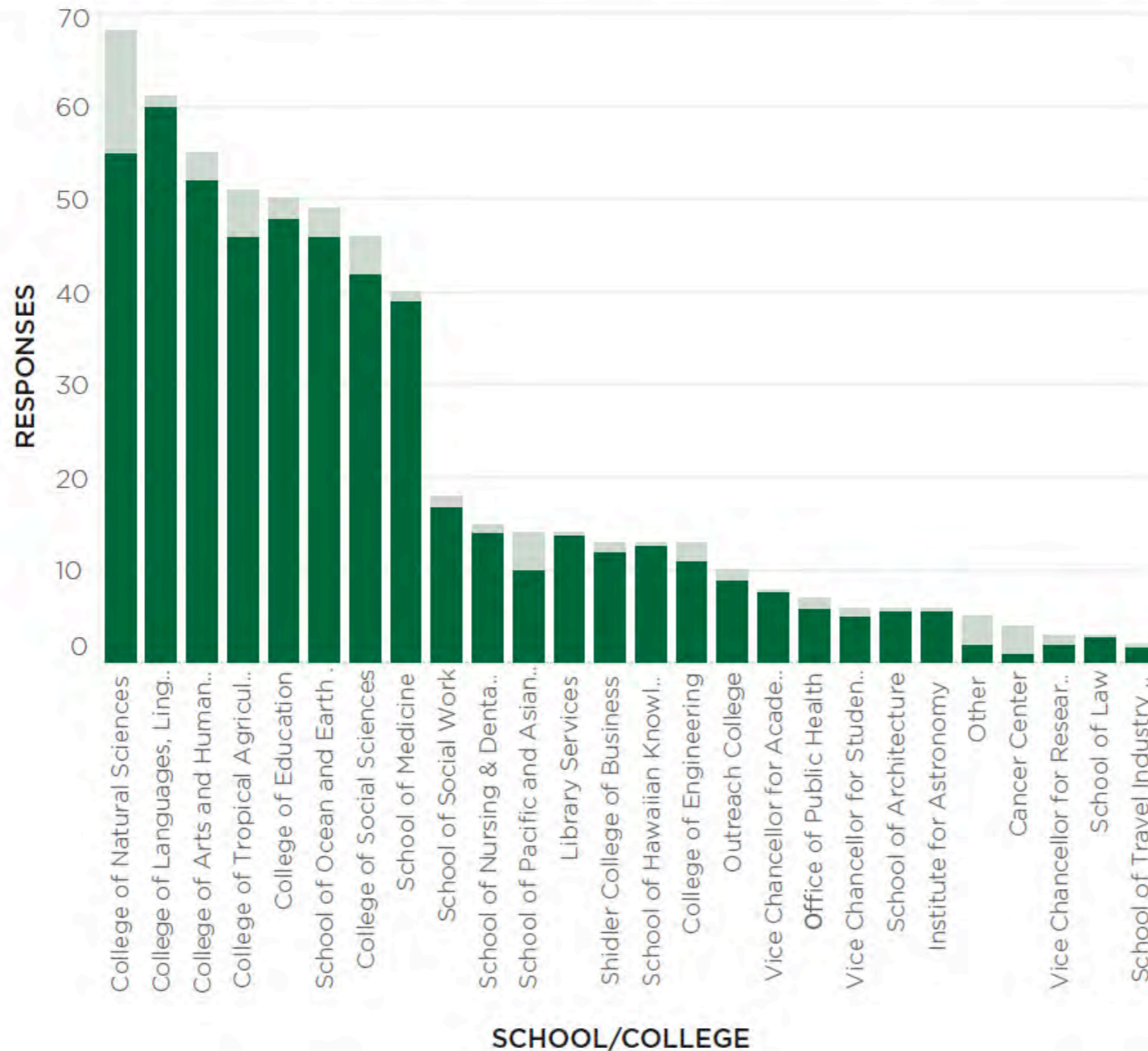
Faculty Survey on Facilities: Participation

WORK ACTIVITIES OF RESPONDENTS

In what college or school is your primary academic appointment, and, if applicable, secondary appointment(s)?

KEY

- Primary Academic Affiliation
- Secondary Academic Affiliation



26 schools/colleges were represented by respondents, with the most responses from the College of Natural Sciences, the College of Languages, the Linguistics & Literature and the College of Arts & Humanities



Faculty Survey on Facilities: Themes

EMERGING THEMES



1. MEETING/COLLABORATIVE SPACE

Collaborative spaces and meeting rooms emerged as a primary need for faculty members. Formal rooms such as meeting or conference rooms as well as collaborative spaces that encourage small group learning were determined to be among the most essential future workplace typologies. Additionally, faculty noted the importance of providing meeting spaces for graduate students seeking to meet and engage with faculty and students.



2. FACULTY, STUDENT SPACE LIMITED

The additional provision of faculty and student spaces were primary themes throughout. Specifically, this revolved around the need for collaboration among students, graduate students, researchers and faculty in offices as well as in library settings. Active learning spaces and multi-purposes spaces were also deemed important.



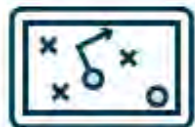
3. PHYSICAL ADJACENCY TO OTHER DEPARTMENTS

The provision of spaces to interact with other faculty members was listed as one of the top five priorities of faculty members. Limiting splits between departments and ensuring adjacencies exist between departments working in close collaboration was a primary concern among faculty. Additionally, the breadth of collaborations as evidenced across schools and colleges highlights the importance of physical proximity.



4. ROOM ENVIRONMENTAL QUALITY ESSENTIAL

Access to natural light and ventilation was the second highest priority among faculty, as corroborated by the recurrent requests for alternative air-conditioning systems. Additionally, the need for green spaces, open-air walkways, and landscaped areas emerged as ways to improve the work environment and better align with Hawaiian climate and culture.



5. TECHNOLOGY ADVANCEMENTS

The need for improved technological effectiveness emerged as a primary concern in meeting rooms, classrooms, and laboratories. Over the next 10 years, faculty believe they will increasingly use other mobile devices, video conferencing services and smart boards, partially to prepare for more remote-teaching set-ups.

Faculty Survey on Facilities: Collaboration

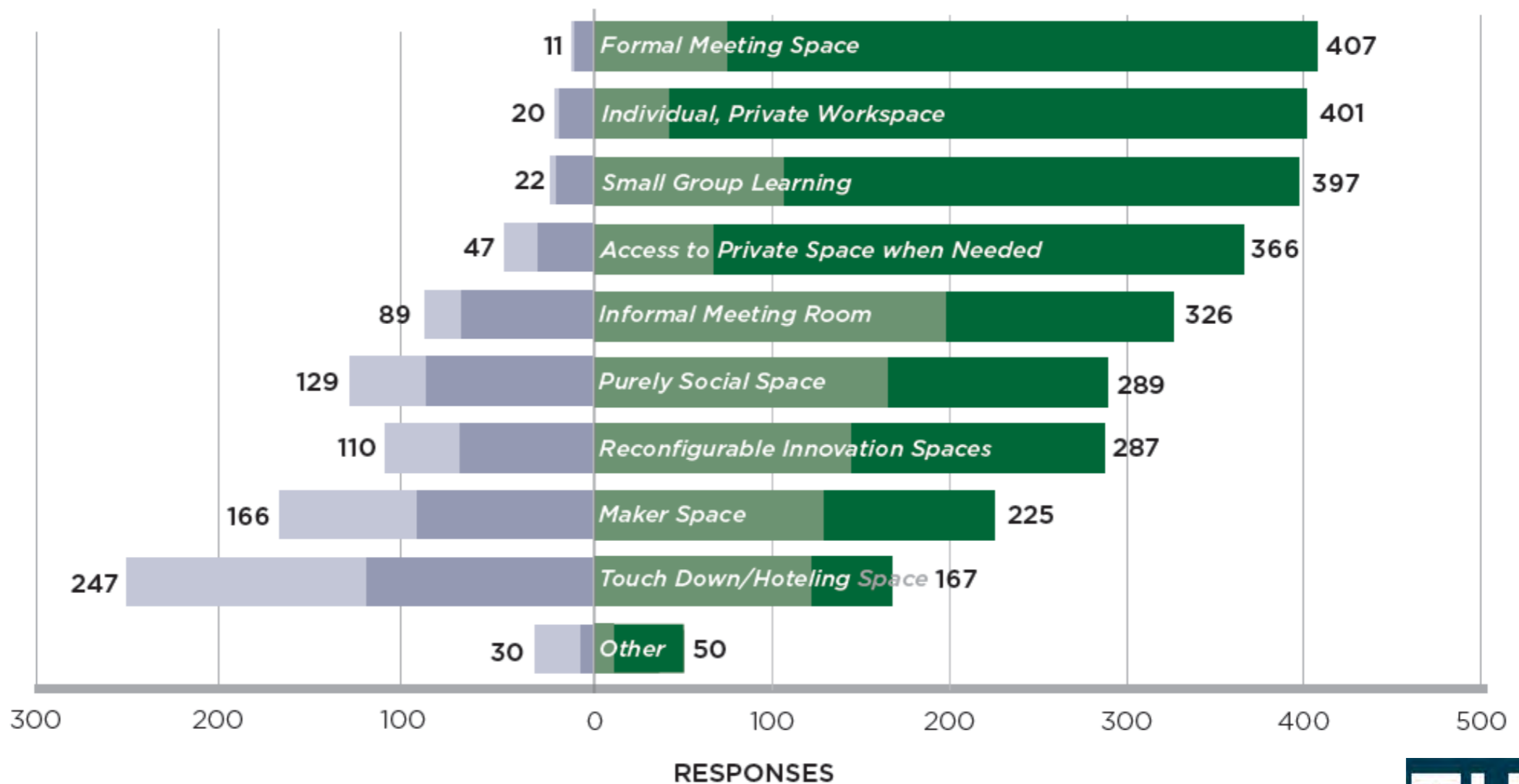
FUTURE IDEAL WORKPLACE TYPOLOGIES

Imagine a future ideal academic office workspace. Please evaluate the following workplace typologies.

KEY

- Essential
- Somewhat Important
- Somewhat Unimportant
- Unnecessary

Formal Meeting Space, Individual/Private Workspaces, and Small Group Learning Spaces are the most favored workplace typologies



Faculty Survey on Facilities: Space Priorities

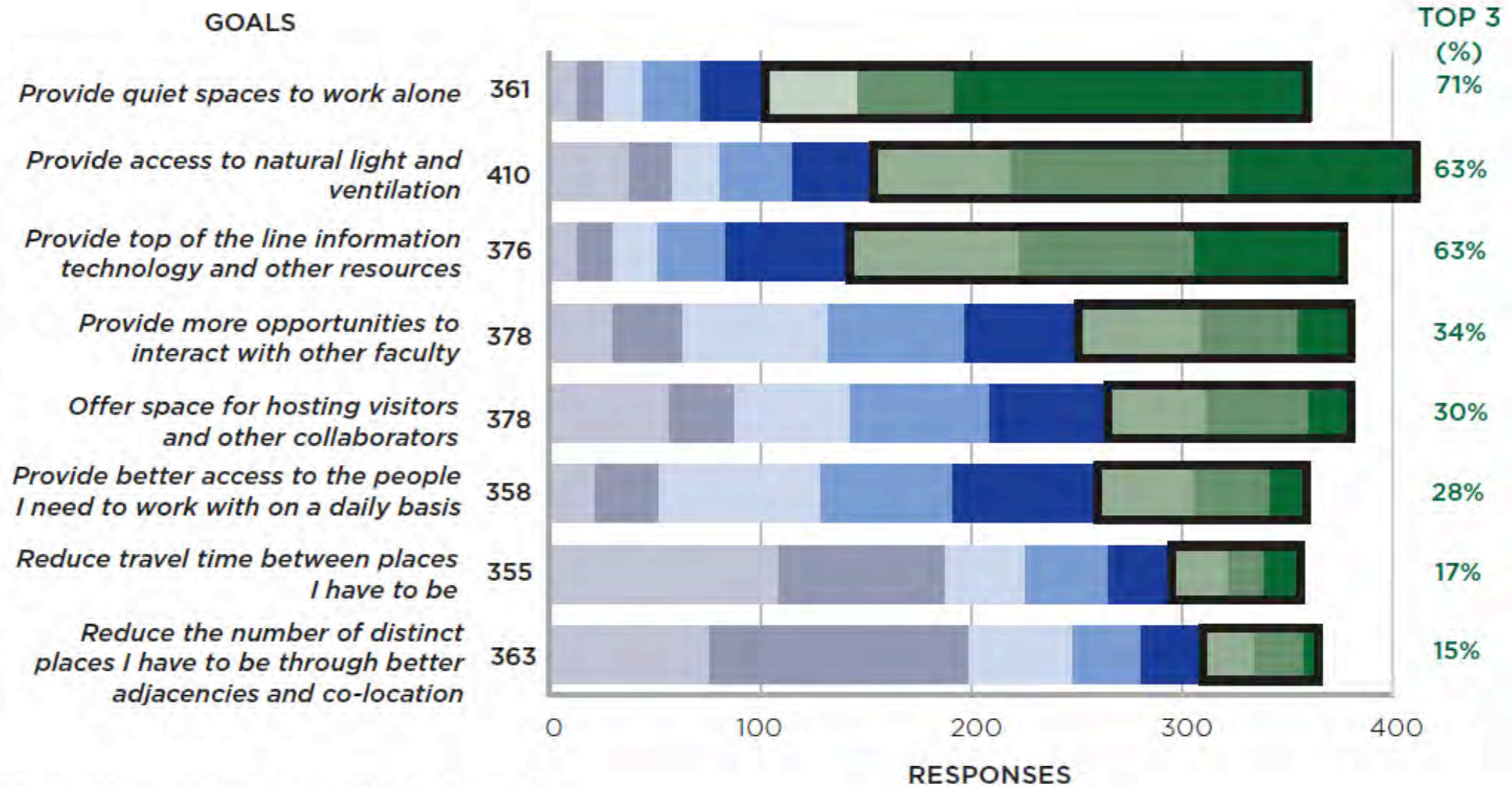
PRIORITIES OF FACULTY MEMBERS

From your perspective, please rank following goals (1 = highest priority):

KEY

- Priority 1
- Priority 2
- Priority 3
- Priority 4
- Priority 5
- Priority 6
- Priority 7
- Priority 8

The top 3 workspace priorities of faculty members are:
 1) Provide quiet spaces to work alone, 2) Provide access to natural light and ventilation, 3) Provide top of the line information technology and other resources



*Ordered by ranking within the 'Priority 1' category



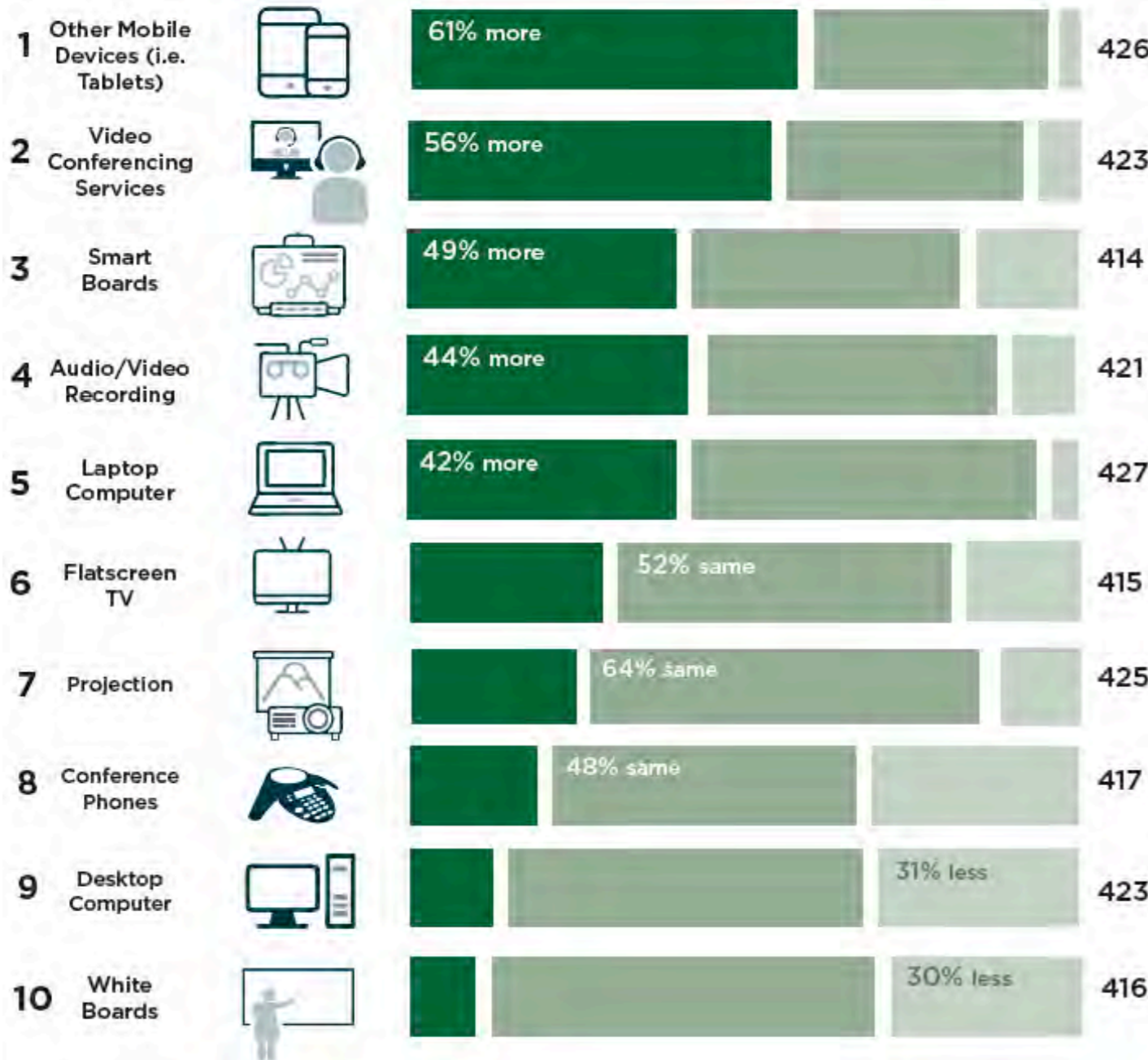
Faculty Survey on Facilities: Technology

TECHNOLOGY USAGE - OVER NEXT 10 YEARS

Please review this list of technologies. Over the next 10 years, do you imagine yourself using these less, about the same, or more than you do today?

KEY

- More
- About the same
- Less



Over the next 10 years, the greatest increases in technology use are projected to be for Other Mobile Devices, Video Conferencing Services and Smart Boards

*Ordered by ranking within the 'more' category



Master Plan



DEFINITIONS

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- CIP⁴: Capital Improvement Plan

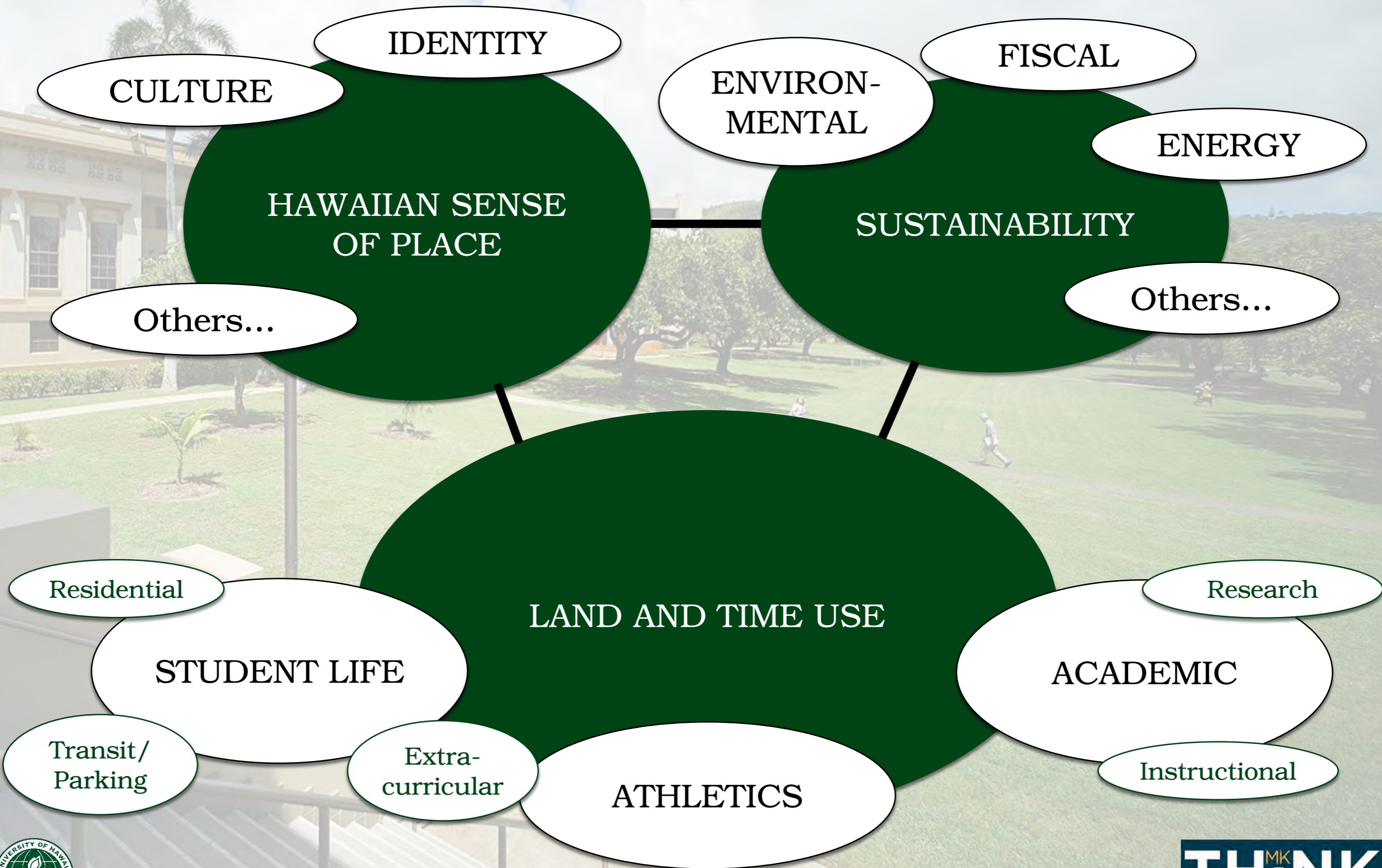


Master Planning – General Approach

- Facilities must accommodate changing modalities of instruction
- Master Plan is a long-term land use strategy
 - Campus is an asset, use it to support the University's goals and objectives
 - Land is the scarcest resource, plan needs to create most effective use of the resource
 - How can campus be resilient to changing academic demands and teaching styles



Master Planning – General Approach



Master Planning – Team Organization



Master Planning - Timeline





Update on University of Hawai'i at Mānoa Campus Space Utilization Study & Master Physical Plan

BOR Planning & Facilities Committee
Feb 7, 2018





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University of Hawai'i Repair & Maintenance Operating Budget Overview

Planning & Facilities Committee

February 7, 2018



Repair & Maintenance (R&M)

VS.

Capital Improvement Projects (CIP)

- Routine work that maintains original condition
- Preventive maintenance against deterioration and replacement
- “Cash” financed = General Funds & Tuition and Fees Special Fund
- Operating Expense

- New asset with a useful life of at least 10 years
- Extends the life of the asset by at least 10 years
- Debt financed
- Capitalized/Depreciated

\$1 R&M = \$3 CIP

Repair & Maintenance

VS.

Capital Improvement Projects

- Custodians & Groundskeepers
- Trade Shops: Electricians, Plumbers, Painters, Carpenters, etc.
- Maintenance Agreements: Elevators, HVAC, etc.
- General Rule: <\$250,000
 - In-house projects
 - 90%+ of all workorders
 - Emergencies
- Budget = Salaries + Operations

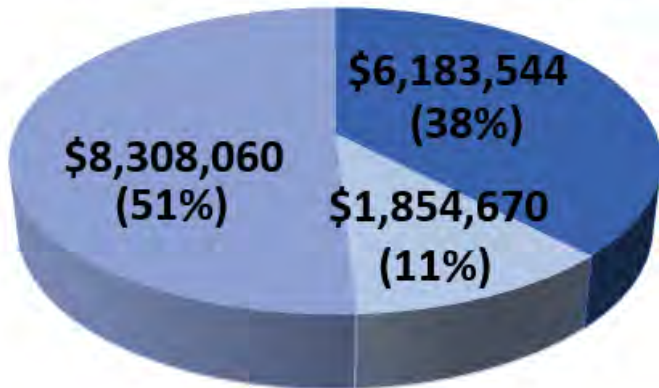
- Project Managers
- Design Consultants
- General and Specialized Contractors
- General Rule: >\$250,000
 - Planned Projects
 - Longer lead time
- Budget: = Major CIP & RIM
- G.O. Bond Projects Processed through Department of Accounting & General Services

EQUALLY IMPORTANT

FY18 Facilities Operating Budget (Repair & Maintenance, Custodial, and Grounds)

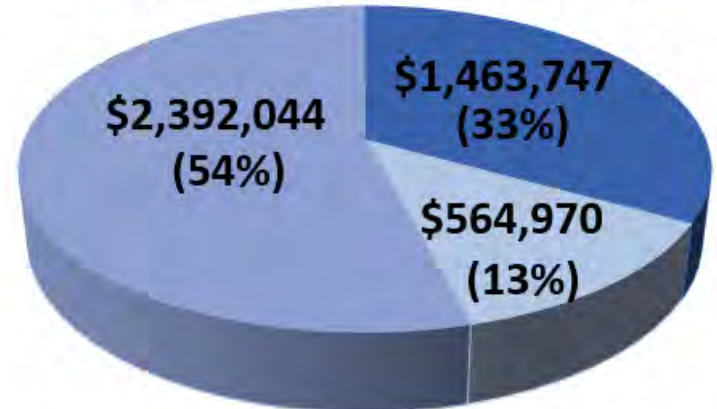
Mānoa

Total: \$16,346,274 (\$2.06/gsf)



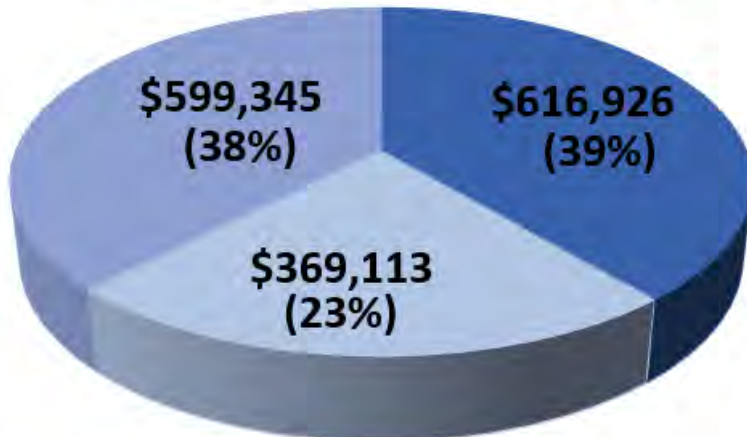
Hilo

Total: \$4,420,761 (\$3.88/gsf)



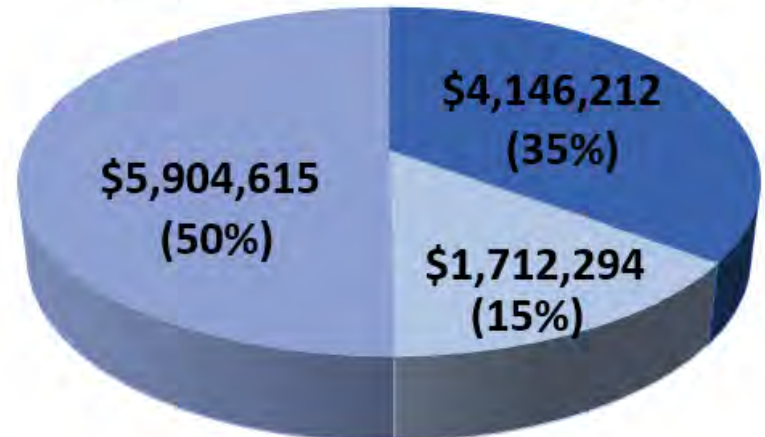
West O'ahu

Total: \$1,585,384 (\$7.23/gsf)



Community Colleges

Total: \$11,763,121 (\$3.84/gsf)

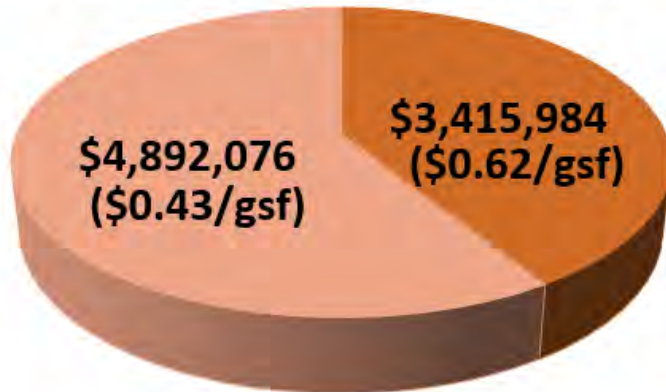


■ Repair & Maintenance ■ Custodial ■ Grounds

FY18 Repair & Maintenance Operating Budget

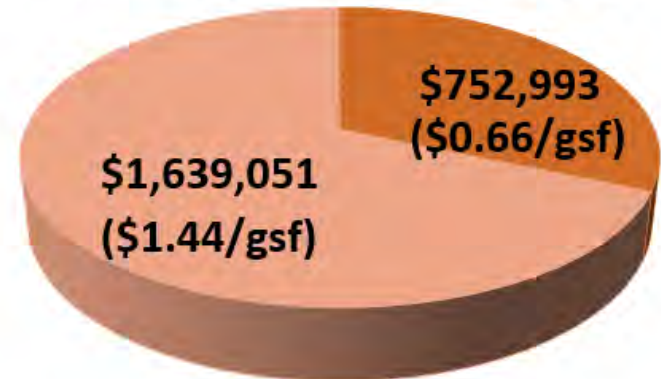
Mānoa

Total: \$8,308,000 (\$1.05/gsf)



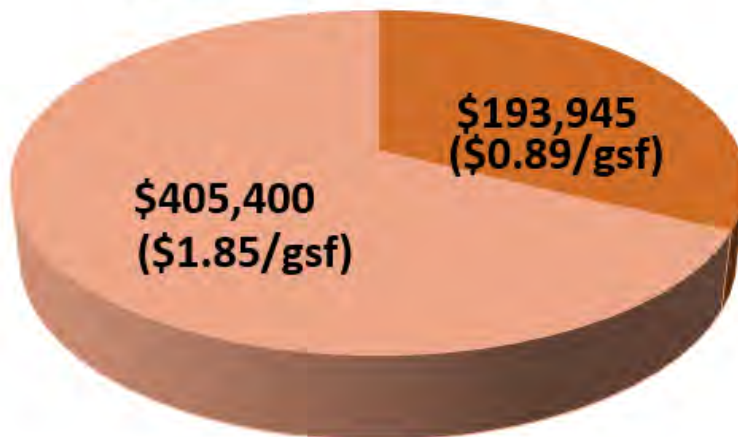
Hilo

Total: \$2,392,044 (\$2.10/gsf)



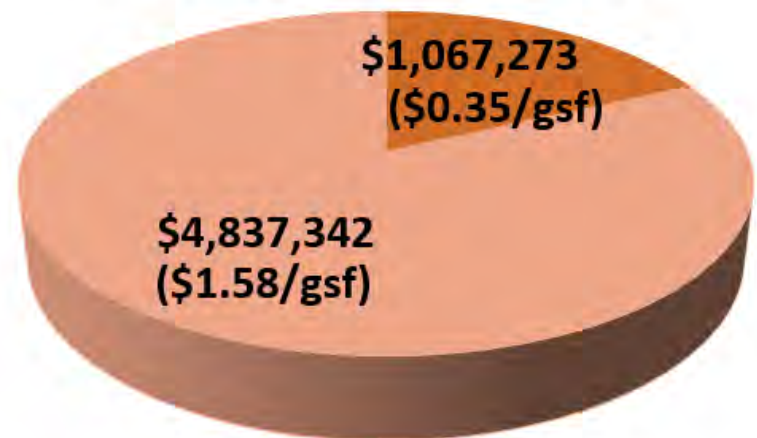
West O'ahu

Total: \$599,345 (\$2.73/gsf)



Community Colleges

Total: \$5,904,615 (\$1.93/gsf)

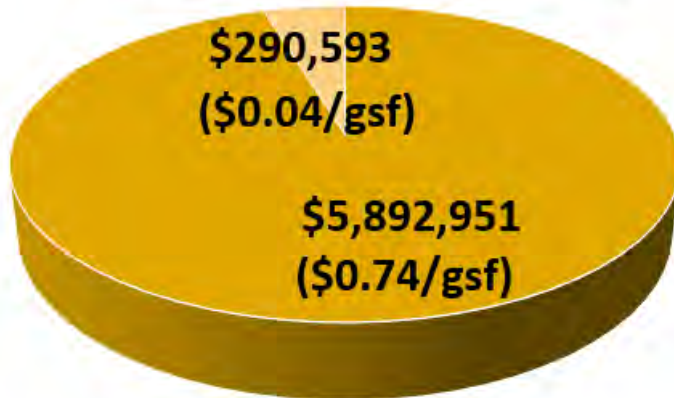


Other Costs Salaries

FY18 Custodial Operating Budget

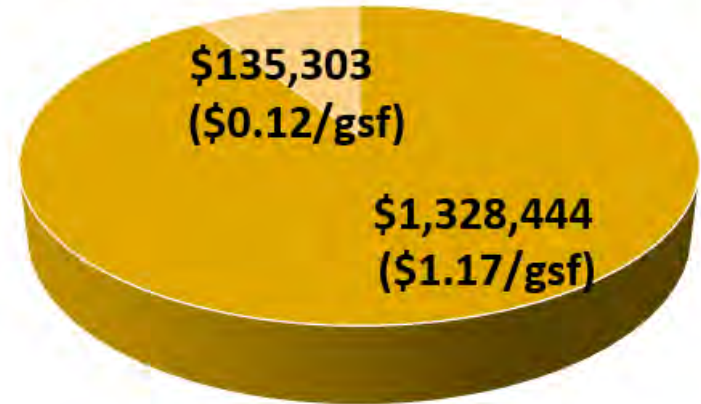
Mānoa

Total: \$6,183,544 (\$0.78/gsf)



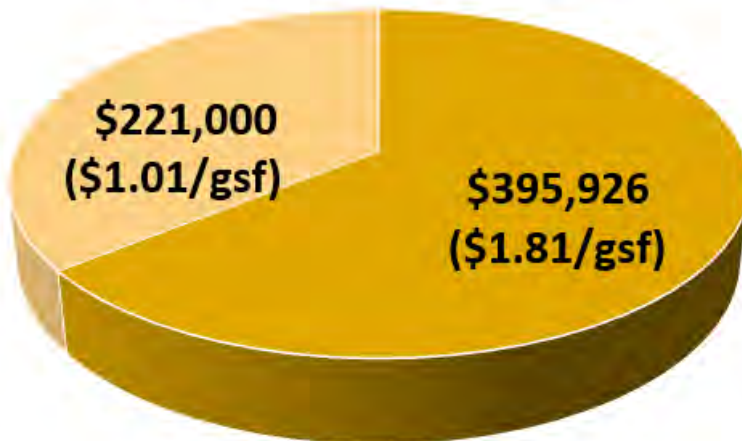
Hilo

Total: \$1,463,747 (\$1.29/gsf)



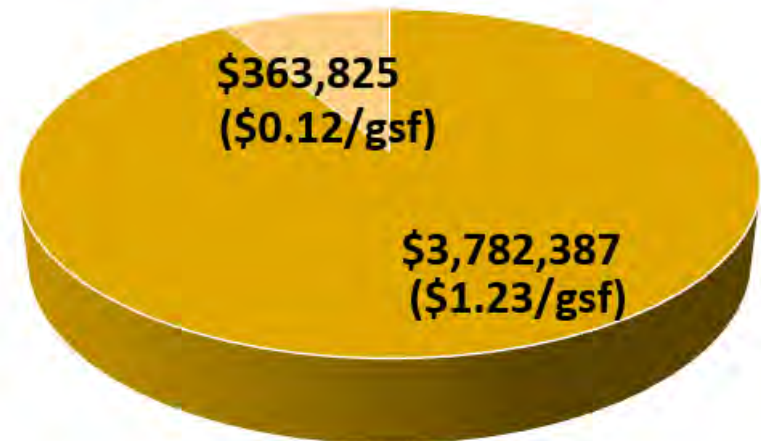
West O'ahu

Total: \$616,926 (\$2.82/gsf)



Community Colleges

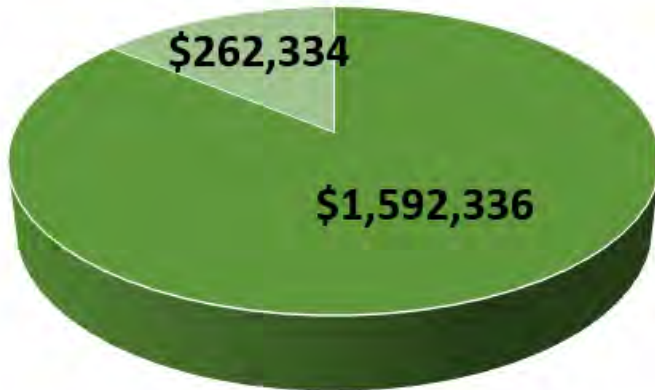
Total: \$4,146,212 (\$1.35/gsf)



Salaries Other Costs

FY18 Grounds Operating Budget

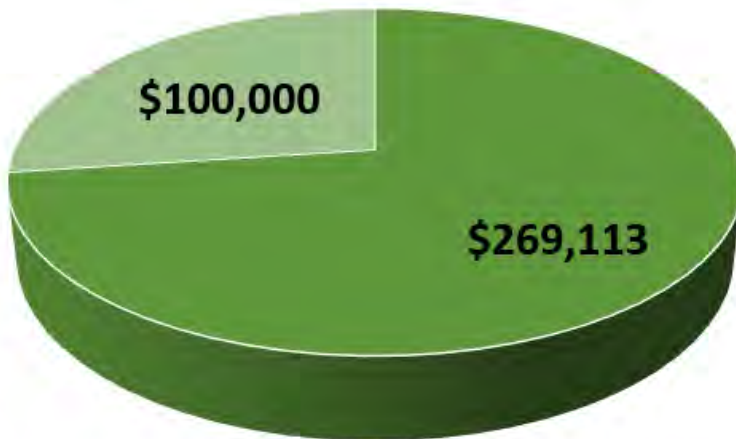
Mānoa
Total: \$1,854,670



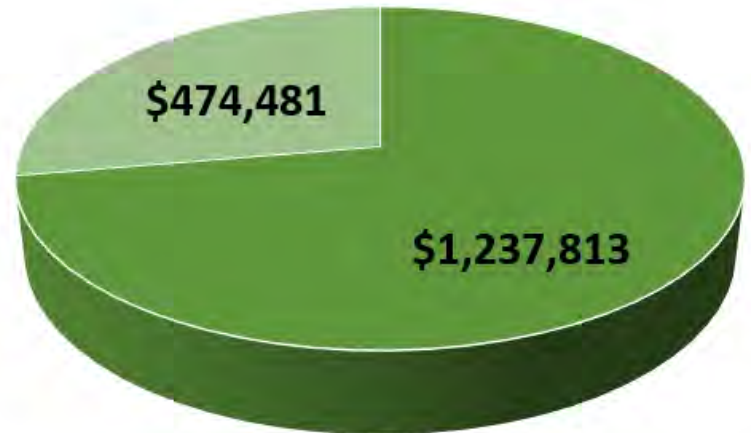
Hilo
Total: \$564,970



West O'ahu
Total: \$369,113

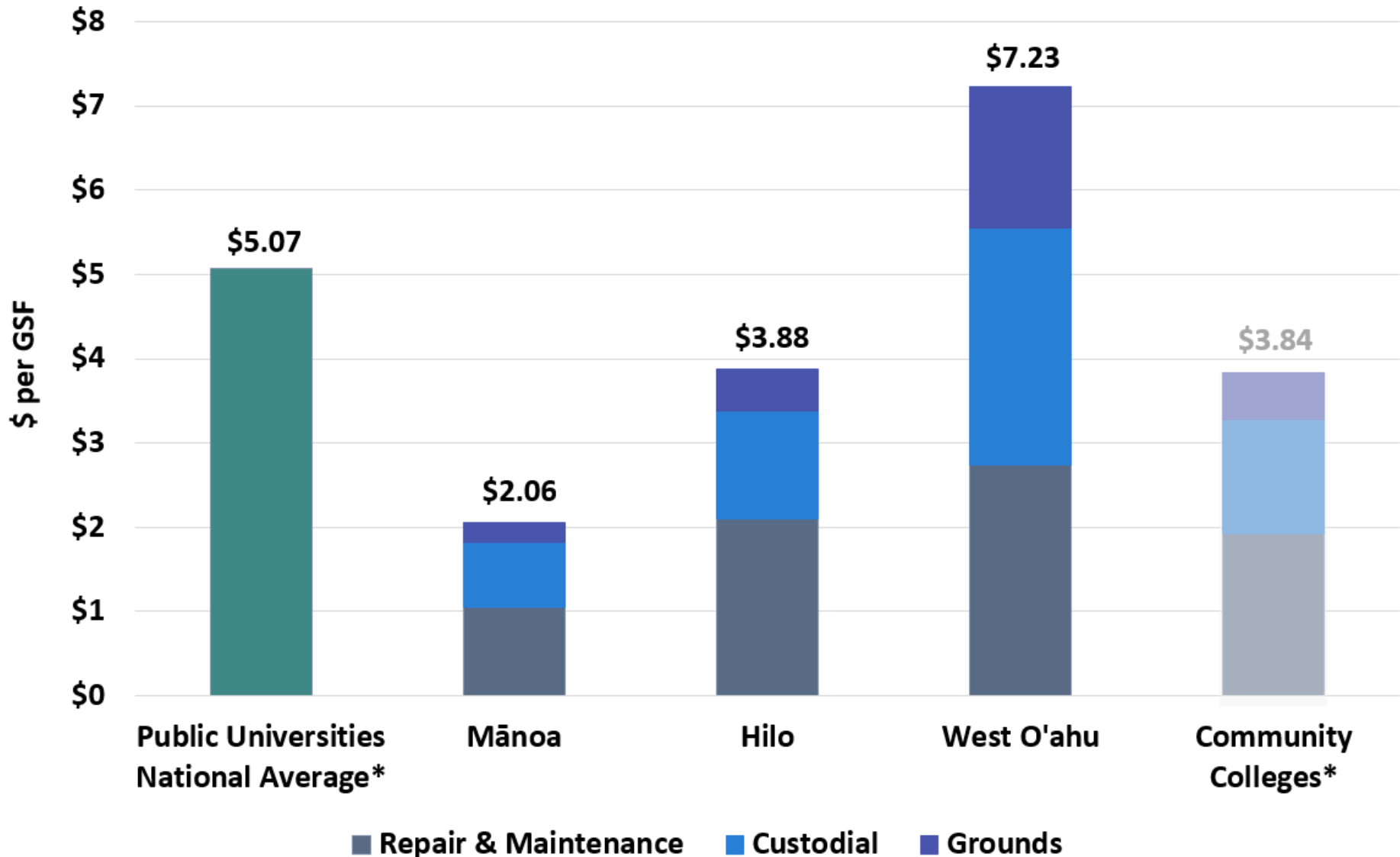


Community Colleges
Total: \$1,712,294



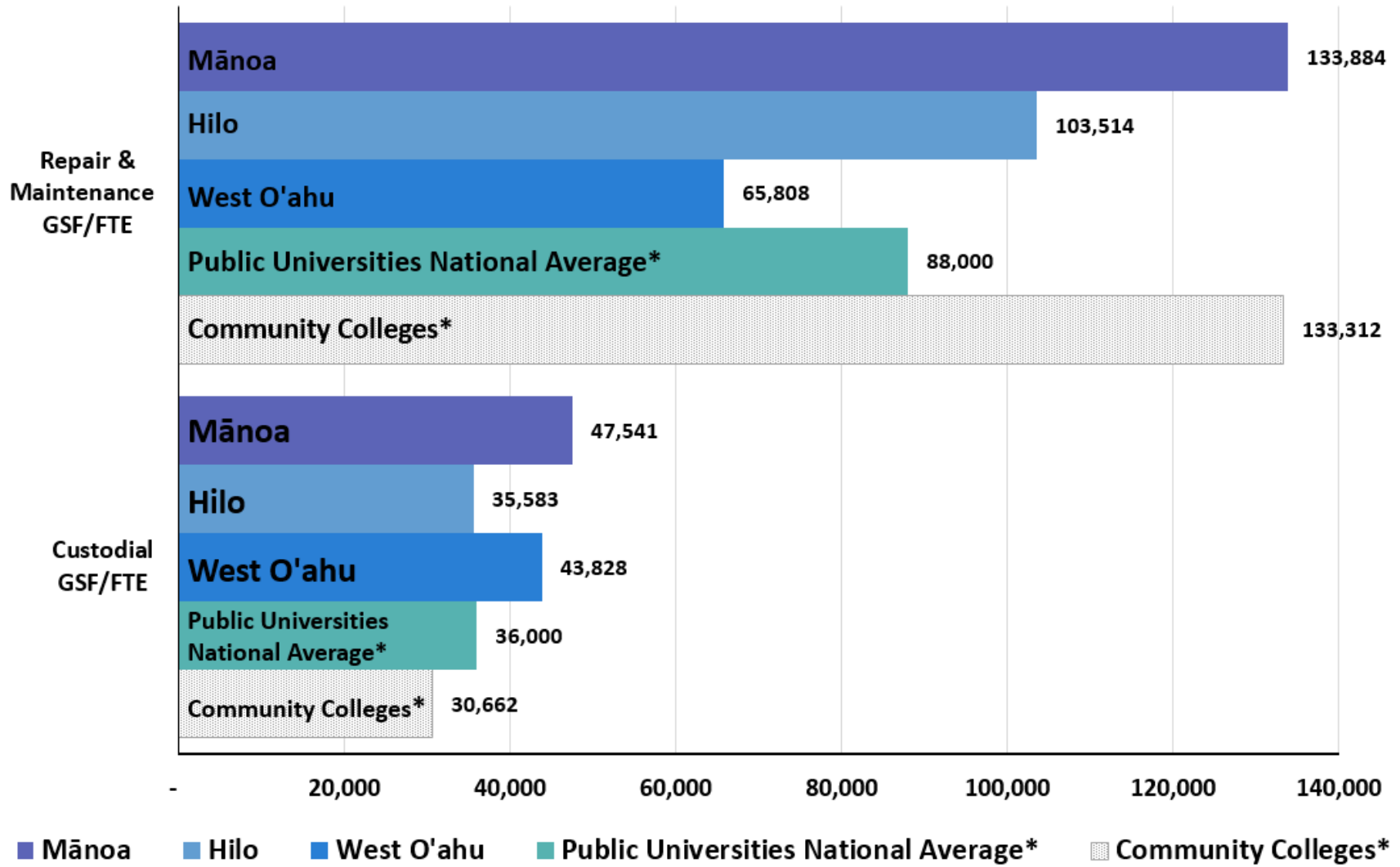
■ Salaries ■ Other Costs

FY18 Facilities Operating Budget per GSF



*"State of Facilities in Higher Education, 2016 Benchmarks, Best Practices & Trends," Sightlines (2016). Public Universities National Average includes operating budget for maintenance, custodial and grounds operations of 4-year public institutions (2-year institutions not included).

Facilities Staff Coverage Rates by Campus



*"State of Facilities in Higher Education, 2016 Benchmarks, Best Practices & Trends," Sightlines (2016). Public Universities National Average of maintenance and custodial coverage for 4-year public institutions (2-year institutions not included).

FY 18 R&M as Percent of Total Campus Operating Budget (GF & TFSF)

Mānoa
4% (\$16 million)



Hilo
6% (\$4.4 million)



West O'ahu
5% (\$1.6 million)



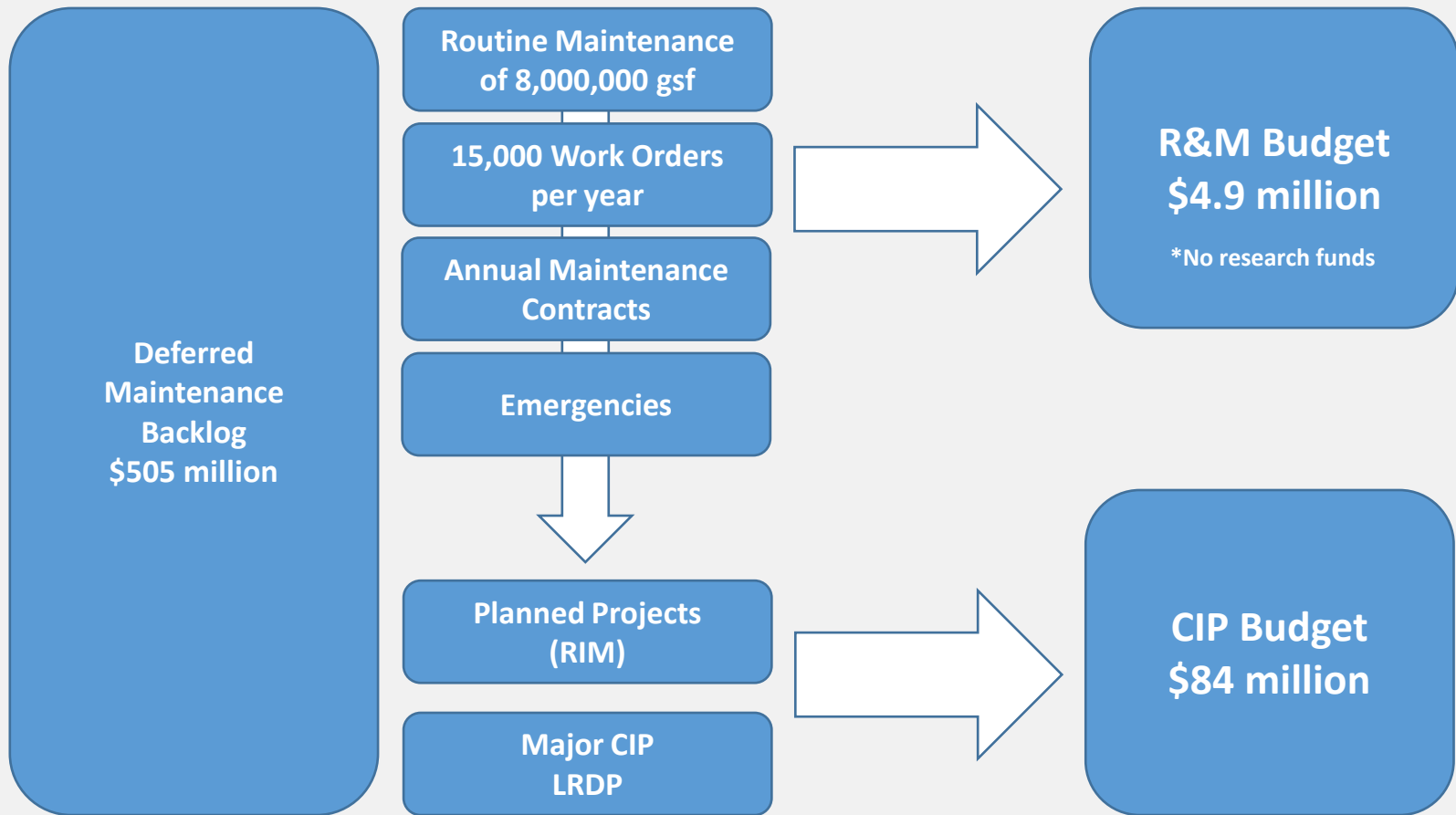
Community Colleges
6% (\$12 million)



 Tuition & Fees Special Funds

 General Funds

FY18 MĀNOA R&M AT A GLANCE





UNIVERSITY of HAWAII®



MAHALO

Item IV.A.4.

**FY18 Q2 Major
Projects Update**



UNIVERSITY *of* HAWAII®

FY 2018 SECOND QUARTER CIP STATUS REPORT **(as of 12/31/17)**

Planning and Facilities Committee Meeting
February 7, 2018



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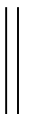


Table Summary – Construction Projects Over \$5 Million

**Indicates changes from FY18 Q1 CIP Status Update Report (as of 9/30/17)*

<i>Campus/Project</i>	<i>Original/ Revised Completion Date</i>	<i>Original Construction Amount</i>	<i>Change Orders & Percent Change to Date</i>	<i>Change(s) from Quarter 1</i>
Mānoa – Coconut Island Utility Rehabilitation/Replacement	Nov. '16 / Apr. '18*	\$6,397,204	\$2,996,134 (47%)	Completion date changed from Oct. '17 to Apr. '18; extension due to addition of a second bore for the waterline and an air release valve and pressure gauge for the sewer line.
Mānoa – Coconut Island Lilipuna Pier and Seawall Repair	Apr. '18* / Jul. '18*	\$5,999,000	\$414,550 (6.9%)*	Original completion date changed from Jan. '18 to Apr. '18 as original completion date was erroneously identified; the Jan. '18 completion date was for completion of the pier only and the Apr. '18 completion date was for the completion of the remainder of the scope. Revised completion date changed from Apr. '18 to Jul. '18, and change order amount increased from \$0 to \$414,550; cost increase and extension due to additional multi-spectrum survey and demolition of canopy structure and excess planks for recycling.
Mānoa – Coconut Island Marine Laboratory Buildings 1 & 2 Interior Renovation and General Repairs	Feb. '18 / Mar. '18	\$21,019,747	\$10,646 (0.05%)	None
Hilo – Daniel K. Inouye College of Pharmacy	May '18 / Oct. '18*	\$31,300,000	\$109,373 (0.4%)	Completion date changed from May '18 to Oct. '18; extension due to additional 2' of excavation and backfill under the building foundation, structural steel changes, underground electrical line extension and pole relocation, and extension of paved area for emergency site access due to County Fire Department's comments
Mānoa – Law School Renovation & Addition – Community Legal Outreach Center	Nov. '17 / Mar. '18*	\$7,372,000	\$85,574 (1.2%)*	Completion date changed from Nov. '17 to Mar. '18 and change order amount changed from \$0 to \$85,574; extension and increase due to implementation of card access system in lieu of keys, addition of PV panel installation and details for a gate and bollards, parking lot and interior wall revisions, and additional rebar.
LCC – Repair and Refurbish Theater	Sept. '17 / Apr. '18*	\$10,256,335	\$367,850 (3.6%)	Completion date changed from Jan. '18 to Apr. '18; extension due to installation of a new waterproof coating and relocation and redesign of auditorium accessibility-related items.
West O'ahu – Administration & Allied Health Facility	May '18 / Oct. '18	\$29,941,000	\$465,236 (1.6%)*	Change order amount increased from \$139,173 to \$465,236; increase due to furniture revisions, revisions due to unavailability of specified products, and replacing inoperable existing underground valves.
Mānoa – Life Sciences Building	Spring '19 / Summer '19*	\$49,500,000	\$269,796 (0.6%)*	Completion date changed from Spring '19 to Summer '19; change order amount increased from \$0 to \$269,796; time extension and increase due to environmental issues discovered in the soil below Henke Hall and the addition of a second elevator to the project.

Mānoa – Kennedy Theater General Repairs and Code Compliance	July '17 / June '18*	\$5,491,500	\$540,984 (9.9%)*	Completion date changed from Nov. '17 to June '18 and change order amount increased from \$470,688 to \$540,984; extension and increase due to providing user storage to move items from work area and added changes for safety, reroof and mold remediation of costumes and storage area.
Mānoa – Saunders Hall Exterior Repairs and Reroof	Aug. '18 / Aug. '18	\$5,227,618	\$149,240 (2.9%)*	Change order amount increased from \$1,142 to \$149,240; cost increase due to repair of additional unforeseen spalls and cracks on the North and East exteriors of the building.
Mānoa – Hamilton Library Addition, Phase III – Mechanical Repairs	Sept. '18 / Sept. '18	\$6,018,387	None	None
Mānoa – Replacement of Substation “M”	Dec. '17 / Feb. '18*	\$4,777,000	\$457,369 (9.6%)	Completion date changed from Jan. '18 to Feb. '18; extension due to additional electrical work.
West O‘ahu – Creative Media	June '20 / June '20	\$33,275,000*	None	Amended anticipated base contract amount from \$32,000,000 to \$33,275,000.

Table Summary - Design Projects Over \$1 Million

<i>Campus/Project</i>	<i>Original/ Revised Completion Date</i>	<i>Original Design Amount</i>	<i>Change Orders & Percent Change to Date</i>	<i>Change(s) from Quarter 1</i>
Mānoa – Holmes Hall Renovation	Feb. '17 / Mar. '18*	\$1,514,992	\$301,445 (20%)	Completion date changed from Nov. '17 to Mar. '18; extension due to infrastructure requirements for teaching and research laboratories.
CTAHR Due Diligence for Various Deferred Maintenance Improvements	Sept. '17 / Dec. '18	\$1,231,316	None	None
Mānoa – Campus Infrastructure Trunklines, Easements, Water Catchment, Filtration and Reuse Plan, and LMP Phase I Infrastructure Design	Jan. '18 / Mar. '20	\$1,490,403	None	None.
Mānoa – Elevator Modernization, Phase IV*	Dec. '18 / Dec. '18	\$1,077,157	None	New Project
Mānoa – New Classroom Building*	June '20 / June '20	\$275,913	\$2,708,380 (982%)	New Project. The funds for this project were appropriated in Act 213, Session Laws of Hawai‘i 2007, as amended and renumbered by Act 158, Session Laws of Hawai‘i 2008, Item G-117.05 and are still available to deliver an updated PRU/LRDP/Master Plan and EA and also provide a full design for this classroom building. The Board of Regents previously approved this project in 2008.

Table Summary - Upcoming Capital Improvement Projects

<i>Campus/Project</i>	<i>Estimated Construction Amount</i>	<i>Current Phase</i>
Hawai‘i CC – North Hawai‘i Education and Research Center Renovation (Phase III)	\$5m - \$10m	Design
Maui College – Renovate Kitchen & Accessory Spaces in Pilina Building	\$5m - \$10m	Design

Coconut Island Utility Rehabilitation/Replacement – Mānoa

Contractor:	Frank Coluccio Construction Company
Estimated Date of Project Completion:	April 2018*
Original Estimated Date of Project Completion:	November 2016
Completion Level:	58%
Original Construction Amount:	\$6,397,204
Change Orders & Percent Change to Date:	\$2,996,134 (47%) (No change from Quarter 1)
Current Phase:	Awaiting arrival of directional drill boring equipment to resume drilling.
Next Phase:	Begin directional drill boring for new water line from Lilipuna Pier to Coconut Island and assemble high-density polyethylene water piping for pullback to Coconut Island.

Project Scope: Coconut Island, located in Kāneʻohe Bay, is the home to the Hawaiʻi Institute of Marine Biology, a world-renown marine research institute of the School of Ocean and Earth Science and Technology at UH Mānoa. This project involves (1) horizontal directional drilling of a bore through rock roughly 40' below Kāneʻohe Bay for the installation of new sewer and telecommunications lines between Coconut Island and Lilipuna Pier, and (2) replacing an existing sewer pump station and selected sewer pipes on Coconut Island. Approximately 2,000 cubic yards of soil and rock must be excavated and hauled from the site to create a level area for the drilling rig. Cost increase and time extension due to additional trenching and pull boxes for the telecom lines; changing geology conditions between basalt and extremely soft sand requiring a different drill; additional work to install the telecom system; addition of waterline replacement to project scope; drilling subcontractor delays; and addition of a second bore for the waterline and an air release valve and pressure gauge for the sewer line.



Excavation for new waterline at Lilipuna Pier



New Hawaiian Telecom manhole and conduit installed at Lilipuna pier

Coconut Island Lilipuna Pier and Seawall Repair – Mānoa

Contractor:	Global Specialty Contractors, Inc.
Estimated Date of Project Completion:	July 2018*
Original Estimated Date of Project Completion:	April 2018*
Completion Level:	54%
Original Construction Amount:	\$5,999,000
Change Orders & Percent Change to Date:	\$414,550 (6.9%)*
Current Phase:	Concrete jacketing of piles under the elevated driveway and pier.
Next Phase:	Placement of concrete reinforcement and formwork for new pilecaps; completion of new deck planks and cast-in-place concrete; crane barge removal.

Project Scope: Coconut Island, located in Kāneʻohe Bay, is the home to the Hawaiʻi Institute of Marine Biology, a world-renowned marine research institute of the School of Ocean and Earth Science and Technology at UH Mānoa. This project involves the evaluation and repair of Lilipuna Pier, which serves as the transit point for shuttle service to and from Coconut Island. The existing concrete piles will be repaired, the landing deck will be replaced, and the precast planks of the last one third of the pier will also be removed and replaced. A temporary dock will be constructed to the right of the existing pier to maintain shuttle access to the island. Cost increase and time extension due to additional multi-spectrum survey and demolition of canopy structure and excess planks for recycling. Original completion date changed from Jan. '18 to Apr. '18 as original completion date was erroneously identified; the Jan. '18 completion date was for completion of the pier only and the Apr. '18 completion date was for the completion of the remainder of the scope.



*Concrete tremie pour at bent 15, at the end of the pier
with new deck planks*



*New concrete jacketing of piles at bent 7,
at elevated driveway with existing deck planks*



Coconut Island Marine Laboratory Buildings 1 & 2 Interior Renovation and General Repairs – Mānoa

Contractor:	Frank Coluccio Construction Company
Estimated Date of Project Completion:	March 2018
Original Estimated Date of Project Completion:	February 2018
Completion Level:	50%
Original Construction Amount:	\$21,019,747
Change Orders & Percent Change to Date:	\$10,646 (0.05%) (No change from Quarter 1)
Current Phase:	Wall framing, ceiling coordination and installation, and mechanical, electrical and plumbing components installation is ongoing; laboratory mock-up and new HECO transformer are complete.
Next Phase:	Enclosing the project work spaces with new windows and doors.

Project Scope: Coconut Island, located in Kāneʻohe Bay, is the home to the Hawaiʻi Institute of Marine Biology, a world-renown marine research institute of the School of Ocean and Earth Science and Technology at UH Mānoa. This project involves the renovation of the interior of Marine Laboratory Buildings 1 & 2 to provide state of the art research and teaching laboratories, provide general repairs of the buildings (including replacing and upgrading mechanical, electrical, and architectural systems and structures), and perform significant structural retrofitting. Cost increase and time extension due to replacement of sub-contractor.



*Ceiling coordination and installation;
mechanical, electrical, plumbing and communication trays*



Laboratory mock-up at Wet Lab (Room 215)



Daniel K. Inouye College of Pharmacy – Hilo

Contractor:	Isemoto Contracting Co., Ltd.
Estimated Date of Project Completion:	October 2018*
Original Estimated Date of Project Completion:	May 2018
Completion Level:	49%
Original Construction Amount:	\$31,300,000
Change Orders & Percent Change to Date:	\$109,373 (0.4%) (No change from Quarter 1)
Current Phase:	Utility site work, MEP rough-in work, metal roof decking and wall framing on-going; installing electrical conduits, fire sprinklers and HVAC ductwork.
Next Phase:	Install exterior wall sheathing, windows, drywall, painting, acoustical ceilings and HVAC/electrical finishes.

Project Scope: This project involves a new pharmacy facility. Level 1 consists of lecture rooms, breakout rooms, a student lounge, and restrooms. Level 2 includes an administration suite with counsel offices, administrative offices, two biolabs, faculty offices, a Medication Therapy Management suite, a mock pharmacy, a resource center, two seminar rooms, consult rooms, a compound lab, two sim labs, an IV Institutional Pharmacy lab and restrooms. Site development includes new surface parking stalls, landscaping and site lighting. Cost increase and time extension due to structural steel changes, underground electrical line extension and pole relocation, extension of the paved area for emergency site access due to County Fire Department's comments, and additional 2' of excavation and backfill under the building foundation.



Aerial view of site



Metal framing on Level 1

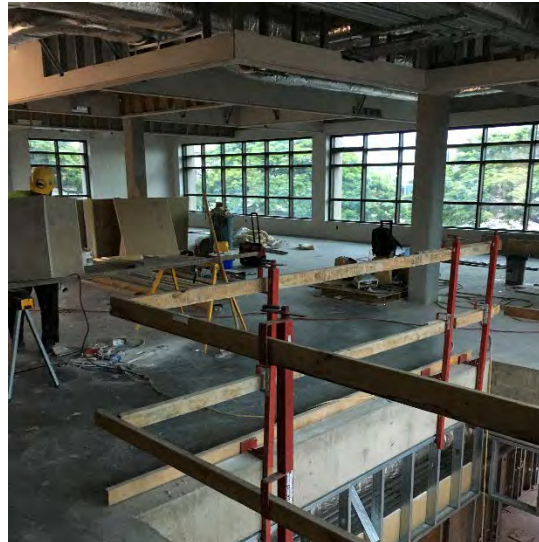
Law School Renovation & Addition: Community Legal Outreach Center – Mānoa

Contractor:	F&H Construction
Estimated Date of Project Completion:	March 2018*
Original Estimated Date of Project Completion:	November 2017
Completion Level:	78%
Original Construction Amount:	\$7,372,000
Change Orders & Percent Change to Date:	\$85,574 (1.2%)*
Current Phase:	Drywall and electrical installation is ongoing; landscaping and fine grading of the parking lot and roadway is ongoing.
Next Phase:	Install doors and asphalt concrete pavement.

Project Scope: The Community Legal Outreach Center at the William S. Richardson School of Law on the UH Mānoa campus will serve as a space for the growing clinical service offered by law school students and faculty. Currently, students provide thousands of hours of free legal help to some of Hawai‘i’s most vulnerable people, including the elderly, troubled and incarcerated youth, veterans, and families living at or near poverty levels. The building will also provide much-needed space to develop practical trial and advocacy skills. The project includes partial demolition and reconfiguration of the existing parking and site features at the UH Mānoa Zone 17 parking lot outside of the Law School and construction of a new, 6,000 square foot, two-story precast concrete building and connecting bridge to the existing law school. Cost increase and time extension due to implementation of card access system in lieu of keys, addition of PV panel installation and details for a gate and bollards, parking lot and interior wall revisions, and additional rebar.



North side of the building



Second floor drywall installation ongoing; windows have been installed



South side of the building – subbase being installed prior to asphalt concrete pavement



Repair and Refurbish Theater – Leeward CC

Contractor:	MEI Corporation
Estimated Date of Project Completion:	April 2018*
Original Estimated Date of Project Completion:	September 2017
Completion Level:	87%
Original Construction Amount:	\$10,256,335
Change Orders & Percent Change to Date:	\$367,850 (3.6%) (No change from Quarter 1)
Current Phase:	Electrical/stage lighting, stage lift and flooring, rigging system and curtains, auditorium seating and power, and flooring and painting work is ongoing.
Next Phase:	Complete seating installation, site work/landscaping/irrigation, building exterior spalling and concrete work, waterproofing/coating, and fire alarms.

Project Scope: This project involves remedying the water intrusion into the building by improving the exterior drainage, doing landscaping improvements, installing continuous canopies to the side entries, creating an open and inviting exterior foyer to the main entry by relocating the ticket office, renovating the restrooms and including a concession area. It also involves upgrading the stage equipment (rigging and drapes, orchestra pit lift system, stage trap panel system and related items) and the main seating and stage area throughout the Theater. The auditorium seating, stage and dance rooms wood flooring, carpet and VCT flooring, painting, ceiling, and lighting, will also be replaced. The project will also retrofit the existing fire alarm system and mechanical system, abatement of hazardous materials at rooms/areas being renovated, meeting DCAB requirements, and making improvements to the theater lighting system and sound system. Cost increase and time extension due to additional labor to remove and relocate items left behind by LCC staff; asbestos abatement; additional concrete seal, spall and crack repairs; installation of a new waterproof coating; and relocation and redesign of accessibility-related items in the auditorium.



Work within the auditorium (including seating, wall finishes, lighting, power, ramps, etc.)



Exterior canopies, wall restoration and side entries



Rigging system, stage curtains and lighting, catwalk, stage and lift flooring/coating



Administration & Allied Health Facility – West O‘ahu

Contractor:	Swinerton Builders Hawai‘i
Estimated Date of Project Completion:	October 2018
Original Estimated Date of Project Completion:	May 2018
Completion Level:	48%
Original Construction Amount:	\$29,941,000
Change Orders & Percent Change to Date:	\$465,236 (1.6%)*
Current Phase:	Mechanical, electrical and plumbing rough-in on first level is ongoing; installing roof structure.
Next Phase:	Waterline testing/chlorination, concrete curbs and headers, and asphalt concrete pavement installation.

Project Scope: The project consists of an approximately 43,442 square foot facility to house Administration and Allied Health programs at the University of Hawai‘i at West O‘ahu (UHWO) Campus. The new facility will include offices for UHWO administration and faculty, classrooms, laboratories, and other related spaces. Extension due to changes to the roof drainage design, which affected coordination with underground utilities. The changes involved replacing interior roof drains with exterior downspouts, to address campus concerns for long term maintenance. Cost increase due to demolition of existing site electrical, replacing valves on chilled water loop, adjusting the location of the emergency power electrical duct, cutting and plugging existing utility lines, furniture revisions, revisions due to unavailability of specified products, and replacing inoperable existing underground valves.



Entrance to administration wing – north side



Administration wing – second floor open office area



Classroom wing – north side



Life Sciences Building – Mānoa

Contractor:	Layton Construction
Estimated Date of Project Completion:	Summer 2019*
Original Estimated Date of Project Completion:	Spring 2019
Completion Level:	6%
Original Construction Amount:	\$49,500,000
Change Orders & Percent Change to Date:	\$269,796 (0.6%)*
Current Phase:	Performing soil testing to determine extent of contamination.
Next Phase:	Install underground electrical main and address soil contamination once test results have been received.

Project Scope: This design-build project for a new Life Sciences Building will be developed at the site of Henke Hall and will support multiple programs like botany, PBRC, biology and microbiology. As the first of a three-phase Mānoa Mini Master Plan, this project will also provide surge space to allow for the redevelopment of the Snyder Hall site and subsequent redevelopment of Kuykendall Hall. Cost increase and time extension due to environmental issues discovered in the soil below Henke Hall and the addition of a second elevator to the project.



Current Site Conditions



Soil testing to determine the extent of the hazardous conditions



Kennedy Theatre: General Repairs and Code Compliance – Mānoa

Contractor:	RSI Roofing and Building
Estimated Date of Project Completion:	June 2018*
Original Estimated Date of Project Completion:	July 2017
Completion Level:	97%
Original Construction Amount:	\$5,491,500
Change Orders & Percent Change to Date:	\$540,984 (9.9%)*
Current Phase:	Theater is operational. Completed installation of high bay lights in the Ernst Lab Theater, upper main stage, and scene shop; completed Ernst Lab Theater floor repairs.
Next Phase:	Final test of acoustic doors and frames, add acoustic gaskets, inspect rigging, install pit fall protection and ClearCom system, and replace the 2nd floor roof.

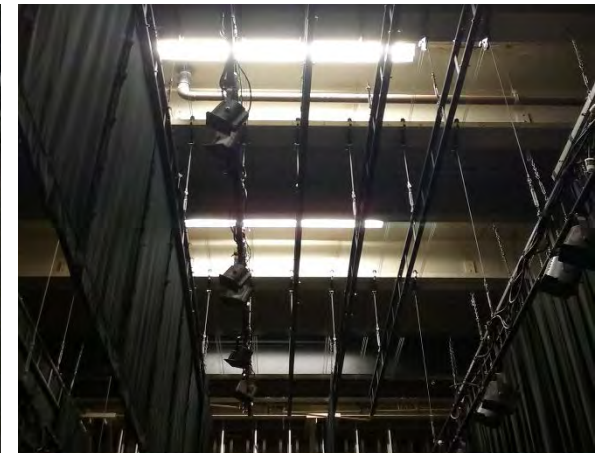
Project Scope: Kennedy Theatre is the flagship performing arts center on the UH Mānoa Campus. The need for repairs and maintenance is long overdue as the theater was built in 1963 and no interior work has been done in over 50 years. Parts of the facility are OSHA, building code and ADA non-compliant – including the catwalk system over the Ernst Lab Theater. This project involves replacing the existing sand bag rigging system at the Lab Theater with a new system, Main Theater theatrical dimming system and Main Stage curtains, catwalk system at the Lab Theater to meet OSHA requirements and finished floor at the Lab Theater and Main Stage with a floor suitable for dance performances; and installing a pre-manufactured dust collection booth at the Scene shop and a safety cage around the existing 80-foot high spiral staircase for fall protection. Cost increase and extension due to storage container for theater items during construction; additions to the original contract including mold and efflorescence abatement; light fixture, dimmer rack, and electrical power installation; door frame replacement; conduit and circuit replacement; dye vat work; providing user storage to move items from work area; and added changes for safety, reroof and mold remediation of costumes and storage area.



Completed installation of Upper Main Stage high bay light fixtures



Ernst Lab Theater Makai-side floor repairs painted black



Completed installation of Ernst Lab Theater high bay light fixtures

Saunders Hall Exterior Repairs and Reroof – Manoa

Design Consultant:	WTN Architecture
Estimated Date of Project Completion:	August 2018
Original Estimated Date of Project Completion:	August 2018
Completion Level:	39%
Original Design Amount:	\$5,227,618
Change Orders & Percent Change to Date:	\$149,240 (2.9%)*
Current Phase:	Demo in Atrium is complete; spall demo on South East side and spall patching started on North side; painting of elevator lobby walls and roofing is ongoing.
Next Phase:	Continue spall and crack repair on South East side of building, start exterior painting of ribbed walls and apply corrosion inhibitor on exposed aggregate surfaces.

Project Scope: Saunders Hall (formerly known as Porteus Hall) was designed in the early 1970's. Due to inadequate concrete coverage over the reinforcing bars during the original construction of the building, corrosion of the rebars is causing the exterior of the building to crack and spall. This project involves the repair of all concrete delaminations, spalls and cracks. In order to seal the entire building envelope watertight, the project also includes reroofing, new traffic coating, glazing, and interior renovation work. Cost increase due to the removal and disposal of an abandoned PV system and repair of additional unforeseen spalls and cracks on the North and East exteriors of the building.



Atrium spall demo



Spall demo on South East side of building



Spall patching on North side of building



Hamilton Library Addition, Phase III – Mechanical Repairs – Mānoa

Contractor:	Economy Plumbing & SheetMetal, Inc.
Estimated Date of Project Completion:	September 2018
Original Estimated Date of Project Completion:	September 2018
Completion Level:	11%
Original Construction Amount:	\$6,018,387
Change Orders & Percent Change to Date:	None
Current Phase:	Pre-tested existing air handling/fan coil units, exhaust/supply fans, fire smoke dampers; roof thermography study ongoing; installed motorized dampers, thermostats and static pressure sensors; roughed in conduits for power and controls; completed chiller plant outage and welded new supports for chilled waterline.
Next Phase:	Continue variable-frequency drive and controls and power rough in installation; install outside air manual and motorized dampers and test Loop D loads.

Project Scope: Hamilton Library is the main library on the UH Mānoa campus. This project involves the replacement of existing mechanical equipment, ductwork, plumbing and piping, and partial ceiling replacement to upgrade the central chiller plant, air distribution system, reheat system and direct digital control systems. The project also involves replacement of electrical work, chemical abatement, a roof thermography study, structural steel work for cooling tower support, and miscellaneous painting.



Install motorized dampers



Weld supports for chilled waterline



Replacement of Substation “M” – Mānoa

Contractor:	Nan, Inc.
Estimated Date of Project Completion:	February 2018*
Original Estimated Date of Project Completion:	December 2017
Completion Level:	98%
Original Construction Amount:	\$4,777,000
Change Orders & Percent Change to Date:	\$457,369 (9.6%) (No change from Quarter 1)
Current Phase:	HECO completing paving and fencing; plumber to install emergency eye wash and hose bibbs.
Next Phase:	Paint striping of parking stalls.

Project Scope: This project is to replace Substation M on the UH Mānoa Campus. The substation complex consists of the Hawaiian Electric Company's East-West Transformer Substation and UH Mānoa's Substation M. Substation M consists of 12.47 kV switchgear (circuit breakers and relays) and switchgear controls. Substation M is over 50 years old and needs to be replaced due to age and unavailability of switchgear spare parts. The existing switchgear is covered with a roof, but is not enclosed by a building and has experienced problems due to stray cats and rodents entering the premises. The new Substation M will consist of a 3,000 sf building which will have separate rooms for the new switchgear, switchgear controls and DC battery bank. Cost increase and time extension due to labor/equipment/material escalation due to delayed issuance of NTP to contractor pending formal submittal; changes related to and coordination with HECO; addition of UH remote monitoring of new switchgear; and additional electrical work.



Fine grading



Completed asphalt concrete pavement



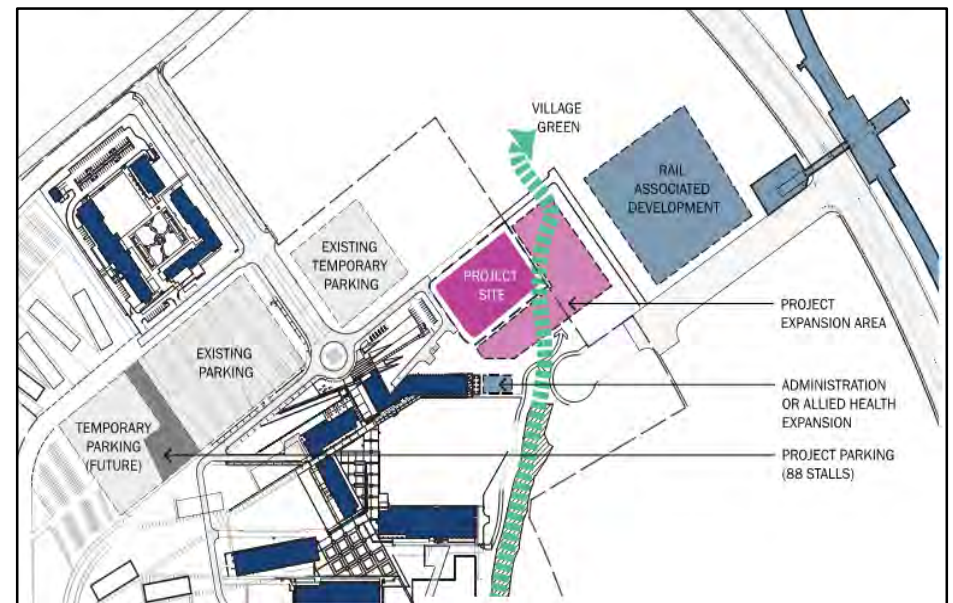
Creative Media – UH West O‘ahu

Contractor:	TBD
Estimated Date of Project Completion:	June 2020
Original Estimated Date of Project Completion:	June 2020
Completion Level:	0%
Original Construction Amount:	\$33,275,000*
Change Orders & Percent Change to Date:	None
Current Phase:	Determining final design-build team
Next Phase:	Notice of Award is planned for February 2018

Project Scope: This design-build project is for a new, 33,000 SF facility to house the existing Academy of Creative Media (ACM) program. The building will be constructed on undeveloped land next to the new Allied Health Building. The function of the building will combine teaching facilities, production facilities, faculty offices, creative workspaces, and an incubator for emerging companies. It will be a professional environment focused on learning and creating a showcase for UH West O‘ahu and the UH System, as well as our entire state. The building expands the current UH West O‘ahu ACM program from approximately 110 student majors to an anticipated 500 majors.



Site of future Creative Media facility



Site location of Creative Media Facility next to new Allied Health Building



Holmes Hall Renovation - Mānoa

Design Consultant:	John Hara Associates
Estimated Date of Project Completion:	March 2018*
Original Estimated Date of Project Completion:	February 2017
Completion Level:	75%
Original Design Amount:	\$1,514,992
Change Orders & Percent Change to Date:	\$301,445 (20%) (No change from Quarter 1)
Current Phase:	Finalizing pre-design programming documents
Next Phase:	Concept Design

Project Scope: The project involves the renovation of Holmes Hall (approximately 133,350 gross square feet) to transform it into an innovative, state-of-the-art facility to accommodate instructional, research, student and administrative workspaces for the College of Engineering and the related UHM engineering community. The project intended to add approximately 27,000 square feet of new research laboratories and supporting workspaces for graduate students and researchers. However, the estimated construction costs exceeded the justifiable benefit, and the proposed renovation would not meet academic facilities needs for growth. To address these issues, the scope of pre-design work was modified to analyze current and future academic program and facilities space needs, and develop a programming document for the renovation of Holmes Hall and the use of other existing facilities or new facilities. Extension due to deferred CIP budget request, allowing more time to fully develop the requirements analysis report, and infrastructure requirements for teaching and research laboratories.



Floor plan of level 3 showing current space utilization by function and department

CTAHR Due Diligence for Various Deferred Maintenance Improvements

Design Consultant: INK Architects
Estimated Date of Project Completion: December 2018
Original Estimated Date of Project Completion: September 2017
Completion Level: 48%
Original Design Amount: \$1,231,316
Change Orders & Percent Change to Date: None
Current Phase: Updating format of and restructuring Due Diligence Study Report
Next Phase: Continue toward completion of Due Diligence Reports for 8 sites and evaluate the merit of continuing with the remaining 19 sites.

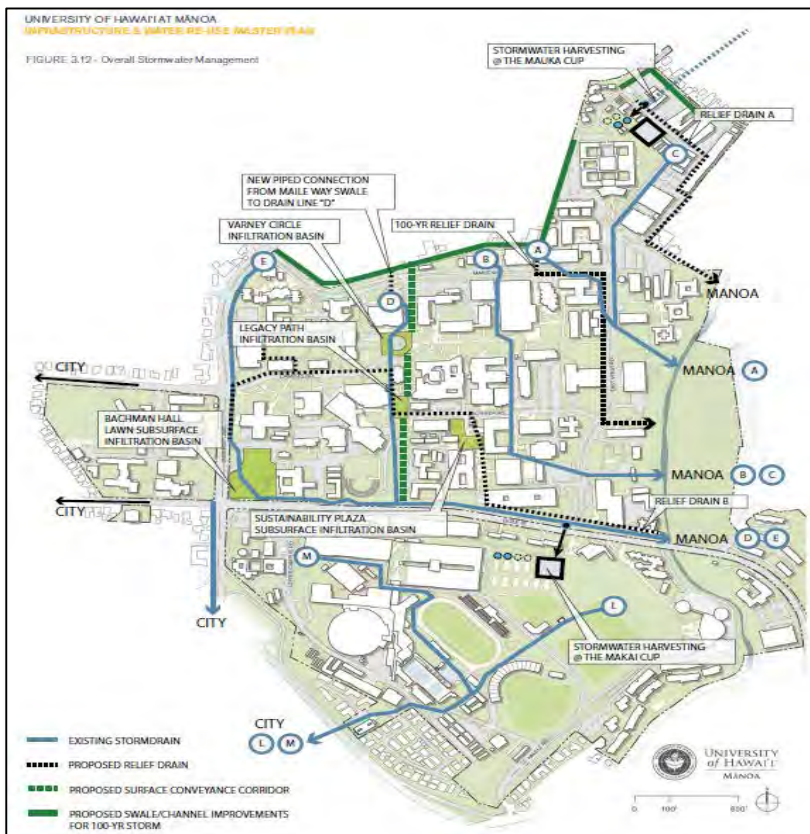
Project Scope: The UH Mānoa's College of Tropical Agriculture and Human Resources (CTAHR) has twenty-seven sites statewide as part of its outreach, research, and experimentation programs. All of these sites have facilities that are currently in use by its occupants and are in various states of disrepair or require upgrades for improved functionality and/or life safety and accessibility code compliance. The goals of the due diligence study are as follows: Document general property information and code requirements, and document the existing conditions exhibited at each facility on the property, and provide recommendations for demolition, repair, maintenance, accessibility, life safety, and hazardous materials condition. Time extension due to numerous revisions to the reports and delay in the initiation of field work on the remaining sites.



Waimanalo Research Center Due Diligence Study showing the areas and buildings. Each Due Diligence Study evaluates the condition of each of the buildings and provides detailed photos and a description.

Campus Infrastructure Trunklines, Easements, Water Catchment, Filtration and Reuse Plan, and LMP Phase I Infrastructure Design – Mānoa

Design Consultant:	WRNS Studio
Estimated Date of Project Completion:	March 2020
Original Estimated Date of Project Completion:	January 2018
Completion Level:	85%
Original Design Amount:	\$1,490,403
Change Orders & Percent Change to Date:	None
Current Phase:	Consultant directed to stop work; contract is in the process of being terminated.
Next Phase:	None.



Project Scope: This project involves the design of an infrastructure trunkline and a water catchment and reuse system. If constructed, this project would organize and update campus utilities into an interconnected network under major open space corridors for predictable and available access during future construction, maximize areas unrestricted by utility easements for future developments, and increase the capacity of our campus drainage system to convey 100 year storms. The water catchment and reuse system is anticipated to redirect 95% of rainfall toward rain gardens and recycled water cisterns which, when combined with 600,000 gallons of water scalded from sewer, could offset 73% of potable water and reduce the volume of storm drainage to be conveyed off site. Extension due to contract modification to support Long Range Development Planning/Plan Review Use permit update

Elevator Modernization, Various Buildings, Phase IV – Mānoa*

Design Consultant:	Design Partners, Inc.
Estimated Date of Project Completion:	December 2018
Original Estimated Date of Project Completion:	December 2018
Completion Level:	5%
Original Construction Amount:	\$1,077,157
Change Orders & Percent Change to Date:	None
Current Phase:	Final-Construction (Construction Documents)
Next Phase:	Construction to be awarded when construction funds are available.

Project Scope: This project consists of the modernization of the existing elevator systems, machine rooms, possible replacement of the elevator cabs (if technically feasible), and the installation of access card readers and CCTV cameras in all elevator cabs and lobbies. The modernization shall comply with all current codes and accessibility standards. The buildings that are included in this project are St. Johns (2 elevators), Hamilton Library, Phases I and III (3 elevators/phase), Music Complex (1 elevator), Bilger Addition (1 elevator), Law School (1 elevator), Shidler Business School, Towers A, C and E (1 elevator/tower), and Astronomy Building B and C (1 elevator/building).



Law School elevator cab interior



Shidler elevator pit



Shidler elevator machine room that will be modernized

New Classroom Building – Mānoa*

Design Consultant:	Ushijima Arch
Estimated Date of Project Completion:	June 2020
Original Estimated Date of Project Completion:	June 2020
Completion Level:	0%
Original Design Amount:	\$275,913
Change Orders & Percent Change to Date:	\$2,708,380 (982%)
Current Phase:	Update Plan Review Use (PRU), Long-Range Development Plan (LRDP) and Master Plan; perform the Environmental Assessment (EA) for the PRU/LRDP as required for future classroom building construction permits.
Next Phase:	Complete design of the new classroom building

Project Scope: The new classroom building will provide swing space for classrooms and offices as part of the 6-year mini capital improvement program/master plan and eventually permanent space for bringing off campus colleges onto the Mānoa Campus in the effort to reduce square footage and modernize classrooms to meet current needs for academic programs. After the new Life Sciences Building is complete in 2019, Snyder Hall occupants will be relocated to the Life Sciences Building and Snyder Hall will be demolished. This new classroom building will replace Snyder Hall. The original scope of the classroom building includes updating the PRU and LRDP and conducting an EA. The EA for the PRU/LRDP is required for future classroom building construction permits as the current PRU/LRDP is already considered outdated and set to expire in 2020. The PRU/LRDP will also address the demolition of buildings/portables and future energy, traffic and other requirements on the Mānoa campus. The funds for this project were appropriated in Act 213, Session Laws of Hawai'i 2007, as amended and renumbered by Act 158, Session Laws of Hawaii 2008, Item G-117.05 and are still available for this effort with enough funds to deliver an updated PRU/LRDP/Master Plan and EA and also provide a full design for this classroom building. The Board of Regents previously approved this project in 2008.



Upcoming CIP: North Hawai‘i Education and Research Center Renovation (Phase III) – Hawai‘i CC

Estimated Construction Amount:

\$5m – \$10m

Current Phase:

Design; out to bid early 2018

Project Scope: The North Hawai‘i Education and Research Center (NHERC) is located 40 miles north of Hilo in Honoka‘a and is designed to serve the approximately 19,000 residents in North Hawai‘i currently underserved by higher education. This project includes the complete interior renovation of the existing unused wing at NHERC. The project will include a commercial kitchen, nursing and STEM lab, classroom and storage space. The wing will be reroofed and all walls repaired and refinished. Parking and site improvements will be included as required.



Existing unused wing at NHERC which will be renovated

Upcoming CIP: Renovate Kitchen & Accessory Spaces in Pilina Building – Maui College

Estimated Construction Amount:

\$5m – \$10m

Current Phase:

Design; out to bid early 2018

Project Scope: This project includes the renovation of an existing kitchen space on the second floor and loading dock on the first floor of the Pilina building. The space will include food innovation spaces that include kitchens, packaging, as well as research and development.



Existing kitchen space that will be renovated

Projects Pending Close-Out

<i>Campus/Project</i>	<i>Original/ Revised Completion Date</i>	<i>Original Construction Amount</i>	<i>Change Orders & Percent Change</i>	<i>Reason for Extension/Increase</i>
Mānoa – Agricultural Science Facility Chill Water Plant, Reheating Water System, and HVAC Upgrade	Aug '15 / Jan. '18*	\$5,270,742	\$169,847 (3.2%)	New roof cover design required for cooling tower room; scheduling changes to minimize impact on occupants; and enhancements added during construction to improve system performance and energy efficiency
Mānoa – Clarence T.C. Ching Complex, Construction of New Athletics Complex	July '13 / Jan. '18*	\$12,393,000	\$2,294,625 (18.5%)	Unforeseen conditions; C&C comments and owner changes; and the design, redesign, negotiation and execution of change orders
Mānoa – Biomedical Sciences Building, R/R HVAC Equipment, Reheat Water System, Building Air Balance & Controls	Aug. '13 / Jan. '18*	\$5,324,800	\$358,364 (6.7%)*	Scheduling conflicts with other projects affecting Biomed; revision of type of air valves used in the air handler systems; and unforeseen conditions including deteriorating reheat hot water piping insulation
Hawai'i CC – Hale Aloha Renovation	Oct. '16 / Oct. '16	\$7,629,500	\$282,390 (3.7%)	In litigation
Honolulu CC – Building 8807, Upgrade Infrastructure	May '14 / Dec. '17	\$8,609,000	\$2,227,220 (25.9%)	Unforeseen site and interior conditions; additional abatement work; extended campus relocation; and ongoing testing of the power generation and programming capabilities of the elevator cabs to not exceed the generator's capabilities
Hilo – Campus Security & Emergency Operations Center	Oct. '15 / Sept. '17	\$4,589,000	\$494,762 (10.8%)	Correction to the specifications for wind speed resistance of the roof system; and the University driven schedule and sequencing for the construction and migration of the new Structured Cabling across 28 campus structures
Kapi'olani CC – Culinary Institute of the Pacific at Diamond Head (Phase I)	Oct. '16 / June '17	\$25,058,110	\$2,273,619 (9.1%)*	Archaeological monitoring, scheduling and requirements; unforeseen conditions in Diamond Head Road; and conflict with underground utilities and building foundations
Hawai'i CC – Culinary Arts Building Phase 1A & Health Science and Student Services Building Phase 1B (Pāalamanui)	Mar. '16 / Aug. '17	\$22,670,172	\$5,920,286 (26.1%)	Delay in permit approvals; archaeological monitoring; inclusion of PV system, food service equipment and landscaping at UH's request; delay in waste water treatment system testing
Mānoa – Bilger Complex Air Conditioning System Upgrade	Nov. '13 / Jan. '18*	\$5,737,790	\$789,513 (13.8%)	Schedule conflicts with other projects affecting Bilger; schedule changes to minimize impact on occupants; non-conforming construction required reinstallation; unforeseen conditions; change orders to address vibration issues; and commissioning delays.
Mānoa – Elevator Modernization (Phase 3) – Various Buildings	Dec. '17 / Feb. '18*	\$9,162,000	\$1,087,128 (11.9%)*	Extension and increase due to scheduling conflicts to minimize impact on occupants; unforeseen POST freight elevator shaft issue; modifications due to the adoption of the 2010 American Society of Mechanical Engineers code; and separate modernization of POST elevators.



Closed Projects

Campus/Project	Original/ Revised Completion Date	Original Construction Amount	Change Order(s) & Percent Change	Reason for Extension/Increase
Mānoa – Various Buildings, Elevator Modernization, Phase II*	Feb. '16 / Sept. '17	\$10,321,500	\$1,120,296 (10.9%)	Decision to modernize Biomedical Science’s elevator’s separately; restricted access to freight elevator; scheduling conflicts to minimize impacts on occupants; modifications due to the adoption of the 2010 American Society of Mechanical Engineers code; and elevator deficiency report required updating the existing elevator recall function

