**Academic Affairs Revised Budget Model Final Report**
Issued: June 2021

**History of Academic Affairs Budget Allocations**

The current period in PSU and Office of Academic Affairs (OAA) budgeting can be seen as starting with the Performance-Based Budgeting (PBB) system. This was developed in a highly participatory process in 2011 to 2013. The goals of this model, as stated by the work group assigned to design and implement a PBB system for PSU, were "to allocate resources in a logical, transparent, and efficient manner that rewards achievement of specific strategic initiatives."

Several things resulted from this process:

- Identification of two categories of units: Revenue Supporting and Revenue Generating
- A general allocation principle that 60% of General Fund[1] resources would go to Revenue Generating units (the schools and colleges plus University Studies), 40% to Revenue Supporting units. This ratio of allocation is comparable to most other higher education institutions.
- The development of methodologies to attribute all Education & General[2] revenues to individual Revenue Generating units, and to allocate the costs of Revenue Supporting units to the Revenue Generating units as indirect costs.
  - Tuition revenue was attributed to Revenue Generating units based on teaching effort, net of an allocated share of remissions dollars; State appropriation dollars were attributed based on the activity (i.e. Student Credit Hour (SCH) delivered), outcome (i.e. degrees and certificates awarded to Oregon residents), and research metrics used in the Student Success and Completion Funding Model (SSCM) to allocate appropriation dollars to PSU.
  - The costs of Revenue Supporting units were allocated to Revenue Generating units based on a variety of overhead allocation methods. The resulting set of allocation drivers is very consistent with what one sees at other institutions that have created a similar "full cost" model of academic unit performance.
- These revenue and cost allocations came together in the Revenue and Cost Attribution Tool (RCAT).

The RCAT provides a table that gives a representation of what can be seen as the total revenue and cost contribution of each Revenue Supporting unit. It also gives one way of measuring cross-subsidies between units.

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[1] The main University fund used to record state appropriation, tuition, and student fees/expenses related to the University's core mission and operation.

[2] PSU's core operations. E&G includes funds from tuition, state appropriations (general fund), and fees. These include General Fund - Tuition & State appropriation funds; Other E&G - Fee funds determined and managed by units; Management Reserves - one time funds held by units.

While it is typical at a university that some units have different cost structures and in effect subsidize others, the operating presumption is that most units will have a positive bottom line or balance[3].

Units at PSU reacted differently to this. In general, it was viewed as an incentive to maximize Student Credit Hours. Some units (MCECS is a notable case) organized themselves to reduce the deficit that appeared on the RCAT.

**Background for a revised allocation model**

By the time Provost Susan Jeffords started, it was not clear how the RCAT should be used to allocate resources. While it might seem logical that resources would be moved from one college to another to produce a net zero bottom line, there were no explicit targets, and it is unlikely that imposing a uniform target would have been possible.

Reports are that in the first years of PBB, there was a sense that allocations did follow SCH performance, but any higher education institution is going to be limited in its ability to allocate resources to exactly follow a formula-based model.

PSU did institute a process of setting enrollment targets that were considered in effect to be what was necessary to achieve the revenue targets that were the basis for the budget, defined as the Integrated Planning of Enrollment and Budget (IPEB) process. The IPEB process was not part of the University's PBB system, but could be seen as a way of implementing PBB. The IPEB process was centered on a process to project enrollments defined in terms of SCH. It is worth noting that it did not reflect the entire allocated revenue, which also is significantly driven by awards as they play into the SSCM. IPEB focused on enrollment, the element that contributed most directly and immediately into changes in revenue. Retrospectively, units that exceeded SCH targets could receive additional resources in recognition of their greater contribution, and those that fell below targets could see reductions to reflect the lower than expected contribution. Prospectively, units could request additional resources if their enrollment projections demonstrated that additional resources would result in additional SCH (i.e. revenue) for PSU.

In practice, this was a period in which the increases in University resources were not keeping pace with current service level (CSL), producing an environment of budget constraint that required effective budget cuts. Given the inflexibility of costs, the budget adjustments were increasingly delivered in an across-the-board manner.

**Challenges with PBB**

Because of the coincidence of instituting a revenue-based budgeting model alongside budget reductions to cover CSL, expected investments for increased SCH were not realized; instead, revenue increases were committed largely to covering increased costs of salaries and

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[3] There were subgroups set up to work on cross subsidies and targets, but their work was not completed.

operations. Additionally, budgets were developed based on enrollment projections provided by each college/school.  In developing the FY18 and FY19 budgets, OAA and the University had to address the realized differences in tuition revenue that were built into base budgets. Following the PBB model strictly would have resulted in wide variances between units in funding adjustments based on actual performance.  Rather, to avoid dramatic swings in funding, decreases in base funding were assigned more incrementally and funding to reward positive past results was extremely limited. As a result of these adjustments, there was growing dissatisfaction with the PBB system.

Shortly after Provost Jeffords' arrival, she began hearing calls to revisit the budget allocation system.  In consultation with the deans, Faculty Senate leadership, and the Faculty Senate Budget Committee, she decided to begin a process of iterating the budget allocation model to reflect the more complex factors involved in allocating resources in OAA.

When the process started in late 2018 to assess the budget model, several challenges with the existing PBB model were articulated, not all of which could be controlled by a budget model:

- The allocation was effectively incremental, not performance-based. The biggest problems with this were experienced by units that grew; after seeing growth in SCH, those units did not see the resources follow that were necessary to sustain that growth as well as sustain accreditation.
- The allocation system was perceived to over-emphasize SCH at the expense of other factors that drive PSU's economic success and support its values.  While in fact the budget was not adjusted heavily in response to enrollments (see bullet above), the IPEB process was heavily consumed with projecting enrollment, and to the extent that the budget contained performance-based elements, that performance was defined in terms of SCH.
- Beyond the over-emphasis on SCH, the budget allocation process was not seen to reflect all of the values that contribute to the success of PSU and its students.  It should be noted that the Strategic Planning Narrative component of the IPEB process did bring forward the efforts of the Revenue Generating units to promote persistence, recruitment, and degree completion, but the focus was perceived to be on the extensive enrollment (SCH) planning and projection process.
- Lack of clear strategic focus.  Budget models don't determine strategy, but they can significantly shape a conversation.  In discussing budget decisions, deans were asking where PSU wanted to achieve growth, and they wanted to see budget allocation support that planned growth.  Not all institutions are able to boil their strategic ambitions down to a few areas targeted for growth, and it is not clear that this is the best way for PSU to define its strategic objectives.  However, the issue of strategic direction remains an open and serious question; developments in the strategic vision could shape the future of allocation decisions.

In addition to the Revenue Generating units, the division of Academic Affairs contains significant Revenue Supporting units including the Library, the Registrar, Advising and Career Services, the Office of International Affairs, the Office of Academic Innovation, and the direct Office of the

Provost. These units play a major role in achieving the division's goals and have a significant and direct impact on students, but the existing budget allocation model provided no method to allocate resources to these units on the basis of performance. This is a typical problem--such units have heterogeneous roles, and therefore their budgetary needs and contributions cannot be evaluated on the same basis as colleges and universities, or on a basis common across all of the supporting units. Budgeting for such units is typically incremental, with additional resources dependent on some sort of request process or tied to specific initiatives or requirements, and this has been the case at PSU.

**Goals and Process**

In 2018, the Provost launched an effort to review and possibly revise the OAA budget allocation model. Provost Jeffords asked Interim Vice Provost for Academic Budget and Planning Dave Maddox to lead this effort. The process included:

- Consultation and regular updates with the Faculty Senate Budget Committee
- Consultation and regular updates with the deans and Senior Fiscal Officers
- Public presentations about the budget model on January 22 and 24, 2020 and March 9, 2021

A committee was formed to work on exploring revisions to the existing PBB model. The committee members were:

- Kathy Black, School of Business
- Michael Bowman, Library
- David Brown, School of Social Work
- Karen Camp, Joint School of Public Health
- Kelly Doherty, Graduate School
- John Hawley, College of Liberal Arts and Sciences
- Laura Hickman, College of Urban and Public Affairs
- Jim Hook, Maseeh College of Engineering and Computer Science
- Kathy Martin, College of Education
- Gil Miller, College of Urban and Public Affairs, Honors College, and University Studies
- Aimee Shattuck, Student Affairs
- Long Tran, College of Education
- Cher Wildenborg, College of the Arts
- Ron Witczak, International Program
- Diane Xiong, Academic Affairs Budget and Planning

Among its first tasks, the committee set preliminary goals for a revised budget model, prioritizing a model that:

- Was more responsive to performance;
- Reflected more factors than SCH generation;
- Gave more clarity on the rationale for specific allocation decisions; and

- Addressed the allocation of resources to the Revenue Supporting units within Academic Affairs.

**Alternatives**

Several alternatives were possible at this stage.

One alternative would have been to return to the kinds of models PSU cited when it started the development of Performance-Based Budgeting. Allocations to colleges would be driven by performance on metrics, either the metrics defined by PBB and incorporated into the RCAT, or a sub-system for Academic Affairs that might look like a traditional Responsibility Center Budget or Activity Based Budget in which resources are allocated based on a combination of SCH and a measure of size or success of program such as number of majors or number of degrees awarded. Such a model would constitute a significant departure from incrementalism, and would likely result in significant shifts of resources between colleges and greater responsiveness to future changes. However, this sort of model does not directly reflect student success and other critical institutional values that cannot be translated directly into revenue-generating activity.

In considering the model, Fiscal and Planning Officer Diane Xiong encountered a model at Virginia Tech that had characteristics that aligned better with our goals. Instead of just two or three pools, it included 6 pools: credit hours, enrollment, externally funded research, student success, faculty success, and administrative effectiveness. The first three pools were based on formulas, the last three on "scorecards," which report multiple metrics of performance that would be assessed in a more qualitative way in making allocation decisions.

Some of the key insights from the Virginia Tech model were:

- The idea of extending the model to include many more pools
- Using formulas to drive some pools, but using other allocation methods in other pools that did not lend themselves to a clear formula
- This model was also limited to the Academic Affairs division

The Academic Leadership Team (ALT) agreed that a model of this kind was of interest for PSU Academic Affairs, and charged a working group with representatives from each major budget unit in the division to develop a model suited to PSU.

**Revised budget allocation model**

The Working Group conducted its work during the 2019-2020 academic year, with regular input from ALT and the Faculty Senate Budget Committee.

After numerous discussions of goals, and emergent institutional needs, the goals for the proposed model can be summarized as follows:

- Provide a clear and transparent basis for allocation

- Support strategic values
- Direct resources to areas with greater and increasing demonstrated demand
- Establish a model that is responsive to performance but not disruptive

The result is a model with five pools that will be described in further detail below[4]:

1. Weighted average rate of change in SCH over three years
2. Rate of change in SSCM-weighted degrees and certificates awarded to Oregon residents
3. Rate of change in percent of SCH delivered associated with students with successful one-year outcomes
4. Unit goals for research, collaboration, and engagement
5. Difference between actual and targeted ratio of Direct Expense to Allocated Revenue

Description of pools

Pool 1: Rate of change in SCH

The change in SCH is a measure of whether instructional activity in the unit is increasing or decreasing. Increasing SCH will result in a need for additional teaching resources, both to cover classes and to comply with accreditation standards. It also represents changes in student interests, and responsiveness on the part of the institution to support the programs of interest to those students. While singly focusing on SCH can have a distorting effect on incentives, it does deserve significant recognition, due to its effectiveness as a proxy for student interests as well as its reflection of tuition as a major component of PSU's overall budget. In order to minimize the effect of one-year anomalies, the rate of change was averaged over 3 years, with more weight given to the final year to reflect the greater relevance of more recent performance.

It is important to note that the Working Group did not propose basing this pool on the actual distribution of SCH at the time of implementing the model. This would result in more extreme changes in allocations. As an example, consider the College of Education and the School of Business below. If the budget as a percent of the total had been set equal to the distribution of SCH, it would have resulted in significant shifts of resources.

| | Percent of FY21 College and School budgets | Percent of total SCH generated in FY20 |
|---|---|---|
| College of Education | 8.0% | 4.6% |
| School of Business | 11.3% | 12.6% |

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[4] For the purpose of this budget model, IELP was not included with the other revenue generating units. Under the model developed, IELP's statistics, including a steady decline in SCH and direct expenses in excess of attributed revenues, would have generated results that suggested stripping the unit of all funding, possibly even a "negative allocation." During Spring 2021, IELP's budget and cost structure was addressed through a separate process following Article 22.

The allocation formula for this pool is based on the rate of change (averaged as stated above). Therefore, in the example above, if the College of Education experienced a 4% rate of growth in SCH, it would receive a 4% increase in its allocation from this pool--8.0% * 4% = 8.3% of the total (not 8% + 4%). This methodology will generally result in subtle shifts of resources between units in a single year that can compound over time if growth (or decline) is sustained over time.

Pool 2: Rate of change in SSCM-weighted degrees and certificates

The Student Success and Completion Funding Model (SSCM) is used by the State of Oregon to determine funding for public universities. The Completion portion of the matrix captures all degrees and certificates awarded to Oregon residents and weights them according to factors that reflect the teaching effort required and state policy priorities. In a manner similar to the SCH pool, the revised model uses the rate of change in the tallies from year to year to shift resources to or from each school. The SSCM matrix already includes 3 years worth of data, so the Working Group used the change in reports from one year to the next as captured in the RCAT. The formula works in a similar way to the example above-- assuming that the College of Education receives the same portion of the pool as its baseline of total dollars (8%) and then adjusting that number by the rate of change.

Pool 3: Rate of change in percent of SCH associated with students with successful outcomes

Though it presents a number of methodological challenges, creating a pool that reflects student success was a high priority for ALT. A key challenge is deciding how to measure student success. Retention, persistence, and graduation rates are the typical metrics in discussions of student success, but each of these has its own methodological challenges. Once this decision is made, the challenge arises of how to translate these metrics into an allocation methodology--student success is not distributed between schools the way SCH, majors, or graduates are. Also, the effort associated with student success reflects the efforts of many units more so than does a measure like Student Credit Hours, where in most cases one department and college is responsible for providing the instruction. At the time the OAA model was developed, Virginia Tech was still developing its approach to student success and was including it among its "scorecard metrics. VT had arrived at 4 metrics that would be reported in assessing a unit's performance on student success: 4-year graduation rate for first time freshmen, disparity in 4-year graduation rate for underrepresented minority/underserved students (URM/USS) and others, and 3-year graduation rates for transfer students and disparity for the URM/USS students and others.

The Budget Model Working Group wanted to try harder to come up with a measure of Student Success that could be used in a formula, feeling that if it were not based on a formula, it would not have the same impact on allocations and incentives. To this end, the Working Group developed a new statistic that captures joint responsibility across departments and colleges for student success; it was important to units that such metrics not be limited to entering undergraduate students, but could be applied to undergraduates at any stage in their career as well as to graduate students.

The metric captured: all credit hours delivered in a term, which college taught those credit hours, and whether the student either graduated in the next year or was still enrolled a year later.  This allowed for expression of the total number of "successful credits" or the percentage of credits delivered associated with students who had successful outcomes in the following year[5].

This metric gives a unit credit for the success of the student regardless of that student's major or home school.

The Working Group chose to base the metric on the rate of change in the percent of successful credits.  This recognizes that different units may have different patterns of persistence and graduation depending on the student population their programs serve.  Importantly, focusing on rate of change rewards any program for improving its performance.

Pool 4: Research, collaboration and engagement

In many conversations about budgeting within Academic Affairs, and in the deliberations of the Budget Model Working Group, it was important that we

- Recognize mission-centric values
- Recognize activity essential to the unique PSU identity
- Counteract tendencies towards silos and unconstructive behavior, and reward collaboration

A core part of PSU's mission is service to the city and more broadly, and it is reflected in the University's motto and in Post-Tenure Review guidelines. It was also recognized that interdisciplinary and collaborative approaches are becoming increasingly critical to higher education in general and to PSU in particular.  Therefore, a budget model that intends to incorporate values needs to address these values at PSU.

The Working Group worked hard to find ways to construct pools that would reflect these values, and to specifically address activity dedicated to research, engagement, and public service. It is inherently difficult to construct formulas that effectively capture this sort of activity.  The most common in this area of activity is in research, where grant dollars (or indirect cost dollars) generated can be measured and factored into either the allocation of a general fund pool or indirect cost recovery dollars.  However, the nature of research and scholarship at PSU brings home the limits of that approach--units such as Business and COTA have research and creative activity that does not correspond with grant dollars. The problems of measurement are worse as one moves into other areas that reflect the faculty's efforts outside the classroom.  In particular we investigated the possibilities of quantifying performance or effort in public service and engagement, but found all efforts foundered on the problems of measurement and comparison.

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[5] The statistic does not include Campus K and non-enrolled students, for whom success is not represented by earning a degree or remaining enrolled.

Using Virginia Tech's model as a prompt, we turned to what they call a "scorecard" approach. For this sort of pool, the unit would establish a set of goals or metrics upon which they would like to be measured. During the budget process, progress and outcomes on those goals and metrics would be discussed with the Provost. It could result in changes in funding, but that would probably be the exception more than the rule. In fact, if a deficit emerged, the response might be to sustain funding but direct it towards specific activities to improve performance, however that was defined.

This approach provided a starting point for thinking about pools and evaluation criteria for budgets in the support units (see below).

Pool 5: Difference between actual and targeted ratio of Direct Expense to Allocated Revenue

This pool was added as a result of the feedback process. From the beginning there was concern that while SCH and other metrics were proxies for generating revenue, they did not fully capture the contribution to financial health. The Working Group considered using a report on 'tuition revenue generated' instead of SCH, but ran into methodological uncertainty and lack of alignment with institutional budget metrics. The Working Group also realized that looking at revenue generation in isolation from the cost of delivery was problematic. When Deans reviewed the model, they stressed the importance of accountability for the impact of allocation decisions on net revenue and on incentives for efficiency. To add this dimension to the model, OAA developed a pool based on RCAT results. The RCAT captures a view of the net economic contribution of a unit, and it was developed through the participatory PBB process. OAA chose to focus specifically on the line in the report called Base Net Revenue, which is the difference between attributed revenue and direct college expenses. Using this calculation avoids the methodological uncertainty of overhead allocation, and puts the focus on aspects that the colleges control more directly.

This pool measured the average ratio of direct expenses to attributed revenue for each college and school over 3 years and compared that to the average across units, excluding IELP. Those units above the average would see a reduction from baseline in their allocation from this pool in proportion to that difference, and those below the average would see an increase. Recognizing that different units have different inherent cost structures, the model sets individual direct expense/attributed revenue targets for each school. The targets for CLAS and University Studies are set to the average, and others are set higher or lower based on rough initial

judgments of the expected relative costs of the programs[6].  These values are worthy of additional discussion and refinement by academic leadership.

In future years, it is likely that the formula for this pool will need to be adjusted to one that reflects changes in the ratio rather than absolute value, since the baseline within the pool will effectively be reset in year 1 of its use.

Pool weighting

In a model like this, the weight assigned to pools has a critical impact on outcomes.  You can see it whenever these models are developed.   At PSU there is an interesting example in the Library, which has used weighted factors to evaluate acquisitions budgets.  One lesson from these efforts is that setting weights is more a matter of art than science.  In some cases, it may represent a concept of relative effort, but in a system like this it will reflect values as much as anything.

In our case, we ended up with the following weighting because it puts emphasis on the values of both student success and the need for responsiveness to changes in student demand and the impact of that on the units.

| Pool 1 | Pool 2 | Pool 3 | Pool 4 | Pool 5 |
| | | | Research | Direct Expense: |
| | | Student | Collaboration | Attributed |
| SCH | Awards | Success | Engagement | Revenue |
|---|---|---|---|---|
| 30% | 15% | 30% | 20% | 5% |

Allocation method for support units

The Working Group set a goal to include support units as well.  They don't participate directly in the things that tend to be the focus of academic budget models, which are the things that translate most directly into revenue.  They often seem like an afterthought in budget development, either treated incrementally, or as balancing budgets for other units.  They are

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[6] OAA set the target for the School of Public Health significantly lower because its ratio reflects the fact that PSU receives credit for in its State appropriation for degrees awarded by OHSU and these flow into the RCAT as revenue attributed to SPH, but the costs borne by OHSU under the arrangement where PSU and OHSU split the cost of the Joint SPH do not appear in the RCAT, which is a report on PSU finances.  If those costs were included, it is likely that the ratio would come out much closer to average, perhaps over, but the fact remains that PSU benefits from the arrangement on the degree credits in the SSCM.  Therefore, the target ratio we set splits the difference between the actual ratio and the average. An alternative would be to restate the RCAT to either remove the State dollars associated with OHSU degrees, or add the OHSU costs, but we have tried to avoid adjusting data for this model that will take data out of alignment with their sources.

also heterogeneous, so there is not one common metric to compare performance across these units or with the schools and colleges. However, in the same way that the need for instructional resources changes with changes in SCH, the demand for services should change as institutional activity grows or shrinks.   The Working Group chose to introduce some performance accountability for support units.  The allocation is divided into 2 pools, one that would be associated with the metrics, and another that would be based on more unit- and year-specific goals. Since neither pool is currently or likely in the future to be driven on a formula basis, the separation into two pools (and assigning a size to those pools) is largely to communicate the importance of both dimensions in assessing budgets for these units. (See attached table for proposed metrics for the support units.)

Other elements

1.  Contribution to Academic Discretionary Investment Fund

    The model includes a formula that allows users to designate a portion of funding to be provided to the Academic Discretionary Investment Fund.  There is not currently a method to add funding to this budget; increases have been done on an ad hoc basis in some years, as opportunities presented themselves.  The formula in the model takes a portion of funding from each unit in an across-the-board manner.  It could be taken off the top from the total pool of funds available, but this method shows the impact on total funding for each unit.

    Increases to this fund increase the capacity of the Provost to make "out of model" budget decisions.  This would be the mechanism to resolve issues created by budget decisions in the past, seed-fund future developments, and adjust where strategic considerations outweigh the results of the model.

2.  Contribution to diversity initiatives

    In recognition of the critical position of diversity, equity, and inclusion in PSU's strategic vision, a mechanism in the model that allows the division of Academic Affairs to pull funds to build a pool for DEI initiatives.  A pool like this does not currently exist in Academic Affairs, and any funds built up within the division might be combined with institutional funds for institutional initiatives.

    The methodology for the pool is the same as the formula to increase funding for the ADIF.

Outstanding issues

*Diversity, Equity and Inclusion.*  Over the time this model was being developed, the campus conversation about the response to injustice has progressed in important ways, including a workgroup on Leadership and Infrastructure that has made a proposal for an equity-based budget.  These ideas need to be pursued and fleshed out, and it is the case that this model does not anticipate those conversations.  Some options available

- A mechanism to create a pool for resources specifically for diversity, equity and inclusion work have been added to the model. That pool does not exist, but one of the most pressing budgetary issues for DEI work is to make sure resources are available
- Pool 4 could be expanded to include DEI. Given the importance of DEI, it may not be appropriate to add it to a pool that addresses other sorts of issues.
- Create an additional Pool similar to Pool 4 for DEI activities and goals, with allocations following similar principles.
- Weight successful SCH differentially for credits associated with students with certain characteristics. As with other student success-related data, there would need to be significant work on how data is broken down, and how to deal with intersectionality.
- Weight SCH or Awards similarly.

*Setting targets for Pool 5.* The current values reflect a single higher target for a few units that could be expected to have a more expensive cost structure, and for the most part a single lower target that is the same distance below the mean as the higher value is above it. The higher target was based on eyeballing the data and subjectively picking a value that was somewhat higher but within a range that "felt right." There can easily be a case for a more refined set of targets, and different reference points (such as cost studies) could be used to guide setting these rates.

*Finalizing metrics for Support Units.* OAA met with most of the support units to discuss which metrics to use and settled on the ones proposed for Student Affairs, ACS, Library, and Office of the Provost. Other areas are still in the form of proposals. For all of the units, it would be good to reassess the set of metrics after pulling the data and looking at it together.

*Scorecard pools.* Pool 4 for the Colleges and Schools and the second pool for the Support Units is based on a scorecard approach which would be reviewed in a more qualitative way. Qualitative research methods could be used to make this review more rigorous, but might require some specifications about the format of the submission. One option would be to ask for more of a narrative submission which could be reviewed and coded. If the Budget Model were to require a narrative submission, the Office of Academic Affairs should revisit the IPEB submissions and see if they can be modified to incorporate this material. It may be possible to collapse some of the sections in the Strategic Planning Narrative (presuming that is retained) and add a section for the topics needed for the budget model.

*Timeline and integration with IPEB process.* This description assumes that the primary time the model will be run will be in January as parameters for budget planning are being set. There are going to be other points of integration. For example, the points in the qualitative pools (Pool 4 for colleges and schools, the second pool for support units) might be topics of discussion in initial IPEB-related meetings in the Fall.

**Metrics for Support Units**

| Unit | Metrics |
|---|---|
| Office of the Provost | Faculty headcount (change)<br>Academic Affairs staff headcount (change)<br>Student headcount (change) |
| Office of International Affairs | International student headcount (change)<br>Number international scholars (change) |
| Advising and Career Services | Ratio of UG students:Advisors<br>Ratio of UG students:Career Counselors<br>New transfer student headcount (change) |
| Registrar | Student headcount (change) *proposed* |
| The Learning Center | UG student headcount (change) *proposed* |
| Office of Academic Innovation | FT faculty headcount (change) *proposed* |
| Library | UG student headcount (change)<br>Masters headcount (change)<br>Doctoral headcount (change)<br>FT faculty headcount (change) |
| Student Affairs | Student headcount (change)<br>Headcount students in dorms, University Pointe, and CHNW (change)<br>Students active in SALP (change) |

**Technical Appendix**

The following section provides technical details on using the model, followed by details necessary to update it annually.

Decision variables

Change in overall funding, expressed in percentage terms.  Cell C1 on sheet Overview.

Percent to add to ADIF, expressed in percentage terms.  Cell C3 on sheet Overview.

Percent to add to DEI pool, expressed in percentage terms.  Cell C4 on sheet Overview.

Weighting scheme.  The current model allows you to use different weighting schemes--the one described above, plus three that were developed as alternatives by the Budget Model Working Group.  In the future, the division may set this weighting as fixed values and no longer treat this as a variable.  The choice of weighting schemes is based on a drop-down menu with four options in cell C6 on sheet overview.  The values for the weights are held in cells O6 through S9 on the same sheet--to try different values, update here.

Year coverage for Year 1.   Depending on when in the year the model is run, it may be better to work with previous year data rather than projections for the current year, and this drop-down menu allows you to pick the earlier option.

Model sequence and proposed use

The model has 4 sheets that conduct the primary calculations in the model.

> Overview
> This sheet allows the user to adjust the decision variables and summarizes results for the schools and colleges.  One of the first steps in using this model would be to set the decision variables, all of which are in cells highlighted in bright yellow.  The Overview sheet is where the reductions for the ADIF and DEI funds are taken, so they are taken out based on the adjusted budget, not off the top.

> Allocate cut
> This sheet is necessary in planning for FY22 to show the effect of two separate cuts--the 1.1% cut taken in August 2020 and redistributed for FY22, and the FY22 cut.  This sheet is where the 1.1% reduction is re-introduced, and it shows the steps in the model results--the original base is first redistributed based on the output from the sheet Model Colleges and Schools.  Column F redistributes the 1.1% reduction by adjusting an across-the-board application of the decrease by the same adjustment used to redistribute the base.  Column H distributes the 1.5% reduction also by adjusting across-the-board application by the same rate of adjustment.  In the future, the redistribution of the base would not be necessary, and only a single column would be required to summarize the difference from

the baseline--the current version shows the variance both from the pre-COVID base and from the current budget in which the 1.1% reduction has been applied across-the-board.

Model Colleges and Schools

This model conducts the primary calculations for redistributing the budget based on the 5 pool factors.  This model also brings in any additional funds (or conceivably decreased funds) from changes in the support units, which would be reported in cell C6.  Two decision variables are included on this page.

Weight for the average change in SCH over multiple years.  The model allows the user to weigh the average change to put more emphasis on more recent years.  The user free inputs to these columns, so needs to make sure they add up to 100%.

Target Direct Expense:Attributed Revenue ratio.  Users can input different values here to reflect expectations of higher or lower rates depending on typical costs for these areas, and special considerations for the School of Public Health discussed above.  There is also the option of setting the target equal to the target, shown in cell L20, discussed above.

In most of these cells, the sheet includes columns to the right to normalize the results of formula calculations.

Pool 4 set equal to the current distribution of baseline.  In future, users could set this equal to new baseline distribution, or keep FY21 distribution rates.

Model Support Units

This sheet includes one section for IELP, another for the other support units, and records balances and additions to the Academic Discretionary Investment Fund and a Diversity, Equity and Inclusion pool.  There are several decision variables here

- Percent to distribute to Academic Units--allows the user to decide to shift some resources to the Academic Units
- Percent of allocation to assign to metrics-referencing pools (F4 and H13).  This only has a formulaic bearing on the allocation for IELP, but is indicative of value weights as discussed above for the other units.
  - The percent for IELP is set independently on this sheet, but the user might want to use the same weight as that used for Pool 1 for the schools and colleges
- Adjustments--dollar amount increases or decreases for the scorecard pools (I8 and N16 through N23).
- An indicator whether to include the unit in the contributions to the ADIF (C16 through C23).  In particular, it may not make sense for the Office of the Provost to move resources from the departmental budget to the ADIF
- Percent change for metrics-referencing pools (J16 through J23)
- Dollar adjustment to ADIF and Diversity pool above and beyond formula-based contributions, which come in D29 and D30

The IELP section is set up so the average change in SCH, calculated as it is for the Schools and Colleges, comes in here as a change to the baseline. Then the user could make an additional adjustment--in the current state, that amount is set equal to the SCH-related change to allow a clean view of effects on the other units, and to reflect that decisions on the IELP budget for FY22 will be made through the Article 22 process.

In this model, the post-COVID baseline is used because the starting assumption for these units is that the general change in budget will be applied across-the-board, and then the 1.5% cut is applied, also across-the-board. The rest of the model is used to make adjustments from there.

The total change from the post-COVID budget is summarized in cells K9 and P24, and this value along extra adjustments to the ADIF and DEI fund (#29 and E30) and additional allocations to the Schools and Colleges (B2) are applied to the total available for redistribution to the Schools and Colleges.

**Technical description and updates**

The description starts with worksheets near the middle of the workbook, working back towards the beginning.

<u>Baseline</u>

Because of the August 2020 1.1% budget cut, this version of the model shows both the pre-COVID budget and the final budget. When Academic Affairs applied the 1.1% reduction in an across-the-board fashion, we agreed that we would recalculate the distribution in preparing the FY22 budget. The targets developed for the units were based on going back to the FY21 pre-COVID basis for calculating model changes, then also redistributing the 1.1% reduction and the 1.5% reduction. The biggest effect was the basic redistribution. In future years, if normal processes are followed and the budget is set once, you will be able to start the process by redistributing the FY22 base, then applying additions or reductions to that base.

The Baseline sheet allows you to input the base budget from the final OAA Crosswalk and remove targeted funds and protected differential tuition. These include the funds targeted by the Legislature plus the targeted funds that were legacies of OUS targeted funds and the subject of a recent memo from the Budget Office. Once those funds start being treated no differently, no adjustment will be required here.

To update:

1. Copy/paste value Columns B and C rows 3 to 14 either to H3 or K3 to keep as reference
2. Input or copy Final budget values from Crosswalk into Column B, rows 43 through 71.
3. Input targeted fund values from Crosswalk into Column C, rows 43 through 71
4. Input protected differential tuition values from Crosswalk into Column D, rows 43 through 71

5. Set column F rows 43 through 71 equal to column E rows 43 through 71. If there is a reduction, decrease it by this amount.  You may also be able to remove these values if you adjust the overview to remove the "Adjusted Budget" portion
6. Update headings in cells B3, C3, B21, C21, and A42

DE to Att Rev

1. Copy paste value column A row 23 to column N row 26 to Column A row 24
2. From Output Page on Year-end RCAT, copy Column C through M row 87 (Direct Expenditures per $1 of revenue--this value may not appear on the same line every year). Paste value into Column B row 23
3. Update dates in B4 through F4, A23, column A rows 30-34, column A rows 39-41, and column A rows 44-47

State Support Productivity

1. In the year-end RCAT, copy Worksheet titled State Support Productivity, copy into the model workbook in front of State Support Productivity, and update name to include the new year.

Awards Data

1. Copy paste values column G row 2 through column P row 12 to column B row 2
2. Update cell references to new State Support Productivity worksheet, summary rows by college in columns BB through BE.  Row numbers will change each year but columns look like they are constant.
3. Update date values in column L row 2, column Q and R row 3, and column T and U row 3

Students

1. Copy/paste value column D rows 2 to 16 to column B row 2 (may want to check OIRP report to see if there were any update to values)
2. Copy/paste value column F rows 2 to 16 to column D row 2
3. Get OIRP to update what I have as a file called OAA_Student_Success_Metric_202004Update. Copy percentages for each college from Column I in the Results worksheet from the ORIP workbook into column F rows 4 through 14.
   a. Note: David may reformat and relabel sheets in future.  Share the file with this name with him for reference
4. Update dates in column F row 2, column I row 3 and column J row 3

SCH data

1. Get SCARF data table from OIRP for the most recent year.
2. Copy columns G through AD to column C, including headings.

3. Confirm that lines in the new table correspond with the version in the model.
4. Copy most recent version into columns AA to AC (AD has a sum cell formula), updating column headings
5. Go to sheet Overview, and update AA25 and AA27 to reflect later years. This will update dropdown menu

SCH calcs

1. Update column headings for row 2 across.
2. Get college and school level enrollment projection from OIRP (same as used for SEP in IPEB) or create your own based on Fall enrollment trends. Input these values into column J, rows 3 through 13.