CHAPTER 2
ACADEMIC UNITS

OVERVIEW OF ACADEMIC UNITS

This chapter summarizes programmatic and financial activity for each academic unit. The revenue expectation in 2019/20 for these academic units comprises nearly 75% of the university total revenue. Overall, the academic units project an operating surplus of $64.3 million. After transfers to facilities and endowment, the unit budgets overall will achieve a $55.2 million surplus.

CONSOLIDATED BUDGET FOR OPERATIONS, 2019/20: ACADEMIC UNITS

<table>
<thead>
<tr>
<th>Academic Units:</th>
<th>Total Revenues and Operating Transfers</th>
<th>Total Expenses</th>
<th>Result of Current Operations</th>
<th>Transfers (To/From Assets)</th>
<th>Change in Expendable Fund Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate School of Business</td>
<td>292.1</td>
<td>299.3</td>
<td>(7.1)</td>
<td>0.3</td>
<td>(6.8)</td>
</tr>
<tr>
<td>School of Earth, Energy &amp; Environmental Sciences</td>
<td>74.6</td>
<td>77.1</td>
<td>(2.5)</td>
<td>(0.8)</td>
<td>(3.2)</td>
</tr>
<tr>
<td>Graduate School of Education</td>
<td>73.5</td>
<td>77.0</td>
<td>(3.5)</td>
<td>(1.1)</td>
<td>(4.6)</td>
</tr>
<tr>
<td>School of Engineering</td>
<td>456.4</td>
<td>428.2</td>
<td>28.2</td>
<td>(12.0)</td>
<td>16.2</td>
</tr>
<tr>
<td>School of Humanities and Sciences</td>
<td>537.9</td>
<td>517.6</td>
<td>20.3</td>
<td>(13.3)</td>
<td>7.0</td>
</tr>
<tr>
<td>School of Law</td>
<td>105.9</td>
<td>100.2</td>
<td>5.6</td>
<td>(6.5)</td>
<td>(0.9)</td>
</tr>
<tr>
<td>School of Medicine</td>
<td>2,692.7</td>
<td>2,660.2</td>
<td>32.5</td>
<td>19.4</td>
<td>51.9</td>
</tr>
<tr>
<td>Vice Provost and Dean of Research</td>
<td>258.0</td>
<td>248.6</td>
<td>9.4</td>
<td>3.0</td>
<td>12.4</td>
</tr>
<tr>
<td>Vice Provost for Undergraduate Education</td>
<td>62.0</td>
<td>65.6</td>
<td>(3.6)</td>
<td>0.0</td>
<td>(3.6)</td>
</tr>
<tr>
<td>Vice Provost for Graduate Education</td>
<td>45.9</td>
<td>50.5</td>
<td>(4.6)</td>
<td>(0.3)</td>
<td>(4.9)</td>
</tr>
<tr>
<td>Vice Provost for Teaching and Learning</td>
<td>41.3</td>
<td>43.1</td>
<td>(1.7)</td>
<td>1.2</td>
<td>(0.5)</td>
</tr>
<tr>
<td>Vice President for the Arts</td>
<td>22.8</td>
<td>26.2</td>
<td>(3.4)</td>
<td>0.0</td>
<td>(3.4)</td>
</tr>
<tr>
<td>Hoover Institution</td>
<td>67.1</td>
<td>71.8</td>
<td>(4.7)</td>
<td>1.0</td>
<td>(3.7)</td>
</tr>
<tr>
<td>Stanford University Libraries</td>
<td>91.9</td>
<td>92.8</td>
<td>(0.9)</td>
<td>0.0</td>
<td>(0.9)</td>
</tr>
<tr>
<td>SLAC</td>
<td>492.7</td>
<td>492.4</td>
<td>0.3</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Total Academic Units</td>
<td><strong>5,314.9</strong></td>
<td><strong>5,250.6</strong></td>
<td><strong>64.3</strong></td>
<td><strong>(9.1)</strong></td>
<td><strong>55.2</strong></td>
</tr>
</tbody>
</table>

2019/20 Consolidated Expenses by Academic Unit

- **Academic Units**: $5,250.6 Million
- **Auxiliary**: $449.5 Million
- **Administrative**: $1,318.4 Million
- **SLAC**: 9%
- **H&S**: 10%
- **Engineering**: 8%
- **GSB**: 6%
- **Other**: 5%
- **Dean of Research**: 5%
- **Law**: 2%
- **Libraries**: 2%
- **SE3**: 1%
- **Medicine**: 51%

1 Other is Hoover, VP for Undergraduate Education, VP for Graduate Education, VP for Teaching and Learning, and VP for the Arts.
PROGRAMMATIC DIRECTIONS

The Stanford Graduate School of Business (GSB) delivers transformational experiences to students in the areas of business, management, and leadership education. The school's mission is to create ideas that deepen and advance the understanding of management and, with those ideas, develop innovative, principled, and insightful leaders who will change the world. The GSB offers three degree programs: a two-year full-time MBA, a one-year Master of Science in Management (MSx), and a five-year PhD in seven distinct fields of study. Five years ago, the school established a research fellows program for pre-PhD students to broaden the pipeline of women and underrepresented minorities considering PhD programs. The GSB also delivers more than 60 Executive Education courses, including custom, open-enrollment, and online programs that extend the impact of its faculty in U.S. and global markets. Overall, the GSB seeks to support, engage, and empower students as they endeavor to change the world for the better.

Faculty Research and Teaching

The GSB is growing in many areas, expanding its tenure-line faculty with seven new hires in 2018/19 and several more expected in 2019/20, across discipline areas. The school continues to selectively recruit outstanding new lecturers, often in co-teaching roles, using its distinctive academic-practitioner model. The GSB offers more than 160 elective courses in management education and maintains relatively small MBA cohorts. For the MBA class of 2020, the GSB received nearly 8,000 applications for about 420 spots.

One of the GSB’s top priorities in 2019/20 will be to implement the recommendations of two committees that have examined (1) trends in the future of management education and (2) the changing nature of faculty research. As first steps in implementing the recommendations on the future of management education, the GSB has restructured various programs and appointed a new senior associate dean to strengthen teaching support and work with faculty and students to more effectively integrate ethics and values into the management education curriculum.

In 2019/20, the GSB will be acting upon recommendations made by the committee reviewing the changing nature of faculty research. In particular, the GSB will invest in resources to support junior faculty research and strengthen financial and infrastructure support to facilitate hiring predocs, postdocs, and research assistants. This transition marks the first time the GSB will integrate the work of postdocs into its research environment. The change will strengthen support for faculty research on a range of cutting-edge topics that impact society, including digital business, artificial intelligence, automation, data governance, and ethics.
The Student Experience
The committee examining the future of management education also made recommendations to improve the student experience. The 2019/20 year will bring renewed focus on MSx admissions to increase awareness of the program’s unique value and to continue to improve the integration and experience of MSx students at the GSB. Specifically, the GSB will consolidate operations and student services for MSx students with those supporting MBA students.

In addition, the school’s redesigned financial aid system now places emphasis on excellence, access, and fairness, applying a 100% need-based approach to allocating fellowships and loans to students offered admission. The GSB deems this policy decision essential to enable students from a wide range of backgrounds and circumstances to attend the GSB.

Global Impact
MBA students must satisfy a global study requirement and have several options for doing so. They may choose to participate in or lead a global study trip, which is a nine-day group experience in country, preceded by three pretrip education sessions (recent study trips included the first such trip to Cuba and travel to Ethiopia and Rwanda). They may attend global study seminars, led by faculty and focused on relevant business topics, or they may enroll in an exchange program with Tsinghua University in Beijing or in a four-week immersion project at a global company.

The Stanford Institute for Innovation in Developing Economies (Seed) continues its mission to enable small- and medium-sized businesses in developing countries to grow, expand, and foster economic growth. In 2019/20, Seed will offer its flagship transformation program in four locations: India, East Africa, Southern Africa, and West Africa. This one-year leadership program provides management training, one-on-one support, and networking opportunities to empower business owners to grow their companies and lead their regions to greater prosperity. Over 40 Stanford student interns will participate in Seed’s summer internship program in the developing world in 2019/20.

In 2018/19, the GSB co-sponsored, with the Stanford Institute for Economic Policy Research and the Stanford Center on Global Poverty and Development, the first Stanford China Economic Forum in Beijing. The forum convened 500 alumni and business and academic leaders from Asia. The participation of faculty from each of Stanford’s schools, deans from the schools of Business, Engineering, Medicine, and Law, and the university’s president also contributed to the success of this collaborative event. The GSB is planning a follow-up event in 2019/20 at Stanford.

CONSOLIDATED BUDGET OVERVIEW
The GSB projects a 2019/20 consolidated budget with total revenues and operating transfers of $292.1 million, expenses of $299.3 million, and a resulting operating net deficit of $6.8 million after $300,000 in transfers from endowment and other assets. Of this projected deficit, $4.0 million is part of a plan to use reserve funding, with $3.0 million going toward a deferred maintenance plan and $1.0 million to support the aforementioned program expanding junior faculty research.

The GSB projects that revenues and transfers for 2019/20 will increase by $9.1 million, or 3.2%, from the current projection for 2018/19. Endowment income is expected to increase by $2.5 million due to investment gains and newly endowed gifts, though this rate of growth is slower than in previous years. Gift revenue is planned to grow by roughly $1.1 million. The GSB’s Executive Education unit is also contributing to revenue growth, with projected revenue for 2019/20 growing by 6%, or $4.2 million. Moderate revenue growth is expected for Seed and GSB residences.

Overall, the GSB projects a $13.8 million, or 4.8%, increase in expenses in 2019/20 from the 2018/19 projection. Compensation is projected to increase primarily due to merit increases as well as a plan for some growth in total faculty. Non-compensation expenses are projected to increase above pure inflationary growth rates.

The GSB has been prudent in adding to its reserves as a hedge against market volatility and as part of a deferred maintenance plan. As a result, fund balances increased in 2017/18, and beginning fund balances in 2018/19 totaled $112.1 million. Following planned asset transfers in 2018/19, as well as the designation of several pending funds, the GSB projects a year-end fund balance of $108.1 million, which will further decline to $101.3 million in 2019/20 due to the aforementioned maintenance and faculty research plans.
PROGRAMMATIC DIRECTIONS

The mission of the School of Earth, Energy & Environmental Sciences (SE3 or Stanford Earth) is to create knowledge to understand Earth and sustain its inhabitants. This mission is of critical importance to the future of our planet.

It is an exciting time at Stanford Earth. The school is top ranked in both earth and environmental sciences, with all of its graduate programs highly competitive and consistently attracting exceptional applicants. During Dean Stephan Graham’s second year of leadership, the school has focused, among other things, on recruiting and onboarding a new cohort of assistant professors. The school is fortunate to be welcoming nine new faculty, seven of whom are women, over the next few years. By fall 2019, Stanford Earth’s faculty will be 35% women. That is a 75% change over the past decade—a remarkable shift towards gender balance. Furthermore, 27% of the school’s tenure-line faculty will be at the assistant professor level, marking a generational shift and providing exceptional opportunities for the school.

In response to these rapid demographic changes in both gender and rank, Stanford Earth is expending considerable effort on developing and implementing programs to serve this community. More robust mentor and advisor training for faculty and more professional development opportunities for postdocs and grad students are two examples. In addition, Stanford Earth’s Respectful Community Program and others that promote diversity and inclusion further its goal of being a collaborative and supportive place to learn and work.

This is also a challenging time for Stanford Earth. While the school’s expertise in earth and environmental sciences has never been more urgently needed, its resources are under significant strain, hampering its ability to respond to this need. There are two primary reasons for this strain: recruitment costs and poor revenue growth.

Faculty recruitment expenses represent a significant line item in SE3’s budget. Faculty start-up packages can include lab renovations, equipment, housing, graduate aid, and more. The school estimates that $12-$15 million will be needed to onboard the incoming cohort, depending on the complexity of facilities needs. Due to financial constraints at the university level, the school will bear the lion’s share of these costs at a time when its own coffers are under pressure. The primary funding source for these start-up expenses will be school-held reserves, which will therefore decline rapidly over the next four years, potentially to well below 50% of current levels.

The school’s budgetary challenges are not solely caused by rising incremental expenses; they are also caused by its revenue composition. Stanford Earth relies on endowment income to cover about 66% of operating costs. Due to a pro-

| 2019/20 Consolidated Revenues | $74.6 Million |

**[IN MILLIONS OF DOLLARS]**

<table>
<thead>
<tr>
<th></th>
<th>2017/18 ACTUALS</th>
<th>2018/19 PROJECTION</th>
<th>2019/20 BUDGET PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Revenues</strong></td>
<td>74.4</td>
<td>77.1</td>
<td>74.6</td>
</tr>
<tr>
<td><strong>Expenses</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries and Benefits</td>
<td>54.1</td>
<td>55.8</td>
<td>59.8</td>
</tr>
<tr>
<td>Non-Salary</td>
<td>19.3</td>
<td>19.0</td>
<td>17.2</td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td>73.4</td>
<td>74.8</td>
<td>77.1</td>
</tr>
<tr>
<td><strong>Operating Results</strong></td>
<td>0.9</td>
<td>2.2</td>
<td>(2.5)</td>
</tr>
<tr>
<td>Transfers From (to) Endowment &amp; Other Assets</td>
<td>1.0</td>
<td>0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Transfers From (to) Plant</td>
<td>0.0</td>
<td>0.0</td>
<td>(0.8)</td>
</tr>
<tr>
<td><strong>Surplus / (Deficit)</strong></td>
<td>1.9</td>
<td>2.3</td>
<td>(3.2)</td>
</tr>
<tr>
<td><strong>Beginning Fund Balances</strong></td>
<td>55.4</td>
<td>57.3</td>
<td>59.7</td>
</tr>
<tr>
<td><strong>Ending Fund Balances</strong></td>
<td>57.3</td>
<td>59.7</td>
<td>56.4</td>
</tr>
</tbody>
</table>
A prolonged period of slow growth in endowment payout, SE3 is implementing cost-cutting measures. In addition, the school will fund $1.1 million less of graduate aid from centrally held resources, forcing local units to either spend reserves or reduce admission numbers. SE3 is also estimating little to no growth in affiliate program income, which, along with sponsored revenue, provides support for research expenses such as graduate students, postdocs, and research staff. The school anticipates that a contraction in these resources will slightly suppress expense growth, although the increased faculty headcount will counteract this trend.

Space is also a very urgent problem for Stanford Earth. The school’s overall population has increased some 60% since 2005, yet its footprint has only increased 8%. With no new facilities on the immediate horizon (although these are desperately needed), the school has had to become extremely efficient with what space it has. Efforts have been made to double or triple staff in offices, “rightsize” faculty offices, and give students modest but functional work spaces. At the same time, wherever possible, the school is creating informal meeting and conversation spaces.

Despite these challenges, Stanford Earth is excited about its involvement in the university’s long-range planning effort and the great opportunities it presents for the school. SE3 is well positioned to take on a leadership role in Stanford’s sustainability research and education efforts. Stanford Earth also plans to be a strong partner in the Data Science, Natural World, and Social X-Change initiatives, and looks forward to helping in their evolution.

**CONSOLIDATED BUDGET OVERVIEW**

Stanford Earth projects total revenues and transfers of $74.6 million in 2019/20 and expenses of $77.1 million, yielding an operating shortfall of $2.5 million. Anticipated asset transfers to plant of $750,000 increase that shortfall, leading to a $3.2 million net reduction in school reserves. The shortfall is attributable to a combination of accelerated growth in spending and a lackluster forecast for the school’s major revenue sources.

The school’s restricted revenues come from several major sources: sponsored research, expendable gifts, investment income, endowment payout, and industrial affiliate program fees. Compared with 2018/19 year-end projections, total restricted revenues are projected to decrease by $1.1 million, or 1.9%, in 2019/20. While sponsored revenue and corresponding spending are expected to remain above $15 million for a third year, bolstered by a large volume of new grants, they are projected to taper off as some grants come to an end. Gift revenue will likely remain close to 2018/19 levels thanks to existing pledges, some of which are strictly for matching and therefore not immediately accessible. The school’s investment income is from direct oil and gas investments. While there has been a great deal of investment activity recently, the long-term impact remains uncertain. Endowment payout is projected to be $28.1 million, up $690,000, or 2.5%, from 2018/19. Of this increase, $568,000 will come from 2.1% payout growth of existing endowment principal, and $122,000 is expected from new gifts. Industrial affiliate program fee income is experiencing an extended contraction and is expected to remain flat at approximately $7.0 million.

The school will receive $15.9 million in base and one-time general funds, including incremental funding from the Faculty Incentive Fund for eligible new faculty (women and underrepresented minorities). Other operating transfers will decline by $2.6 million in 2019/20, in large part reflecting an accounting change related to funding from two graduate fellowship programs: Stanford Graduate Fellowships in Science and Engineering (SGFs) and Stanford Interdisciplinary Graduate Fellowship (SiGFs). This drop has no impact on the bottom line; a corresponding expense reduction is reflected in non-salary outlay.

Total expenses are projected to grow by $2.2 million, or 3.0%. By far the largest growth will come from costs associated with the incoming cohort of nine new faculty, including salary, graduate student support, and capital spending on laboratory setup and office renovations.
In 2018/19, the Graduate School of Education (GSE) began to implement parts of a new long-range plan that has been in development for the past two years. This effort will accelerate in 2019/20 and will require substantial investments. Many of the GSE’s initiatives overlap with the university’s emerging long-range priorities, particularly with regard to diversity, the future of learning, data sciences research, and engagement and impact beyond the university. With a number of senior faculty retirements, the GSE has an opportunity to recruit a large number of new faculty who will shape the field of education research.

PROGRAMMATIC DIRECTIONS

While work is being done across all of GSE’s initiatives, these areas have already seen some notable achievements:

- **Learning differences and the future of special education**: The GSE launched a recruitment effort for five new faculty to lead this initiative, including one who will hold a joint appointment with the School of Medicine. Several incumbent faculty members are also beginning to seek research funding for sponsored projects in this area, and research labs are beginning to form with interdisciplinary faculty and student engagement.

- **Developing leaders of education**: The GSE has a long tradition of preparing leaders in various practice fields. The Stanford Teacher Education Program (STEP) produces teacher leaders. The master’s program in policy, organization, and leadership studies (POLS) traditionally prepares students for leadership at the policy level. An additional emphasis on entrepreneurial and philanthropic forces in education is being created within POLS. The GSE is also collaborating with the Graduate School of Business to create a new online program, EdLEADers, to provide professional development to 30 school district administrators and superintendents. The GSE hopes to prepare and train teachers, administrators, and industry leaders to continue learning, adapting, and realizing positive change.

- **Student initiatives**: The GSE has added substantially to student support programs in recent years, but more needs to be done. Doctoral funding has been extended to five years, including two summers. Among master’s programs, a new Dean’s Fellowship has been created to provide substantial tuition benefits to highly competitive students, and a program targeting low-income students has been added. Still, GSE students take on proportionally more debt than other Stanford graduate students, and some will enter professions with limited income possibilities.
Progress with the following GSE initiatives is expected in the coming years:

- **Advancing early childhood learning:** The GSE is pursuing strategies to understand and improve young children’s learning and development as these influence their opportunity to thrive in school and beyond. The early childhood field offers opportunities for broad-ranging interdisciplinary work within the GSE (policy, learning technologies, developmental sciences) and across the university (neurosciences, engineering, medicine, etc.).

- **Sustained excellence:** As the GSE faces several faculty retirements over the next few years, it undertook a major recruitment effort in 2018/19, yielding over a dozen candidates for faculty positions. Some of these candidates will fill vacant positions and deepen the faculty strength in an existing area of research. Other candidates are focused on new strategic areas of research to help develop new programs for the university.

- **State-of-the-art spaces:** The project to substantially renovate the GSE’s historic main building and expand adjacent space is intended to bring all GSE faculty and programs into modern, contiguous spaces and to create model collaborative learning spaces for the school and the university.

**CONSOLIDATED BUDGET OVERVIEW**

The GSE projects a 2019/20 consolidated budget with total revenues and transfers of $73.5 million. After asset transfers, including a $1.6 million endowment income transfer to student loan funds in support of STEP students and a $500,000 transfer in from pending gifts, revenues and transfers total $72.4 million. Projected expenses are $77.0 million, for a deficit of $3.5 million. This deficit is the result of increased faculty compensation and start-up costs in areas of strategic and planned initiatives and operations, preparation for planning the new building, and a reduction in sponsored research activities. As part of its 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 2018/19 year-end projection, 2019/20 total revenues and expenses appear to grow less than 1%. However, an accounting change in 2019/20 will move Stanford Graduate Fellowship activity from the GSE to VPGE. Excluding this geography change, 2019/20 total revenues and expenses will increase by 2.2%. For ongoing and new initiatives, the GSE seeks new sources of funding. For 2019/20, the expected increase in gift revenue is the result of the launch of several strategic initiatives and increased donor interest. Because endowment for faculty and graduate students is a top priority, the GSE expects to see increased endowment revenue as well.

Funding from federal sponsors continues to trend downward, with a $1.4 million, or 21.1%, decrease projected for year-end 2018/19 and a decrease of 13.9% expected in 2019/20. Non-federal grants and contracts will decrease in 2018/19 by 14.7%, or $2.5 million, and a decrease of 7.9% is projected in 2019/20. Aside from general funds, sponsored research remains the largest funding source for the GSE, at 24% of revenue. The GSE’s planned use of accumulated reserve balances will provide funding for strategic initiatives in 2019/20.

The GSE’s long-term financial plan is especially sensitive to three factors: anticipated faculty turnover; the need to invest in new programmatic areas; and ongoing requirements for student support. It is anticipated that sponsored research funding will decline in the short term but rebound as new faculty members build research programs. The school will use reserves to support student aid and new initiatives. Fundraising to supplement these resources will be critical to their success.

**CAPITAL PLAN**

The GSE will be completing plans for new and renovated facilities, which received concept and site approval from the Board of Trustees in February 2019. This project will provide new teaching and learning spaces, increase collaboration, and provide space for convening scholars and practitioners. The new facilities are essential to achieving the school’s programmatic objectives. The schematic design phase will be completed by fall 2019. Pending additional Board of Trustees approvals and a successful fundraising program, construction could begin in 2020.
PROGRAMMATIC DIRECTIONS

The School of Engineering (SoE) continues to thrive as it executes initiatives that evolved from the school-level SoE-Future planning effort, while also participating actively in university-level long-range planning (LRP). Many school faculty are serving as co-chairs or members of LRP design teams, and the school will be heavily involved in many of the initiatives. In the research domain, the Data Science and Human-Centered Artificial Intelligence (HAI) initiatives have very large footprints in engineering, while sustainability and the two health and medicine initiatives also have substantial SoE involvement. The school’s ongoing efforts to improve diversity and inclusion for students and faculty mirror the themes of the presidential IDEAL (Inclusion, Diversity, Equity & Access in a Learning Community) initiative, and the Catalyst for Collaborative Solutions pilot is providing a useful blueprint for Flexible Resources. Shared platforms and infrastructure are critical to the school, and it is helping map the future in this extremely important area. Finally, the many activities in education are highly relevant as Engineering continues to serve an increasing fraction of Stanford’s students.

SoE Diversity

Diversity at all academic levels has been and remains a priority for SoE, and the school is beginning to see results in both the faculty and the graduate student body. With the addition of two new student affairs staff dedicated to diversity, SoE is devoting more attention to programs for improving the sense of inclusion for these increasingly diverse cohorts of incoming graduate students. With continued attention to diversity in both student admissions and faculty recruitment, SoE expects to see further gains as critical mass builds in underrepresented cohorts.

Connections across Stanford

A second priority for SoE is building even stronger bridges to Stanford’s six other schools. The Data Science and HAI initiatives will make major contributions here. HAI’s three areas of focus will involve all six other schools. Data Science has the objective of democratizing access to data and data analysis techniques across the entire campus, something researchers and students are clamoring for. Additionally, the next phase of the d.school, evolving plans for shared experimental facilities and maker spaces, and new curricular initiatives advance this priority.

Curricular Evolution

Both the SoE-Future process and the LRP process to date have identified the need for evolution in the undergraduate curriculum. Several departments have made changes in
their majors, including creating a brand-new undergraduate major in aero-astro, revamping the undergraduate major in mechanical engineering, and reducing the overall unit requirement for the bioengineering and chemical engineering majors. As many departments modernize their majors, Computer Science (CS) continues to serve a large number of students. There are early discussions on possible alternate paths for CS-inclined students, especially those who might wish to combine computing or data science with other disciplines. Stanford is well positioned to innovate in this area, given its strength in CS (and engineering in general), embedded in a liberal arts university that is equally strong in many other disciplines.

**Maker Spaces and Experimental Facilities**

Two loosely related areas that remain very important to the school are student maker spaces and shared experimental facilities. The LRP process includes design teams for both, and SoE is quite anxious to move forward with recommendations; Stanford is quickly falling behind its peers in these areas. A significant initiative involving multiple schools (Engineering, Medicine, Stanford Earth, Humanities and Sciences, and SLAC) could yield world-class 21st-century experimental facilities. Maker spaces are in high demand by students and are beginning to pop up in dormitories and other areas around campus; a coordinated effort is likely to yield a more exciting and innovative long-term approach.

The school remains financially sound but is experiencing continued inflationary pressure on many core expenses, without corresponding increases in revenues. Faculty salaries that are on par with those of peers in much cheaper geographical locations, along with modest annual salary increases, contribute to challenges in faculty hiring and retention. Start-up packages and the cost of construction for lab build-outs continue to escalate, and SoE is having increasing difficulty competing with peers in start-ups, particularly in bio-related areas. Endowed professorships and a suite of general-purpose endowments are the revenue sources for many of these expenses, and recent endowment performance challenges the school to keep up with these rising costs. Most importantly, as the school continues to pursue a strategic faculty growth plan initiated several years ago, as well as dealing with increased compensation and other costs for faculty, staff, and students related to affordability initiatives, general funds and other flexible funds are not keeping up with rising expenses.

**CONSOLIDATED BUDGET OVERVIEW**

SoE projects a 2019/20 consolidated budget with total revenues and transfers of $456.4 million and expenses of $428.2 million. Transfers to assets for locally funded capital projects and transfers to other assets will net to $12.0 million, making the net projected change in current funds $16.2 million. Discounting the impact of revenue and expenses from Stanford Graduate Fellowships in Science and Engineering (SGFs) and Stanford Interdisciplinary Graduate Fellowships (SiGFs) moving to VPGE, 2019/20 revenues will decrease slightly by 0.3%, and expenses will increase 4.9%. This reflects a stabilization of gift revenue expectations after receipt of $30 million in one-time gifts in 2017/18.

Sponsored research remains the largest single component of SoE finances, at approximately 33% of revenue; however, this proportion has been shrinking steadily over the last few years. Federal grants are projected to increase slightly due to new faculty applications, though the impact will be offset by a modest slowdown in non-federal awards.

The overall school reserve position is strong and provides a cushion for research funding fluctuations, but the funds are asymmetrically distributed among faculty, departments, and the school. The majority of reserves are earmarked for the research of individual faculty and labs, while the dean-controlled reserves are largely restricted to faculty and student support, limiting financial flexibility for the dean.

**CAPITAL PLAN**

For 2019/20, SoE was allocated $4 million in facilities reserve funding to renovate labs for new faculty housed in several engineering buildings. SoE will also renovate the basement in Packard to accommodate a shared robotics research center.

The Engineering capital plan includes studies that address renovating the Gates Building and exploring options for the Product Realization Lab. However, SoE does not plan any action on the lab until the university LRP is more fully developed, anticipating university-wide action on student maker spaces.

The school’s main focus is on the programming study for the Bridge Building for the Digital Future, jointly developed by SoE and the School of Humanities and Sciences. This building will house some faculty from the departments of Computer Science and Statistics, as well as the Data Science and HAI institutes.
SCHOOL OF HUMANITIES AND SCIENCES

PROGRAMMATIC DIRECTIONS

Debra Satz, philosophy professor and former senior associate dean for the humanities and arts, was appointed dean of the School of Humanities and Sciences (H&S) effective September 1, 2018. Under her leadership, new strategic directions for the school are being developed, and several pilot projects have already been launched.

To enhance the consistency and quality of undergraduate teaching, all incoming junior faculty will now attend a three-day Course Design Institute offered by the Office of the Vice Provost for Teaching and Learning. Departments will assign faculty mentors to provide coaching and observe classroom teaching. The school is also establishing a senior associate dean for curriculum position that will provide faculty leadership in efforts to improve undergraduate teaching and overall student experience.

Starting in 2019/20, H&S will begin conducting external departmental reviews to assess areas for programmatic and intellectual focus and identify opportunities for teaching innovation and improvement.

An effort to enhance the school’s intellectual community has been launched with a series of forums that convene groups of faculty from different departments and disciplines to discuss specific issues of broad interest. Discussion topics include freedom of speech, conflict of interest, open science, and reproducibility of research.

Though the overall state of H&S is very strong, the school continues to have concerns about faculty recruitment and retention, affordability for graduate students, and inefficiencies stemming from its highly decentralized administrative structure.

Over the past decade, the Dean’s Office has worked closely with the provost to ensure H&S is able to attract and retain outstanding faculty. Nonetheless, the frequency and cost of retentions have grown significantly in recent years. This cost escalation has further strained an already tight operating budget.

Graduate enrollment has remained relatively flat over the past five years, fluctuating marginally with changes in external funding and admission yield rates. Attracting top students has become more challenging as peer institutions have increased summer-quarter support and added sixth-year funding in some disciplines. The extremely high cost of living in the Bay Area further exacerbates this problem.

H&S’s highly decentralized structure provides a fertile academic and intellectual environment for both discipline-focused and interdisciplinary work, but also creates many administrative inefficiencies. The Dean’s Office is exploring...
opportunities for improving support and oversight for the school’s 24 departments and approximately 75 interdisciplinary programs, centers, and institutes.

**CONSOLIDATED BUDGET OVERVIEW**

For 2019/20, H&S projects revenues and operating transfers of $537.9 million and expenses of $517.6 million, resulting in an operating surplus of $20.3 million. After $13.3 million of net transfers to assets, the school projects an increase in consolidated fund balances of $7.0 million, with an ending fund balance of $325.9 million. While the financial environment has been constrained for several years, the school’s overall health is good.

One-third of the school’s funding comes from endowment, and for the past three years, payout growth has been less than expense rate inflation. For the period 2016/17 through 2018/19, this gap totaled $5.9 million and was managed through funding reductions allocated to departments and programs, provostial mitigation, and short-term use of Dean’s Office reserves. Projections for 2019/20 through 2021/22 indicate an additional $7.3 million gap between endowment payout growth and expense rate inflation. For 2019/20 only, most of this gap will be funded by Dean’s Office reserves. This short-term strategy will provide time to better assess the severity and duration of this financial issue and develop strategic approaches to what may be substantial financial reductions in 2020/21.

Despite the poor endowment payout growth, consolidated fund balances have continued to grow in recent years. Department- and program-controlled reserves are spread across 103 units, but a dozen units hold 50% of the total. While most departments and programs are in relative equilibrium with modest reserves, a small number have received large expendable gifts that will be spent down across multiple years.

Faculty-controlled balances have grown in aggregate but, like department and program reserves, are very unevenly spread. Growth is primarily related to new start-up packages, while a few individuals have received large expendable gifts. These increases obscure the fact that most faculty have relatively modest research balances.

Dean’s Office–controlled unrestricted reserves have decreased from a high of $74 million in 2010/11 to about $30 million in 2013/14 after significant investments in construction projects for the arts, the sciences, and new university initiatives such as Chemistry, Engineering & Medicine for Human Health (ChEM-H). Reserves have remained fairly constant across the past five years.

A reserve balance of $30 million is precariously low for a school of this size and complexity. For a number of years, faculty searches have been authorized at a replacement rate, but actual hires have occurred more slowly, and there is a substantial number of authorizations in the pipeline. The timing of these future hires is difficult to project or control; surges in acceptances could adversely impact Dean’s Office reserves. The increased frequency and cost of faculty rejections are projected to continue and could also impact the school’s tenuous financial equilibrium. The Dean’s Office also recognizes that current reserve levels may not allow the school to continue making significant investments in infrastructure or adequately participate in new initiatives. Therefore, the school will continue to explore strategies to move to a stronger financial position in order to generate reserves for these purposes.

Sponsored research volume has fluctuated over the past five years, with recent increases driven by faculty hiring and large capital equipment expenditures. While directly impacting research activity levels, grant volume fluctuations indirectly impact faculty- and department-controlled balances as graduate student support and faculty research expenditures shift between funding sources.

**CAPITAL PLAN**

The H&S capital plan’s focus on the new Science Precinct was celebrated with the spring opening of the Bass Biology Building. In preparation for the decanting of the Mudd Chemistry Building, programming began within the Lorry Lokey Lab, Keck Science, and Stauffer 1 buildings. The Stock Farm Greenhouse Replacement project is slated to begin construction this spring, while the Gilbert Biology Building lab modification project is under way, with completion scheduled for the fall. These two projects are in preparation for the demolition of Herrin Hall. The audiovisual upgrades in Dinkelspiel Auditorium will be completed this summer. H&S’s capital plan commitments extend to the Wu Tsai Neurosciences Institute and ChEM-H building, as well as partnership with the School of Engineering in the programming of the Bridge Building for the Digital Future.
SCHOOL OF LAW

PROGRAMMATIC DIRECTIONS

Stanford Law School (SLS) has maintained its perch at the top of the national rankings—along with Harvard and Yale. Much of this success has to do with the ability to attract accomplished students and top-notch faculty. The school continues to compete with its peers for the best talent across all ranks, and that means maintaining a competitive compensation program. Over the past six and a half years, SLS has welcomed nineteen new Academic Council faculty members: nine tenured faculty, seven tenure-track faculty, and three clinical faculty. These individuals have revitalized the faculty and transformed research, teaching, and the collegiality of the institution. In addition, SLS continues to attract exceptional students; for example, seven of the first cohort of Knight-Hennessy Scholars were Law School students.

Providing SLS students with an exceptional educational experience is always a top priority. In the past few years, the school has renewed focus on the student climate, both inside and outside the classroom. Faculty and staff have devoted substantial time to thinking about issues of diversity and inclusion and of student mental health. The school has implemented a range of new programs to foster a positive educational experience for all students, with their different backgrounds, experiences, identities, and viewpoints. Among other things, the Law School faculty recently voted to implement changes to the first-year curriculum, moving one of the required fall courses to spring and adding small discussion seminars, which will address a variety of topics and meet in professors’ homes. Additional initiatives relate to student affairs programming and student recruitment and admissions.

In addition to the emphases on recruiting and retaining faculty and improving the experience of law students, SLS has dedicated considerable attention to strengthening its already stellar educational program. It has made important strides in expanding the curriculum to meet the demands of a rapidly changing legal profession as well as changes in the spheres of business, civil society, and government in which Law School graduates will serve as counselors and leaders. These curricular initiatives are focused on public policy analysis, globalization, and technology, and all involve an emphasis on interdisciplinary problem-solving and teamwork.

One hallmark of Stanford Law School is the faculty’s willingness to innovate in not only the subject matter taught, but also the modes of instruction used. This effort has resulted in a best-in-class clinical education model, in which students are immersed in legal practice for real clients. More recently, the school launched its cutting-edge policy lab program, in which students receive training in public policy analysis as well as the chance to work on real-world public policy problems, often in interdisciplinary teams. Lawyers have an
important role to play in addressing complex social problems like the global refugee situation or the opioid addiction crisis, but legal analysis alone is insufficient to address these issues. In the coming years, the school plans to continue this emphasis on training students to rigorously analyze policy problems and to support faculty research with the potential for real-world policy impacts.

Over the past several years, faculty, in consultation with alumni, have been intent on building and launching a global initiative. They developed an innovative foundational course on global legal practice that includes in-depth case studies of international business transactions and litigation, as well as intensive overseas study trips to countries such as Brazil, India, and China. They also improved the integration of comparative law and international issues into existing core courses. Building on this program, and relying on funding from a $25 million gift it received earlier this year, the Law School will launch a full-time, immersive global quarter in winter 2020 with a group of 24 students. If successful, this will be the only program of its kind in legal education, and the school hopes it will be a transformational educational experience for all involved.

A third major area of innovation relates to the numerous impacts technology will have not only on the legal profession, but also on the ways law and government operate across countless substantive domains. The Law School already is engaged in work in this area through the program on Law, Science and Technology, including the CodeX project on legal informatics, and the Center on Internet and Society. The school is also launching a new technology initiative. This will expand research and teaching on topics involving the intersection of technology and law, including democracy and elections, privacy, online speech, Internet architecture, intellectual property, artificial intelligence, machine learning, and big data.

**CONSOLIDATED BUDGET OVERVIEW**

The 2019/20 consolidated budget comprises total revenues and operating transfers of $105.9 million, expenses of $100.2 million, and transfers to assets of $6.5 million. SLS projects a decrease in expendable fund balances of $881,000. The transfers to assets include $4 million to student loan to fund the Loan Repayment Assistance Program; $1.5 million to plant for the Crown Quadrangle renovation project; and $1 million of endowment income reinvested into endowment principal.

Consolidated revenue, exclusive of general funds and operating transfers, is estimated to rise 3% to $69.2 million. Executive education programs (Corporate Governance; Law, Science and Technology) and royalty income remain strong, with $5.5 million of designated income producing 4% more revenue. The Law School’s 125th anniversary will help lift expendable gifts 4% to $13.4 million. Endowment income will increase 2% to $47.6 million. Sponsored research is steady and will generate $2.3 million; half of this represents the U.S. Department of State grant to support the Afghanistan Legal Education Project.

Total consolidated expenses are anticipated to grow more than 5% to $100.2 million. A considerable amount of this growth is due to the importance of addressing the programmatic issues described herein. Compensation will rise 6% to $71.6 million, primarily as a result of faculty-related cost commitments, as well as academic and regular staff for the technology initiative, the global quarter, and diversity/inclusion. Non-compensation expenses will increase 5% to $28.6 million. Principal factors in this growth are community diversity and inclusion programs, travel costs associated with the global quarter, and graduate student financial aid.

SLS consolidated expendable fund balances will decrease by $881,000 to $23.9 million. Of this balance, $12.4 million is in noncash investments in the Law School Venture Fund and faculty housing loans. The remaining $11.5 million consists of $9 million for restricted purposes, such as academic programs and centers and financial aid, and $2.5 million for unrestricted purposes.
PROGRAMMATIC DIRECTIONS

The School of Medicine is one of three entities, along with Stanford Health Care and Stanford Children’s Health, that make up Stanford Medicine. Its mission is 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 to lead the biomedical revolution in precision health. A fundamental shift from reactive medicine to proactive and personalized health care, precision health aims to predict, prevent, and cure disease—precisely.

Last year, Stanford Medicine completed its integrated strategic planning process, which resulted in an overarching plan inclusive of research, education, and patient care missions. From this planning, three integrated strategic priorities emerged: Value Focused, Digitally Driven, and Uniquely Stanford. These strategic priorities indicate that Stanford Medicine is focused on excelling in quality while driving down cost, leveraging its unparalleled position to lead health care in the digital age, and continuing to partner with the university at every opportunity—embracing Stanford’s distinctive culture, which emphasizes collaboration across disciplines and schools.

This planning process, which has been complementary to the university’s own long-range planning process, has helped create a better-aligned and more collaborative organization. Currently, Stanford Medicine leaders are working to launch initiatives identified as having both high impact and high feasibility over the next one to three years.

For example, last fall, the School of Medicine launched a new MD program curriculum that strengthens educational experiences in the basic sciences and gives students more opportunities for in-depth scholarship. Next year, Stanford will launch a new track for an innovative six-year MD/MS degree program. Ongoing efforts to sustain funding for PhD students received a boost with a generous gift that has allowed the school to establish five endowed fellowships. These will enhance the flexibility of students in pursuing research in areas of interest.

In research, the school has successfully increased its funding, maintaining the number three spot in terms of total National Institutes of Health (NIH) funding to schools of medicine, even though effective levels of NIH funding have decreased over the last decade. In February, Stanford Medicine announced the launch of a new biospecimen management system that is streamlining the process by which researchers track, share, and protect biological samples. Additionally, a cancer biologist was named to lead the Stanford Cancer Institute, which aims to improve patient outcomes and conduct basic and translational research to predict and prevent cancer.

### 2019/20 Consolidated Revenues

**$2,692.7 Million**

- **Designated Clinic**: 42%
- **Sponsored Research**: 28%
- **Patent Income**: 2%
- **Auxiliary Income**: 1%
- **General Funds**: 5%
- **Gifts**: 5%
- **Endowment Payout**: 7%

### [IN MILLIONS OF DOLLARS]

<table>
<thead>
<tr>
<th></th>
<th>2017/18 ACTUALS</th>
<th>2018/19 PROJECTION</th>
<th>2019/20 BUDGET PLAN</th>
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<tbody>
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<td>1,346.5</td>
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The School of Medicine plans to establish itself as a market leader and innovator in digital health education through Digital MEdIC (Digital Medical Education International Collaborative) and other platforms. Another initiative is to build out the school’s efforts to apply the science of risk assessment, customized disease monitoring, disease prevention, and early detection under the umbrella of the Precision Health & Integrated Diagnostics Center.

Diversity continues to be a key priority. Stanford hosted an inaugural LGBTQ+ visibility event last fall and established a Sexual and Gender Health research program. With the help of expanded programming, outreach, and scholarships, the 2018/19 PhD and MD entering classes each included 23% underrepresented minorities. The biosciences PhD entering class was a record 61% female. Further, through the work of its chief wellness officer and WellMD Center, Stanford remains at the forefront of the national effort to address physician burnout.

CONSOLIDATED BUDGET OVERVIEW

The school projects total revenues and operating transfers of $2,692.7 million in 2019/20 and expenses of $2,660.2 million, yielding an operating surplus of $32.5 million. After a net positive transfer from assets of $19.4 million, the school anticipates a net change in current funds of $51.9 million. The growth areas are healthcare services, tuition, and sponsored research. Offsetting this growth is the projected shortfall in expendable funds pool payout.

Total revenues and operating transfers are projected to increase 5.1%, or $129.5 million, to $2,692.7 million in 2019/20. Key drivers include the following:

- The inter-entity funds flow agreements with hospitals will contribute growth of 7.6%, or $92.0 million, in healthcare services revenues to $1,308.0 million in 2019/20. This growth is driven by continued increase in clinical activities and incremental faculty and clinicians.
- Tuition revenue is projected to grow 6.1%, primarily from the tuition rate increase and ramp-up of the physician assistant master’s program introduced in 2017/18.
- Federal and non-federal sponsored research revenues are projected to grow 4.0%, driven by new faculty hires and increased clinical research activities.

- Investment revenue is projected to drop by $8.6 million due to a shortfall in the expendable funds pool payout.

Expenses are projected to increase by 6.6%, or $164.9 million, to $2,660.2 million in 2019/20. Major areas of increase include the following:

- The school projects net recruitment of 39 faculty, 21 in the Medical Center line, 15 in the university tenure line, and 3 in the non-tenure line. In addition, it anticipates adding 80 clinician educators for 2019/20.
- Total compensation expenses for faculty, clinicians, and staff are expected to increase 7.2% in 2019/20. The main drivers are increase in clinical activities, incremental faculty and staff, and the annual salary program.
- Non-compensation expenses are projected to rise faster in 2019/20 due to growth in sponsored research and healthcare services revenues. Rent expenses are projected to increase with the move of administrative functions to Redwood City and new Research Park leases.

Asset transfers include $26.0 million in new gifts, offset by $5.0 million of transfers to quasi endowment by departments and a transfer to plant of $1.6 million.

CAPITAL PLAN

The school’s capital plan for 2019/20 includes the completion of BioMedical Innovation Building I, which is on budget at $210 million, with occupancy anticipated in fall 2019. The Center for Academic Medicine I building, with its associated underground garage, began construction in 2017/18 and is on budget at $222 million, with occupancy planned in 2021.

In 2018/19 the school leased 1701 Page Mill to be renovated into a 116,000-square-foot office and wet-lab space. The total project cost is estimated to be $17 million, with occupancy anticipated in 2021.

In 2019/20 the school will begin the design phase for two new projects: the Laboratory for Cell and Gene Medicine (LCGM) Expansion and the Grant Building Decommission. Construction for the LCGM Expansion is planned for 2020, with occupancy in 2022. The total project cost is estimated to be $15 million. The Grant decommission involves phased move-outs from the Grant and Boswell buildings to other school properties over 2020/21 and is projected to cost $15 million.
The Office of the Vice Provost and Dean of Research (VPDoR) oversees and supports the research enterprise throughout Stanford’s seven schools. VPDoR oversees five shared research platforms and 17 institutes, centers, and independent labs. The office also develops research policy and manages the compliance and administrative offices that support research. Guided by Stanford’s Long-Range Plan (LRP), VPDoR plans to support discovery, accelerate impact, increase flexible funding opportunities, and provide state-of-the-art facilities for all Stanford researchers.

**PROGRAMMATIC DIRECTIONS**

Stanford’s research ecosystem must enable scholars and students to explore to the limits of their talents and imaginations and thereby contribute to the human quest for understanding and innovation. The goals of the VPDoR enterprise flow from the purposes of research at Stanford, which are to understand nature and humans, to accelerate transformational impact, to educate students, and thereby to benefit society. In 2019/20, VPDoR will pursue four primary goals:

1. **Implement the LRP design teams’ recommendations on flexible resources and shared platforms.** VPDoR seeks to support Stanford researchers and encourage high-risk, high-payoff research in a conservative funding environment through the following activities:
   - Foster flexible resources, funding programs that support researchers, award seed grants, and facilitate new collaborations.
   - Enhance Stanford's shared platforms and create new ones. Many new instruments cost so much and require such specialized expertise that investigators cannot afford to install them in their individual laboratories. The optimal way to give Stanford researchers access to a full suite of new tools is to install those tools in shared facilities with skilled scientific staff.
   - Evaluate research computation and data services. Faculty and students need research computation facilities on campus and in the cloud. A research computation and data services design team will evaluate the best ways to support the digital future by providing computation facilities; hosting, cataloging, and archiving data; purchasing, licensing, and contracting for data services and data; and providing training and consultation.

2. **Address the growing complexity of compliance requirements.** To conduct research effectively, Stanford faculty members, staff members, and students require clear and appropriate research policies. It is critically important to continually review, update, and improve the university’s policies, practices, and systems. Three critical areas of regulatory compliance have emerged:

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![2019/20 Consolidated Revenues $258.0 Million](chart)

<table>
<thead>
<tr>
<th>[IN MILLIONS OF DOLLARS]</th>
<th>2017/18 ACTUALS</th>
<th>2018/19 PROJECTION</th>
<th>2019/20 BUDGET PLAN</th>
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**Endowment Payout**

- **18%**

**Sponsored Research**

- **28%**

**Other**

- **1%**

**General Funds**

- **26%**

**Gifts**

- **22%**

**Affiliates**

- **2%**

**Auxiliary Income**

- **3%**

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**Consolidated Revenues 2019/20**

- **$258.0 Million**
- **Foreign influence:** Stanford’s research policies derive from federal laws and regulations designed to protect research integrity and from cherished principles on openness in research policy, academic freedom, and nondiscrimination. Federal agencies are taking steps to protect sensitive technology and intellectual property developed on U.S. campuses. VPDoR is convening panels of faculty and staff experts in research, law, political science, and government to help identify policies that will enable the university simultaneously to protect its own research integrity, exchange people and ideas with domestic and foreign collaborators, and support national goals related to economic strength and military security.

- **Accelerated impact:** During the LRP process, voices are calling for Stanford researchers to accelerate their beneficial impact on society. The most effective way for investigators in STEM fields to accelerate the impact of new technology is to intensify interactions with companies. Such interactions create policy issues surrounding intellectual property, conflicts of interest, and management of graduate students.

- **Personal data:** Scholars in every field face unprecedented and thrilling quantities of medical, social, and physical data that will transform their scholarship and accelerate its benefits. What data may Stanford researchers collect? How should Stanford negotiate data use agreements with companies and government agencies that are collecting similar troves of data? How does Stanford store personal data to balance the demands of security with the benefits of science? Research data policies and training are key to assure that personal and social data are treated responsibly and respectfully.

3. **Review the institutes, centers, and independent labs.** The 17 institutes, centers, and independent labs span the life sciences, physical sciences, social sciences, and humanities; engineering; and medicine. VPDoR will establish a regular review cycle to revisit their missions and structures; assess their relationships to the schools and departments; search for ways to enhance their activities; improve their support for researchers; and create a research environment even more conducive to success. This year, the physical science institutes and their directors will undertake a self-assessment and convene an external review board.

4. **Launch the Digital Future initiatives:**

- **Stanford Human-Centered Artificial Intelligence (HAI) Initiative:** In March 2019, Stanford launched a new institute designed to advance AI research, education, policy, and practice. HAI leverages Stanford’s strengths in business, economics, education, genomics, law, literature, medicine, neuroscience, and philosophy. These strengths complement Stanford’s leadership in AI, computer science, engineering, and robotics. Stanford HAI will serve as a global interdisciplinary hub for researchers, students, developers, and users who want to leverage AI’s impact and potential.

- **Stanford Data Science Initiative (DSI):** The ability to advance discovery, create new knowledge, and solve the world’s most pressing global problems will increasingly rely on the ability to learn from data. DSI will weave data science research and methods into the fabric of the university. DSI will foster collaborations among the world’s best data scientists and scholars from other fields who require accurate, dependable, large data sets and data sciences techniques.

**CONSOLIDATED BUDGET OVERVIEW**

VPDoR projects a 2019/20 consolidated budget with total revenues and transfers of $258.0 million and expenses of $248.6 million, resulting in an operating surplus of $9.4 million. After transfers to assets of $3 million, the net change in current funds is a net surplus of $12.4 million. Compared with 2018/19 year-end projections, 2019/20 revenues will decrease by 2.8% and expenses will increase by 3.1%. The largest factor in the drop in total revenues and transfers is a decrease of 16%, or $4.7 million, in non-federal sponsored funding. The primary reasons for this reduction are that a variety of programs and projects are coming to an end in 2018/19 and a specific large program receives its funding in alternate years. Gift revenue will remain at a high level as new initiatives from the LRP are launched, such as HAI and DSI.

The overall VPDoR reserve position is strong; however, funds are restricted to the control of faculty and departments. Of the total reserves, faculty and department programs control 78% ($185 million), and all of these funds are earmarked for research.
VICE PROVOST FOR UNDERGRADUATE EDUCATION

PROGRAMMATIC DIRECTIONS

The Office of the Vice Provost for Undergraduate Education (VPUE) serves as the nexus for key programs and initiatives to facilitate students’ acclimation to college-level work and to help them define and achieve their intellectual ambitions. VPUE meaningfully engages all 7,000 undergraduates during their time at Stanford and aims to provide all students with strong foundations, individualized support, opportunities for exploration, tailored advice and guidance, carefully structured experiences, and meaningful connections with faculty.

In late 2018, the Haas Center for Public Service shifted from the Office of the Vice Provost for Student Affairs (VPSA) to the new Office of the Senior Vice Provost for Education (SVPE). While the SVPE office takes shape, VPUE has assumed financial and administrative management of Haas and has included Haas in its budget plan.

VPUE expects continued focus in 2019/20 on five priorities established in 2018/19:

- Working at one’s best: Explore enhancements and process improvements that will enable better collaboration and coordination across all units within VPUE.
- Articulating and advancing VPUE’s mission: Explain more concretely, both internally and externally, what VPUE is and what it does to undergird and contribute to the undergraduate experience.

- Ensuring capacity and preparedness for Long-Range Plan (LRP) outcomes: Remain engaged in Stanford’s LRP opportunities and move nimbly when necessary to prepare for and implement initiatives.
- Demonstrating and enhancing inclusive policies: Amplify understanding of and commitment to programs and processes that support inclusion and belonging and provide equity and access.
- Managing faculty leadership transitions: Ensure smooth transitions of key faculty leadership positions within three VPUE units: Bing Overseas Studies Program (BOSP), Stanford Introductory Studies, and the Vice Provost’s Office with the transition of a new senior associate vice provost.

Programmatically, the expansion and enhancement of undergraduate academic advising remains one of the organization’s key areas of focus and ties directly to the university vision that emerged from the first phase of the LRP. Housed within Undergraduate Advising and Research, academic advising directors (AADs) currently face an unsustainable student-to-AAD ratio of 525:1. As part of the 2019/20 budget process, VPUE laid forth a plan to add 12 AADs over the next three years. While there was general support for this plan, staffing will have to ramp up over a longer period, given the current budget climate. VPUE plans to add two incremental AADs in 2019/20 and will return to the Budget

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<th>[IN MILLIONS OF DOLLARS]</th>
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¹ Revenues and expenses in this chart and table include $12.0 million of activity that is accounted for as operating transfers in Appendix A.
Group next year with a revised request to add the remaining positions and additional support staff for the program.

Other programs that will undergo significant transitions in 2019/20 include Stanford in New York (SiNY), an off-campus, quarter-length offering that immerses students in a blend of coursework and internships in one of the world’s most vibrant cities. In 2019/20, SiNY will officially move out of its pilot phase and find a continuing home within BOSP.

BOSP will also introduce its newest overseas program in Hong Kong in autumn quarter 2019/20. Approximately 25 students will live in dormitories on the campus of the Chinese University of Hong Kong (CUHK), take courses taught by both CUHK and Stanford faculty, and engage in cultural activities exploring the importance and diversity of the Sinophone world. In addition, BOSP is taking advantage of the opportunity to lease additional academic space at its Florence campus, enabling the program to expand enrollment capacity and add classroom space to better accommodate students’ needs.

Serving as the hub of Cardinal Service, a campus-wide effort to make service a more essential element of a Stanford education, Haas will engage in the following four priority areas that emerged as part of the LRP process:

- Expanding graduate student engagement
- Engaging locally: Stanford as an anchor institution
- Expanding Stanford engagement with domestic rural areas
- Rethinking time and space: Cardinal Courses on the Road, gap year support, Cardinal Quarters during the academic year, and service terms

**CONSOLIDATED BUDGET OVERVIEW**

The following overview describes VPUE’s and the Haas Center’s consolidated budgets separately. However, the two are combined in the dashboard on the facing page.

Excluding Haas, VPUE expects 2019/20 total revenues and operating transfers of $66.3 million and total expenses of $68.6 million, yielding a $2.3 million deficit and an anticipated ending fund balance of $20.0 million. Compared with 2018/19 year-end projections, this represents a 1% increase in revenues and operating transfers and a 1% increase in expenses. The organization does not expect any significant asset transfers in 2019/20.

Overall, no significant changes are expected in VPUE’s major streams of annual revenue, which continue to consist predominantly of endowment payout and general funds. VPUE will receive $118,000 in incremental base general funds in 2019/20 to support the hire of one additional AAD. VPUE will match this support by funding a second incremental AAD in 2019/20 through its reallocation efforts and gift support.

In 2019/20, currency exchange rate fluctuations are projected to yield a budgetary advantage of approximately $890,000, offsetting a significant portion of VPUE’s standard expense cost rise.

VPUE’s financial position remains strong, and its short-term fiscal strategy has been to sustain excellence in academic programs by using its fund balances. Historically, the organization has had great success with fundraising, and as themes and initiatives emerge from Stanford’s LRP, VPUE is confident its vision for undergraduate education will support a larger, campus-wide fundraising effort.

**Haas Center for Public Service**

In 2019/20, Haas expects total revenues and operating transfers of $7.6 million, total expenses of $9.0 million, and a resulting deficit of $1.4 million. Compared with 2018/19 year-end projections, revenues and operating transfers are expected to decrease by 5%, or $367,000, driven primarily by the ending of two sizable gifts, one dedicated to Cardinal Quarter and the other in support of Haas’s Emerson Peace and Justice Fellowship. Overall expenses will increase by $339,000, or 4%, from 2018/19 year-end projections, largely in line with the university’s 2019/20 salary program. An ending fund balance of $6.2 million is projected.

**CAPITAL PLAN**

Four modest capital projects are planned for 2019/20. As referenced above, VPUE plans to lease additional space in Florence. Renovation costs, estimated to be about $500,000, will be covered by gift revenue. In Berlin, minor renovations, estimated to cost $50,000, are needed in the faculty apartment, and reserves will be used. In support of the Haas Center, the $125,000 kitchen remodel discussed above will be funded jointly by department reserves and central university funding. Finally, exterior improvements will be made on Salvatierra Walk as a joint project with VPSA to create useful program space.
VICE PROVOST FOR GRADUATE EDUCATION

PROGRAMMATIC DIRECTIONS

The Office of the Vice Provost for Graduate Education (VPGE) plays a key leadership role in enriching the educational experiences of Stanford graduate students. VPGE works collaboratively to expand what’s possible in graduate education. It does so by facilitating academic innovation and creative problem-solving on systemic issues within a highly decentralized university, where over 9,400 graduate students pursue 14 distinct types of degrees in 200 degree programs across seven schools. Students are encouraged to be bold in their ambition and prepare themselves to have impact in an increasingly diverse and complex world. To these ends, VPGE provides opportunities that complement school programs and resources by promoting leadership and professional development, interdisciplinary learning, and diversity programming within Stanford’s inclusive community.

VPGE’s programs and fellowships reach over 5,100 graduate students annually, including 866 students currently supported by one or more of VPGE’s seven fellowship programs.

VPGE initiatives address university priorities in four areas: (1) resources to strengthen faculty advising and academic innovation within and across degree programs; (2) support to increase student diversity by giving departments leverage in recruitment and by fostering inclusion of enrolled students through professional development and community building; (3) interdisciplinary learning and networking to spur innovation in research and teaching; and (4) professional development resources, which students and faculty value, especially if employment prospects are uncertain. VPGE’s university-wide fellowship programs serve many of these objectives concurrently. Providing graduate student funding—about 10% of the university’s annual total—remains a high priority.

Fellowships

VPGE fellowship funding overall will increase 10.3%, from $38.2 million in 2018/19 to $42.2 million in 2019/20, despite flat growth in endowment payout and general funds income. Stipend amounts will increase 6.1% next year, while tuition will increase 3.5%. Fund balances will cover this increase in graduate student support.

Innovative Programs

VPGE continues to provide innovative programs, in collaboration with Stanford’s seven schools, to recruit and retain students from diverse backgrounds and enhance their educational experiences 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, with a total of almost 600 EDGE fellowships awarded. 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, now in its eleventh year, supports advanced PhD students who bring diversity to their fields as they prepare for academic careers. With 210 fellowships awarded thus far, over 152 DARE Fellows have graduated, and 75% are employed in the academic sector.

Through VPGE’s “What’s Possible” portal as well as submissions to long-range planning, students have identified many distinctive strengths of graduate education at Stanford as well as some factors that may impede academic progress and, as such, are opportunities for change. Academic advising and student family support have been highlighted as action items this past year. With a new policy from the Faculty Senate requiring departments and programs to make advising expectations explicit, VPGE has been expanding and disseminating effective practices in graduate advising. VPGE also led the university’s response to recommendations from the Student Family Working Advisory Group to assist graduate students with children. The provost approved a new pilot program, the Graduate Family Grant, a need-based grant of up to $10,000 annually. In its first six months, the program has distributed over $1 million to 125 student parents. VPGE has also expanded Childbirth Accommodation funding to a full quarter, and Academic Accommodations have been extended to non-birth parents. The Graduate Life Office has developed online information for students with children to facilitate access to support services and planning resources as well as connections among student parents within the community. The Student Family Working Advisory Group is working alongside the Affordability Task Force and a childcare working group to review the impact of these new initiatives and identify priorities for next steps.

CONSOLIDATED BUDGET OVERVIEW

Since January 2007, VPGE has used resources strategically, taking a conservative approach to growth in operations. VPGE was fortunate to begin with a highly restricted endowed fund balance for the Stanford Graduate Fellowships in Science and Engineering (SGF) Program. Over the next several years, growth was more gradual than envisioned, resulting in a designated fund balance from general funds. The 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 increased expenses for graduate student funding and programs as well as anticipated declines in endowment income for multiyear fellowships.

VPGE projects a 2019/20 consolidated budget with total revenues and transfers of $45.9 million and expenses of $50.6 million, resulting in an operating deficit of $4.6 million. After asset transfers of $292,000, a deficit of $4.9 million in fund balances is expected. This will reduce the consolidated fund balance to $42.1 million at year-end, as planned.

The 2019/20 consolidated expenses comprise 83% direct graduate student support, 10% compensation and benefits, and 7% programmatic non-compensation expenses. VPGE will provide $42.2 million in direct graduate student funding for fellowship programs in 2019/20. Growth in the tuition and salaries/stipend rate for fellowships and programs drives this increase. Compensation and non-compensation expenses are expected to increase slightly to $5.1 million and $3.2 million, respectively.

VPGE’s current budget plan will provide stability and flexibility over the next two years. Planned deficits in endowed fellowships and the operating budget will continue annually, bringing the consolidated fund balance to $26.8 million by 2021/22. Retaining a reasonable consolidated fund balance supports multiyear fellowship commitments and provides flexibility for VPGE to align with priorities in long-range planning. There is excitement about potentially emerging initiatives that at present have unknown budgetary implications. Next steps will entail some difficult decisions, as there are always more good ideas and compelling needs than resources to support them. VPGE will continue to work collaboratively with university leaders within and across the schools to identify what matters most and where there is the greatest leverage for change in this large, decentralized enterprise.
PROGRAMMATIC DIRECTIONS

Stanford’s commitment to making important contributions to society and to human well-being requires world-class research, outstanding teaching, and effective learning. The Office of the Vice Provost for Teaching and Learning (VPTL) supports faculty, instructors, students, schools, and the Stanford community in advancing educational experiences for undergraduate, graduate, professional, and lifelong learners. VPTL delivers services through two main programmatic areas: campus-based learning, and global and extended education.

Campus-Based Learning

VPTL serves as a nexus of teaching and learning support for instructors and students across campus through the following branches:

- **Center for Teaching and Learning (CTL):** CTL, in close collaboration with schools, departments, and other offices, works to ensure the quality of educational experiences for all Stanford students by vigorously supporting the development and widespread use of inclusive learning practices, learner-centered approaches in teaching, and the integration of evidence-based practices in teaching. As part of this effort, VPTL supports rigorous and thoughtful ongoing assessment and feedback to improve learning outcomes. In addition, VPTL supports the academic success of diverse learners and develops and inspires the next generation of educators (current graduate students and postdocs) to be excellent teachers, communicators, and leaders through educational programs and training. In 2019/20, CTL will focus on six service areas:
  - Expanding learning services for students
  - Boosting faculty support programs, including developing new formats for the Course Design Institute so that more faculty and instructors may take advantage of the program
  - Increasing support for assessment
  - Expanding graduate student and postdoc teaching support programs
  - Increasing resources for use of academic technology tools
  - Supporting Stanford’s long-range planning initiative Inclusion, Diversity, Equity & Access in Learning (IDEAL)

- **Learning Technologies and Classrooms:** VPTL develops and optimizes the use of classrooms, informal learning spaces, and technologies to enhance education for all students. In 2019/20, VPTL will focus on four major priorities:
  - Facilitate a master plan for classrooms and informal learning spaces with new guiding principles for campus learning spaces: a 10-year roadmap and capital
plan for updating, retrofitting, and constructing learning spaces; and a plan for ongoing technology and furnishing provisions.

- Continuously improve the learning management system serving all Stanford undergraduate students.
- Enable students and instructors to leverage online learning by expanding an integrated technology capable of recording and streaming classroom lectures (synchronously or asynchronously) to general-use classrooms.
- Continue developing a robust learning analytics plan by assessing and improving current infrastructure.

Global and Extended Education Programs

VPTL provides platforms, infrastructure, policies, and oversight to support Stanford’s vision of engaging remote learners, including alumni and professionals, regionally, nationally, and globally.

- Stanford Center for Professional Development (SCPD):
  SCPD supports the development and delivery of Stanford educational offerings to learners around the world. SCPD records, produces, and delivers faculty teaching to a global community via a portfolio of online credit-bearing courses, executive and professional education programs, and free or low-cost courses. In 2017/18, SCPD supported 1.5 million enrollments in over 190 countries. These programs create valuable research and teaching connections between faculty and industry worldwide, support professionals who seek to remain educated during their careers as well as lifelong learners, and provide financial support to participating faculty and departments. In 2019/20, SCPD will focus on collaborating with schools and departments to increase the number of online and hybrid part-time graduate degree programs and increase programming for students taking Stanford online credit-based certificate offerings and courses. SCPD will also grow its portfolio of executive education and professional credential offerings.

- Stanford Center for Health Education (SCHE):
  Co-sponsored by the School of Medicine and VPTL, SCHE accelerates global access to both education and quality health care by creating and disseminating relevant, engaging, accessible, and scalable digital content. In 2018/19, SCHE launched its first online professional course in nutrition science and a graduate certificate program in epidemiology and clinical research. In 2019/20, SCHE will launch three new online certificate programs and one to two in-person targeted training opportunities.

The Digital Medical Education International Collaborative (Digital MEdIC), a program that improves global health outcomes by extending access to health education, will continue expanding its work in Africa and Asia. Digital MEdIC has reached over 300,000 learners worldwide and is growing its library of education content, with a focus on maternal and child health and critical care. SCHE also partners with underresourced medical schools worldwide to extend Stanford Medicine’s core curriculum and expertise in order to train more qualified health professionals.

CONSOLIDATED BUDGET OVERVIEW

VPTL’s 2019/20 consolidated budget projects total revenues and operating transfers of $41.3 million and expenses of $43.1 million, resulting in a planned net operating deficit of $1.7 million. After a $1.2 million transfer from external endowment assets in support of SCHE, VPTL projects an overall deficit of $543,000.

Total revenues are projected to increase by $2.4 million, or 6.2%, from 2018/19. This is primarily due to increased enrollment in online academic courses. However, online program revenue can fluctuate 10%-20% from year to year.

Total expenses are projected to increase by $2.8 million, or 7%, from 2018/19. Compensation expenses are projected to increase by $1.4 million, or 5.6%, primarily due to addition of staff to support expanding programs. Non-compensation expenses are projected to increase by $1.4 million, or 9.4%, due to several infrastructure projects.

VPTL expects to have a $12.2 million fund balance. It plans to utilize some of these funds to support additional program development for residential and online students; create new technologies, tools, and platforms; pilot new modes of course delivery; and establish technology reserves to refresh technology-rich spaces throughout campus over the next several years.

VPTL’s fiscal strategy is to use accrued funds from start-up backing to cover planned deficits as it transitions to a sustainable funding plan. VPTL’s path to long-term sustainable funding includes raising gift funds, increasing efficiency, reducing expenditures, and increasing SCPD revenue-generating programs. SCPD will also refocus its portfolio of free, low-cost courses and programs to ensure alignment with school and department priorities and to ensure this activity has a sustainable funding source in future years.
VICE PRESIDENT FOR THE ARTS

PROGRAMMATIC DIRECTIONS

The Vice Presidency for the Arts (VPA) was created in 2017 with the stated desire of elevating the arts at Stanford. As a new university organization, it has a mandate to amplify the impact of the arts at Stanford through senior university leadership, ambitious arts programs, and collective activity that is greater than the sum of its parts. VPA consists of the Cantor Arts Center, the Anderson Collection at Stanford University, Stanford Live and Bing Concert Hall, the Institute for Diversity in the Arts (IDA), and the Stanford Arts Institute. A central office coordinates programming, develops and executes university-wide initiatives, and supports student arts practice and extracurricular arts activity.

In 2017/18, the first full year of its existence, VPA conducted a strategic planning process, working with faculty, students, staff, and alumni to identify and articulate priorities for the organization. Two overarching themes emerged out of this process: (1) investing more deeply in talent, collections, and programs to make Stanford a vibrant home for art and artists, and (2) leveraging Stanford's strength across disciplines to make a productive impact on the future of the arts. At the same time, VPA has been working operationally to identify opportunities for collaboration, efficiencies, and synergies across the different units that make us stronger together.

Significant progress can be reported on these fronts. In 2018/19, VPA launched two new signature programs that speak to both of its programmatic themes:

- The Presidential Residencies on the Future of the Arts is a pilot program that brings renowned artists to campus for a substantial engagement with students and faculty. Artists are asked to contribute to the creative life of campus; crucially, however, they are also given the opportunity to work with faculty across disciplines to move their own work forward. For instance, the visual artist and videographer Kahlil Joseph is workshopping his new project BLKNWS on campus all year long. The project, which is at once both a work of visual art and a news broadcast, reimagines a CNN-style constant news feed from an African American perspective. It is being shown in three locations on campus (the Cantor, Harmony House, and Lagunita Dining), and Joseph is conducting focus groups and input sessions with faculty and students from the arts, engineering, law, and business. After Stanford, the project will go to the Venice Biennale, and the version there will reflect input from Joseph’s residency here.

- A new conversation series, Artists on the Future, pairs world-renowned artists with thought leaders from other fields to discuss issues of importance to our collective

![2019/20 Consolidated Revenues $22.8 Million](chart)

### [IN MILLIONS OF DOLLARS]

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future. These open public discussions will allow students and faculty to have exposure to significant artists, while at the same time highlighting the contribution that artists, with their unique perspective, can make to questions about social justice, human connection, and a meaningful existence, to name just a few. The series launched in March 2019.

In addition to these two new programs, VPA has been able to establish a new endowed fund, the Stanford Visiting Artist Fund, in honor of Roberta Bowman Denning. This new resource will support significant artists deeply embedded in academic departments and programs. Funding is offered on a competitive basis; the first round of departmental proposals has been submitted, and the first artists supported by this fund will be on campus in 2019/20.

**CONSOLIDATED BUDGET OVERVIEW**

The finances of the VPA units vary greatly; each unit has its own dedicated funds, with differing levels of restrictions. Most operate more like nonprofit businesses than academic departments. Programmatic and one-time spending are often driven by availability of donor funding, so expenses can vary greatly from year to year. Often, units receive gifts with the intention of spending them in future years, so reserves are used over multiple years.

VPA projects a 2019/20 consolidated budget with total revenues and operating transfers of $22.8 million and expenses of $26.2 million, resulting in an operating deficit of $3.4 million that reflects the strategic use of reserves, primarily for one-time programs and art acquisitions.

Revenues and transfers are expected to decline from 2018/19. Gift revenue is expected to be $700,000 lower, mainly due to receipt of a couple of high one-time gifts in 2018/19. Additionally, transfers are expected to decline by $3.3 million, primarily because there were two large one-time transfers in 2018/19 to support the public art program for the next five years and the Frost Amphitheater launch. VPA will start transferring funds to other departments to support the new Denning Visiting Artist and public art programs in 2019/20. These declines are slightly offset by an expected $700,000 increase in earned income due to anticipated revenue from Frost as the number of shows ramps up in 2019/20, as well as from the Cantor with the introduction of a new events program.

Expenses are expected to decline by $900,000, primarily because there were one-time start-up equipment purchases for the Frost launch in 2018/19. Compensation will increase in 2019/20, as there was significant staff attrition in recent years, and VPA is planning to fill critical vacant positions at the Cantor and Live to support the strategic priorities of their executive directors. There will also be one-time spending of reserves for the Public Art Plinth project, a presidential residency, and art acquisitions by the Cantor.

VPA’s financial priorities in 2019/20 are to:

- Seek new revenue opportunities at the Cantor to support its growth to become a 21st-century art museum.
- Evaluate and seek funding opportunities for Live, Anderson, and IDA to sustain ongoing operations and programs as well as new initiatives.
- Create a robust financial infrastructure and processes to support the new Frost Amphitheater business.
- Continue to develop and pilot new initiatives, including enhanced student professional development programs in the arts, public art, and visiting artist programs.

VPA’s overall reserve position is strong, with an expected fund balance of $23.5 million at the beginning of 2019/20. However, the reserves are unevenly distributed among the VPA organizations and narrowly restricted to use by those organizations. The Cantor controls 59% of the total fund balance, Live controls 10%, and Anderson and IDA control less than 5%. The majority of the remaining reserves are restricted for visiting artists, public art, and student extracurricular arts program support.

**CAPITAL PLAN**

VPA is moving forward with phase 2 of the Cantor space utilization study, evaluating storage, operations, and exhibition areas. In the future, VPA, in coordination with the President's Office's Town Center Study, intends to perform an architectural and infrastructure upgrade study to evaluate recommendations in the Memorial Auditorium Renovation Feasibility Task Force report.
**PROGRAMMATIC DIRECTIONS**

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.

Now in its centennial year, Hoover will reinforce its strengths in research and education and accelerate its pace of innovation to extend its reach and impact in the next one hundred years. Hoover will achieve these objectives by investing significantly in the vitality of the fellowship and the collections and digital capabilities of the Library & Archives and disseminating its core scholarship to key constituents via quality education and communication programs.

Hoover’s hallmark is independent policy scholarship, distinguished by empirical and intellectual rigor. Therefore, revitalizing the fellowship remains a key priority as the institution enters its next century. Under the leadership of Hoover Senior Fellow Joshua Rauh, director of research, Hoover developed a human capital plan to grow its most indispensable intellectual asset, the senior fellowship, while also creating a pipeline for the next generation of scholars. In the short term, Hoover will continue its appointment of adjunct senior fellows, courtesy senior fellows, and visiting fellows, seeking to expand its senior fellowship by identifying scholars from other institutions at the pinnacle of their careers. The transition to full-time senior fellow from these ranks can be rapid, and Hoover hopes to add one new full-time senior fellow per year from this group of distinguished scholars. In the long term, Hoover seeks to revitalize the fellowship via the new Hoover Fellows Program, a fellowship track that will attract younger scholars to Hoover for five-year terms at the age when they have proven their scholarly potential and have their best work still before them. The 2019/20 budget plan includes expenses for limited-term appointments, one new full-time senior fellow, and three Hoover Fellows.

The Library & Archives has developed a vision for how it will enter its next hundred years as a simultaneously virtual and physical space, while continuing to increase its collection of physical and born-digital media. It will expand remote access to digital objects and facilitate on-site access to virtualized objects with virtual walls technology. Continuing to develop technological capabilities is vital to achieving this commitment. In the next year, Hoover will hire skilled staff with the technical competency to carry out the digital vision and sustain partnerships with peer institutions and vendors for mass digitization.
The Library & Archives will enhance its collections by growing specific collecting areas in support of the mission, building on core strengths and expanding into new areas of strategic interest to scholars and policy makers. Hoover will continue to support a significant output of scholarship and education derived from its archival holdings through conferences, workshops, and fellowship programs.

Hoover has a unique opportunity to educate and inform policy leaders and the broader public through its educational platforms and facilities. Collaborative research provides Hoover with a tremendous advantage, as participating scholars increase Hoover’s impact by partnering with core fellows. Therefore, the institution will use its physical space to convene gatherings of scholars to tackle changes in public policy. The physical spaces at Stanford also provide opportunities to engage with the Stanford community and beyond. The recently launched Hoover Centennial Lecture Series is a useful example. This series of public talks will showcase Hoover’s scholarly talent and achievements in a way that highlights the overall mission of the institution and its values: individual, economic, and political freedom; private enterprise; and limited, effective, representative government. The program will continue in 2019/20 and will be matched with other public conferences, seminars, and events. In the digital space, Hoover created the Educating Americans in Public Policy initiative to translate its work into accessible, shareable content. The initiative provides a broad offering of online programs on its Web platform, PolicyEd.org, and will continue to do so in the coming year.

CONSOLIDATED BUDGET OVERVIEW

For 2019/20, Hoover projects revenues of $67.1 million and expenses of $71.8 million. In prior years, Hoover received restricted gifts for specific projects and scholars in advance of associated expenditures. Hoover will use $3.7 million of these accumulated restricted reserves plus $1 million in asset transfers from gifts released from restriction to balance the budget in 2019/20, as planned. Net of these results, end-of-year fund balances will total $19.9 million.

Hoover projects revenues to increase by $1.4 million, or 2.1%, over 2018/19. Endowment income will grow 2.4%, with the variation from the growth to a typical fund due to new endowment gifts. Hoover expects the increase in expendable gifts to be modest in 2019/20, at 2.7%, or $850,000.

Hoover’s plans are ambitious, but modest growth in endowment income and expendable gifts is limiting. In 2019/20, expense growth will be moderate, aligned to revenue growth. Expenses will be just $1.4 million more than in 2018/19. Hoover will accommodate growth in strategic areas by reductions in others. For 2019/20, fellow retirements and departures, an organizational restructuring, and several fellow sabbaticals allow for growth in the budget, but additional development effort will be necessary to fund growth in the long term. For 2019/20, growth will occur primarily in the following areas:

- Expenses for one new senior fellow, the Hoover Fellows Program, and limited-term adjunct fellow appointments.
- Library & Archives expenses around new digital efforts, staff hires, and collecting activities.
- Enhanced programming, including collaborative research groups, public-facing programs, and continued online educational outreach.

CAPITAL PLAN

After a comprehensive master plan study to evaluate its overall facilities and space needs, the Hoover Institution proceeded with plans to construct the new George P. Shultz Building, a 58,200-gross-square-foot building for Hoover fellows on the site of the current Lou Henry Hoover Building (LHH). The Board of Trustees granted concept and site approval in October 2018, with design approval expected in June 2019 and construction approval in October 2019. The project will be fully funded with gifts, and the Hoover Institution has received signed pledges in excess of the preliminary construction budget. In 2019/20, Hoover anticipates concluding several make-ready projects, demolishing LHH, and breaking ground on the new building. Hoover is also collaborating with the Stanford Libraries to fund construction of the Stanford Auxiliary Library 3, Phase 3, facility in Livermore to address archival storage needs. Hoover will contribute funding to the construction and operating costs of this new facility at a rate relative to its storage allocation.
PROGRAMMATIC DIRECTIONS

Jane Stanford’s visionary 1900 plan to create a “grand library” for the university was based on her determination to serve the intellectual pursuits of existing faculty and to attract a future community with more diverse academic interests. The value of Mrs. Stanford’s determination is seen in today’s library: a platform that is both physical and virtual in support of the dynamic research and teaching environment at Stanford. Contemplating Green Library’s first centennial this year and its theme of Beyond100, the Stanford Libraries are reflecting on the past, but also looking forward for new ways to spark curiosity, elevate knowledge, and transform scholarship.

To guide planning and program development, the Stanford Libraries have established three programmatic goals for the next few years. They are:

- **Access**: Accelerate knowledge dissemination by making curated collections, people, and space accessible and discoverable.
- **Community**: Build connections and foster a supportive, stimulating, and inclusive environment within the Libraries and with the research and teaching communities.
- **Stewardship**: Preserve and steward cultural and scholarly heritage in a digital age in support of research, teaching, learning, and cultural enrichment.

The Libraries made several strategic choices to further these goals in 2018/19. They reallocated funds to hire term staff to improve access to unprocessed bulk collections; continued to invest in data catalogs in the SearchWorks discovery platform to make digital materials more easily available for research use; and funded an additional conservator position to care for fragile materials such as the photographic teaching and research collection, which is growing as a result of donations.

In 2019/20, while continuing to focus on access, community, and stewardship, the Libraries will face and address several significant budgetary and programmatic challenges. The imminent challenge is the end of term university funding that supported the development of the digital library programs. Other major challenges include the increasing cost and diversity of academic information resources and the burgeoning demand for the library IT system to adapt to those new resources, particularly Web-based information and data sets. For 2019/20, the strategic priority is simple: maintain the core, including core services, core collections, core staff, and core facilities.
Digitization services and the Stanford Digital Repository are examples of core library programs where investments will be made to retain and expand functionality. The Libraries will sustain services that have brought the Stanford community a broad variety of digitized resources, including government documents, maps, manuscripts, newspapers, piano rolls, and lately anthropological specimens in 3D. Attentive to the call for a collaborative solution on research data platforms emerging from the university long-range planning process, the Libraries will enhance the infrastructure of the Digital Repository and, in partnership with campus stakeholders, contribute to a shared platform for data acquisition, storage, and discovery.

Collections also remain core to the Libraries’ mission. Over 53% of the Library Information Budget is now allocated to e-resources. As that percentage increases, the Libraries face heightened cost escalation, as most e-resources are licensed in a market dominated by monopolistic providers. Inflationary trends require the Libraries to engage in thoughtful rebalancing of purchasing activity, especially given the 2019/20 funding shortfall, to ensure the Library Information Budget continues to meet the immediate needs of Stanford scholars.

**CONSOLIDATED BUDGET OVERVIEW**

The Stanford Libraries forecast revenues and transfers of $91.9 million and expenses of $92.8 million for 2019/20. The estimated operating deficit of $904,000 will reduce the consolidated fund balance to $11.3 million. Compared to the 2018/19 projected year-end actuals, expenses will increase modestly, by 2.2%, and total revenues will stay flat.

The Libraries will face an operating shortfall of about $2 million as a multiyear subvention from the university to build out the digital library programs sunsets in 2019/20. Although it will receive $150,000 of base general funds to continue operating the digital imaging lab, the funding gap is too great to support the remaining digital library staff. The Libraries will carry out a number of deliberate actions to recalibrate internal resources, rebalance the existing budget, and restrain incremental costs to shore up core programmatic priorities. The 2019/20 budget strategy manifests those tactics.

On the revenue side, reinvesting $3 million of balances into endowment principal at the end of 2018/19 will allow for a higher increase in endowment payout than the growth rate for a typical fund. The level of expendable gifts will remain steady at $900,000, but a higher fraction will support existing programs instead of new initiatives or capital needs. The incremental payout and unrestricted gifts will partially offset the loss of digital library funding in 2019/20.

On the expense side, the Libraries will reduce overall nonsalary expense 1.2% by keeping the nonsalary budget, including the Library Information Budget, flat and eliminating some one-time expenses. Careful rebalancing of resources across acquisition areas will address material inflation and respond to critical needs of the research community. The Libraries also eliminated seven digital library positions this year in anticipation of the fiscal cliff, and it will use base salary savings to fill key vacant positions in 2019/20. With a lower vacancy rate expected than in previous years, the projected salary budget will increase 5.1%.

The consolidated fund balance will amount to $11.3 million at the end of 2019/20. Of this, $3.2 million is controlled by LOCKSS, an open-source digital preservation auxiliary. The fund balance will decrease almost 25% from its level three years ago, partially due to two years of strategic reinvestment of endowment balances. The Libraries aim to maintain a reserve of no less than 10% of consolidated expense.

**CAPITAL PLAN**

The Stanford Libraries are embarking on two major capital projects in 2019/20. The first is the third phase of Stanford Auxiliary Library 3, the university’s high-density cold-storage preservation facility in Livermore, with a construction start date of April 2019. The $27.3 million project will be funded by central university funding and a $7.9 million contribution from the Hoover Institution. The facility will provide 44,355 square feet of additional storage space to hold overflow collections from libraries across Stanford; patrons can request those items for use on campus.

In addition, the Libraries received a generous philanthropic gift to renovate the first floor of the East Wing of Cecil H. Green Library. The Hohbach Hall project is in the schematic design phase and is expected to commence construction in winter 2019/20. The gift will support the transformation of Green’s main entrance floor into a welcoming, versatile, and inclusive environment for Stanford communities. It will include new spaces for archives-based teaching, exhibitions, collaborative group study, and presentation of programmatic events and lectures.
SLAC NATIONAL ACCELERATOR LABORATORY

PROGRAMMATIC DIRECTIONS
Stanford University operates SLAC for the Department of Energy (DOE) through a management and operating contract. DOE has identified Stanford’s corporate stewardship of SLAC as best in class. SLAC’s success depends on a robust partnership with Stanford University to attract and support some of the world’s best scientists, engineers, and staff.

Scientific User Facilities
SLAC hosts numerous user facilities, drawing more than 2,900 researchers from around the world annually, with Stanford users representing roughly 12%.

The Linac Coherent Light Source (LCLS) hard X-ray free-electron laser (XFEL) has transformed the field of X-ray science. To maintain world pre-eminence, SLAC and DOE are pursuing a series of developments (LCLS-II and LCLS-II High Energy) that will expand the accelerator’s range of X-ray energies. The LCLS-II Instruments (L2SI) project will provide transformative tools for energy science, qualitatively changing the way that X-ray imaging, scattering, and spectroscopy can be used.

The Ultrafast Electron Diffraction (UED) instrument enables broad capabilities in ultrafast material science and chemical dynamics. SLAC is currently designing options to incorporate a state-of-the-art petawatt laser facility at LCLS. Once operational, the laser will allow researchers to create extreme states of matter with one of the highest peak power lasers in the world, and then probe these states with LCLS X-rays.

The Stanford Synchrotron Radiation Lightsource (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 Stanford pursue research enabled by SSRL.

A joint initiative between Stanford and DOE laid the groundwork for Stanford and SLAC to host a world-leading center, supported 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.

SLAC has several facilities enabling the pursuit of experimental approaches in accelerator development. The Facility for Advanced Accelerator Experimental Tests upgrade project (FACET-II) is currently under construction. Once complete, FACET-II will be a test bed for the development of innovative accelerator technologies.
Science Programs
In addition to large-scale user facilities, SLAC’s core capabilities include advanced instrumentation, condensed matter physics and materials science, chemical and molecular science, accelerator science and technology, fusion energy science, and particle physics.

SLAC is a major partner in the ATLAS experiment at the Large Hadron Collider at the European Organization for Nuclear Research (CERN), which probes for fundamental particles. 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 Large Synoptic Survey Telescope (LSST) camera. SLAC has responsibility for the detector payload and offline computing for the Super Cryogenic Dark Matter Search (SuperCDMS) project that will allow researchers to better understand the nature of dark matter.

Joint Stanford-SLAC institutes and research centers create a competitive advantage by offering sponsors the combined capabilities of SLAC and Stanford. Joint institutes include the Stanford PULSE Institute, the Stanford Institute for Materials and Energy Sciences (SIMES), the SUNCAT Center for Interface Science and Catalysis, and the Kavli Institute for Particle Astrophysics and Cosmology (KIPAC). New is the Joint Initiative for Metrology in Biology (JIMB) center, which creates foundational measurement science tools and standards for biosciences and biomedicine, with funding from the National Institute of Standards and Technology.

As a result of Stanford’s long-range planning process, Stanford and SLAC launched the Quantum Fundamentals Architecture and Machines (Q-FARM) initiative in 2019 to leverage and expand on strengths in quantum science and engineering and to train the field’s next generation of scientists.

SLAC has successfully built new programs in applied energy that leverage capabilities and expertise at SLAC as well as Stanford, nearly doubling the number of applied science programs at SLAC.

CONSOLIDATED BUDGET OVERVIEW
The 2019/20 consolidated budget shows total expenditures of $492.4 million. DOE provides substantially all (97%) of SLAC’s funding. In 2019/20, the DOE contract is projected to fund $488.4 million: $382.9 million for operations and research, $98.5 million for construction of new facilities and instruments, a $4.6 million performance fee, and fees for space at Stanford. SLAC’s strategy to diversify funding sources to include other federal and non-federal agencies besides DOE is showing results. Research program awards reflect growth of over $49.0 million for 2019/20 compared to 2018/19, resulting from diversification of the sponsor base. This growth includes the cryo-EM center, as well as the continued transition to operation costs for LCLS-II and LSST projects.

Construction project costs are expected to decline in 2019/20 by more than $80.0 million from 2018/19 as the DOE-funded LCLS-II and LSST projects wind down. The LCLS-II project in particular has a total project cost exceeding $1.0 billion over its lifetime that includes $993 million for construction. Planning for the new LCLS-II High Energy project began in 2018/19 with a total estimated project cost nearing $368 million ($348 million for construction) and completion expected in 2025/26.

CAPITAL PLAN
SLAC has developed a long-range campus strategy to support future scientific programs by revitalizing utilities, providing collaboration spaces to exploit new science opportunities, and modernizing existing facilities to support its goals. The long-range development plan serves as a working document and resource guide beyond the immediate future of planned capital projects.

SLAC’s building projects provide the laboratory and office spaces necessary for scientists, engineers, and staff. The new Arrillaga Science Center was completed in 2019; the university funded the shell and DOE provided $57.0 million to outfit the first two floors with labs, cleanroom spaces, offices, and collaboration space. SLAC and DOE are currently discussing funding for a large-scale collaboration center, which would add much-needed office and collaboration spaces to further the multidisciplinary nature of SLAC’s strategic programs. LCLS-II will have significant impacts when it opens in 2021, including increased numbers of users and significant increases in data generated from research activity. The Stanford Guest House at SLAC has been operating at full capacity, and SLAC has been pursuing options for the projected increase in housing demand when the new facilities transition to operations in 2021. SLAC and Stanford are also discussing a second scientific research computing facility to address the significant data expected from scientific computing at both SLAC and Stanford.