CHAPTER 2
ACADEMIC UNITS

OVERVIEW OF ACADEMIC UNITS

This chapter summarizes programmatic and financial activity for each academic unit. The revenue expectation in 2018/19 for these academic units comprises nearly 75% of the university total revenue. Overall, the academic units project an operating surplus of $54.3 million. After transfers to facilities and endowment, the unit budgets overall will achieve a $50.8 million surplus.

CONSOLIDATED BUDGET FOR OPERATIONS, 2018/19: ACADEMIC UNITS

[IN MILLIONS OF DOLLARS]

<table>
<thead>
<tr>
<th>Academic Units</th>
<th>Total Revenues</th>
<th>Total Operating Expenses</th>
<th>Result of Current Operations</th>
<th>Transfers (To/From)</th>
<th>Change in Expendable Fund Balance</th>
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<td>(8.8)</td>
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<td>13.4</td>
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<td>237.6</td>
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<td>(0.2)</td>
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<td><strong>Total Academic Units</strong></td>
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<td><strong>4,989.9</strong></td>
<td><strong>54.3</strong></td>
<td><strong>(3.5)</strong></td>
<td><strong>50.8</strong></td>
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</table>

2018/19 Consolidated Expenses by Academic Unit

1 Other is Hoover, VP for Undergraduate Education, VP for Graduate Education, VP for Teaching and Learning, and VP for the Arts.
The Stanford Graduate School of Business (GSB) remains focused on delivering transformational experiences to its students in the areas of business, management, and leadership education. The school’s mission is to transform these students into leaders who have the skills to change lives, organizations, and the world. Degree programs offered by the GSB are the two-year full-time MBA, the PhD in seven distinct fields of study, and the one-year Master of Science in Management. In addition, the GSB conducts a research fellows program aimed at broadening the pipeline of prospective PhD students, with an emphasis on attracting students from underrepresented groups. Finally, the GSB conducts a research fellows program aimed at broadening the pipeline of prospective PhD students, with an emphasis on attracting students from underrepresented groups. Finally, the GSB runs a number of custom, open, online, and international executive education programs. The GSB seeks to empower and engage its students through excellence in teaching and research, and by leveraging education technology and global programs to reach students worldwide, moving them to drive positive change.

Faculty Research and Teaching
The GSB is currently engaged in long-range planning complementing that of the university and focused on two main topic areas: the future of management education and research on the advancement of management. Committees consisting of faculty, staff, students, and alumni have been convened to address these topics and will announce their findings and recommendations in the coming months. The committee addressing the future of management education is tasked with envisioning the changes the GSB will need to make to enable its management education programs to remain vital and essential over the next decade. The committee addressing research on the advancement of management is focused on the shift toward large-scale experiments and data-driven research, as well as new topics of interest, including the effects that digital technology, automation, and globalization are having on organizations, industries, and society.

A focus on research is already having an impact on the development of curriculum for the GSB’s degree-granting and executive education programs. Faculty at the GSB are grappling with coming technological advances, driven by developments such as artificial intelligence, and bringing them into GSB classrooms. For example, faculty are working on developing new methods for machine learning, often with business applications, and studying threats and opportunities posed by artificial intelligence. This research has led to the creation of new elective and executive education courses, such as Big Data, Strategic Decisions: Analysis to Action.

The GSB’s offerings of world-class teaching and research continue to attract a strong pool of excellent candidates for
its programs. For the MBA class of 2019, the GSB received over 8,000 applications for 418 available spots. Of students enrolled in that class, 40% are women, 41% are international students (coming from 61 countries), and 29% are from underrepresented groups.

**Education Technology**

Expanding the reach of faculty research, as well as engaging with students in workplaces around the globe in real time, the GSB continues to build on the success of its online-based certificate program. Its LEAD (Learn, Engage, Accelerate, Disrupt) program dynamically connects GSB faculty teaching and content to a global cohort of leaders, innovators, and entrepreneurs. A LEAD certificate in personal leadership was launched this year and joins the existing LEAD certificate in corporate innovation, now in its third year and sixth cohort.

The GSB has also been experimenting with the application of flipped classrooms to the core curriculum of the MBA program. Data and Decisions debuted as a pilot flipped classroom in 2016/17, with strong positive feedback, and has now been converted to a foundation course for first-year MBA students.

**Global Impact**

As the GSB develops its long-term strategy regarding research and teaching, it also continues to reach into international markets so that it can bring a range of insights to its students, provide research opportunities for faculty, and stay connected to dynamic trends in global business. The Stanford Institute for Innovation in Developing Economies (Seed) launched its third regional center in September 2017 in Chennai, India. This center joins existing regional centers in West and East Africa; all are tasked with the mission of enabling small and medium-sized businesses in developing countries to grow, expand, and foster economic growth. Seed also provides an opportunity for GSB and other Stanford students to engage with the developing world through its intern programs. Twenty-one Stanford student interns have worked at Seed companies in Ghana, Cote d’Ivoire, Nigeria, India, and Ethiopia.

The GSB’s global programs also provide opportunities for further collaboration with other schools, departments, and units at the university. Seed played an integral role in the launch of Stanford’s interdisciplinary Center on Global Poverty and Development in November 2017, a university-wide initiative with over 100 affiliated university faculty.

**CONSOLIDATED BUDGET OVERVIEW**

The GSB projects a 2018/19 consolidated budget with total revenues and operating transfers of $290.4 million, expenses of $288.8 million, and a net surplus of $200,000 after $1.4 million of transfers to endowment principal. In comparison, a $2.0 million surplus is projected for 2017/18.

The GSB projects that revenues and transfers for 2018/19 will increase by $21.9 million, or 8.2%, from the 2017/18 projection. Endowment income is expected to increase by $4.5 million due to investment gains and newly endowed gifts. Gift revenue is planned to grow by roughly $700,000. The GSB’s executive education unit is also contributing to revenue growth, with projected revenue for 2018/19 growing by 14%, or $9.5 million. This growth will be achieved through a new online LEAD certificate program, the launching of a third cohort of the Stanford Executive Program due to high demand, and other new face-to-face programs. Revenues from Seed and GSB residences are expected to grow moderately.

Overall, the GSB projects a $24.2 million, or 9.1%, increase in expenses in 2018/19. Compensation is projected to increase primarily due to merit increases as well as a plan for moderate growth in faculty. Non-compensation expenses are projected to increase at a rate above pure inflationary growth. The largest areas of expense growth within the GSB are executive education, fellowship support, research support, and facility refresh and renewal expenses, as well as funds reserved to support long-range planning initiatives. Executive education’s increased expenses are offset by its increased revenue.

The GSB has been prudent in adding to its reserves as a hedge against market volatility and as part of a deferred maintenance plan for the Knight Management Center academic buildings and residences. As a result, fund balances increased in 2016/17 producing a total beginning fund balance of $106.7 million in 2017/18. Following an operating surplus and planned transfers to endowment principal in 2017/18, the GSB will continue to add to its reserves and projects an ending fund balance of $108.7 million at year-end.
The School of Earth, Energy and Environmental Sciences (Stanford Earth or SE3) welcomed Stephan Graham, professor in geological sciences, as its new dean in the fall of 2017. He has served as the school’s senior associate dean for academic affairs for many years, and has been a key member of the school’s leadership team since the late 1990s.

Stanford Earth’s mission is to create knowledge to understand Earth and sustain its inhabitants. The school’s efforts in the first full year under new leadership will focus on the following:

- Continuing to broaden its reach to undergraduates
- Improving support for graduate students and postdoctoral scholars
- Supporting and expanding diversity and inclusion
- Rebuilding faculty strength in the face of many retirements

In addition, the school will have a strong focus on the university’s long-range planning (LRP) efforts, partnering with university leadership to explore significant ways Stanford Earth can contribute to Stanford’s long-term vision.

Undergraduate Education

The school will continue efforts begun several years ago to increase its impact on Stanford’s undergraduates. The Earth Systems bachelor of science and cotermination master of science programs continue to thrive, as does the Stanford O’Donohue Educational Farm, which now touches well over a thousand undergrads each year through research, teaching, and other activities. The new Sustainability Science and Practice (SUST) cotermination master’s program and the cotermination degree in environmental communication have attracted a wider and more diverse group of undergrads, but the school’s reach across the undergraduate population is still relatively small. With a goal of reaching 80% of Stanford’s undergrads—through majors, minors, field experiences, and pop-up classes—the primary foci of 2018/19 will be threefold: pursuing the consolidation of three small, departmentally based undergraduate majors into a schoolwide major; expanding field education offerings; and improving support for career exploration and job recruitment. Resources to aggressively pursue these goals have come from leveraging a staff retirement and a team restructuring that was supported through reallocation of school funds.

Graduate Students and Postdocs

The restructuring mentioned above will also allow the school to enhance support for its graduate and postdoctoral communities through improved professional development services (courses, workshops, career services), increased...
opportunities for cross-disciplinary collaboration, and improved mentoring, to name a few. Recent senior staff changes enable SE3 to move on some of these needs right away. However, the next year will provide time to experiment with the most effective ways to provide these services, as well as explore how the school can partner with the university on similar efforts that emerge from Stanford’s long-range plan.

**Diversity and Inclusion**

Stanford Earth established the Office of Multicultural Affairs eight years ago. Through school, corporate, and university support, the office has developed several programs that have had a positive impact on diversifying the school’s student population, improving faculty hiring practices, and developing a more inclusive environment in which all can thrive. The school is committed to sustaining the progress made thus far and will continue to seek external funding for these programs. As resources become available, SE3 hopes to expand its SURGE (Summer Undergraduate Research in Geoscience and Engineering) program, which aims to increase diversity in the geosciences and engineering by helping targeted undergraduates acquire research experience and prepare competitive graduate school applications. In addition, the school has plans to establish a diversity postdoctoral scholars program and will collaborate with university partners on making this a reality over the next several years.

**Faculty Recruitment**

Like those at many of its peers, the demographics of Stanford Earth’s faculty is heavily weighted toward individuals at or nearing retirement. Since 2016, the school has seen five retirements, and it expects at least five more by 2020. Therefore, it has been actively recruiting new faculty who bring new and exciting areas of climate, energy, and earth sciences to the school, as well as strength to its core areas of expertise. Under a university program that provides incremental resources for diversity hires, Stanford Earth has been very successful in increasing the number of women on the faculty, and therefore has been able to increase its faculty numbers overall. This amount of faculty hiring brings with it significant pressure on school resources for start-up packages, lab renovations, and housing support. With the school’s centrally held, unrestricted reserves being called upon to mitigate the impact of very slow endowment income growth, the additional expenses stemming from a high level of faculty recruitment will require institutional support.

**Long-Range Plan**

Many of Stanford Earth’s goals align well with themes emerging from the LRP process. Sustainability is emerging as a guiding principle for Stanford in the 21st century, and this is a focus for much of the teaching and research done in SE3. The school already offers students a broad and deep examination of the science of sustainability and climate change and related matters that affect society, providing a very strong platform for SE3 leadership in Stanford’s sustainability efforts. Other areas of convergence between LRP goals and SE3’s are improved support for graduate students and postdoctoral scholars, as well as diversity and inclusion efforts focused on graduate admissions, postdoctoral selection, and faculty hiring.

**CONSOLIDATED BUDGET OVERVIEW**

SE3 projects total revenues and operating transfers of $71.1 million in 2018/19, total expenses of $73.7 million, and a resulting shortfall of $2.1 million following $500,000 in transfers from assets. Compared with 2017/18 year-end projections, revenues and transfers are anticipated to increase by $800,000, or 1.2%. Total expenses are anticipated to increase by $2.4 million, or 3.4%. The projected shortfall is the result of an imbalance between growth in revenues and growth in expenses.

Endowment income, which makes up approximately 50% of the school’s non-sponsored revenue, is expected to grow modestly, and below cost rise. Designated revenue, composed primarily of industrial affiliates program income, is projected to continue recovering from record lows experienced in 2016/17. While the school is actively pursuing new gifts, by conservative estimates gift revenue will remain at a level closer to recent multiyear averages. Sponsored revenue is expected to hold steady overall, with non-federal grants filling the gaps left by a shortage of federal grants in some areas.

Of the $2.4 million anticipated growth in expenses, compensation costs account for the majority, reflecting planned salary programs and additional costs stemming from new faculty arrivals and related increase in graduate student headcount. SE3 aims to address the anticipated operating shortfall with active fundraising, using reserves in the meantime. In partnership with the Dean’s Office, departments and programs will also draw on local reserves to respond to faculty and student needs. If additional resources cannot be found to bring revenues and expenses back into balance, cost-cutting measures will have to be considered.
ACADEMIC UNITS

GRADUATE SCHOOL OF EDUCATION

PROGRAMMATIC DIRECTIONS

Long-Range Planning and New Initiatives

During its centennial year of 2017/18, the Graduate School of Education (GSE) engaged in an extensive planning exercise that has resulted in a renewed vision and mission for the future. The GSE envisions a world where all learners are prepared to thrive in a dynamic future. The mission of the school is to pursue the greatest challenges and most promising opportunities—those where Stanford’s unique strengths can ignite breakthroughs that will transform learning to produce accessible, equitable, and effective education for all learners.

The school’s strategic priorities can be organized under three broad headings:

1. Discovery, especially in emerging areas, such as neurosciences, data sciences, and technology, that promise to deepen our understanding of learning and of best practices in education.

2. Innovation in classroom practices, the design of curricula, and the structure of educational organizations. Innovation in education is especially needed to help prepare students for a rapidly changing future and to assure that historically underserved students reach their full potential.

3. Driving change by disseminating GSE research and engaging with practitioners, policy makers, entrepreneurs, philanthropists, and others who share a commitment to education as a universal right and a foundational human need.

These strategic themes will shape the GSE’s most important programmatic initiatives in the coming years. Projects that are under way or in the planning stages include the following:

- **Learning Differences:** As part of this initiative, the GSE will build a new special education program.

- **Race, Inequality & Language:** The GSE launched this new doctoral specialization to focus on students who face systemic social and cultural challenges in schools. In its first year, the program received the highest number of applications of all GSE programs and has attracted a highly qualified and remarkably diverse cohort of students.

- **Data Sciences:** The GSE is exploring ways to incorporate data sciences as a core research strength, a new training program for students, and a collaboration with other Stanford schools and departments.

- **Teacher and Leadership Training:** The Stanford Teacher Education Program (STEP) is an international model for teacher preparation. In an effort to help STEP alumni to stay in the teaching profession, priority will be given to identifying additional fellowship and public service loan programs. In addition, the GSE is creating professional development programs for alumni and practitioners. It is also collaborating with the Graduate School of Business to

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2018/19 Consolidated Revenues
$78.6 Million

[IN MILLIONS OF DOLLARS]

<table>
<thead>
<tr>
<th></th>
<th>2016/17 ACTUALS</th>
<th>2017/18 PROJECTION</th>
<th>2018/19 PLAN</th>
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<td>76.9</td>
<td>78.9</td>
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<td>Transfers From (to) Endowment &amp; Other Assets</td>
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<td>(1.7)</td>
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<td>Beginning Fund Balances</td>
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<tr>
<td>Ending Fund Balances</td>
<td>54.9</td>
<td>53.4</td>
<td>51.3</td>
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Endowment Payout 17%
Gifts 13%
Sponsored Research 33%
General Funds 27%
Other 10%
create a new program in leadership and management for school executives.

- **Expanding Research Practice Partnerships:** Building on a successful and unique partnership with the San Francisco Unified School District, the GSE has launched a second research-practice collaboration with Sequoia High School District and its primary feeder schools.

- **A New GSE Campus:** New facilities are needed to house and support the GSE's strategic initiatives.

- **Sustained Excellence:** As many as half of GSE faculty will retire in the next decade, creating an opportunity and challenge to find and develop new scholars and research areas. To that end, the faculty will spend its spring retreat prioritizing faculty search areas to align with the future foci of the GSE.

**Achievements and Program Continuation/Enhancements**

**Students**

- The GSE has created a needs-considerate financial aid program for master's students in order to attract a more diverse applicant pool and to partially compensate for the reduction of federal loan programs. This program is targeted to applicants from low-income families. In 2017/18, the GSE awarded 15 fellowships, and the yield among these students was 13% higher than the overall yield. The program has been expanded to include STEP.

- UP@GSE will coordinate undergraduate programs and student activities throughout the school. These include the honors and minor programs, research with GSE faculty, education-focused undergraduate organizations, residential education, and outreach for the nearly 2,000 undergraduates taking courses in the school.

- The faculty is deliberating a new doctoral admissions process to provide more time for students to identify potential advisors, and to uncouple the process from funding sources.

**Faculty**

- A new faculty orientation process will provide more resources and a more hands-on approach for new faculty joining the GSE.

- The GSE launched a program to provide a small amount of funding for research-related expenses to the active and growing emeritus faculty, including funding for projects with current students.

**GSE-Wide Community and Alumni Initiatives**

- The school has completed the programming and early feasibility phases of planning for a new building, and it continues short-term renovations to maximize use of the current facilities. In 2018/19, the GSE will start the schematic design phase of the building planning.

- The GSE has had very little organized programming for alumni until recently. As part of a new alumni engagement program, it held events last year in several U.S. cities and in three cities in Asia. The GSE is expanding its alumni communication efforts and building on successful programs such as the annual Alumni Achievement Awards.

**CONSOLIDATED BUDGET OVERVIEW**

The GSE projects a 2018/19 consolidated budget with total revenues and operating transfers of $78.6 million. After subtracting asset transfers, including a $1.7 million endowment income transfer to student loan funds in support of STEP students, the revenues and transfers total $76.9 million. Projected expenses are $78.9 million, resulting in a deficit of $400,000. This deficit is the result of increased compensation in areas of strategic and planned initiatives and operations. As part of the school's strategic and long-term planning, the GSE will draw on unrestricted reserves to seed new initiatives and seek additional gifts and grants for longer-term support.

Compared with the 2017/18 year-end projections, 2018/19 revenues and operating transfers will increase by $1.5 million, or 1.9%, while expenses will increase by $2.0 million, or 2.6%.

Funding from federal sponsors continues to trend downward in 2017/18, with a 2.6% decrease in the year-end projection; a modest 1% increase is projected for 2018/19. Non-federal grants and contracts had an unexpected increase in 2017/18 of 9.6%, or $1.7 million, and an increase of 2.9% is projected in 2018/19. Sponsored research remains the largest funding source for the GSE, at 33% of budgeted revenue. The GSE's planned use of accumulated reserve balances will provide funding for strategic initiatives in 2018/19.

**CAPITAL PLAN**

The schematic design phase of the new building planning process will be completed in 2018/19 with architects William Rawn Associates. The goal is to obtain site and concept approval from the Board of Trustees in 2018/19 and continue the process through subsequent phases.
PROGRAMMATIC DIRECTIONS

The School of Engineering (SoE) is healthy, with advances in all fields of engineering, from energy storage to applications of artificial intelligence (AI), driving fundamental discoveries and technology transfer as well as student enrollment and faculty growth. The school continues to move forward with plans developed through the SoE-Future strategic planning process and looks forward to participating in initiatives that will evolve out of university-level long-range planning (LRP).

The school is entering the second year of the pilot of the Catalyst for Collaborative Engineering. This $12 million pilot awarded grants to three multidisciplinary teams in the first year and will award a new set of grants in the spring. The SoE Catalyst program will be assessed after this second year, but its goals and initial success are consistent with themes emerging from the LRP. One of the first major grants awarded went to the Microbial Culture Shift Team of researchers involved in a new approach to fast, accurate pathogen diagnosis. Their research holds the promise of reducing health care costs and improving millions of lives.

Data science and AI have received tremendous attention recently from within the campus, in industry, and in society at large. The school expects to bolster existing activities in these areas, as well as drive initiatives across campus. Significant data sciences and AI initiatives are expected to emerge from the LRP, and preliminary exploration is under way. Activities and initiatives will address such topics as how data sciences and computation can accelerate discoveries in many fields (as articulated by SoE-Future) and how AI impacts society and the human condition.

Undergraduate majors in the SoE share a long-standing common set of basic requirements in math, science, and engineering breadth, originating in part from ABET accreditation. The SoE Undergraduate Council is currently discussing proposals to modify these requirements, with an emphasis on reducing the numbers of units required in the math and science categories. While the outcome is yet to be determined, the school’s reconsideration of legacy requirements has been well received across campus.

One of the most powerful white papers to emerge from SoE-Future was on the topic of diversity. The SoE is making a dedicated effort to “up the game” on diversity at all levels through steps such as hiring a new staff member to focus specifically on student diversity. A recent policy of additional billets for diverse faculty hires has led to notable improvements (including 35% female hires over the past two years), and the school will continue that policy to the extent possible. Initiatives in graduate student admissions have led to
significant improvement in the gender diversity of incoming graduate students (raising the percentage of women to 37% from the historical level of 25%-28%). The school aspires to similar improvements in percentages of underrepresented minorities among graduate students and faculty.

Two loosely related areas very important to the school are student maker spaces and shared experimental facilities; both need significant expansion and modernization in the relatively near future. Most of the school’s student maker spaces and programs, including the Product Realization Lab (PRL), are run at the departmental level. The building and sustaining of these programs would benefit from a more coordinated approach. Similarly, in research, the tools and equipment required to advance the frontiers of knowledge are becoming more complex and expensive, and the variety of equipment any one investigator might need drives the need for shared services and facilities. Several individuals and groups have been studying the future of shared experimental facilities; it is likely a future initiative would involve multiple schools.

The school remains financially sound but is experiencing inflationary pressure on many core expenses without corresponding increases in revenues. Despite targeted salary increases for midcareer and computational faculty, the school continues to face very significant challenges in faculty hiring and retention, with most of the concern around base salaries and the overall cost of living in the Bay Area. The costs of start-up packages and construction for lab build-outs also continue to escalate. Endowed professorships and a suite of general-purpose endowments are the revenue sources for many of these expenses, so the school is highly dependent on endowment performance to keep up with these rising costs.

**CONSOLIDATED BUDGET OVERVIEW**

The SoE projects a 2018/19 consolidated budget with total revenues and operating transfers of $430.5 million and expenses of $431.1 million. Transfers to assets for locally funded capital projects and transfers to other assets will add $8.2 million. Compared with 2017/18 year-end projections, 2018/19 revenues will decrease 5.3% and expenses will increase 4.3%. This reflects $30 million in one-time gifts in 2017/18 with associated spending that will begin in 2018/19. Sponsored research remains the largest single component of SoE finances, at approximately 35% of revenue; however, this proportion has been shrinking steadily over the last few years. Federal and non-federal grants are projected to remain flat.

The overall school reserve position is strong, but the funds are asymmetrically distributed among faculty, departments, and the school. Of the total reserves, individual faculty and laboratory groups control 82% ($109 million) of designated fund balances and 91% ($118 million) of expendable gift balances, most of which are earmarked for research. The majority of reserves controlled by the school are restricted to faculty and student support, so the dean does not have much financial flexibility to support new initiatives and meet the rising costs of outfitting new research space.

**CAPITAL PLAN**

For 2018/19, the SoE was allocated $4 million in facilities reserve funding to renovate labs for new faculty housed in several engineering buildings. As construction of the Neuro/ChEM-H (Chemistry, Engineering & Medicine for Human Health) Research Complex progresses, the SoE is providing additional funding to outfit individual labs for engineering faculty in both institutes.

There are several studies in the Engineering capital plan, addressing issues such as near-term and longer-term renovations to the Gates Building and exploration of options for the PRL. However, the SoE does not plan any action on the PRL until university long-range planning is more fully developed, as there may be university-wide action on student maker spaces.

The school’s main focus is on the programming study for Bridge Building jointly developed by the SoE and the School of Humanities and Sciences (H&S). This building will house some faculty from the Department of Computer Science and the Department of Statistics, who will pursue the areas of data science and AI broadly with many disciplines in H&S. The building is currently envisioned to house centers or institutes in these areas of study along with the Brown Institute for Media Innovation. The target completion date for the study is late spring 2018.
SCHOOL OF HUMANITIES AND SCIENCES

PROGRAMMATIC DIRECTIONS

The School of Humanities and Sciences (H&S) continues to maintain a position of academic strength, with investments focused on its core activities, while also partnering in university initiatives such as the Neurosciences/ChEM-H (Chemistry, Engineering & Medicine for Human Health) Research Complex. In the upcoming academic year, H&S will undergo a change in leadership. Richard Saller’s decade as dean of H&S has been marked by a broad strengthening of the school’s faculty, large-scale renewal of the physical plant, and reestablishment of financial stability.

H&S grew its faculty 10% between 2010 and 2014, replacing losses experienced after the economic recession. For the past three years, hiring has been at replacement rate, but large faculty start-up costs from the hiring surge continue to impact H&S’s budget, creating a somewhat constrained financial environment. The school intends to continue hiring at replacement rate for the foreseeable future, with any additional growth targeted toward new university initiatives and enhanced faculty diversity.

Facilities growth and renewal continue as the school implements a large multiyear plan. During the past decade, the Arts District was established through the Bing Concert Hall, Anderson Collection, McMurtry Art and Art History, and Roble Gym building projects. Natural science facilities are also undergoing large-scale renewal with development of the Sapp Center for Science Teaching and Learning, construction of the Bass Biology Building, and investments in ChEM-H and Neurosciences facilities. Science facility renewal will continue for several more years as aging Chemistry Department buildings are replaced.

H&S contributions to these construction projects, along with investments in new faculty research support, have significantly reduced Dean’s Office reserves. Replacement-rate hiring has moved the school toward financial equilibrium, and H&S is working to reestablish an annual net surplus in the operating budget to position the school to participate in future university initiatives and building construction projects.

The school remains concerned about undergraduate interests shifting away from the humanities, arts, and social sciences. More than a dozen initiatives have been launched in the humanities, and undergraduate majors have increased 7% over the past four years. Similar initiatives are being developed in the social sciences. The numbers of majors, along with enrollment numbers, in both clusters will be closely monitored going forward. Funding for doctoral students is also under analysis.

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<th>IN MILLIONS OF DOLLARS</th>
<th>2016/17 ACTUALS</th>
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<th>2018/19 PLAN</th>
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<td>Ending Fund Balances</td>
<td>276.3</td>
<td>281.6</td>
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CONSOLIDATED BUDGET OVERVIEW

For 2018/19, H&S projects revenues and operating transfers of $521.8 million and expenses of $508.4 million, resulting in an operating surplus of $13.4 million. After $13.1 million of net transfers to assets, the school projects an increase in consolidated fund balances of $300,000, with an ending balance of $281.9 million. Dean’s Office fund balances are projected to decrease mainly due to spending reserves on large capital projects. Fund balance growth in department-, program-, and faculty-controlled awards offsets this decrease.

For the third consecutive year, endowment payout growth will be less than inflation growth in expenses. H&S is highly dependent upon endowment to fund core operations—particularly faculty salaries and graduate student support. With 30% of the school’s consolidated funding coming from endowment, these shortfalls have a significant impact on finances. The $3.7 million shortfall in 2016/17 was addressed through funding reductions to graduate aid, elimination of nonessential expenditures, and use of departmental reserves. The $2.4 million shortfall in 2017/18 was partially mitigated by provostial funding, with the remainder addressed by funding reductions. The 2018/19 endowment shortfall is projected to be $500,000, and H&S has not budgeted for a third year of funding reductions, in the hope that endowment growth will offset this gap in future years. Recent projections of low growth in endowment payout and continued gaps in 2019/20 and 2020/21, however, raise concerns that additional funding reductions may be necessary.

Dean’s Office unrestricted reserves have declined from a high of $74 million in 2010/11 to $30 million at the end of 2016/17. Reserves have contributed to funding several large construction projects, including the McMurtry Art and Art History and Bass Biology buildings, along with the post-recession faculty hiring surge. A small continued net use of reserves is projected for the next few years, gradually diminishing as lower costs associated with replacement-rate hiring take effect.

Department- and program-controlled balances are growing, but the aggregate trend overshadows the fact that most units are in relative equilibrium. A smaller number of units saw large balance growth, with some receiving large one-time gifts, while others experienced savings from variances in incoming graduate student cohort size. The Dean’s Office is initiating several projects to better understand departmental approaches for projecting restricted balances and reserves, with a goal of having departments develop more strategic and data-driven approaches for managing fund balances.

Faculty-controlled balances have also grown during the past five years, primarily as a result of the post-recession hiring surge and large start-up packages for a few key faculty. Balance growth is projected to slow as replacement-rate hiring continues in H&S.

Sponsored research volume was quite erratic between 2011/12 and 2015/16. Volume has been less volatile since then, and current projections indicate 2018/19 growth equal to the rate of inflation, in line with university-wide sponsored research trends. In addition to impacting direct research expenditures, changes in sponsored research volume also shift faculty summer salary and graduate student support to/from department, program and faculty-controlled funding sources.

CAPITAL PLAN

H&S manages a large capital plan focused on the development of the new science quad, renewal of performance spaces, and research lab modifications for new faculty. Occupancy of the Bass Biology Building will occur in fall 2018, triggering faculty moves from the Mudd Chemistry Building into renovated spaces in the Keck Science and Lorry Lokey Laboratory buildings. In preparation for the demolition of Herrin Hall, development and renewal of the Stock Farm Greenhouse Facility and modifications to lab space in the Gilbert Biology Building are underway to support plant biology research. H&S’s capital plan commitments extend to the Neuro/ChEM-H Research Complex and the Encina Complex Upgrade Project; construction of both is expected to be complete in mid-2019.
PROGRAMMATIC DIRECTIONS

Over the past year, Stanford Law School (SLS) has maintained its position at the very top of national law school rankings—along with Harvard and Yale. This success is due to the strength of the school’s faculty and students, which results from the high priority placed on the continued influx of these talented individuals. Innovations in the curriculum have been made to meet the demands of a rapidly changing legal profession and to better prepare students for their professional futures.

There are exciting changes occurring in the study and practice of law, and SLS is in the enviable position of having exceptional faculty who are passionate about bringing these new areas of legal thought into classrooms, the legal academy, and the legal profession. However, the school is in the midst of a generational shift in faculty; 23 of 48 tenured research faculty will be 59 or older in 2018. In anticipation of future retirements, SLS leadership has focused on retaining, recruiting, and hiring the very best faculty across all ranks and working hard to establish a pipeline of new faculty, who will in many ways shape the future of the law school and its national reputation.

This year the school is focused on strengthening a variety of academic programs. By expanding curriculum offerings in the areas of public service, policy work, global legal practice, and legal technology, SLS is able to address relevant and important topics of interest to law students, as well as to better prepare graduates for a changing professional landscape.

The law school’s efforts in policy on multiple fronts have been another focus this year. One of the newer experiential learning programs, the Law and Policy Lab, has offered 81 small-group practicums since its inception. These practicums match experienced faculty and student teams with actual clients—many from federal, state, or local government. These teams are tackling real-world challenges in areas such as tax code reform, childhood obesity, and the legalization of marijuana, and provide students with an invaluable educational experience.

After five years of the policy lab practicum program, several of the faculty involved have been discussing the possibility of more systematically offering policy analytic skills to the students who have interest in policy-relevant classes. Student interest in policy labs also leads to questions about how best to serve students interested in pursuing policy careers.

The global initiative, now in its fourth year, exposes students to transnational issues across substantive areas of the
law. Over the past two years, the school has improved and expanded the program by allocating additional staff and faculty to help create the curriculum and teach the classes. In addition to the on-campus classes, there are global study classes held in part overseas: last year students traveled with faculty members to China, India, and the Netherlands, and this year there are courses in China, Hong Kong, India, Austria, and Japan.

SLS is also exploring changes in technology—data analytics, machine learning—and how these changes are altering legal decision making and how students should be taught. A particular focus is on the changes in the delivery of legal services and the practice of law. Like policy, this is a topic that many faculty think about when engaged in research, teaching, and other activities. The school is in the process of determining whether the appropriate courses are currently being offered and whether there are beneficial opportunities for faculty who want to pursue these topics in their teaching and research.

The caliber, diversity, and varied professional interests of law students are important factors in keeping SLS at the top of the national rankings. Many other schools are trying to compete for the same high-caliber students, and they have done so by bolstering scholarship awards and providing significant numbers of merit scholarships at significant dollar levels. SLS continues to provide only need-based financial aid, and it continues to make fundraising for financial aid a high priority. The school’s generous Loan Repayment Assistance Program (LRAP) also ensures that graduates who wish to do so can pursue careers in the public service and public interest sectors.

**CONSOLIDATED BUDGET OVERVIEW**

The 2018/19 consolidated budget comprises total revenues and operating transfers of $101.4 million, expenses of $94.9 million, and transfers to assets of $6.4 million. SLS therefore projects an increase in expendable fund balances of roughly $100,000. Transfers to assets comprise $3.6 million transferred to student loan to provide funding for LRAP, $600,000 transferred to plant for the continuation of the Crown Quadrangle renovation project, and $2.2 million of endowment income reinvested into funds functioning as endowment (FFE).

Consolidated revenue, exclusive of operating transfers, is estimated to increase 3% to $66.3 million. After expansion of executive education programs in recent years, designated income ($5.1 million) will be more consistent. Expendable gifts are projected to grow 2% to $13.1 million. As a result of new gifts to endowment and prior-year FFE investments, endowment income should rise 4% to $45.5 million. Sponsored research remains steady and will generate $2.2 million; half of this total is for the U.S. Department of State grant to support the Afghanistan Legal Education Project.

Total consolidated expenses are anticipated to grow more than 6.2% to $94.9 million. A portion of this growth is attributed to ongoing faculty recruitment and retention efforts. Additionally, as the law curriculum evolves, there will be other new expenses associated with the Mills Legal Clinic and the global initiative program. Lastly, both Law School Student Affairs and Admissions & Financial Aid will receive new resources for diversity and inclusion staffing and programming.

The aforementioned activities will contribute to an increase in compensation of over 7% to $68.6 million. The largest compensation group, academic salaries, will grow to $36.6 million. Non-compensation expenses will rise almost 4% to $26.3 million, increasing at similar rates in both internal and external categories.

SLS consolidated expendable fund balances will increase by roughly $100,000 to $25.3 million. Of this amount, $12.9 million is unavailable; it is in noncash investments in the Law School Venture Fund and housing loans. The remaining $12.4 million is available. It consists of $11.6 million for restricted purposes, such as academic programs and centers and financial aid, and $800,000 for unrestricted purposes.
SCHOOL OF MEDICINE

PROGRAMMATIC DIRECTIONS

The School of Medicine is an academic medical center that, combined with Stanford Health Care and Lucile Packard Children’s Hospital Stanford | Stanford Children’s Health, is known as Stanford Medicine. Its mission is tripartite: to improve human health locally and globally through innovative discovery and the translation of new knowledge; to serve the community by providing outstanding and compassionate care; and to inspire and prepare the future leaders of science and medicine. Stanford Medicine’s vision is bold: to lead the biomedical revolution in precision health. A fundamental shift from reactive medicine to proactive and personalized health care, precision health is made possible by revolutions in genomics, data, and technology. The goal of precision health is to predict, prevent, and cure—precisely.

Stanford Medicine is at the final stage of the integrated strategic planning process to develop an overarching plan that is inclusive of its research, education, and patient care missions. The process began with a thorough diagnostic assessment of Stanford Medicine’s organizational culture, capabilities, and performance. Thirteen cross-organizational workgroups incorporated the perspective of every clinical and basic science department and both health care delivery systems, based on input from thousands of surveys and interviews.

Three integrated strategic priorities have emerged from this planning process: Value Focused, Digitally Driven, and Uniquely Stanford. As health care costs continue to rise, Stanford Medicine is focused on the value equation—excelling at quality while driving down cost. With its long history of technological innovation, Stanford Medicine is in an unparalleled position to lead health care in the digital age. Finally, Stanford Medicine is committed to continuing to partner with the university at every opportunity, embracing the distinctive Stanford culture that emphasizes collaboration across disciplines and schools.

This planning process is complementary to the university’s long-range planning process and aligned with its emerging priorities. Stanford Medicine’s plan will not be final until it is presented to the Stanford University Board of Trustees in June 2018. Even after that, it will be regularly updated to reflect new opportunities and challenges. An annual working plan will outline deliverables and measurable gauges of success.

The school has successfully increased its research funding. In 2017 it earned the number three spot in terms of total National Institutes of Health (NIH) funding to schools of medicine (though effective levels of NIH funding have decreased over the last decade). Stanford Medicine also launched Project Baseline, a collaboration with Verily, Google, and Duke University to conduct a longitudinal observational...
study involving 10,000 participants, and the Apple Heart Study to determine whether the Apple Watch's heart rate sensor can identify irregular heart rhythms. Through the newly opened Laboratory for Cell and Gene Medicine, designed to accelerate the development of cell and gene therapies, the school has increased research competitiveness in new areas.

Last fall, the School of Medicine began implementing a new MD program curriculum, which strengthens educational experiences in the basic sciences and gives students an option to take the pre-clerkship curriculum over three years to enable time for in-depth scholarship. The school also launched a new physician assistant master’s program with an inaugural class of 27 students. For PhD students, the school established Foundations in Experimental Biology, a unique multidisciplinary course for incoming students, and minicourses that allow students and postdocs to tailor their education across disciplines.

Diversity continues to be a key priority, and the school has engaged in a wide range of inclusion initiatives, including the opening of the Diversity Center of Representation and Empowerment last fall. With the help of expanded programming, outreach, and scholarships, the 2017/18 PhD and MD entering classes included 22% and 26% underrepresented minorities, respectively. In 2017, Stanford Medicine became the first academic medical center in the United States to have a chief wellness officer, an important milestone in the national effort to address physician burnout.

**CONSOLIDATED BUDGET OVERVIEW**

The school projects total revenues and transfers of $2,527.5 million in 2018/19 and expenses of $2,467.6 million, yielding an operating surplus of $59.8 million. A contribution of $21.0 million as transfer from plant and other assets increases the net change in current funds to $80.8 million. Offsetting growth in health care services, tuition, and sponsored research is an expected decline in gift revenue, driven by receipt of a large one-time gift in 2017/18.

Total revenues and transfers are projected to increase by 4.9%, or $119.1 million, in 2018/19. Key drivers include the following:

- Renewed funds flow agreements with the hospitals will contribute growth of 7.6%, or $84.3 million, in health care services revenue that will reach $1,200.1 million in 2018/19. This growth is driven by increases in clinical program activities and incremental faculty and clinicians.
- Tuition revenue is expected to grow 8.3%, primarily from the new physician assistant master’s program introduced in 2017/18.
- Federal and non-federal sponsored research revenue is projected to grow 3.3%, mainly driven by new faculty hires.

Expenses are projected to increase by 8.1%, or $184.2 million, in 2018/19. Major areas of increase are the following:

- The school projects net recruitment of 34 faculty, 20 in the Medical Center line and 14 in the university tenure line. In addition, it anticipates adding 80 clinician educators for 2018/19.
- Total compensation for faculty, clinicians, and staff is expected to increase 8.9% in 2018/19. The main drivers are increases in clinical activity growth, incremental recruitment, and the annual salary program.
- Projected growth in sponsored research and health care services revenue will drive related non-compensation expenses higher in 2018/19. Rent expenses are expected to increase with the move of administrative functions to Redwood City and new Research Park leases.

Transfers to plant of $5.6 million for renovation of research park spaces will be offset by return of $13.9 million from completed capital projects and bridged funds on the Lorry I. Lokey Stem Cell Research Building. An additional $12.7 million will be transferred from pending to current gifts.

**CAPITAL PLAN**

The school’s capital plan for 2018/19 includes ongoing work on the Center for Academic Medicine I and the BioMedical Innovation Building, construction on both of which began in 2017/18. They are on schedule to be completed in 2020 and on budget at $222 million and $210 million, respectively.

Additionally, the capital plan includes renovation and tenant improvements for new wet and dry lab research spaces in Stanford Research Park. The lease of 1701 Page Mill Road will increase the school’s wet lab research space by 116,000 square feet. This $24 million wet lab renovation project is planned to begin in 2018, with occupancy projected for 2019. Pending the identification of a specific location, feasibility, engineering, and design studies for the dry lab research space will begin in 2018/19, with construction planned for 2020. The total project cost is estimated to be $10 million.
The Office of the Vice Provost and Dean of Research (DoR) is responsible for facilitation of faculty research and scholarship across all of the schools and departments and serves as cognizant dean for the 18 university-wide independent laboratories, institutes, and centers. These organizations provide intellectual and physical environments for research that invite scientific and scholarly dialogue, facilitate interdisciplinary collaborations, support policy-relevant research, and increase the success of faculty in obtaining research funding. The office has oversight of the implementation of research policies and manages the compliance and administrative offices that support research. DoR also oversees major shared facilities that support a broad range of research and scholarly activities.

**PROGRAMMATIC DIRECTIONS**

Through all of its activities, DoR seeks to support faculty competitiveness in research and scholarship. This is particularly important as obtaining extramural funding becomes increasingly challenging. DoR will pursue this goal through the following four program objectives in 2018/19:

- Providing state-of-the-art shared facilities;
- Minimizing compliance and administration burdens for faculty and staff; and
- Mitigating research-related safety risks.

The Woods Institute for the Environment (Woods) is launching a major new multidisciplinary initiative on climate change that will include other Stanford institutes, schools, and departments, as well as organizations beyond Stanford. Effectively addressing climate change through both adaptation and mitigation requires an unparalleled level of systems thinking. The focus will be on workshops about the relationship between climate change adaptation and infrastructure development, environmental impacts of sustainable energy expansion, and the role of international development assistance in climate change mitigation.

The Freeman Spogli Institute for International Studies (FSI) plans initiatives related to the Middle East; global health, governance, and security; governing the global economy; European security; biosecurity; and U.S.–Asia security, and seeks to increase its impact in the public policy arena through its International Policy Outreach Lab. New education programs will make more use of case studies, place greater emphasis on technology, and introduce new specializations (e.g., cyber policy).
New programs in the Stanford Institute on Economic Policy Research are designed to deepen the understanding of pressing economic challenges and opportunities in the United States and globally, and increase student interest in economic policy and public service to create a pipeline of thought leaders.

Bio-X, ChEM-H (Chemistry, Engineering & Medicine for Human Health), and the Stanford Neurosciences Institute (SNI) are collaborating to optimize opportunities for research and education in the life sciences. SNI and ChEM-H are jointly planning knowledge centers and community labs that will benefit life sciences researchers and students broadly. The independent labs and institutes that focus on the physical sciences are developing new programs in advanced imaging to leverage the Stanford–SLAC relationship and attract and support the most talented postdoctoral fellows.

CONSOLIDATED BUDGET OVERVIEW

DoR projects a 2018/19 consolidated budget with total revenues and operating transfers of $228.6 million and expenses of $237.6 million, resulting in a net deficit of $9 million. After transfers to assets of $7 million, the net change in current funds is a deficit of $2.0 million. Compared with 2017/18 year-end projections, 2018/19 revenues will decrease 5.4% and expenses will increase 2.8%.

Total revenues and transfers are projected to decrease by 5.4%, or $13.1 million. This is primarily due to the reduction in projected gift and sponsored funding sources. Gift revenue is projected based on known development initiatives and trend analysis. DoR has benefited from large unanticipated gifts, though it projects gift revenue conservatively, thus resulting in a planned decrease of 17%, or $6.7 million. Sponsored revenue is projected to decrease by 12%, or $9.5 million. Federal sponsored funding is expected to increase by 5%, or $2.2 million. Non-federal funding is projected to decrease by 36%, or $11.8 million. This reduction is primarily due to the fact that a variety of programs and projects are coming to an end in 2018/19, including the Global Climate and Energy Project and the Beamline at SLAC. Several units, such as FSI and Woods, have also experienced a slow ramp-up of non-federally funded projects.

The overall DoR reserve position is strong; however, funds are restricted to the control of faculty and departments. Of the total reserves, 84% ($165 million) are controlled by faculty and department programs, and all of these funds are earmarked for research.

CAPITAL PLAN

To preserve the historic architecture of the Encina Complex and improve its functionality as a university-wide hub for international studies, renovations are currently under way to convert major portions of Encina Hall and Commons from administrative use to academic use. Once completed, Encina’s physical space will promote greater collaboration among faculty and students; provide more teaching facilities; and create dynamic relationships across social science, area studies, and policy research. The reconfigured space will also improve spatial flow and access throughout the entire complex while maintaining its character-defining features.

The project will seismically upgrade Encina Commons, convert approximately 16,000 square feet of administrative space for academic use, and renovate the courtyard between Encina Hall and the Commons. An outdated kitchen in Encina Commons will be demolished, allowing for a generous garden courtyard and patio area. The new courtyard, with its landscape, hardscape, and water feature, will become the new outdoor gathering space for daily use as well as for outdoor receptions, ceremonies, and informal gatherings. The redesigned outdoor space will also inspire interaction between FSI and Humanities and Sciences, as well as facilitate interdisciplinary classes and create room for a new Policy Implementation Lab to help students and research practitioners put their ideas into practice. The project will cost $25.8 million and is scheduled to be completed in mid-2019/20.
PROGRAMMATIC DIRECTIONS

The Office of the Vice Provost for Undergraduate Education (VPUE) serves as the nexus for key programs and initiatives that meaningfully engage all 7,000 undergraduate students over the course of their Stanford careers. Working in collaboration with faculty, schools, and departments across the university, VPUE advocates for a preeminent undergraduate experience; facilitates students’ acclimation to the college environment; helps undergraduates explore, define, and achieve their intellectual ambitions; and encourages their development into confident, creative, and engaged leaders.

Over the past year, VPUE has continued to foster student success and well-being by making substantial progress in three main focus areas:

- Building strong academic foundations with general education courses and signature ongoing programs that help students develop the skills needed for a successful academic career. These programs include the Program in Writing and Rhetoric, Thinking Matters, Ways of Thinking/Ways of Doing, Education as Self Fashioning, Immersion in the Arts: Living in Culture, and Structured Liberal Education.

- Providing targeted opportunities that inspire students to explore their intellectual interests and to discover their academic passions. In 2017/18, Stanford Introductory Seminars offered over 200 faculty-led seminars spanning all seven schools, each course capped at 16 undergraduate students. This past summer, 375 students participated in one of VPUE’s three-week, on-campus intensive learning experiences: Sophomore College, Arts Intensive, and Bing Honors College. Approximately 1,000 students each year receive support through one of VPUE’s undergraduate research grant programs, facilitating student participation in faculty-designed or independent research.

- Encouraging learning through experience and reflection by providing opportunities for students to apply classroom learning to real-world situations as they engage in hands-on practice. Long considered one of VPUE’s flagship experiential learning programs, the Bing Overseas Studies Program (BOSP) provides roughly 900 undergraduate students each year with transformative, culturally immersive learning opportunities overseas. This past year also saw Stanford in New York (SiNY) enter the third year of its pilot phase. SiNY offered its first spring quarter and, as a result, expanded to a full, academic year–long experiential program, offering 20 students per quarter the opportunity to study and do internships in one of the world’s most iconic cities. VPUE, in partnership with the Haas Center for Public Service (Haas) and the deans of Stanford Earth,
School of Engineering, and School of Humanities and Sciences, will continue the initiative to add directors of community engaged learning, which has significantly enhanced the quantity and quality of service-learning courses offered across the campus. VPUE will receive incremental base general funds in 2018/19 to support this initiative. Combined with continued funding from other school deans and Haas, VPUE hopes to have the resources to maintain this program at a robust level.

Looking ahead, VPUE has identified two additional areas of focus for 2018/19:

- Providing enhanced guidance and support to specific, vulnerable student populations, and
- Assisting all students in organizing academic choice and discovering purposeful pathways.

VPUE’s annual student assessments, in conjunction with those of Institutional Research and Decision Support, have shown that, by focusing on these two areas, it will support needs that cut across Stanford’s diverse and evolving student population. In recent surveys, Stanford students report high levels of stress and uneven feelings of belonging, with first-generation, low-income (FLI) students reporting higher levels of stress than their continuing-generation peers. Studies show that targeted interventions such as the Leland Scholars Program (LSP), now in its seventh year, can be beneficial in mitigating these concerns. In 2018/19, VPUE will undertake coordinated efforts to elevate and enhance LSP—the four-week, community-building summer bridge program that provides 60 first-year students from underresourced high schools with introductory academic work in chemistry, writing, and oral communication immediately prior to their frosh year. As another approach to student well-being, in 2017/18 VPUE launched a pilot residential seminar program, Frosh 101, with 100 students to address issues of belonging, community, and identity. Next year, the program will expand to some 300 students.

In addition, VPUE seeks strategically to engage in thoughtful and deliberate reimagining of undergraduate advising. This effort will include building stronger collaborations with campus partners and identifying how to make the best use of new online tools such as Carta, without discounting the undeniable benefit students receive from in-person, sustained engagement with highly trained academic advisors. During 2018/19, VPUE will add another professional advisor. Funded by VPUE, this advisor will enhance the capacity of Undergraduate Advising and Research to provide dedicated support to students from underresourced high schools.

**CONSOLIDATED BUDGET OVERVIEW**

VPUE projects a 2018/19 consolidated budget with total revenues and operating transfers of $64.6 million, total expenses of $66.4 million, and total transfers from assets of $124,000, yielding an overall deficit of $1.7 million.

Approximately half of the projected deficit is attributable to disadvantageous foreign currency exchange rates. Given the size of BOSP’s operations, VPUE’s budget has, at times, benefited from a strong U.S. dollar; at other times, the budget has been negatively impacted. VPUE has maintained a currency reserve fund precisely for this contingency, and in 2018/19, VPUE will be drawing down on those reserves.

Another significant source of the 2018/19 deficit relates to a $1.5 million decrease in one-time provostial and presidential funding as commitments supporting the pilot SiNY program, LSP, and a co-term advising position come to an end. VPUE has been rigorously assessing these pilots and is actively seeking ongoing donor support for those initiatives that have proven to be particularly effective. Development efforts to date have been promising, and VPUE is optimistic that such efforts will yield incremental, sustainable revenues that will mitigate any future-year deficits.

Outside of standard cost rise and the incremental academic advisor FTE referenced above, 2018/19 is expected to be a year of minimal programmatic growth, with more organizational focus on strengthening and sustaining base programs.

VPUE anticipates ending 2018/19 with an overall fund balance of $20.5 million. A steady growth in unrestricted fund balances over the past several years has provided VPUE with the flexibility to make strategic use of its reserves. In 2018/19, VPUE plans to deliberately reduce its reserves to address the current year’s projected deficit.
The Office of the Vice Provost for Graduate Education (VPGE) plays a key leadership role to ensure that Stanford graduate students have the best possible educational experience. VPGE marshals distinctive resources across the university as a catalyst for academic innovation and creative problem solving to address systemic challenges within Stanford’s large and complex organization. Over 9,400 graduate students pursue 15 distinct types of degrees in 212 graduate degree programs across the seven schools. Students are encouraged to be bold in their ambition and prepare to have impact in an increasingly diverse and complex world. To these ends, VPGE provides opportunities for leadership and professional development, interdisciplinary learning, and advancement of diversity within Stanford’s inclusive community. VPGE’s programs and fellowships reach over 5,100 graduate students annually, including 850 students supported by one or more of VPGE’s seven fellowship programs.

Fellowships
VPGE fellowship funding will increase 8%, from $37.8 million in 2017/18 to $40.7 million in 2018/19, despite minimal growth in endowment payout and general funds income. This plan enables the number of VPGE fellows to remain constant.

For endowed fellowships, the Stanford Graduate Fellowships in Science and Engineering (SGFs) and the Stanford Interdisciplinary Graduate Fellowships, the number of new awards may be reduced if endowment income remains flat. Stipend amounts will increase 4% next year, while tuition will increase 3.5%. Fund balances will cover this expected increase in graduate student support.

Departments, schools, and students rely heavily on VPGE’s funding, which helps with departmental planning, given multiyear funding; increases diversity in graduate student enrollment; and mitigates financial stress and affordability challenges for students.

Innovative Programs
VPGE continues to develop opportunities open to all graduate students through the Graduate Professional Development (GPD) framework, which includes initiatives that promote professional skills in major domains, such as leadership, communication, teaching, and preparation for faculty careers. The GPD framework itself is an interactive tool that students use to assess their skills, determine priorities for gaining proficiency, and locate resources at Stanford—many of which are provided by VPGE.

Revenues and expenses in this chart and table include $35.8 million of activity that is accounted for as operating transfers in Appendix A.
A major focus to improve graduate education is to strengthen student-faculty advising relationships. When advising goes well, it may be the best part of a student’s graduate education. When it doesn’t, it can be a major impediment. Graduate students and faculty alike have conveyed a range of concerns about advising. With input from the Committee on Graduate Studies, directors of graduate studies, faculty, students, and colleagues at peer universities, VPGE is developing clear guidelines and disseminating established best practices, including templates to scaffold conversations as well as advising workshops for students and faculty on parallel tracks. Topics range from setting expectations to giving feedback and resolving conflicts.

VPGE provides innovative programs in collaboration with Stanford’s seven schools to recruit and retain students from diverse backgrounds and enhance their educational experiences while at Stanford. Among several initiatives, two are noteworthy for their impact and national visibility. VPGE has scaled the Enhancing Diversity in Graduate Education (EDGE) Doctoral Fellowship Program from 57 to 100 new awards annually. EDGE supports incoming PhD students who bring diversity, broadly defined, in the context of their academic fields. EDGE provides mentoring, professional development, and research funds. The Diversifying Academia, Recruiting Excellence (DARE) Doctoral Fellowship Program is in its 10th year of supporting advanced PhD students who bring diversity to their fields as they prepare for academic careers. With 188 fellowships awarded thus far, over 130 DARE fellows have graduated, and 75% are employed in the academic sector.

This is an era when many graduate students turn to the university for more holistic support. Students seek more central resources that supplement specialized advanced study in their degree programs, including professional development and career preparation, as well as enhancing their daily lives at Stanford. They have articulated their perspectives through VPGE’s “What’s Possible” portal as well as submissions to the university’s long-range planning process. Students have identified several factors that may impede academic progress and therefore offer opportunities for change. These opportunities involve requests for resources to mitigate financial stress, improve faculty advising, hire and retain diverse faculty, increase the diversity of graduate enrollment, promote a more inclusive culture through training for faculty and staff, add resources to support mental health and well-being, further subsidize health insurance, and add subsidies for child care. Collaborating with university leaders, students, faculty, and staff across the campus, VPGE will continue to explore how to address these needs and prioritize them in the context of the university’s long-range planning.

CONSOLIDATED BUDGET OVERVIEW

VPGE was launched in 2007 with a highly restricted endowed fund balance for the SGF program. As growth was more gradual than initially envisioned, VPGE accrued a designated fund balance from general funds as well as patent income from the Office of Technology Licensing (including an unprecedented $9 million). As a result, since 2015, VPGE’s fiscal strategy has been to sustain an annual deficit in the consolidated budget to be covered by designated and endowed fund balances. The reserves cover higher expenses for graduate student funding and programs as well as anticipated declines in endowment income for multiyear fellowships.

VPGE projects a 2018/19 consolidated budget with total revenue and operating transfers of $43.7 million and expenses of $48.6 million, resulting in an operating deficit of $4.8 million. After asset transfers of $300,000, a deficit of $5.2 million in fund balances is expected. This will reduce the consolidated fund balance to $44.4 million at year-end, as planned.

The 2018/19 consolidated expenses comprise 85% direct graduate student support, 9% compensation and benefits, and 6% programmatic non-compensation expenses. VPGE will provide $40.7 million in direct graduate student funding for fellowship programs in 2018/19. Tuition and salary/stipend rate increases in fellowships and programs drive this increase in funding. Compensation and non-compensation expenses are expected to increase slightly to $4.6 million and $3.2 million, respectively.

VPGE is confident the budget plan will provide sufficient stability and flexibility over the next three years. Forecast models indicate consolidated deficits will be increased annually, bringing the consolidated fund balance to $32.8 million by 2020/21. VPGE will monitor the fund balance closely as it makes decisions while long-range planning unfolds. There is excitement about initiatives that will emerge, which at present have unknown budgetary implications. The need for a sustainable growth model is unarguable. Next steps will entail some difficult decisions, as there are always more good ideas and compelling needs than resources to support them. VPGE will work to identify what matters most and where there is leverage for change in the highest priorities.
The Office of the Vice Provost for Teaching and Learning (VPTL) broadly supports learning across all of Stanford’s schools and beyond the campus, advancing faculty-led programs and initiatives. VPTL’s mission reflects campus priorities; it is intended to help Stanford invent the future research university through faculty-initiated teaching and learning innovation for undergraduate, graduate, professional, and lifelong learning. VPTL’s activities and services draw upon core competencies in pedagogy, educational technology, learning environments, academic business development, and strategic collaboration throughout the university.

Throughout 2017/18, VPTL actively engaged in the long-range planning (LRP) initiative. VPTL submitted proposals with partners across campus, shored up essential campus-based learning services, and prepared to support university-wide priorities that will emerge from the LRP effort.

**PROGRAMMATIC DIRECTIONS**

In 2017/18, VPTL mapped out five areas of strategic focus for 2018/19 that reflect the goals of faculty, departments, and schools and that capitalize on the organization’s core competencies to best meet increased needs expressed by both faculty and students. The five areas are pedagogy and learning success, learning spaces and tools, expanded credit and degree programs, global engagement, and—a smaller but important area—support for the research community. As a service organization that is responsive to campus priorities, VPTL established an academic advisory council (AAC) composed of dean-appointed representatives, as well as three focus-area steering groups with representation from each of the seven schools and from students.

**Pedagogy and Learning Success**

VPTL provides instructors and students with customized support for learning, using principles of goal-based design, engagement, inclusion, and reflection. In 2018/19 VPTL will continue to support increased and improved educational opportunities for instructors and graduate students to acquire discipline-specific pedagogical foundations, develop new teaching ideas, and apply inclusion and engagement strategies in their teaching. One specific opportunity VPTL will support with campus partners is the development of a graduate student teaching certificate using blended modes of face-to-face instruction combined with online learning.

Learning success programs delivered by VPTL optimize student learning and resilience through tutoring, coaching, workshops, and learning communities. These programs help the university expand its efforts around inclusion and diversity, especially helping first-generation and low-income students build capacity and develop a sense of belonging at Stanford. In 2018/19 VPTL will hire peer leaders and expand academic skills and discipline-specific study support to...
student community centers, residence halls, and departments. This will not only fill an unmet need for student learning support, but also help tailor this support to distinct academic disciplines.

**Learning Spaces and Tools**

In 2018/19 VPTL will continue work started in 2017/18 with Land, Buildings and Real Estate to build a comprehensive and rigorous framework designing instructional spaces when planning new buildings and renovating existing buildings. VPTL will facilitate a campus-wide instructional space study with campus partners and school representatives. The long-term goal is to use the output of this study to better inform the location, type, and size of both formal and informal classroom spaces. This will improve support for learners and instructors while also allowing flexibility to accommodate the future needs of evolving teaching practices.

Faculty are increasingly interested in adopting new technologies, tools, and platforms that in some cases promise dramatic improvements in student learning activities or substantial time savings for faculty and other instructors. VPTL has been asked to serve as a central resource to support the secure, efficient, and effective adoption of these digital tools. In 2018/19 VPTL will continue to use its depth of knowledge in this area to analyze and implement tools that faculty/students want while optimizing Stanford’s investment and minimizing risk.

**Expanded Credit and Degree Programs**

Historically, admission to many Stanford programs has been limited by physical capacity. In addition to supporting broader, non-degree learning opportunities, VPTL supports schools and departments in delivering hybrid degree and online degree programs to learners worldwide. Upon school and department demand, in 2018/19 VPTL will deliver three new hybrid/online degree programs and two new graduate certificate programs, all in different schools. Additionally, VPTL will explore new delivery modes to not only enhance the learner’s experience, but also help address issues such as the needs to scale learning and to make the most of valuable faculty time over the long term.

**Global Engagement**

VPTL plays a significant role in extending the global reach and impact of Stanford’s educational mission. By the end of 2018/19, VPTL will help create hybrid, remote, and in-country educational programs and support meaningful engagement in six countries: China, France, India, South Africa, Thailand, and United Arab Emirates. The engagement in India and South Africa is related primarily to VPTL’s 2017/18 addition of the Stanford Center for Health Education (SCHE), a partnership with the School of Medicine. SCHE supports a more effective and efficient approach to the training of health professionals at Stanford and around the world. SCHE is being studied as a model for global engagement by interested faculty, schools, and departments.

**Research Community**

VPTL supports faculty and graduate students interested in conducting research on learning by managing data on learning/learners and making that data available for research, suitably anonymized. The emergence of online courses with massive enrollments has enabled an entirely new field of educational research: the analysis of educational data on a very large scale. The Stanford Lytics Lab at the Graduate School of Education, supported by VPTL, is currently developing a body of experimentally validated research that identifies targeted interventions most likely to improve student learning at scale.

**CONSOLIDATED BUDGET OVERVIEW**

The 2018/19 consolidated budget for VPTL projects total revenues and operating transfers of $41.2 million and expenses of $41.2 million, resulting in a small net operating surplus of $67,000.

Total revenues in 2018/19 are projected to increase by $1.1 million, or 2.8%, from 2017/18. This increase is due to the expansion of departmentally requested online degree and hybrid programs as well as the growth in new faculty-developed graduate certificate programs.

Total expenses in 2018/19 are projected to increase by $1.3 million, or 3.1%, from 2017/18. Compensation expenses are projected to increase $968,000, or 3.9%, primarily due to annual merit increases. Non-compensation expenses are projected to increase by $285,000, or 1.9%, which is slightly below the rate of inflation. This is primarily due to a change in the funding model for Converged Communications Services.

VPTL expects to have a $12 million fund balance at the end of 2018/19. It plans to utilize that balance to support additional program development for residential and online students; new technologies, tools, and platforms; pilots of new modes of course delivery; and technology reserves to refresh VPTL’s technology-rich spaces throughout campus over the next several years.
PROGRAMMATIC DIRECTIONS

The Vice Presidency for the Arts (VPA) was established in February 2017 by the president and provost. It brings together five arts organizations previously housed under the School of Humanities and Sciences (H&S): the Cantor Arts Center, the Anderson Collection at Stanford University, Stanford Live and Bing Concert Hall, the Stanford Arts Institute, and the Institute for Diversity in the Arts (IDA). In addition, a central office provides administrative oversight, supports extracurricular student arts activities, distributes arts grants, and spearheads university arts initiatives. The academic arts departments remain in H&S as key collaborative partners for the VPA.

Building on the accomplishments of the Stanford Arts Initiative (Stanford Challenge, 2007-2011), the VPA plans to move the arts to the next level. In 2017/18, the VPA undertook a process of strategic planning in alignment with the university-wide long-range planning effort. Out of this process, the VPA has articulated two major themes: (1) making Stanford a vibrant home for art and artists, and (2) drawing on Stanford’s multidisciplinary strengths to impact significantly the future of the arts. The two goals will be achieved through new and newly consolidated programmatic initiatives as follows:

- **A vibrant home for art and artists:** Stanford has long been known for its strengths as a research university, but has not been recognized as a leader in the arts. The VPA is committed to changing this dynamic. This will involve magnifying successful programming, collections, and exhibitions presented by VPA organizations. In addition, the VPA will launch a major new visiting artist series, which will bring some of the best and most interesting artists practicing today to Stanford for short-term residencies to engage with students and faculty while workshopping their next projects. The VPA is also working to develop a new public art program, which will create a dynamic presence of contemporary art on campus. Finally, the VPA continues to build support for students in extracurricular arts activities and exploration of career goals in the arts.

- **“Only at Stanford” arts programs:** The arts are changing rapidly through connections across media and artistic disciplines, new technological opportunities, and changing audience habits. Stanford has an opportunity to use its multidisciplinary strengths to help define and forge the future of the arts. To take advantage of this opportunity, the VPA is prioritizing programs and approaches that can only take place at Stanford. In particular, new initiatives are underway in art and technology, next-generation storytelling, art and public policy, and arts leadership.
In addition to the VPA-wide initiatives outlined above, new programmatic directions at the Cantor Arts Center and Stanford Live are of note. The Cantor Arts Center’s new director, Susan Dackerman, who came to Stanford in September 2017, is revamping the exhibition planning and academic engagement structure for the museum. Strategic planning in 2017/18 will result in a revised operating strategy starting in 2018/19. Also in 2018/19, Stanford Live will open a renovated Frost Amphitheater, which will house large-scale performances presented in partnership with external organizations. This will result in a significant increase in earned revenues and also increased operating expenses for the organization.

CONSOLIDATED BUDGET OVERVIEW

The financial situations of the different VPA units vary dramatically. Each unit has its own dedicated funds, with varying levels of restrictions. Cantor, Anderson, and Stanford Live all operate in many ways as nonprofit businesses rather than academic units, and their financial model reflects that orientation. Fundraising for special projects is frequent, and growth in program expenses and one-time expenses is driven by the availability of appropriate funding, so expenses are quite variable year over year. VPA units frequently book gifts in a given year that are earmarked to be spent in subsequent years, so reserve funds are deployed across multiple fiscal years.

The VPA projects a 2018/19 consolidated budget with total revenues and operating transfers of $22.6 million and expenses of $25.5 million, resulting in an operating deficit of $2.9 million that reflects the strategic deployment of reserves. After transfers to plant of $1 million, the net decline in current funds is $3.9 million.

Revenues and operating transfers are expected to remain flat from 2017/18. Earned income is expected to increase by $1.2 million due to anticipated revenue from Frost Amphitheater, opening in 2018/19. However, gift revenue is expected to be lower by $1.1 million, mainly due to receipt of an unusually high one-time gift in 2017/18. This will be slightly offset by higher gift and membership revenues expected by the museums in connection with anniversary activities in 2019. Expenses are expected to grow by $1.3 million due to an increase in staff to support the new Frost Amphitheater and VPA infrastructure and to fill critical vacant positions at the Cantor Arts Center to support the new director’s strategic priorities. There are also expected to be one-time expenditures for Cantor Arts Center art acquisitions. Transfers of $1 million to plant include Cantor Arts Center security upgrade and space/storage utilization projects.

The VPA’s financial priorities in 2018/19 are to:

- Sustain base operations of the VPA organizations;
- Develop an efficient and scalable infrastructure to support the VPA organizations;
- Strategically use reserves to update the Cantor Arts Center to bring it up to standards and make it a leading accredited university museum capable of supporting future/digital art forms; and
- Develop and pilot new initiatives, including new artist residencies and enhanced student professional development programs in the arts.

VPA generally funds new initiatives and pilot programs through expendable gifts. Core programs are sustained through endowment payouts, expendable gifts, earned income, and general funds. VPA has made the strategic decision to centralize several positions, along with the funding associated with these positions, to create efficiencies and become more scalable to support growth and new initiatives.

VPA’s overall reserve position is strong, with an expected fund balance of $26 million beginning in 2018/19. However, the reserves are unevenly distributed among the organizations within VPA, and restricted to use for those organizations. The Cantor Arts Center controls 65% of the fund balance, and Stanford Live controls 17%. Anderson and IDA control less than 3%. The majority of the remaining reserves are restricted for visiting artists and student extracurricular arts program support.

CAPITAL PLAN

The most significant VPA capital project is the renovation of Frost Amphitheater, scheduled to be completed in fall 2018. Additionally, in 2018/19 the Cantor Arts Center will conduct a study to identify opportunities to optimize space use for exhibitions and operations. Finally, VPA is working with H&S to conduct a feasibility study and to evaluate programmatic needs for performance and multidisciplinary arts space as a precursor to considering the possibility of a renovation of the Memorial Auditorium facility.
With its eminent scholars and world-renowned archives, the Hoover Institution seeks to improve the human condition by advancing ideas that promote economic opportunity and prosperity, while securing and safeguarding peace. The Hoover Institution generates ideas from its fellowship, collects knowledge in its Library & Archives, and communicates such knowledge and ideas to a broad audience, particularly undergraduate students at Stanford and elsewhere.

Hoover is approaching the beginning of its centennial year in 2018/19. During its first one hundred years, the institution earned an enviable position in the policy research community due to its fellows and archives. As Hoover enters into its next century, the institution will reinforce its strengths in research and education and accelerate its pace of innovation. Recent activities lay the foundation for these upcoming strategic objectives.

Hoover’s hallmark is independent policy scholarship that is distinguished by empirical and intellectual rigor. Therefore, a strong and vital fellowship is critically important. Hoover will formalize its existing fellow recruiting process, seeking to identify a diverse group of fellows ascending in their careers. The institution recently appointed Joshua Rauh as the director of research to lead the effort of cultivating the fellowship. Under his direction, the institution will launch the Hoover Fellows program next year, recruiting scholars for five-year term appointments. Hoover hopes to appoint three fellows per year, to build a pipeline of scholars for more senior positions at the institution. In addition, Hoover will continue to appoint adjunct fellows, seeking to expand its senior fellowship by identifying scholars from other institutions at the pinnacle of their careers. Raghuram Rajan from the University of Chicago and Stephen Kotkin of Princeton University are two of the scholars appointed as adjunct senior fellows in the last year. The 2018/19 budget plan includes expenses for this more rigorous recruitment process, as well as for a limited number of short-term adjunct appointments.

Hoover views the convening of scholars to tackle changes in public policy as an essential function, which it performs primarily through conferences and seminars. Output from these events will reach and influence audiences beyond those able to attend in person. These gatherings, which include scholars from organizations beyond Hoover and Stanford, allow the institution to leverage its existing fellowship and further identify talent to build the core fellowship.

Hoover has a unique opportunity to educate and inform policy leaders and the broader public by utilizing its educational platforms and facilities, both at Stanford and in...
its Washington, D.C. office. Hoover created the Educating Americans in Public Policy initiative to translate the institution’s work into accessible, shareable content. Since the launch of the initiative’s Web platform, PolicyEd.org, in late 2016, Hoover content has garnered more than 38 million views. The institution will continue to develop unique educational content on this platform in the coming year. Locally, the recent opening of the David and Joan Traitel Building provides new opportunities to engage and inform the broader Stanford community with lecture series, policy boot camps, and other programs. One example is the Cardinal Conversations series, begun in January 2018 in collaboration with the university and the Freeman Spogli Institute. The speaker series is a thought-provoking community discussion of key issues across the political spectrum and is included in the 2018/19 budget.

The Library & Archives commit themselves to collecting, preserving, and providing access to the most vital material related to global, political, social, and economic change. Technology is vital to achieving this commitment. In the past year, Hoover implemented a new content management system and initiated partnerships with international and U.S. institutions and with private-sector companies to increase the capacity of its digitization efforts. In the next year, Hoover will leverage these new capabilities to bring its most significant collections online in a robust, searchable form, to be used for pure or applied research.

The Library & Archives will enhance their collections by growing specific collecting areas in support of the mission while simultaneously deaccessioning collections outside the mission. Hoover will continue to support a significant output of scholarship and education derived from its archival holdings through conferences, workshops, and fellowship programs.

CONSOLIDATED BUDGET OVERVIEW
For 2018/19, Hoover projects revenues of $68.9 million and expenses of $74.2 million. In prior years, Hoover received restricted gifts for specific projects and scholars in advance of associated expenditures. To balance the budget in 2018/19, Hoover will use $5.3 million of these accumulated restricted reserves, as planned. Net of these results, end-of-year fund balances will total $34.9 million.

Hoover projects revenues to increase by $4.0 million, or 6.2%, over 2017/18. Endowment income will grow 3.9%, with the difference from university growth projections due to new endowment gifts. After several years of extraordinary expendable giving growth, Hoover expects gifts to grow more moderately in 2017/18, by 2.6%, or $900,000.

In 2018/19, expenses will be $4.5 million more than in 2017/18, as expenditures in the current year are below budget due to staff vacancies. Growth from the 2017/18 budget is a more modest $1.9 million and will be limited to available revenue, occurring primarily in the following areas:

- Expenses for fellow recruitment under the Hoover Fellows program and limited-term adjunct fellow appointments are included.
- An increase in the number of events held in the David and Joan Traitel Building will necessitate additional staff, including a new event manager and audiovisual personnel. Rental income will offset these staff costs. Additionally, Hoover will begin to build deferred maintenance reserves in 2018/19.
- Hoover intends to celebrate its centennial year with speaker series, publications, and exhibitions. The 2018/19 budget plan includes costs for these programs.

CAPITAL PLAN
The Hoover Institution completed a master plan study to evaluate its overall facilities and space needs. The Hoover program requires collaborative meeting space, a securable single point of entry, and optimized archival storage. Based on these needs, Hoover leadership is exploring the option of demolishing the Herbert Hoover Memorial Building (HHMB) and the Lou Henry Hoover Building (LHH) and replacing these buildings with new facilities. If Hoover selects this approach and university approval is obtained, construction will be phased and only begin once funding from new capital gifts has been identified. For 2018/19, activities will consist primarily of additional planning efforts related to studying the viability of demolishing LHH, with its replacement targeted for Hoover fellows and meeting facilities. A replacement for LHH should be completed within the next five years, with HHMB replacement occurring subsequently. Hoover is also collaborating with Stanford University Libraries regarding a proposed expansion of the off-site Stanford Auxiliary Library. Hoover has agreed to partially fund the expansion of this facility at a rate proportional to the size of Hoover’s archival storage needs.
Jane Stanford envisioned for the university a grand library that would “draw to our far-off shore … eager, hungry students for knowledge.” While the first library building fell in the 1906 earthquake before it even opened, what is now known as the Cecil H. Green Library took its place in 1919. As they prepare to celebrate the 100th anniversary of the central building, the Stanford Libraries are proud to have developed into a dynamic information system powering research and study, supporting every corner of campus and, per Jane Stanford’s vision, drawing students eager for knowledge.

Attentive to the emphasis on data services in the long-range planning process, the Stanford Libraries will continue their decades-long programs of collection and service in providing data sets, training, support, and access to analytical software for sciences, engineering, social sciences, and humanities. The Libraries’ expertise in understanding scholarly needs, skill in negotiating favorable rates and appropriate contractual terms, and goal of avoiding redundant purchases while assuring broader access will continue. In addition, the digital archive program, the Stanford Digital Repository (SDR), will continue to provide on-demand, long-term, and scalable archival storage for data and research results. In 2018/19, the SDR will incorporate 3.5 million books digitized by Google since 2004, dramatically extending its ability to support research in the humanities and social sciences.

Recognizing the increased emphasis on digital research methodologies and associated student demand, the Libraries will continue their popular program of workshops on digital research tools, including data curation, data and statistical software, geospatial information systems applications, database design and management, and digital archiving. With supplemental funding from the Dean of Research, work will proceed in 2018/19 on the development of the Research Information Ecosystem, an intelligence system that leverages the capacities of the SDR, Stanford Profiles, and Stanford Electronic Research Administration (SeRA) to improve utility and efficiency in the Stanford research community.

Since 2016, the Libraries have extended access for faculty and students to rich archival holdings across the globe with the development of the International Image Interoperability Framework (IIIF) and Mirador image browser. IIIF supports streaming of an estimated 1 billion images from hundreds

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**PROGRAMMATIC DIRECTIONS**

**STANFORD UNIVERSITY LIBRARIES**

![Graph showing 2018/19 Consolidated Revenues $91.5 Million]

<table>
<thead>
<tr>
<th>[IN MILLIONS OF DOLLARS]</th>
<th>2016/17 ACTUALS</th>
<th>2017/18 PROJECTION</th>
<th>2018/19 PLAN</th>
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of cultural organizations directly to researchers’ computers, while Mirador enables annotation of portions of images, transcription, translation, comparison of multiple versions, and even reassembly of dismembered manuscript books and assembly of 3D objects. The Libraries will continue to coordinate the work of a global community developing IIIF and Mirador, and will initiate discovery services that will improve the delivery of IIIF-compliant digital images to researchers at Stanford.

Planning for the third and final module of Stanford Auxiliary Library number three, the Libraries’ off-site storage facility, will be initiated in 2018/19. The module is being planned in collaboration with Hoover and is forecast to accommodate transfers of collections from campus for eight to ten years. Also ongoing in 2018/19 will be the collaborative digitization of Stanford’s extensive historic newspapers.

In 2017/18, Stanford University Press, an enterprise division of the Stanford Libraries, moved to a new distributor, Ingram Academic. In addition, the Press continued to refine its publishing programs, reducing the number of titles in order to focus more editorial and marketing resources on each title. This strategic move, along with superior marketing services from the new distributor, led to a per-title revenue increase of 25% above the 2017/18 budget, and a total book sale revenue increase of 10% above budget. For 2018/19, the Press projects a break-even budget, with revenues and expenses each at $8.1 million.

These strategic moves have also resulted in increased attention from prospective authors and agents, enabling the Press to sign higher-profile titles. The lead title for the fall 2018 season will be John Hennessy’s book Leading Matters, an account of his leadership strategy and its development. Additionally, representation of Stanford faculty within the program has more than doubled in the past year, growth that is anticipated to continue into 2018/19 and 2019/20. Income from The Zohar, the first complete, annotated translation of the founding work of Jewish mysticism, which has a worldwide audience, is also expected to drive revenue in 2018/19. Innovations in digital publishing at the Press will continue through some open-access digital publications and the Interactive Scholarly Works program, which will release four new publications in 2018/19. In fall 2018, the Press will also publish a collaboratively authored, open-access, online textbook for undergraduate American history classes.

CONSOLIDATED BUDGET OVERVIEW

The 2018/19 consolidated budget shows total revenues and operating transfers of $91.5 million and expenses of $90.0 million, yielding an operating surplus of $1.5 million. Revenues and transfers are forecast to increase less than 1% from the level projected for 2017/18. Modest increases in the range of 3% to 4% are anticipated for expendable gifts and endowment payout. However, the volume of sponsored activity is projected to decline by about one-third from the peak level in 2017/18. Two major foundation grants totaling $2.5 million that propelled sponsored activity over the past two years will both expire in December 2018, with only one new sizable grant anticipated.

Expenses are forecast to increase $2.6 million. The Libraries’ staff headcount has not grown since 2014/15, as recruiting and retaining academic staff remain challenging. The salary budget is estimated to grow about 3.9% in anticipation of continuing high turnover. The library information budget is forecast at $25.7 million, an increase of 5.1%. However, overall expenses will only grow 3%, as $506,000 of converged communications budget will be transferred to University IT in 2018/19, when these services will become centrally funded.

Consolidated fund balances at the end of 2018/19 are expected to be $19.8 million, of which about 20% is unrestricted to operations. Approximately $10 million of the fund balances will reside in restricted gift and endowment funds. A comprehensive study is under way to analyze possible utilization of these resources in the short and long run to relieve inflationary pressure on the library information budget. In addition, over $5 million in fund balances are in the LOCKSS (Lots of Copies Keep Stuff Safe) auxiliary unit, an open-source system allowing peer libraries to preserve digital library materials.
ACADEMIC UNITS

SLAC NATIONAL ACCELERATOR LABORATORY

PROGRAMMATIC DIRECTIONS

Stanford University operates SLAC for the Department of Energy (DOE) through a management and operating contract. The DOE considers Stanford one of the best contractors, as evidenced by its fiscal year 2017 performance feedback: “Stanford University continues to provide outstanding corporate support to SLAC. This level of strong contractor support is uncommon within the DOE-SC complex.” SLAC’s success depends on a robust partnership with Stanford University to attract and support some of the world’s best and most innovative scientists.

Based on its strategic plan, SLAC’s investments are focused on two broad areas: photon science programs enabled by its X-ray user facilities and particle physics and particle astrophysics programs.

Scientific User Facilities

SLAC’s user facilities draw more than 2,700 researchers from around the world annually, with Stanford users representing more than 10%. The laboratory operates two leading X-ray scientific user facilities: the Linac Coherent Light Source (LCLS) and the Stanford Synchrotron Radiation Light Source (SSRL). LCLS is the world’s first hard X-ray free-electron laser (XFEL). This facility has transformed the field of X-ray science and positioned SLAC as a world-leading center for XFEL science. To maintain this preeminence, SLAC and the DOE are pursuing a vigorous series of developments (LCLS-II and LCLS-II High Energy) that will expand the accelerator’s range of X-ray energies, significantly enhancing SLAC’s scientific capability and capacity.

SSRL provides X-ray beams and advanced instrumentation for research ranging from energy storage to drug discovery. SSRL facilitates tremendous scientific synergy between SLAC and Stanford. A large number of faculty groups from four of Stanford’s schools pursue research enabled by SSRL. In addition to past investments, Stanford is contributing funding towards a new macromolecular crystallography beam line, which will enable structural biology research. SSRL is also building a new energy materials beam line that will further leverage materials research programs at Stanford.

A joint initiative between Stanford and the DOE laid the groundwork for Stanford and SLAC to host a world-leading National User Center, funded by the National Institutes of Health, for cryo-electron microscopy (cryo-EM). cryo-EM is a transformative scientific tool of the future for atomic-resolution structural biology.

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[IN MILLIONS OF DOLLARS]

<table>
<thead>
<tr>
<th></th>
<th>2016/17 ACTUALS</th>
<th>2017/18 PROJECTION</th>
<th>2018/19 PLAN</th>
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<tr>
<td>Total Revenues</td>
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<td>Expenses</td>
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<td>Salaries and Benefits</td>
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<td>SLAC Construction</td>
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<td>SLAC Fee Paid to Stanford</td>
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<tr>
<td>Total Expenses</td>
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<td>577.0</td>
<td>514.4</td>
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<tr>
<td>Operating Results</td>
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<td>Transfers From (to) Endowment &amp; Other Assets</td>
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<td>Surplus / (Deficit)</td>
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<td>Beginning Fund Balances</td>
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<td>Ending Fund Balances</td>
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<td>5.1</td>
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</tr>
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DOE

Research Funds

71%

University Funds

1%

DOE Construction Funds

28%
Science Programs

SLAC recognizes that providing world-class research facilities is not enough. To ensure that the best science is carried out at SLAC, the laboratory takes a leadership role in identifying and pursuing new science, leveraging Stanford’s ability to attract world-class scientists. In addition to large-scale user facilities, SLAC’s core capabilities as recognized by the DOE include advanced instrumentation, condensed matter physics and materials science, chemical and molecular science, accelerator science and technology, fusion energy science, and particle physics. In addition, SLAC is working with Stanford to leverage its capabilities toward applied programs; these efforts have had significant success in applied energy research.

SLAC is a major partner in the ATLAS experiment at the Large Hadron Collider at the European Organization for Nuclear Research (CERN). The ATLAS experiment explores the properties of the Higgs boson while searching for physics beyond the Standard Model of particle physics. SLAC’s cosmic frontier program includes the Fermi Gamma-ray Space Telescope, research and development efforts for the next generation of dark matter experiments, and construction of the ground-based Large Synoptic Survey Telescope (LSST).

Joint Stanford-SLAC institutes, including the Stanford PULSE Institute (PULSE), the Stanford Institute for Materials and Energy Sciences (SIMES), and the SUNCAT Center for Interface Science and Catalysis, create a competitive advantage for SLAC and Stanford in offering the vast capabilities of both institutes to SLAC’s sponsors. PULSE faculties bring expertise to leverage SLAC’s world-leading position in ultra-fast X-ray science. SIMES is developing next-generation battery technologies, and SUNCAT is expanding carbon dioxide fuel research with a five-year, $7.5 million grant from the DOE’s Joint Center for Artificial Photosynthesis.

CONSOLIDATED BUDGET OVERVIEW

The 2018/19 consolidated budget shows total expenses of $514.4 million. Of this, $510.0 million is from the DOE contract and comprises $332.5 million for DOE-funded research, $142.7 million for construction, and $34.8 million for research funded by others. While the DOE funds the vast majority (93%) of the SLAC budget, SLAC’s strategy to diversify funding sources to include other federal and non-federal agencies is starting to show real results.

Research program awards will increase over $50.0 million for 2018/19 over 2017/18, reflecting SLAC’s growth and diversification of its sponsor base. This growth includes the cryo-EM National User Center, as well as the start of operation costs for the LCLS-II and LSST projects.

Construction project costs will decline in 2018/19 by more than $110.0 million from 2017/18 as the DOE-funded LCLS-II and LSST projects wind down and start the transition to operations. LCLS-II in particular has a total cost exceeding $1.0 billion over the life of the project. Planning for new construction of the LCLS-II High Energy project begins in 2018/19 with a total estimated project cost nearing $350 million.

Included in the DOE contract is a performance fee of $4.6 million paid to the university for operating SLAC. Of this $4.6 million, the university allocates roughly $1.9 million to SLAC for general funds plus $1.0 million for director discretionary activities each year.

CAPITAL PLAN

SLAC’s long-range development plan supports future scientific program direction by consolidating research activities, upgrading infrastructure, renovating facilities, and demolishing substandard structures. This plan serves as a working document and resource guide beyond the immediate future of planned capital projects.

SLAC’s large DOE-funded projects enable its research to stay at the cutting edge of science. The LCLS-II project builds on the success of LCLS to ensure that the United States maintains a world-leading capability for advanced research in energy, materials, biology, and chemistry. In 2018, funding has been approved for the initiation of yet another upgrade project for LCLS to enable the production and use of high-energy, ultra-short pulse X-rays delivered at a high repetition rate; it includes X-ray instrumentation to enable experiments by the external user community.

SLAC’s building projects provide the laboratory and office spaces necessary for scientists, engineers, and staff. The university-funded shell of the Arrillaga Science Center (formerly Photon Sciences Laboratory Building) will be complete with the $57.0 million DOE-funded outfitting of the first two floors in late 2018. This environmentally sustainable facility will include labs, characterization, cleanroom spaces, the NIH National User Center for cryo-EM, and office and collaboration space. The university-funded expansion of the Stanford Guest House at SLAC has been placed on hold. This will impact the ability of users of the new LCLS II facility to find local accommodations when the facility completes transition to operations in 2020.