

Ten-Year Business Forecast for Oregon State University

BACKGROUND

In spring 2015, the Board of Trustees directed university leadership to work with the university community to develop a ten-year business forecast in support of OSU's strategic plan. The principal goal of having a ten-year business forecast is to have a framework for long-term planning. The university will use the forecast to identify areas of opportunity and concern and will adjust annual operating decisions to address those issues.

University leadership proposes that the forecast be updated and reviewed with the Board in January of even-numbered years. Full legislative sessions typically conclude in June of odd-numbered years, so this would provide enough time for staff, leadership and the Board to assess the funding decisions of the state and adjust the forecast to the next ten-year window. By this schedule, the next update would be in January 2018 and then every two years after that.

NEXT STEPS

The ten-year forecast is intended to be continually reviewed, revised and updated. The next major steps in this process are:

- Receiving approval of the ten-year forecast from the Board of Trustees.
- Advocating in the legislative session beginning in February 2017 for increased funding to the university, including OSU-Cascades and the Statewide Public Services, and funding of the next phase of building out the OSU-Cascades campus.
- Funding and implementing the next phase of the student success initiatives and evaluating the projected impact of that work on enrollment and revenues.
- Assessing models for managing depreciation and understanding the dynamics of depreciation costs in projecting the financial position of the university.
- Updating the enrollment management plan (work groups are being formed now) for the university.
- Updating the ten-year forecast after the legislative session is complete at the January 2018 Board of Trustees meeting.

RECOMMENDATION

Staff recommends that the Finance & Administration Committee recommend the ten-year business forecast to the Board for approval, with the understanding that the forecast will be updated and presented at the January 2018 Board meeting and at two-year intervals thereafter.



Ten-Year Business Forecast for Oregon State University

2017-2027

Our Vision:

“To best serve the people of Oregon, Oregon State University will be among the Top 10 land grant institutions in America.”

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EXECUTIVE SUMMARY

In spring 2015, the Board of Trustees directed university leadership to work with the university community to develop a ten-year business forecast in support of OSU's strategic plan. This ten-year forecast considers the financial strategies needed to be implemented that will:

- Support and maintain OSU's current staff and facilities, taking into account salary and benefit costs, inflation, and operating costs of new and existing facilities and services;
- Address trends in enrollment, taking into consideration changing student demographics, the needs of communities hosting our students, and changing modes for delivery of higher education programs;
- Address current challenges in facilities maintenance and repair and define what will be needed in the next ten years to keep the university competitive;
- Support initiatives central to advancing the goals of the strategic plan around providing a transformative education to all students (with particular emphasis on improving graduate rates and eliminating achievement gaps between student groups), building leadership in research and scholarship, and increasing the university's impact in Oregon and around the world; and
- Build and maintain a strong financial position for the university as indicated by standard financial metrics and annual operating balances.

The principal goal of having a ten-year business forecast is to have a framework for long-term planning. The work to look out ten years required identifying priorities, testing the cost of those priorities against projected resources, and considering the overall financial position of the university's operations, not just the annual cash flows. Developing a ten-year business forecast is a more complex approach to considering the future of Oregon State than the university had to do as a part of a state system but is an essential part of charting a course as an independent university with a governing board.

The ten-year forecast is dynamic—the university will use it to identify areas of opportunity and concern and will adjust annual operating decisions to address those issues. University leadership proposes that the forecast be updated and reviewed with the Board in January of even-numbered years. Full legislative sessions typically conclude in June of odd-numbered years, so this would provide enough time to assess the funding decisions of the state and adjust the forecast to the next ten-year window. By this schedule, the next update would be in January 2018 and then every two years thereafter.

The forecast has been updated to extend ten years from the end of the current fiscal year (FY) through FY2027.

The work to build a complete ten-year forecast has had five key components (summarized below and discussed in detail later in the document):

- **Benchmark scenario:** Development of a ten-year operating forecast, which looked at enrollments across all programs, likely cost and revenue escalations, critical issues in maintaining current programs, and projections of revenues and expenses across all operations. This work provides a “benchmark” operating forecast against which ideas for revenue innovations, cost restructuring, or strategic investments can be tested. This included projections for the OSU-Corvallis and OSU-Cascades campuses, the Statewide Public Services, auxiliary operations and restricted fund operations.

- **Strategic Cost Initiatives:** Identification of priorities that would require new cost commitments essential to advancing the university's Strategic Plan 3.0. These included identifying needs in each of the three major areas of the strategic plan (i.e., providing a transformative educational experience to all learners; demonstrating leadership in research, scholarship and creativity through a focus on the three signature areas; and strengthening the university's impact on Oregon and beyond). Most recently these discussions included prioritizing the essential next investments (to be made in 2017-19) for advancing OSU's student success agenda (Appendix A).
- **Strategic Resource Initiatives:** Assessment of revenue sources to support the strategic priorities. The cost to advance the three goals of the strategic plan exceeds available revenues in the benchmark forecast. Advancing those priorities will require strategic reductions in current expenses and exploring innovative revenue growth opportunities. Many of these revenue strategies are non-traditional for a public, top-120, research university – such as programs in Portland, professional master's degrees or certificates, micro-certifications, short courses and continuing education. Identifying the right opportunities will require market analysis, department and college review and commitment and curricular development and delivery.
- **Ten-year Capital Forecast:** Development of a ten-year capital forecast. This work brought together, for the first time, planning for education, research, housing and dining, and athletics facilities (including Corvallis, Bend, and Newport) as well as essential infrastructure work (e.g., roads, electrical grid, steam, etc.). A key step in this work was the creation of the Infrastructure Working Group, which included representatives of the academic, research, auxiliary, and capital planning communities to review projects, develop a scoring rubric, and place projects in a ten-year planning framework. This forecast, like the operating forecast, is dynamic and will be updated on a regular basis. The results of the capital forecast were incorporated into the benchmark operating forecast to account for the operations and debt service costs of projects.
- **Financial Statement Projections and Financial Metrics:** Projection of financial statement outcomes using PFM's Future Perfect tool. PFM is OSU's financial advisor and supports an Excel-based projection tool that uses institution-wide averages and trends based on completed audited financial statements (beginning in 2013 for OSU). This tool projects financial statement measures, including the financial ratios the Finance & Administration Committee of the Board approved for the university to track. This work has identified an issue in how the university plans and accounts for the cost of depreciation: While the projections for Education and General (E&G), self-support, and restricted funds show appropriate cash fund balances, accumulated depreciation costs drive ratios that are dependent on net operating revenues below the desired ranges. This discrepancy highlights the need to fund a reserve account based on depreciation costs. The university has not historically set aside funds to use for future building maintenance costs. Best practice uses depreciation expense as an estimate in funding this reserve. PFM, the university's financial advisor, is discussing how to appropriately assess the depreciation that needs to be funded within the operating budgets.

KEY COMPONENT OVERVIEW

Benchmark Scenario

The ten-year forecast is built from a “benchmark scenario” that projects current enrollment trends and practices, known cost increases (such as retirement costs), and historical trends of major cost and revenue components. The forecast is particularly focused on enrollment, as that is the largest revenue source, the one the university community has the most control over and

the one with the largest number of opportunities for growth. While the university will continue to advocate for increased state support (the second largest revenue source), the business forecast assumes negligible growth in state funding based on current revenue and economic projections. The third largest revenue source for E&G operations is facilities and administrative cost recovery from research grants. This is expected to grow as the number of faculty increases, but constraints on the growth of federal research funding and the costs of supporting faculty research will limit the amount of new net revenue that this would contribute.

The “benchmark” enrollments are projected from growth linked to building out the OSU-Cascades campus, modest growth at OSU-Corvallis, and continued growth of Ecampus through the expansion of programs similar to those offered now (Figure 1). The projections assume growing to about 28,000 students in Corvallis (currently 24,672), of which one-third of the undergraduates would be non-resident students by 2023, and 15% of all students in Corvallis would be international students. Graduate and professional enrollments would reach about 20% of total Corvallis enrollments by 2023. Enrollments at OSU-Cascades would reach about 3,900 (currently 1,122) while Ecampus headcount grows to over 12,000 (currently 5,682). It is assumed that the growth rate in Ecampus enrollments slows to about 8% in 2021 and 6% by 2025. The projections assume the development of some new programs and flattening growth in existing programs, but the projections are still for substantial growth.

The cost projections include costs of the Public Employees Retirement System (PERS), personnel costs from current labor contracts for represented employees, along with 3% annual raises for unclassified employees, and historical trends in other major cost categories (such as services and supplies). Revenues assume 3% annual tuition increases, what is known about funding from the state (using the Governor’s flat-funded recommended budget for 2017-19, with 3% per biennium increases after that), and projections for grant and contract revenues based on the number of faculty. Costs of meeting increased enrollments are estimated from current ratios of faculty, staff and overhead costs. The annual increases in costs (before enrollment growth) generally exceed recent Consumer Price Index (CPI) inflation. This is because of benefit cost increases and because the projection for salary increases is greater than inflation. The university has a very large proportion of expenses in personnel (over 75% of expenses for OSU-Corvallis E&G) and, in many units, has long-term commitments to employees. This requires a component of annual merit increases, as well as cost-of-living increases.

The leadership team at OSU-Cascades has built a forecast that includes a detailed plan for program development, including new academic programs, necessary faculty and staff hiring, infrastructure development and operation, and all of the other components critical to operating a new four-year campus. Enrollment growth is the most critical component of the budget forecast, and meeting enrollment requirements in Bend requires up-front investment in faculty and academic programs to attract the desired numbers and mix of students. This means that the OSU-Cascades E&G operations forecast small negative fund balances through FY2020, growing to a fund balance in excess of 10% by FY2022 or FY2023 (Figure 2).

At OSU-Corvallis, the revenue growth from the projected enrollments allows some investments beyond simply meeting the costs of enrollment growth and annual inflationary increases. These include planning for some additional costs for student success and the library, staffing in facilities services, operating costs of new buildings in the capital component of the forecast, debt service for two bonds to support infrastructure repair and critical program development, and allocation of about \$10.0M annually by FY2027 for routine maintenance and repair of facilities. The forecast yields fund balances in the 10-20% Board-approved range, with balances declining through FY2022 (i.e., up through the three biennia with large projected retirement cost increases) and increasing thereafter (Figure 3). While the E&G fund balances are projected to

stay within the board-approved range, the projections for the other financial metrics (as shown in the Financial Statement Projections and Financial Metrics section of the forecast) reveal financial challenges that will need to be addressed.

The benchmark scenario included projections for all operating funds (E&G, self-support, and restricted). These show fund balances in the range of 12-16% with annual revenues exceeding \$1.5B in FY2024 (Figure 4).

Figure 1: Major enrollment trends in the ten-year business forecast benchmark scenario.

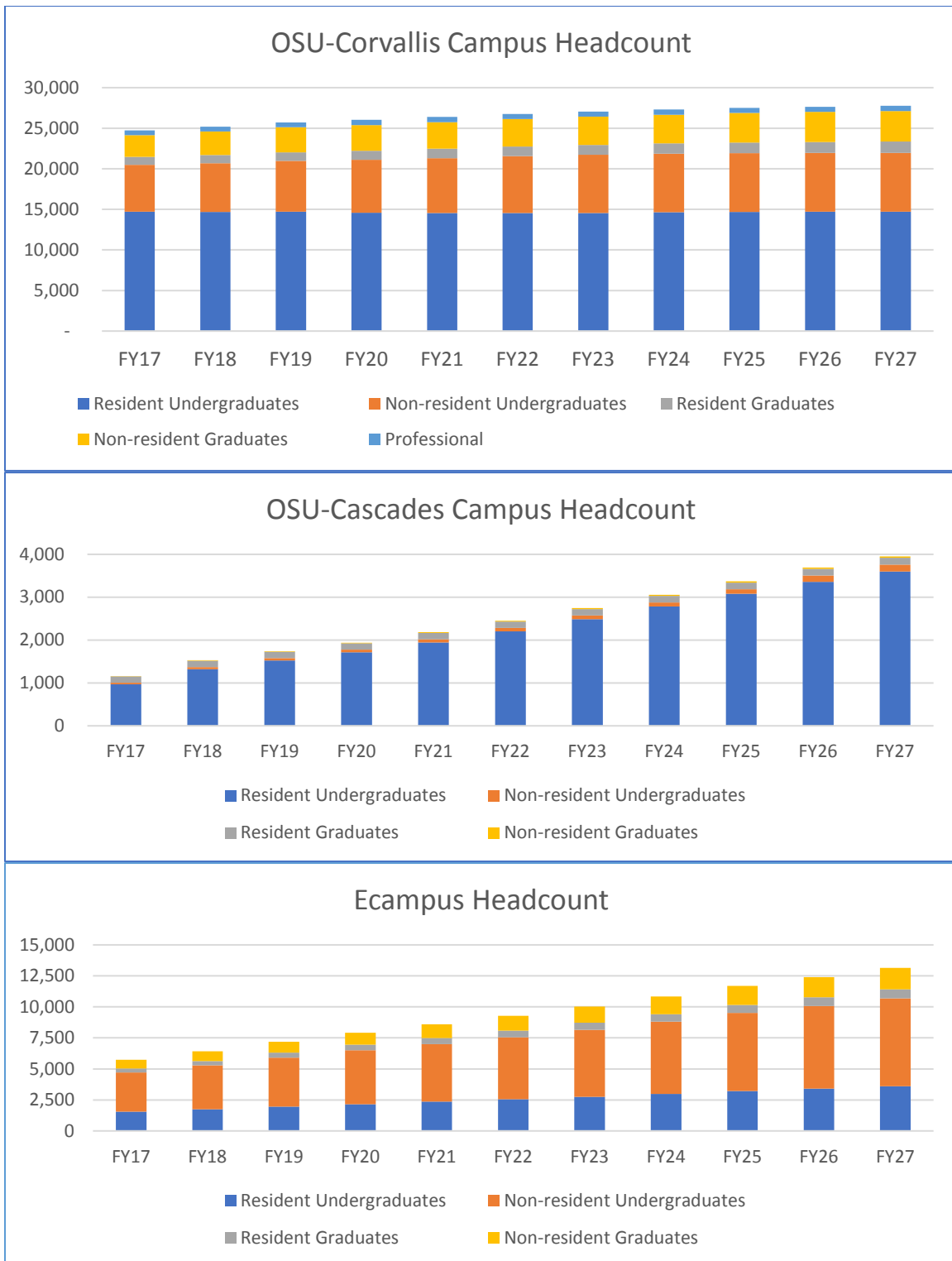


Figure 2: Cost and revenue projections for ten-year planning at OSU-Cascades. There are negative operating balances in FY2018 and FY2019 (\$1.3M or less) as academic programs are developed and faculty and staff hired to deliver those programs.

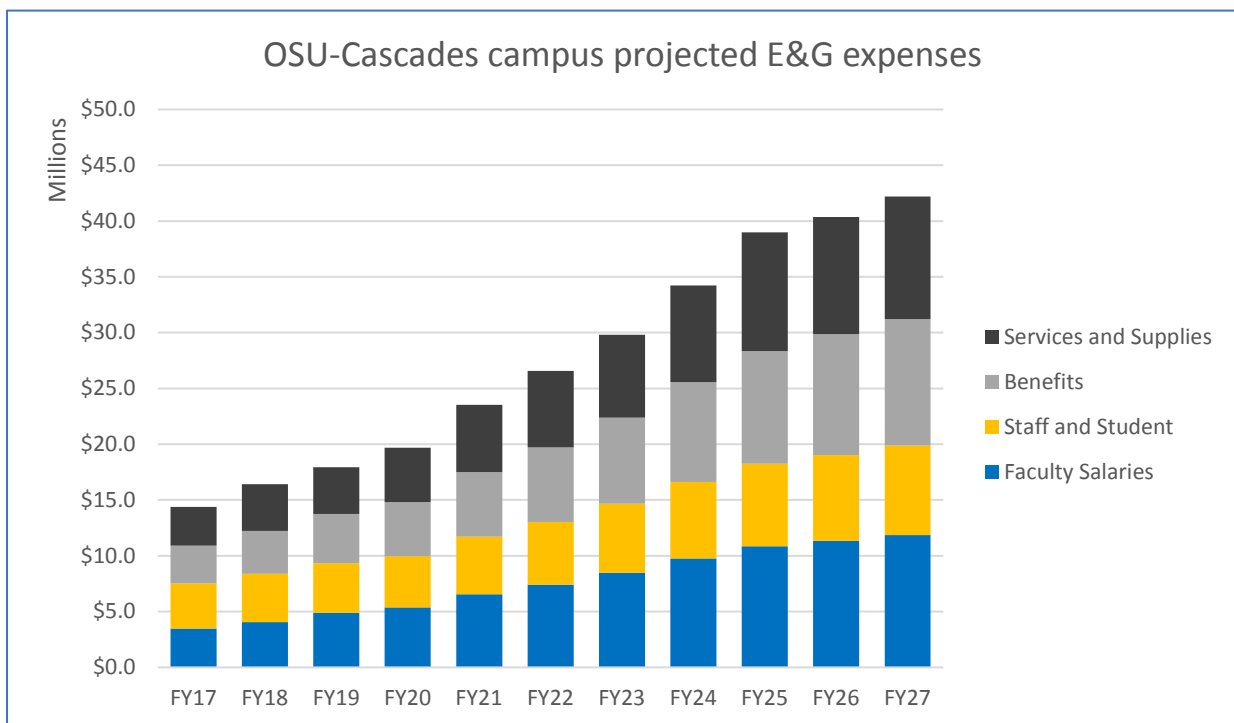
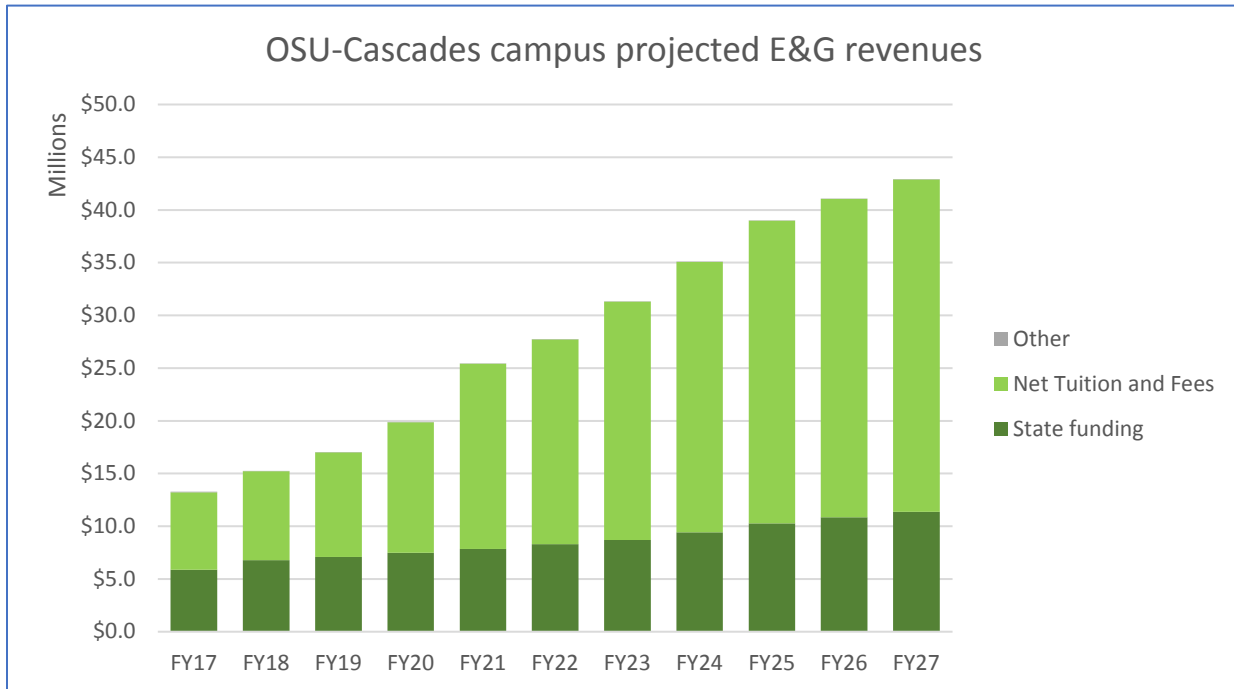


Figure 3: Fund balance projections for the OSU-Corvallis campus E&G funds for the benchmark, strategic revenue and expense scenario, and student-success investments only scenarios (each discussed in the text). The decline in the E&G fund balance through FY2022 reflects retirement rate increases expected for the next three biennia.

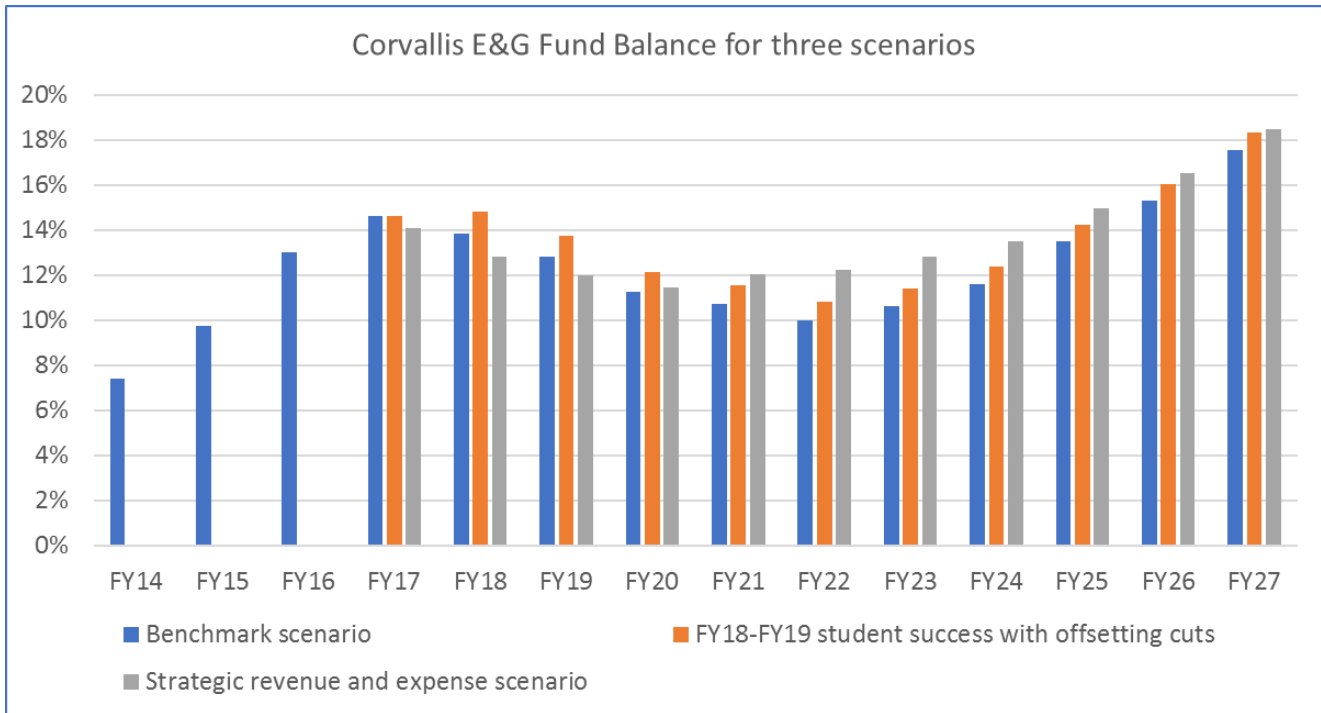
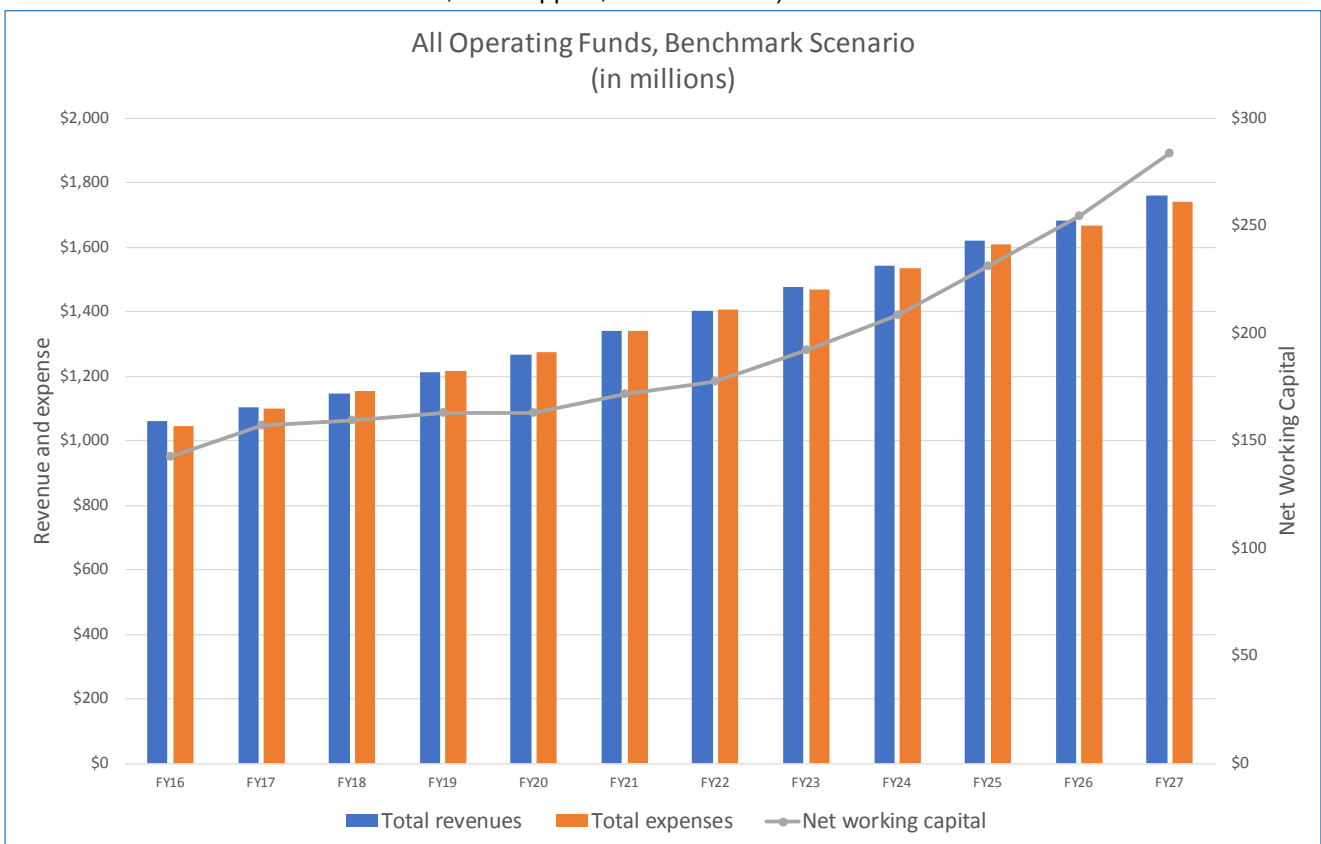


Figure 4: Benchmark scenario projections for all operating funds (E&G at OSU-Cascades, OSU-Corvallis, and the Statewide Public Services; self-support; and restricted)



Strategic Initiatives and Costs

The provost, vice provosts, and deans have been leading discussions over the last year on what new commitments are critical to advancing the university's strategic plan goals and its vision to be one of the nation's top-ten land-grant universities. Three areas were identified that require significant new E&G commitments over the next ten years. These are focused on the OSU-Corvallis campus, but a parallel strategy for developing faculty and staff in support of enrollment growth at OSU-Cascades also exists.

- **Goal 1 strategies** to support transformative educational experiences

Goal 1 strategies include new commitments to improve student success for undergraduates and graduates (Appendix A discusses recommended commitments of \$5.0M in FY2018 and another \$5.0M in FY2019 to these efforts), more widely deploy high-impact learning practices, promote revisions and improvements in the Baccalaureate Core, promote growth in alternative learning and online opportunities, and continue progress on healthy campus initiatives. Implementing these strategies requires about \$30.6M by FY2027 in additional recurring costs. Embedded in these strategies is a commitment to deploy technology and information as institution-wide tools to guide best practices in student success. OSU-Cascades will use the data analytics capabilities to be developed and build student success staffing and programs as part of the overall staffing build-out for the four-year campus.

- **Goal 2 strategies** to advance research, scholarship and creative activity

Strategies include coordinated hiring of the faculty positions to support enrollment, continued development of the marine studies initiative and scholarship-focused initiatives, support for shared instrumentation and facilities, and expanded staffing for research office services. Implementing these strategies totals \$29.5M in recurring costs by FY2027 in addition to the enrollment-driven faculty hiring. The resources for faculty hiring will need to be coordinated to build faculty clusters, support dual-career hiring, and address faculty retention, as well as support enrollment growth and research initiatives.

- **Goal 3 strategies** to increase our impact in Oregon and beyond

Goal 3 strategies focus on expanding high-impact practices in outreach and engagement including providing regional digital information systems and community engagement systems, building startup and entrepreneurship support, and significantly expanding student study abroad experiences. Implementing these strategies is projected at about \$7.5M in recurring costs by FY2027. These initiatives will be coordinated with investments from the Extension Service and other programs supported by the Statewide Public Services.

The specific actions to be pursued in each of these areas may change as assessments of the best tactics are completed and the results of early investments are seen. *The amounts identified in each area are the critical components while the deployment of those commitments may change over time.* The assessment of priorities for student success in Appendix A is a good example of that process. These priorities were assessed in light of experiences to date and of current revenue projections. Commitments in each of the three goals will need to follow a similar periodic review. The top half of Table 1 outlines the strategic initiatives and costs identified for each of the three goals.

Table 1: Summary of costs of strategic initiatives and revenue and cost-saving strategies. The new revenue possibilities are net estimates after considering the cost of delivering the program. The amounts shown are the total cumulative amount for the given year and area, not an incremental amount. The specific actions to be implemented and the exact cost will be adjusted as plans are developed and executed. (Green highlights = student-related commitments; blue highlights = non-student-related commitments; orange highlights = alternative education delivery methods.)

RESOURCES NEEDS											
	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27
GOAL 1:											
Undergraduate student success	\$1,000,000	\$6,000,000	\$10,500,000	\$10,762,500	\$11,031,563	\$11,307,352	\$11,590,035	\$11,879,786	\$12,176,781	\$12,481,200	\$12,793,230
Graduate student success	500,000	1,000,000	1,500,000	1,500,000	2,500,000	3,000,000	4,000,000	5,000,000	6,000,000	6,150,000	6,303,750
Curriculum improvement, faculty development			-	500,000	1,500,000	2,500,000	3,000,000	3,075,000	3,151,875	3,230,672	3,311,439
Online, hybrid, and alternative delivery						1,500,000	3,000,000	5,550,502	6,244,315	6,400,423	6,560,433
Health campus initiatives	125,000	200,000	500,000	750,000	1,000,000	1,250,000	1,500,000	1,537,500	1,575,938	1,615,336	1,655,719
GOAL 2:											
Scholarship initiatives (MSI and other)	1,000,000	2,000,000	3,300,000	4,555,050	5,693,813	7,824,575	11,263,361	14,753,606	18,297,233	18,754,664	19,223,531
Core facilities and instrumentation					250,000	1,000,000	5,566,057	6,905,209	7,246,589	7,427,754	7,613,447
Research office staffing and services					1,000,000	1,700,000	2,377,372	2,436,806	2,497,726	2,560,169	2,624,173
GOAL 3:											
Digital information innitiatives					500,000	700,000	900,000	1,100,000	1,248,863	1,280,085	1,312,087
Economic development initiatives					1,000,000	2,000,000	3,000,000	4,000,000	4,856,689	4,978,107	5,102,559
Study abroad growth	350,000	500,000	750,000	850,000	950,000	1,000,000	1,025,000	1,050,625	1,076,891	1,103,813	1,131,408
Total new commitments	\$2,975,000	\$9,700,000	\$16,550,000	\$18,917,550	\$25,425,375	\$33,781,927	\$47,221,825	\$57,289,034	\$64,372,899	\$65,982,222	\$67,631,777
POTENTIAL RESOURCE STRATEGIES											
	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27
Professional education	\$432,878	\$2,391,868	\$4,460,222	\$6,642,529	\$8,943,548	\$11,368,216	\$13,921,654	\$16,609,172	\$18,896,380	\$19,368,789	\$19,853,009
Continuing education courses/training	-	416,016	855,329	1,318,917	1,807,796	2,323,017	2,865,674	3,436,899	4,037,865	4,138,812	4,242,282
Ecampus NEW program growth	-	2,151,562	4,423,611	6,821,209	9,349,603	12,014,240	14,820,767	17,775,039	20,883,132	21,405,210	21,940,341
Summer innnovations	-	281,363	578,483	892,021	1,375,497	1,767,513	2,180,404	2,615,032	3,072,289	3,149,096	3,227,823
Targeted fees or charges	-	-	3,523,500	3,523,500	3,699,675	3,699,675	3,699,675	3,699,675	3,699,675	3,792,167	3,886,971
Administrative and staffing costs	-	2,000,000	4,500,000	6,500,000	8,062,500	9,626,563	11,192,227	12,759,532	13,078,521	13,405,484	13,740,621
Total incremental resources:	\$432,878	\$7,240,809	\$18,341,146	\$25,698,176	\$33,238,618	\$40,799,225	\$48,680,401	\$56,895,349	\$63,667,861	\$65,259,558	\$66,891,046

Revenue and Cost-Saving Strategies

The cost of the strategic initiatives for the three goals exceeds the revenue expected to be generated by the benchmark enrollment targets. The provost's workgroup considered where there were opportunities to create additional enrollment, revenue, or cost savings that would allow commitments to those critical strategic initiatives.

The enrollment generation ideas that were modeled in the business forecast (bottom half of Table 1) include:

- Expanding professional education opportunities. These could include a greater focus on professional master's degrees on the Corvallis campus, new online one-year post-baccalaureate degrees similar to the program in computer science, and new 4+1 degree programs (master's degree with one additional year after a bachelor's degree) online and on-campus.
- Expanding continuing education programs (largely non-credit), including professional certificates or micro-credentials.
- Pursuing more aggressive Ecampus growth through new programs such as nursing, corporate partnerships, and international enrollment (potentially including 2+2 programs combining two years at community college and two years at the university).
- Using more aggressive program delivery and presence in Portland for appropriate programs, as part of several of these strategies.
- Expanding the use of summer term.
- Working with students to identify tuition or fee increases targeted to specific investments or needs to promote student success.

The revenue targets modeled in the business forecast for these initiatives in Table 1 are illustrative, showing the kinds of revenues that would be needed to enable funding the strategic initiatives. The specific mix of programs or enrollments will need to be developed in collaboration with the colleges and programs. Other revenue ideas that could be part of that mix include three-year degrees, guaranteed cost undergraduate degrees, alternative scheduling strategies (block-week professional courses, half-quarter course schedules, online courses on demand, or a change to a semester calendar), and video-learning modules for single courses or credits.

There are also areas where other large universities have created cost savings. For OSU, the major opportunities include:

- Alternative retirement plans (this would require legislative action to allow the public universities to explore more cost effective retirement plan strategies);
- Alternative healthcare plans (this would require legislative action to provide additional flexibility for public universities than the state currently allows for alternative healthcare plans);
- Efficiencies in existing space utilization for offices, classrooms and, particularly, laboratory spaces;
Consolidation of curricular offerings, in collaboration with Faculty Senate;
- Efficiencies in administrative and support costs, particularly in procurement, span-of-control, information technology, energy use, and marketing services; and

- Voluntary separation agreements and/or early retirement offers.

The ten-year forecast incorporates the last two opportunities, assuming about \$2.5M in FY2018 dollars in voluntary separation savings and a 2% reduction in overall operating costs through efficiencies and restructuring by FY2027. There are significant savings possible in retirement and health offerings, but significant changes in those will require legislative action. The relative savings in improving and better utilizing existing space, compared to building new space, can be substantial, but there is not sufficient detail at this point to include those in the operating forecast. Curricular review and consolidation require careful work with academic units, and it is too soon to estimate possible cost savings. The university will continue to pursue opportunities for cost reduction in all these areas.

Table 1 provides an illustration of how the strategic initiative costs and revenue and cost-saving strategies could be staggered for OSU-Corvallis E&G operations to maintain a 10-15% fund balance and to allow time to develop and implement revenue strategies (Figure 3: gray bars show OSU-Corvallis fund balance with all of the strategic initiative costs, revenues and cost-savings included). The specific timing of any particular initiative could be changed, as can the amounts in an initiative. However, the aggregate impact has to maintain an appropriate operating fund balance. As colleges and departments identify opportunities they wish to pursue, the timing of various commitments will be revisited. It is important to note that substantial new revenue growth requires commitments from academic units to develop and deliver academic programs that may be different from what they have done in the past.

The most immediate strategic initiative cost is the \$5.0M discussed in Appendix A for the undergraduate and graduate student success initiatives. This is included in the detailed planning for the FY2018 budget and the projected shortfall in that budget due to flat or reduced state funding. In the worst case of no new revenues being available, these costs would be accommodated by reductions in existing expenses. The red bars in Figure 3 illustrate a scenario where the student success investments are made and the necessary resources are developed solely through expense reductions (relative to the benchmark case).

Ten-year Capital Forecast

The ten-year capital forecast development began by identifying the needs, plans and aspirations of university leadership. Potential projects from OSU leaders (President, provost, vice provosts, vice presidents, deans and directors) were solicited, refined and cataloged by Capital Planning and Development. Staff from University Housing and Dining, Athletics, Facilities Services, Environmental Health and Safety, Transportation Services, Information Systems and other central service units also contributed requests and data related to infrastructure needs, including deferred maintenance, building renovations, communication infrastructure, parking lots, roads and energy systems.

The Infrastructure Work Group (IWG) was created to review, evaluate and prioritize capital projects for incorporation into the Ten-year Capital Forecast. The IWG membership currently consists of the vice president for OSU-Cascades; vice president for research; senior vice provost for academic affairs; vice provost for information services; vice provost for student affairs; deans of the colleges of Agricultural Sciences, Engineering and Science, and the University Honors College; director for University Housing and Dining Services; and director of Athletics. Over the last four months, the IWG created a prioritized list of projects to incorporate into the Ten-year Capital Forecast.

Capital projects were reviewed based on an assessment of financial impacts, estimates of state bond funding, and gift and other funding opportunities. For the purpose of the forecast, the IWG assumed Higher Education Coordinating Commission (HECC)-requested state-paid bonds at \$70.0M per biennium, HECC-requested capital improvement and renewal funding at \$35.0M per biennium, and gifts and other OSU funds at \$95.0M per biennium.

The IWG created a hierarchy of criteria to use in developing a comprehensive prioritization matrix for projects. The hierarchy of criteria consists of five higher-level criteria, each further defined by sub-criteria as summarized next:

- Criticality of the project including life safety, seismic resilience, and sustainability
- Alignment with the university mission, strategic plan, and ten-year business forecast
- Physical quality of facility, including building condition, accessibility, efficiency, and operating life span
- Impact of facility on student success, employee success, revenue, reputation, scholarship, and outreach
- Leverage potential of project in cost, collateral advantages and space quality, efficiency and quantity

Data to evaluate projects using these criteria were collected from a variety of sources, including a comprehensive space inventory, classroom utilization review and an updated facilities condition assessment.¹ The IWG identified key projects based on these criteria and developed a timeline for pursuing them. The specifics of the projects and the timeline will be revisited as part of the development of biennial capital request to the HECC and the biennial January review of the ten-year business forecast. The capital component of the ten-year business forecast is intended to be dynamic and adjusted as opportunities, resources and priorities change.

Staff within Capital Planning used the IWG prioritization as well as sequential, financial, logistical and other considerations and constraints to build several integrated, efficient and long-range forecasts for the IWG to evaluate and recommend to the Capital Plan Review Group (provost, vice president for finance and administration, director of budget and fiscal planning, and the associate vice president for capital planning and facilities services). An analysis of the financial impacts of the first iteration of IWG-prioritized projects resulted in a re-consideration of the projects to be included in the capital forecast. The revised forecast with proposed timing and type of funding is shown schematically and summarized in Table 2. The costs of operating any new facilities and savings from demolition or renovation of old facilities were included in the benchmark scenario.

¹ The Facility Condition Assessment provides an overview of a building or asset and serves as a common tool by which proposed capital projects can be analyzed, compared and prioritized. Data sources for this analysis include: building history (construction date, renovations and alterations), repair and maintenance data, seismic safety evaluations and energy.

Table 2: Ten-year capital forecast (FY2018-FY2027), including project type, cost, funding source and timing. Funding source is color-coded with state bond as red, OSU bond as gray, other OSU revenue as orange, and gift as blue.

OSU - Corvallis	Type	Cost (\$M)	17-19 (\$M)	19-21 (\$M)	21-23 (\$M)	23-25 (\$M)	25-27 (\$M)
E&G projects							
Oregon Quality Food & Beverage Center	New	22.0	9 9	2 2			
Cordley Hall Renovation Phase I	Renovation	15.0					
Steam Line Replacement Tunnel Extension	New	7.8					
Gilkey Hall Renovation Undergrad and Intl Studies	Renovation	5.0	3 2				
Electrical Grid	Renovation	TBD	Study has been initiated to identify issues, possible solutions and est. costs				
Performing Arts Education Complex	New	70.0		35 35			
Cordley Hall Renovation Phase II	Renovation	50.0					
Campus Operations Center	Infrastructure	22.0					
Washington Way	Infrastructure	16.0					
Fairbanks Hall Renovation	Renovation	12.0					
Data Center	New	7.0					
Student Services (Snell Replacement)	New	52.0			26 26		
Cordley Hall Renovation Phase III	Renovation	50.0					
STEM Education & Research Addition	New	21.0			11 10		
Benton Hall Renovation	Renovation	8.0					
STEM Education & Research Building	New	70.0				35 35	
Gilbert Addition Renovation	Renovation	17.0					
Kerr Admin Seismic Upgrade	Renovation	8.0					
STEM Education & Research Building	New	90.0					45 45
Withycombe Hall Renovation	Renovation	30.0					
Kidder Hall Renovation	Renovation	26.0					
UHDS facilities							
Upper Division/Grad Housing	New	30.0					
Newport (MSI) Housing	New	25.0					
GEM Equity Buy Out	Financial	20.0					
Honors College Living and Learning Center	Renovation	20.0		14 5 1			
Orchard Court Replacement	New	50.0					
UHDS Minor Renewals	Renovation		10	11	12	13	14
Athletics							
Whyte Track and Field	New	6.0					
Reser Stadium West Grandstands	Renovation	150.0					
Gill Coliseum Major Upgrades	Renovation	40.0					
Gymnastics Practice Facility	New	5.0					
Lorenz Soccer Stadium	New	9.0					
Minor Capital							
Capital Improvement and Renewal	Renovation	110.0	14	24	24	24	24
Minor Unit Renovations	Renovation	50.0	10	10	10	10	10

Table 2 (continued): Ten-year capital forecast (FY2018-FY2027) including project type, cost, funding source and timing. Funding source is color-coded with state bond as red, OSU bond as gray, other OSU revenue as orange, and gift as blue.

OSU - Cascades	Type	Cost (\$M)	17-19	19-21	21-23	23-25	25-27
E&G projects							
46-acre campus infrastructure	New	11.0					
Phase 2 Academic Building	New	43.6	33.6	10			
Physical Plant/Central Utility Hub	New	12.6					
Phase 3 Academic Building	New	43.6			33.6	10	
Phase 4 Academic Building	New	21.8					16.8
Phase 4 Academic Building 2	New	21.8					5
46-acre reclamation, demolition, landfill site remediation	New	46.4	14.4		27	5	
Demo landfill campus infrastructure	New	20.0					
UHDS facilities							
Phase 2 Student Housing (300 beds)	New	29.25					
Phase 3 Student Housing (300 beds)	New	29.25					
Phase 4 Student Housing (300 beds)	New	29.25					
Phase 5 Student Housing (400 beds)	New	39.0					
Other Auxiliaries							
Student Success Center Phase I	New	15.0	10	5			
Recreation Center	New	38.25					
Student Success Center Phase II	New	23.0					

Financial Statement Projections and Financial Metrics

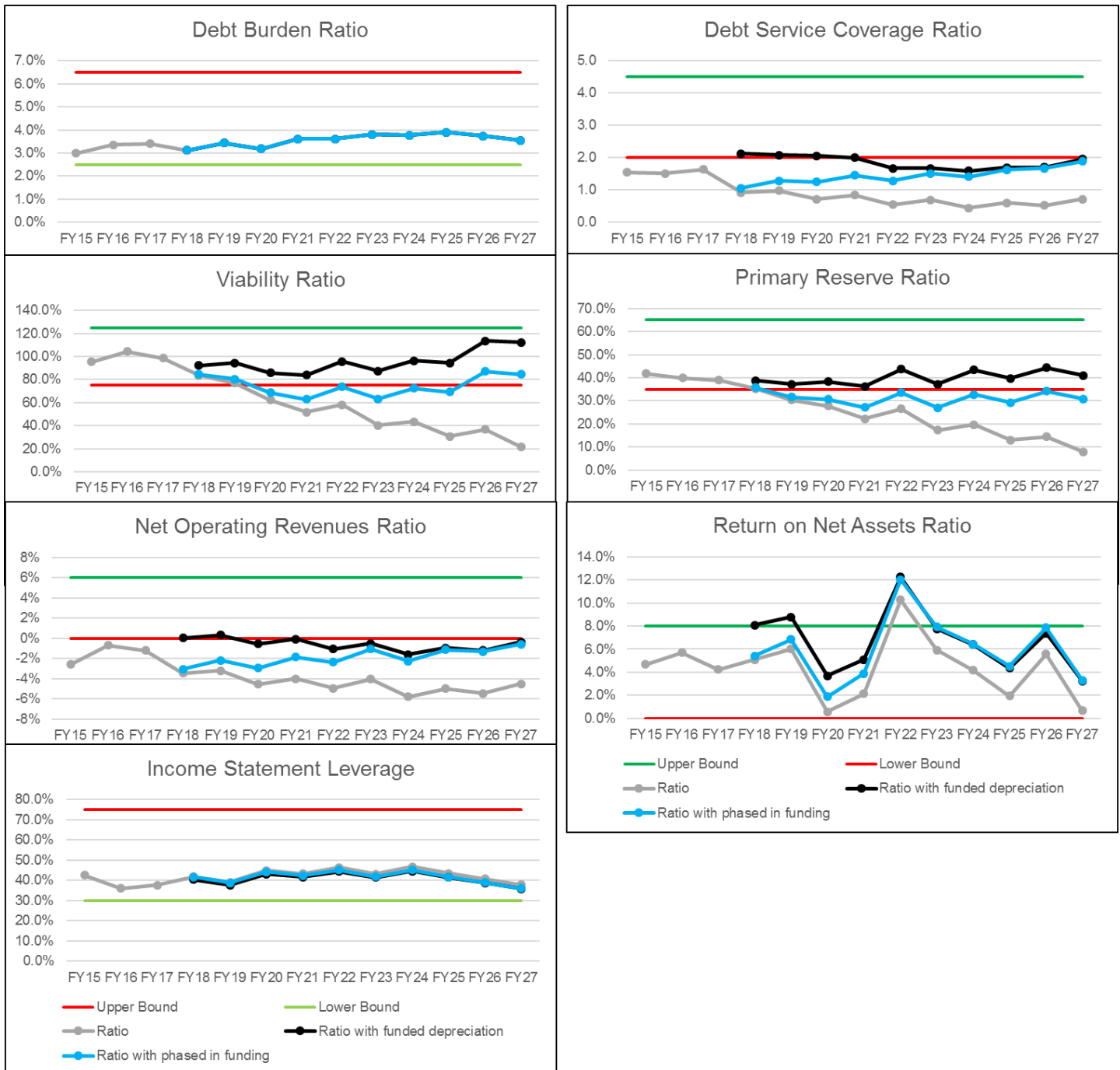
The final component of building the ten-year business forecast was to look at the resulting long-term trends in OSU's financial statements, as projected using PFM's Future Perfect tool. Future Perfect brings together the assumptions in the operating and capital forecasts with other components of the institution's financial statements and includes non-cash components and accounts for revenues and expenses consistent with the financial reporting requirements that OSU follows.

The financial metrics from the Future Perfect analysis are shown in Figure 5. The ratios from the benchmark scenario (gray lines) show that the debt burden remains low (as shown in the debt burden and debt to revenues metrics), but the metrics that depend on net operating revenues (viability and primary reserve ratios, for example) all decline significantly over time. Tests of the principal contributors to these trends show that the historical practice of not budgeting for the cost of depreciation over time is a principal contributor to the declining values. The complex relationships between the components of the financial statements and between the operating and capital budgets, and the assumptions used to project future revenues and costs (e.g., significant increases in PERS costs) contribute to the declining ratio results.

Regardless of this complexity, it is clear that a major contributing factor in the overall financial ratio trends in the forecast is the addition of depreciation costs in operating budgets. For illustration, Figure 5 includes estimates of the ratios if the university were generating net operating revenues sufficient to cover depreciation beginning in FY2018 (black lines), and a strategy to phase in net operating revenue increases (through new revenue generation, cost reductions or a combination) of \$5.0M in FY2018 and increments of \$8.0M per year thereafter until net revenue increases equal the depreciation expense in FY2026 (blue lines). Phasing in these increases in net operating revenues significantly changes the trends of the ratios, though it does not move them all into the desired ranges. The phased-in example is just for illustration, but is likely the kind of strategy the university will have to pursue.

It is immediately evident that the lack of budgeting for depreciation has real consequences for the university. Currently, as was the case when OSU was part of the Oregon University System, self-support operations (with the exception of Athletics) fund depreciation on their facilities as part of their operating budgets. E&G operations and Athletics do not. This is a legacy from the state prohibition on budgeting E&G funds for a non-cash expense and the history of athletics facilities development. The lack of budgeting for depreciation has a very tangible consequence in the condition of some of the older facilities—appropriate capital repairs have been skipped or delayed, and there are an increasing number of systems failures as a consequence.

Figure 5: Principal financial metrics from FY2015 projected through FY2027 from PFM’s Future Perfect tool. These are based on the ten-year forecast benchmark scenario, which includes the capital projects identified by the IWG. The costs and revenues in the strategic initiatives do not significantly change the metrics as the operating revenues and expenses largely balance each other out. The gray lines show the ratios with no net revenue increases to cover depreciation. The black lines show ratios with net revenue increases to fully cover depreciation beginning in FY2018 (which would not possible in practice). The blue lines show net revenue increases of \$5.0M in FY2018 with \$8.0M per year increments until net revenue increases fully covering depreciation expense are reached in FY2026. The net revenue increases shown would be about \$42.0M in FY2018 and \$68.0M in FY2027. The ratios shown below do not include Governmental Accounting Standards Board (GASB) 68 impact.



It is important to note that depreciation was not budgeted for E&G operations when the state's seven public universities were part of a single system. The analysis of the consolidated system's financial statements did not include the evaluation of trends using the same or similar financial ratios until its last few years and did not highlight this issue. It is also important to consider that in 2003, the Governmental Accounting Standards Board (GASB) implemented new standards around capital assets and depreciation (GASB 34 and GASB 35). One of the many elements of these new standards required that universities start showing all assets (some infrastructure assets and library special collections were not included) as well as recognizing depreciation on their books. At the same time that these accounting standards changed, the seven public universities entered a period of significant enrollment growth, large state investments in new capital projects, and building supported by major capital campaigns at the University of Oregon and Oregon State, adding significantly to the depreciation expense. Furthermore, the university system did not have its own credit rating so did not have a history of managing within those financial constructs. The separation of the university as a separate legal and economic entity, with its own credit rating, requires new discipline in financial management that requires managing within a more holistic set of financial metrics, as Oregon State has implemented under its independent board.

This analysis also raises the question of what is an appropriate level of depreciation budgeting. Depreciation is treated as an operating expense, but gifts and state-paid debt proceeds used to construct or renovate facilities are treated as non-operating revenues. This means that if the university receives \$50.0M in gifts to construct a new 100,000 sq. ft. building, the operating fund would see an approximately \$1.0M operating cost and a \$1.0M depreciation cost annually, and none of the revenues that created \$50.0M in net assets would be seen in operations.

The Future Perfect analysis was only recently completed, and the financial management group has been discussing this question and the implications of the analysis. The finance group is also connecting with peers at other public institutions to better understand best practices to manage the cost of depreciation in the future.

The fundamental issue we face with respect to our financial projections is the need to generate net operating revenues sufficient to reverse trends in the forecast and ensure the ongoing financial health of the university. This requires looking holistically at university operations and considering the trade-offs that will need to be made to generate additional net operating revenues. We will review this topic at the update of the ten-year forecast in January 2018.

LOOKING AHEAD

The development of the ten-year business forecast has been an invaluable exercise in looking at the university as an integrated system and in looking ahead far enough to see where significant problems may arise. It has helped identify critical questions and strategies that need to be considered.

Several areas of uncertainty have emerged that could require adjustments in the ten-year forecast in the future are:

- **State funding:** The state is likely looking at flat or reduced funding for the public universities in a biennium where economic growth is anticipated to be relatively strong. This flat or reduced funding is driven by increases in healthcare costs and by increases in cost for public employees' retirement programs, costs that are projected to continue for the next three biennia. History would indicate that the state will likely experience an

economic downturn in the next few years that will put additional pressure on the state's ability to fund the universities with the present revenue structure.

- Academic engagement in resource development: The strategic opportunities for revenue growth include a number of programs that are different than those that many departments and colleges have traditionally delivered. These include professional degrees and certificates, non-credit courses, courses or credentials offered off-site or online and others. Developing these opportunities will require commitment from academic units, which in turn will require clear implementation of benefits to individual departments from those programs as well as the benefits to the university as a whole.
- Tuition and price sensitivity: While OSU's tuition remains below the median of our peers, students and families are increasingly pressed to afford the cost of attendance at OSU. This is particularly true as a larger number of our students are first-generation students or have significant financial need. Covering cost increases or shortfalls in state funding can no longer routinely rely on increases in tuition rates.
- Infrastructure stability and longevity: While OSU has built and renovated a number of buildings in the last ten years, many older buildings are long overdue for major systems and program renewal. As those needs accumulate, so do the risks of a significant systems failure, with the associated risks to the educational and research missions. If we do not find a way to address the depreciation expense and deferred maintenance issues, we will have both physical infrastructure and financial metrics challenges.
- Leveraging of Statewide Public Services support. The Statewide Public Services (SWPS) are the heart of OSU's land-grant obligation to serve the people of Oregon. The SWPS are funded over 65% by the state, so flat or reduced funding from the state has a disproportionate impact on those programs. Because many SWPS faculty are tenured in academic departments, program changes in the SWPS have impacts on E&G operations as well.
- OSU-Cascades campus growth. The OSU-Cascades campus has made tremendous progress in building and opening the first new four-year campus in Oregon in over 50 years. The campus is very much in "start-up" mode, with enrollment growth dependent on the growth of programs, which in turn require enrollment growth to be sustained. The management of the enterprise requires careful planning and is particularly dependent on a clear commitment from the state to support the construction of the necessary infrastructure in Bend.
- International enrollments: OSU's international enrollments are over 13% of total enrollments in Corvallis and are a major part of our non-resident undergraduate enrollments. Much of that enrollment is from China and Pacific Rim nations but includes significant populations from the Middle East and Africa. National and international policies and events can impact those enrollments in ways that OSU cannot control.

Appendix A

Priorities for Investment in Student Success

December 22, 2016

Success of undergraduate and graduate students at Oregon State University is core to our mission and a top priority of the Board of Trustees, senior leadership, faculty and staff of the university. Affecting persistence and graduation rates, closing the achievement gap and enhancing career pathways for undergraduate and graduate students all contribute to the life success of OSU students.

At the October 2016 Board retreat, clear challenges and strategies for achieving these goals were presented along with estimates of investments needed and the relationship between those investments and the ten-year revenue forecast. The gap between investment needs and the revenue forecast drove the need to prioritize actions to those with the greatest return, especially in the short term. Interim Provost & Executive VP Ron Adams convened a work group — Vice President for Research Cindy Sagers, Senior Vice Provost for Academic Affairs Susan Capalbo, Vice Provost/Dean of Undergraduate Studies Susana Rivera-Mills, Vice Provost/Dean of the Graduate School Jennifer Dennis, Vice Provost for Student Affairs Susie Brubaker-Cole, Dean of Engineering Scott Ashford, Dean of Agricultural Sciences Dan Arp, Dean of Science Sastry Pantula and Dean of Liberal Arts Larry Rogers — to help set investment priorities. The work group subsequently engaged with the full Provost's Council, and this document summarizes the recommended priorities for annual investment of *\$5 million per year during the FY2017-19 biennium*.

Undergraduate Student Success: \$4.5M FY2018, \$4.5M FY2019

The strategies and challenges for achieving undergraduate student success include the following:

- Undergraduate goals and metrics found in OSU's Strategic plan 3.0, as well as our aspirational metrics for retention rates, graduation rates, and the elimination of achievement gaps by 2020. State funding shortfalls along with maximum tuition increases within OSU's guidelines will necessarily limit investments, yet progress will still be made toward these stretch goals.
- Following national trends and strategies based on best practices, high impact practices, and peer comparisons.
- Crafting OSU strategies that are specific to our context, culture and needs.

From the strategies and goals presented in October, the following three have the greatest potential for return on investment:

- Proactive advising interventions,
- Proactive data analytics and technology tools, and
- Faculty support and engagement.

In addition to these areas of increased investment, ongoing best practices will be continued. Academic colleges will proactively look at four-year degree pathways and develop alternative pathways to graduation and long-term student success. These include, for example, alternative pathways in mathematics and statistics, use of adaptive learning technologies, efficient use of

baccalaureate core courses, developing interdisciplinary undergraduate programs (e.g., in data science) and incorporating and tracking transformative experiences as a part of curricula.

Proactive Advising Interventions: Academic advisors deployed both centrally and within the academic colleges serve in an essential, direct contact role to help overcome academic and other challenges. Specific actions to raise and equalize the retention and graduation rates for all learners and to eliminate the achievement gaps for students of color, low-income students and first-generation college students increase the engagement needs and result in caseload challenges. Additional capacity is needed in colleges with high enrollments, and support systems need to be enhanced in colleges with the highest credit-hour loads. This investment will effectively reduce the advising caseload at OSU over time from the current 367 students per advisor to a benchmark target of 250 (see national benchmarks and University Innovation Alliance). The actual deployment of these advising resources will be dependent upon the variations in advising approaches among the academic colleges.

Proactive Data Analytics and Technology Tools: Effective student success interventions require strengthening the university's ability to monitor progress, reach out to identified at-risk student populations, provide real-time data to inform student learning and effectively manage intervention caseloads by supporting problem triaging. Enhanced data analytics tools and additional analytical staff are required to meet these goals. These tools and the resulting analytics will provide vital information to faculty, advisors and staff. Specific tools include:

- Adaptive learning tools for courses
- Early alert systems
- Mobile technology to guide students to on-time resources
- Tools to help automation of certain advising functions, scheduling and other administrative processes.

In addition, data analysts and learning analysts are necessary to provide appropriate training for data and technology users and to guide the use of institutional reports and holistic information and services that promote shared ownership for educational progress among students, faculty and staff.

Faculty Support and Engagement: Faculty build the reputation and distinctiveness of the university by creating and communicating research and scholarly output, through teaching and curriculum development and by guiding student success. Faculty engagement with students enhances best practice programs directed toward student success, and faculty play a critical role in both retention and graduation. They form the largest single asset at the university and leverage point for student success. Examples of high-impact engagement include:

- Mentoring relationships;
- Supporting and enhancing diversity;
- Enhancing student learning experiences, including experiential opportunities; and
- Designing innovative curriculum and course delivery that engages students early in their academic careers.

Recommended areas of investment in faculty engagement along with alignment of college-specific efforts include:

- A holistic center for faculty engagement and learning innovations for on-campus, on-line and hybrid pedagogy and learning communities;

- Student-success toolkits, including data analytics;
- Innovative evaluations for assessing learning outcomes and effectiveness in the classroom and in the experiential learning opportunities; and
- Elevating teaching excellence, mentoring and student success within the promotion and tenure process.

Graduate Student Success: \$0.5M FY2018, \$0.5M FY2019

OSU's aspiration to deliver the impact of a top-ten land-grant institution requires a strong research and graduate education program that links internally to undergraduate education and externally to the local and global communities that the university serves. Recruiting the best students globally, diversifying the graduate population and future workforce and attracting graduate students in a timely fashion require targeted investments to:

- Update our current largely paper-based information system to an electronic system,
- Provide targeted financial support for students at crisis points,
- Support an integrated professional development program, including support for a holistic center for faculty engagement and learning innovations.

At the October 2016 Board retreat, strategies and challenges for achieving student success goals were presented. These included the following:

- Graduate goals and metrics found in OSU's Strategic Plan 3.0, as well as our aspirational metrics for retention rates, graduation rates, and the elimination of achievement gaps by 2020;
- Following national trends and strategies based on best practices, high impact practices, and peer comparisons; and,
- Crafting OSU strategies that are specific to our context, culture and needs.

Currently, OSU uses a 2-year/4-year master's retention and graduation rate and a 4-year/6-year doctoral rate to measure student success. Meanwhile the university is evaluating the appropriateness of other metrics related to student progress such as completing coursework and filing a program of study, creating a master's or doctoral committee for research-based degrees, passing written and oral examinations, conducting research and defending the thesis/dissertation.

Within the above context, the recommended investment priorities are:

- Implement an electronic information workflow system,
- Provide increased writing resources for graduate students, and
- Enhance career pathway development.

In addition to these actions, colleges will need to commit to enhancing the mentoring and training of faculty to help their graduate students be more successful and to support a center for learning innovations. Colleges can also look for opportunities to develop professional master's degrees that both create career pathways and generate revenue for the university.

Electronic Information Workflow: This investment enhances graduate student advising and monitoring by fully utilizing university systems and allowing development of the Graduate Education Toolkit (GET). The GET will effectively manage degree completion plans and

processes for graduate students and their advisors. The investment will augment the current IT team with additional staff, which will save costs elsewhere by increasing efficiencies in processing applications, degree audits and conferrals, exam scheduling and student tracking, including:

- An online/web-based program of study where students and their advisors can see what is remaining as they go (degree audit);
- Electronic degree workflow, including automated alerts and exam management tools;
- Automated graduate faculty management portal, including linkages to programs of study; and
- University-wide and multi-term program planning and catalog development/registration to ensure timely degree completion.

Academic colleges will benefit from this electronic information system in reaching out to a diverse potential student population, helping graduate students (and faculty) track their progress and helping faculty advise students appropriately and in a timely fashion.

Writing Resource: Graduate student writing skills are a major factor in their success. The Writing Center assists graduate students with human subjects research forms/compliance, proposals, seminar papers, conference papers and theses and dissertations. Currently, the Center's services are staff-limited with resulting long wait times, and more resources are needed to support graduate students in need of assistance.

Career Resource: A major factor in graduate student success is having a viable career path, and this investment will incorporate career assistance for graduate students into the current career infrastructure with an emphasis on students who are on a non-academic track (private industry and business, national labs, government). Additionally, linkages between the graduate school, academic colleges and the university's industry partnering efforts (OSU Advantage) will also help graduate students engage in internships, industry research and development projects and other activities that clarify pathways and opportunities and help in developing individual professional development plans. Investments centrally and at the college level to develop internship opportunities and other career enhancing experiences will also be important.

Colleges can also look for opportunities to develop professional master's degrees that prepare the future workforce for industry and business, create employment opportunities for graduate students and generate revenue for the university.

Faculty Engagement and Support: In addition to the information technology, writing and career resources, colleges will need to continue providing mentoring and training of faculty to help their graduate students be more successful and more broadly trained for careers, including non-academic careers. The faculty-student mentoring relationship is especially critical due to the custom nature of research-based master's and doctoral degrees. Faculty support and engagement actions mentioned within the undergraduate success section above apply to graduate student success also.