HIGHER EDUCATION COORDINATING COMMISSION
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Docket Item:

University Capital Policy Concepts

Summary:

This docket item revisits the Strategic Capital Development Plan (SCDP) by updating information supporting the key findings and reviewing the central recommendations. Further, certain remaining questions left unanswered by the plan are identified in an effort to discuss potential policy issues.

Docket Material:

The last two years have been a whirlwind of activity regarding state capital for public universities. The HECC completed its ten-year strategic capital development plan (SCDP) in October 2019. In December, 2019 the Commission updated the rubric by which it ranks proposed university capital projects, according to criteria drawn from the SCDP. The HECC submitted and the Legislature considered an updated and re-scored project list during the regular (short) 2020 session, and approved funding for several of these projects during its second special session. The HECC again used the revised rubric to prioritize projects for its 2021-23 biennial request. The Legislature followed the HECC's prioritized list to fund projects consistent with the plan, focusing on improving the quality and suitability of existing facilities while also providing new student support space as needed.

Because the HECC needed to turn its attention so quickly from the SCDP to a revised rubric for scoring projects, Commissioners had little time to fully digest the SCDP report, consider its recommendations, and discuss any remaining policy issues. Now might be a good time to revisit the plan, both to update information supporting the key findings in the report and to consider any remaining policy questions left unanswered. A summary of the report can be found separately posted with the commission materials.

Revisiting the Strategic Capital Development Plan

The plan report included four recommendations and seven key findings. Each recommendation is outlined below with an update on staff actions that have been taken since the report was published. Any updates to the data supporting the key findings are also included.

Invest in capital improvement and renewal. The report found that the achievement of Oregon's 40-40-20 higher education goal is not dependent on significant investments in new capital facilities. This is due to future demographics that do not forecast statewide capacity issues, and analysis that indicates room for growth with existing facilities. Additional analysis showed existing facilities have serious age, quality and suitability issues. Therefore, the report concluded that the priority of continued state investment should be on the improvement and renewal of existing capital assets.

This assertion is based on projected, on-campus enrollments and the resulting space needs for instruction and student support. The analysis found that sustained resident enrollment growth is not likely due to statewide demographic projections with total enrollment expected to increase somewhere in the range of 0 to 2% through 2029.

This analysis was conducted before the pandemic. The number of high school graduates in Oregon was 38,738 in 2019. Long-term projections calculated by the Western Interstate Commission for Higher Education (WICHE) show an increase of 8.7% to 42,120 by 2026 (compared to 2019) with a decline of 4.4% to 37,033 by 2037 (compared to 2019).

Enrollment has fallen as a result of the pandemic. Updated WICHE projections from July 2021 suggest that after 2027, there could be a greater decline in public high school graduates nationally and that projected declines past 2033 are likely to be amplified from pandemic induced birth declines. It is difficult to know exactly how this will affect Oregon. However, this updated information makes it easy to suggest that public university enrollments will likely continue to be constrained.

As for instructional and support space needs, the report shows the universities collectively have a surplus of an estimated nine percent more space than needed to support projected enrollments through 2029, although the report shows a deficit for both the OSU-Cascades campus and PSU. Both received funding for capital projects in the 2021-23 biennium, including a new student success center at OSU-Cascades, partly to help address these deficits. With enrollment projections largely consistent based on updated information, the space needs analysis will likely remain the same.

Due to this analysis, staff recommended that for 2021-23 the highest capital priority be an increase to the Capital Repair and Renewal (CIR) funding. In 2021, the Legislature appropriated an additional $15M for a total of $80M for this purpose, bringing the total authorized since 2009 for CIR to $385M. The capital improvement and renewal workgroup, a collaborative of institutional representatives, HECC staff, and DAS staff, reviews the distribution methodology and calculations for CIR funding.

Incentivize collaboration and shared or online programming in order to reduce the demand for new space. Analysis showed statewide occupational needs exist in health and STEM-related fields but that any identified program gap should not necessarily result in new program development given the potential for alternative or collaborative program delivery. Also, it was found that classrooms are scheduled for an average of 24 hours per week compared to a recommended 30-36 hours per week depending on utilization rates.

The gap analysis performed as a part of the plan took in to account the number of graduates produced annually matched with the number of skilled employees demanded by Oregon employers. This analysis is complicated, time consuming, and expensive to produce. Internal resources do not exist to update the analysis. However, it is reasonable to believe the fundamental assertion remains true as the analysis is only two years old and the underlying structure of the state's economy remains the same.

Staff recommended, and HECC adopted, a change to the capital rubric that incentivizes collaboration among higher education partners. Also, the university funding formula includes an area of study bonus to incentivize the production of health and STEM graduates. HECC will explore with the capital improvement and renewal workgroup how to effectively measure utilization rates.

Define institutional role and mission with more clarity. A key finding in the report was that institutional missions are not well defined. This lack of clarity around the audiences to be served, the array of programs to be offered, and the unique roles they perform could make the determination of needed space more difficult. The mix between teaching and research depending on mission informs the need for related space.

The passage of SB 230 (2021 session) allows for the approval of applied doctoral degree programs at EOU, SOU and WOU which could result in the need for additional, or different, space. It is unclear what those needs might be and how much the institutions will seek in state support for them should programs be approved.

Improve and enhance statewide and institutional planning practices. There were five specific recommendations related to this topic in the report including embracing a broader definition of capital investment, adding professional facilities staff at the HECC, requiring facility space inventories, develop utilization standards, and develop and maintain facility condition assessments.

A broader definition of capital investment suggests there be consideration of the entire life cycle of a facility. This includes the disposition of the facility when its useful life has ended, assuming it is no longer needed to support the institution's mission. HECC staff has asked for related information. One facility meets that definition which is Cascades Hall at SOU. HECC included the demolition of Cascades Hall in its 2021-23 request. The Legislature funded the request. It was not eligible for bond financing.

HECC staff continues to have conversations with the capital improvement and renewal workgroup about space inventories, utilization, and facility condition assessments. The universities submit a building-level inventory each year for CIR funding allocation purposes. A room-by-room inventory with related scheduling information will be needed to calculate utilization. That will require more information and coordination with the universities over time.

The facility condition assessments require additional consideration. Some of the institutions already have assessments conducted routinely while others do not. Using a third-party contractor to ensure consistency is reasonable and preferred. The state architect coordinates that activity for all state agencies and spends roughly $1 million per biennium on the effort. The HECC lacks the funding to do the same. The potential exists for a hybrid approach in which the institutions perform their own assessments using standard guidelines to ensure consistency. HECC staff continues to work on this issue.

Remaining Issues

The SCDP includes high quality data and plenty of insight but there are remaining policy questions left unanswered by the report. One in particular is the relationship between the state and the institutions regarding ownership and maintenance/improvement responsibilities. If a shared responsibility model is assumed, then the central policy issue more specifically is how much of the maintenance and renewal should be paid for by the state versus the institutions? This includes a number of related questions but begins with certain operating assumptions.

Assumptions

Focus on education and general space. A key operating assumption is that auxiliary enterprises should be self-funded with all capital space needs paid for by the enterprise. Therefore, the state's capital funding should be focused on educational and general space used for instruction, research, and student support activities.

This means the institutions should ensure that revenue generated by the enterprise is sufficient to maintain and replace auxiliary capital assets as needed. For example, dormitory fees should be sufficient to pay for all routine maintenance needs, improvement needs and replacement needs. Article XI-F (1) bonds can be issued by the state for auxiliary facilities thereby allowing the institution to benefit from the state's credit rating, but the institution pays all debt service. It should be noted many of the institutions have a building fee whose purpose is to collect revenue to service existing debt and future debt related to auxiliary projects.

Maintenance funding is partially provided through the funding formula. The university funding formula includes the use of cost weights that are intended to recognize the cost of providing instruction in different academic disciplines. The cost weights are used in both the activities and outcomes components of the model. The current cost weights are based on cost data from other states. When created, the cost weights include a component for the operations and maintenance (O&M) of physical plant assets, specifically utilities and routine

maintenance. Granted, the state's share of the total E&G expense is about 25% in the aggregate. As a result, it is unclear if formula funding received by an institution pays for a similar proportion of an institution's O&M cost. However, assuming the cost weights are defined correctly, they should include a component for O&M cost.

A shared financial responsibility. The state's ownership of higher education facilities is clearly defined in statute as is the responsibility of the governing boards to maintain them. However, there is recognition that the funding of deferred maintenance and renewal was inconsistent and often limited under the Oregon University System (OUS). Also, as part of a stewardship model of managing assets, the state and institutions should collaborate on the capital renewal of existing facilities to enhance the effectiveness of program delivery and provide greater efficiency in operating costs.

Remaining Policy Issues

Related to the central issue of using a shared responsibility model, there are several outstanding policy questions to consider as outlined below. Additional context is provided including what statute mandates, the existing approach for state agencies, the historical approach for the universities, and measuring need.

- Does state ownership imply financial responsibility? If so, to what extent?
- What should the state pay for? Does the distinction between the different type of costs, make a difference? What about infrastructure such as roads, utility tunnels, etc.?
- Does the lifecycle of the facility play a role? Specifically, in terms of the universities paying for maintenance and renewal with the state paying for modernization and/or demolition at the end of the lifecycle of the facility?
- What's the appropriate measure of preservation or effective management of facilities? Should it be stipulated that the universities manage to a specific metric or facility condition?

What does statute say?

Oregon Revised Statutes (ORS) 352.113 states the legal title to all real property acquired by a public university must be taken and held in the name of the State of Oregon acting by and through the governing board of the public university. Further, it stipulates the governing board has custody and control of, and shall care for, all real property used for university purposes. Management, maintenance, encumbrance, disposal and preservation of all real property used for university purposes, whether the real property is acquired before or after the establishment of a governing board, is the responsibility of the governing board.

This clearly defines state ownership of university facilities. It also clearly establishes the responsibility of the governing boards to maintain and preserve them. Therefore, it can be concluded that state ownership does not imply a one-way responsibility for capital maintenance and renewal by the state. Nor should it imply a one-way responsibility in the other direction either.

What approach is used for state agencies?

The State Architect uses a professional engineering contractor to produce facilities condition assessments (FCA). The FCA aids in establishing the current replacement value of each facility. This is necessary because each state agency is required to include in their agency request budget 2% of the calculated current replacement value for

their facilities. This then gets included in the Governor's recommended budget as the amount needed for deferred maintenance and capital improvements on existing state-owned buildings and infrastructure.

The State Architect uses an open contract, meaning any state agency, local school district, community college or public university could engage with the contractor using that existing contract to perform an assessment of their facilities. They would have to pay for it.

SB 55, considered during the 2021 legislative session, proposed directing the Oregon Department of Education (ODE) Office of School Facilities to administer a statewide facilities assessment program on local school district facilities. This bill did not pass, but would have allowed ODE to assess the condition of all local district facilities on a rotating basis and would have used existing state funding for the purpose.

This legislation was a response to the pandemic and the need to better understand the condition of local facilities should the need arise for social distancing or other accommodations. HECC staff explored the potential of adding higher education facilities to the scope of the bill.

What approach has been used in the past for the public universities?

The Oregon University System (OUS) frequently tracked current replacement values and deferred maintenance (DM) needs. Targets were also established for capital renewal requirements.

Reporting from 2002, displayed in the table below, shows a CRV for all university E&G facilities to be $2.97 billion with a deferred maintenance backlog totaling $592 million. The facility condition index (FCI), or the amount of DM as a percentage of the CRV, is 20%. The average renewal requirement, the amount of investment needed to avoid additional backlog, was estimated to be $50 million or 1.7% of CRV.

	Current Replacement Value (CRV in $ millions)	Deferred Maintenance Backlog (DM in $ millions)	Facility Condition Index (FCI: DM/CRV)	Annual Renewal Requirement (1.7% of CRV)
2002	$2,971	$592	19.9%	$50
2012	$4,230	$528	12.5%	$72
2019	$10,158	$966	9.5%	$173

By 2012, the CRV was $4.23 billion with a DM backlog of $528 million. It is important to note the DM backlog for 2012 does not include an estimated $352 million in seismic needs nor does it include ADA improvements or infrastructure upgrades. Nonetheless, this implies an FCI of 12.5%. By 2019, the FCI has declined to 9.5%. Using the benchmark of 1.7% of CRV, the annual renewal requirement would be $173 million.

The state has contributed $1.86 billion in state-backed bonds for university facilities since 2007 including the newly approved projects for the 2021-23 biennium. That works out to an average of $116 million per year since 2007. This figure does not include the $1 billion in state-backed, but institution paid, bonds that have been approved during the same time period which are mostly dedicated to auxiliary projects.

Nonetheless, this data shows a marked improvement in the FCI, assuming that is the preferred measure of progress. Granted, the measure of DM might be inconsistent over time and the measure of CRV might be over (or under) inflated depending on the methodology used.

With ever increasing replacement values, largely driven by inflationary pressure for the cost of materials and labor, the annual renewal requirement will only continue to increase.

Is there a best practice of how much should be spent on facilities maintenance and renewal?

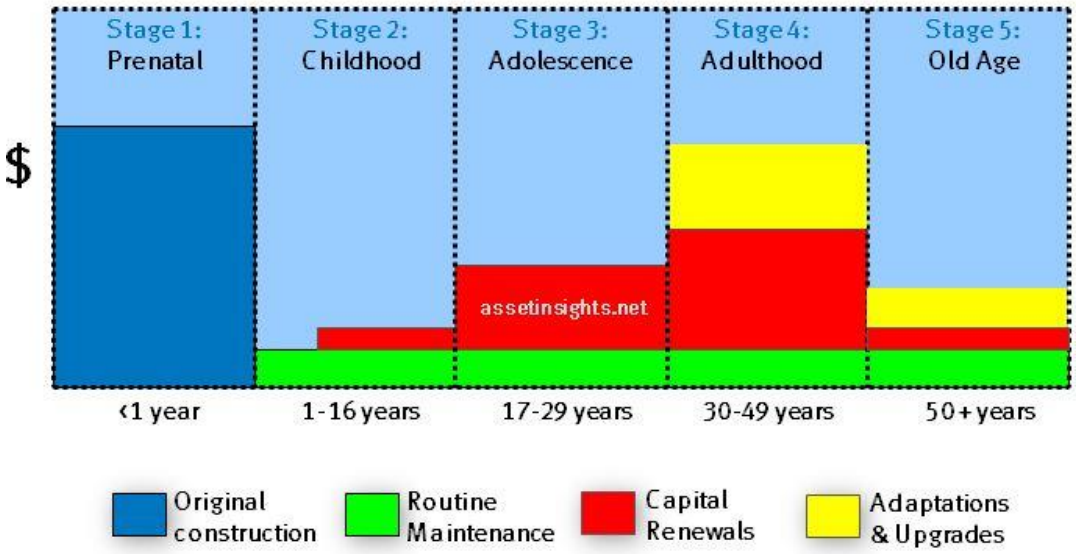
The SCDP does not make a recommendation on this issue but does point out a practice proposed by APPA, formerly known as the Association of Physical Plant Administrators, the national association of those entrusted with overseeing education facilities. APPA suggests a budget model for operating maintenance and capital renewal as follows:

Operations and maintenance (0.5% to 1.5% of CRV) + Life cycle renewal (1.5% to 2.5% of CRV)

= Recurring annual budget guideline of 2.0% to 4.0% of CRV

If the assumption is that the universities themselves will pay for ongoing operations and maintenance, then the focus should be on capital renewal.

The different costs associated with a facility during its lifecycle.



Staff Recommendation:

Discussion only.

An Overview of the Strategic Capital Development Plan Report

What were the Consultants asked for?

Contractor shall develop a strategic capital development plan by leveraging proven comprehensive capital needs analysis and demographic trends. The plan shall consist of a collaborative process to contemplate the holistic capital needs of the State and the best approach to achieve state goals. The plan shall provide the HECC with both a forward-looking basis for prioritization and an opportunity to take the broad view of higher education investments.

This work was not intended to supersede institutional planning efforts nor was it a strategic effort to evaluate the relative strength of an institution and their specific project-based solutions for addressing statewide needs. The assessment of additional space needs was related to the alignment of potential new programs with issues of institutional role and mission and their relationship to state priorities.

What's in the Report?

Roughly 280 pages across four sections.

A – Executive summary – 22 pages outlining seven key findings and four specific recommendations. These are listed separately in the appendix.

B – Process overview and statewide summary of data – 51 pages. It includes information on:

- Population trends and characteristics
- Enrollment projections (using the student flow model – see the appendix for more information)
- The connection between educational supply and employment demand
- Facilities information (buildings, space, age of facilities, etc.)
- Facilities utilization and space analysis
- Space needs, a reconciliation between institutional estimates and consultants' estimates
- Research expenditures

C – Institutional Data – 197 pages. Includes many of the data elements presented in the statewide summary but for each institution.

D – Survey of national best practices – 14 pages. Includes information on surveys completed by twenty states on best practices related to statewide and institutional planning practices.

A review of each of the four recommendations follows.

1) Invest in capital improvement and replacement.

Key findings include that the achievement of 40-40-20 is not dependent on significant investments in *new* capital facilities. The first priority of Oregon's statewide capital plan should be to focus on the improvement and renewal of existing capital assets.

Data analysis and student flow models show that sustained resident enrollment growth is not likely due to statewide demographic projections over the next ten years. Oregon is unlikely to see long-term substantial growth in demand for postsecondary enrollment that by itself will justify new capital investments to serve more students. Regional variation is likely, especially in central Oregon which has been the fastest growing region of the state. The enrollment demand will likely reflect a reshuffling of students among institutions rather than substantial growth in total enrollments.

Regarding on-campus enrollment projections, there is a broad disconnect between institutional optimism and demographic realities. The collection of institutional projections do not sum to a realistic statewide total, and there is no consistency in the way in which projections are developed.

The comparison of institutional estimates and those informed by the student flow model are included in figure 1 using fall, full-time equivalent enrollment. This includes on-campus students only. Online students and the projected enrollments of them is excluded. Institutions are projecting enrollment growth of 19% through 2029 while the student flow model is predicting 2% growth.

Figure 1: On-Campus Enrollment Projections through 2029*

	Current	Institution	Variance	Model	Variance
EOU	1,086	2,541	134%	1,131	4%
OIT	1,840	2,940	60%	1,954	6%
OSU - Bend	789	1,951	147%	811	3%
OSU - Main	23,267	28,414	22%	23,943	3%
PSU	17,599	19,173	9%	18,013	2%
SOU	3,180	3,520	11%	3,167	0%
UO	22,143	24,216	9%	22,359	1%
WOU	4,368	5,828	33%	4,571	5%
TOTAL	**74,272**	**88,583**	**19%**	**75,949**	**2%**

* As measured by full-time student equivalents in the fall term. The Institution column is the institution's projection of its projected on-campus enrollment through 2029. The Model column is the projection of on-campus enrollment through 2029 as calculated by the Student Flow Model.

Modeling of student flows for improved college-going and retention rates does not significantly change the projection of space needs. No estimates currently exist for the impact the Student Success Act might have on these rates. Modeling that includes a 5% increase in college-going and retention rates is included in the report for both the statewide and institutional perspectives. That modeling shows a much greater stability in year to year increases in enrollment for most institutions.

Analysis shows that although localized needs do exist, significant capacity issues do not. Figure 2 looks at a comparison of projected space needs for instruction based on institutional enrollment projections and those based on the student flow model. Overall, a space surplus of 8% is projected under the student flow model analysis although deficits are projected for OSU Cascades and PSU.

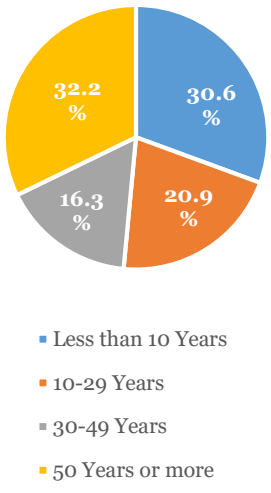
Figure 2: Space Projections through 2029 (Instructional Space)*

	Current	Institution	Variance	Model	Variance
EOU	197,710	264,802	-34%	169,791	14%
OIT	330,662	314,503	5%	223,145	33%
OSU - Bend	57,555	149,762	-160%	83,870	-46%
OSU - Main	3,281,064	3,058,321	7%	2,676,156	18%
PSU	1,494,414	1,877,527	-26%	1,798,097	-20%
SOU	416,751	365,525	12%	345,213	17%
UO	2,402,981	2,424,141	-1%	2,207,377	8%
WOU	431,490	518,965	-20%	422,816	2%
TOTAL	**8,612,627**	**8,973,546**	**-4%**	**7,926,465**	**8%**

* The instructional space needed at each institution based on the enrollment projections included in Figure 1. The Institution column is the calculation made by the consultants of space needed to support the enrollment defined by the institution's projections. The Model column is the calculation of space needed to support the enrollment defined by the model's projections.

Another key finding is that existing facilities have serious age, quality and suitability issues that compromise efficiency and effectiveness. Space assets at the universities are valued at roughly $10.1 billion as defined by the current replacement value. Of the 861 university buildings, the age of about a quarter of them is unknown. For those that the age is known, as noted in figure 3, about 32% are older than 50 years with almost half over 30 years old. Most major building systems are designed for the 30-40 year range. About 30% of the buildings have been renovated.

Figure 3: Age of Buildings



While significant investments have been made by the state, there is a backlog of deferred maintenance estimated at $480M. Given the age and number of renovated buildings in the portfolio, there is a clear need for renewal and replacement as reinforced by on-site observations during campus visits.

Space analysis supports the conclusion that the majority of classrooms are not well suited to accommodate new instructional modalities. Active learning classrooms require 25-35 assignable square feet per student while the existing statewide average is 19. The capital renewal of existing buildings offer not only enhanced effectiveness in program delivery but also greater efficiency in operational costs.

Overall, the recommendation is to focus on investments related to improving the quality and suitability of existing facilities. Qualitative issues exist for a variety of reasons, which include building and repair backlog, building code changes, accessibility issues, changing pedagogy and evolving program needs. As part of a stewardship model of managing assets, renewal can also improve student services and learning effectiveness.

2) Incentivize collaboration and shared or online programming in order to reduce the demand for new space.

A key finding is that there are statewide occupational needs in health and STEM-related fields. A common problem in linking employment demand with postsecondary credentials is that programmatic areas can be loosely coupled. For example, many liberal arts majors often settle in to careers outside their academic area. Therefore, it is most useful to look for broad patterns that do not promise false precision.

Given the analysis conducted, there appear to be broad demands for graduates in fields like computer and information technology, health care and education. Data also suggests the largest demand is in business fields although these jobs often wind up filled by graduates from other programs (like liberal arts). More specific detail by institution can be found in the institutional data section of the report.

Another key finding is that it is unclear the presence of any program gap identified should result in the development of new programs given the potential for alternative or collaborative program delivery. Furthermore, utilization analysis shows some room for growth though specific program areas may need localized attention.

Overall, the campuses had a collective surplus of 9% in academic and academic support space. It may need to be repurposed or reconfigured to more effectively achieve student success. Statewide, classrooms are scheduled for an average of 24 hours per week compared to a recommended 36 hours per week for research universities and 30 hours per week for regional universities.

3) Define institutional role and mission with more clarity.

A key finding is that the institutional roles and missions are not well defined. They lack clarity; and for some institutions, additional space needs depend on this. This is particularly true for OSU – Cascades where the ambiguity about mission makes the determination of space needs particularly difficult. As a regional teaching institution, it lacks instructional capacity at the baccalaureate level. But attendant needs for research space are dependent on mission.

The same questions might be raised about the extent to which PSU should be focused on research or whether WOU should have a health care focus. Therefore, an effort should be undertaken to more rigorously define missions of the institutions including the assignment of:

- Audiences to be served – geographic, selectivity, etc.
- Arrays of programs to be offered – levels and academic fields, particularly professional fields
- Unique roles – land grant, health sciences, minority serving, etc.

4) Improve and enhance statewide and institutional capital planning practices.

A key finding is that existing statewide and institutional capital planning practices are not aligned with best practices. An overwhelming majority of the 20 states surveyed responded that a facilities inventory was required followed by a facilities condition assessment and a classroom utilization study.

Other recommendations related to planning practices include:

- **Embrace a broader definition of capital investment.** A narrow focus on the creation of physical assets can overlook the need to demolish obsolete facilities. Demolition options should be considered.
- **Add professional facilities staff at the HECC.** Given the magnitude of state investment, this will enable the HECC to better support the mission and engage with professionally staffed research institutions.
- **Require facility space inventories and develop utilization standards.** The development and maintenance of a room-level inventory is a clear best practice and should be a prerequisite for capital funding.
- **Develop and maintain facility conditions assessments.** This is a clear best practice and should include an assessment of the suitability of the facility for academic program delivery.

Appendix –Findings, Recommendations and Analysis

Key Findings

- Achieving 40-40-20 is not dependent on significant capital investments (*in new facilities*).
- Enrollment history and future demographics do not forecast statewide capacity issues.
- There are statewide occupational needs in health and STEM-related fields.
- Analysis indicates room for growth with existing facilities although specific program areas may need localized attention.
- Existing facilities have serious age, quality and suitability issues that compromise efficiency and effectiveness.
- Institutional role and mission are not well defined. They lack clarity; and for some institutions, additional space needs depend on this.
- Statewide and institutional capital planning practices are not aligned with best practices.

Recommendations

- Invest in capital improvement and replacement.
- Incentivize collaboration and shared or online programming in order to reduce the demand for new space.
- Define institutional role and mission with more clarity.
- Improve and enhance statewide and institutional planning practices:
    1. Embrace a broader definition of capital investment.
    2. Add professional facilities staff at the HECC.
    3. Require facility space inventories and develop utilization standards.
    4. Develop and maintain facility conditions assessments.

Explanation of Analysis and the Student Flow Model

This plan uses the state's workforce investment areas to draw regions that define each institution's primary service area, and then uses those regions to assess the extent to which demand for enrollment will come from students in those areas as well as to assess the extent to which employment demand can be best met with what array of academic programs.

The project team analyzed a wide array of data addressing population trends and projections, expected enrollments from traditional student enrollment pipelines (including out-of-state and adult enrollments), and potential improvement in retention rates.

The project team modeled enrollment impacts of potential changes at the state level and for each campus using a heuristic tool called the NCHEMS Student Flow Model. The data for the model relied on each institution's enrollments traced to students' county of origin. Scenarios of likely future enrollment took three forms for each institution (including OSU – Cascades), all of which were based on projected population change by age for the primary service area defined for each institution.

The three forms of projections included models that:

- Assumed all most recently measured rates of recruitment and retention would remain constant.
- Assumed an across-the-board five percent increase in the most recently measured rates of recruitment and retention.

- Estimated the across-the-board percentage increase in recruitment and retention rates that would be needed for each institution to reach its own enrollment projection for 2030.

Space models were also created for each institution using room level facility data, linked to enrollment, staffing and course data. The models were constructed using nationally recognized space planning guidelines and informed by the consultants' extensive experience and benchmarking data.

Linking these datasets allowed for the creation of utilization statistics for classrooms and teaching laboratories.