

## Appropriation Allocation Model: Script

My name is Ryan Low, the Vice Chancellor for Finance and Administration for the University of Maine system. I want to thank you for taking the time to understand a little bit more about the proposed new allocation model.

Over the next couple dozen slides I'll talk a little bit about the current allocation method used by the University of Maine System for most of the system's history, and talk about the changes being recommended by our team.

It's important to note up front that these recommendations are focused on the best methods for allocating out the state appropriation to each of our seven campuses. Because the focus is on state funding, the model will not look at all parts of our operations. As a reminder you'll find additional materials helpful to understanding the model on the Think Mission Excellence website at [thinkmissionexcellence.maine.edu](http://thinkmissionexcellence.maine.edu)

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In September 2016, the University of Maine System Board endorsed 29 separate unified budget recommendations, including the adoption of a new allocation method. Since last year, our team has been developing the first substantial overhaul of the funding model in UMS' 50 year history.

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Before we get into the proposed changes, it's important to spend a brief amount of time talking about today's allocation methods. Prior to 2013 UMS allocated state appropriation according to a fixed percentage. This percentage stayed constant, regardless of changes in enrollment or mission. Beginning in 2014, outcomes-based funding was phased in increasing to 30% of the total allocation by 2019. Now fully implemented, the actual changes realized by

outcomes-based funding have been minimal. This model would be implemented beginning in 2020. It's important to note that no campus would lose state support under this model.

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As we've noted in previous presentations, the model relies heavily on spending data from peer institutions selected by each of our campuses. Last year, working with Vice-Chancellor Neely and consultants at Hanover, we created a peer selection tool that allowed each campus to identify peers, with each peer given a similarity score and ranked. Campuses ultimately selected between 7 and 10 peers.

More information on the peer selection process is available on the Think Mission Excellence website.

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With that background, let's jump into the model to understand how it works.

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I want to first begin by thanking the team that helped develop the model. Special thanks to Miriam White for chairing the group, and to Robert Placido and David Jones for their technical expertise.

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As we noted on slide four, peers spending data is what really drives the model.

In late 2017, each campus finalized their work with the model, and a final set of peers was selected for each.

The process the team recommends for future updates of these peers is included with our online materials and comments on that process are welcome.

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The proposed allocation model will look at spending data across nine cost centers. Some examples of the type of expenses included in each cost center are noted above. Data comes from the integrated post-secondary education data system, or IPEDS.

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Today I'll demonstrate how the model deals with four of these categories. Additional data on each cost center can be found online.

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One of the goals we've had as part of this effort was to develop a model that was transparent. At a high level, 90% of this model can be described in three steps.

We use the three most recent years of IPEDS data, adjusted for inflation, for our peers, across each of those 9 cost centers.

Because IPEDS data includes all spending, including federal dollars, we adjust that peer average down by looking at our campuses E&G spending in that particular cost center. E&G is education and general. It's the revenue from state appropriation and tuition in our budget.

We then multiply that peer average by one of several campus specific metrics.

For example, when we look at cost within instruction, we'll multiply that figure by a campus' FTE count. For academic support, we'll use campus' headcount.

The metrics for each of our cost centers included in your online materials.

(next slide)

I'll use data from several campuses as part of this presentation. As we look at instruction cost, we'll use peers for the University of Southern Maine. You will find each campus's individual presentations online.

In this case, we show annual spending and instruction, adjusted for inflation, for each of USM's 8 peers.

You should read this chart from top to bottom.

Next, we'll look to see if we have any large anomalies in the data: a one year award that skews the data, a possible data entry error, any individual fiscal year data point that falls outside the upper or lower bound will be excluded from the model. In this example, all of the data falls within our limits and is simply copied as is to the middle section of this chart.

Later I'll show you examples of data that falls outside our limits and how we handle that. Next will convert the peer spending numbers over to an FTE count. Our data shows the

University of Arkansas at Little Rock in the University of Michigan-Flint spend about the same on instruction, but obviously we'll want to know how many students they're serving. In this case, Flint is spending almost \$2,000 more per student.

After we've determined the annual spend per FTE, we'll look to come up with a 3-year average for each of the peers, and then finally an average for the full set of peers.

In this case, USM's peers spend on average \$7,585 per FTE, in instruction at their campuses.

Although the categories and metrics will change, this is the way each of the nine cost centers will work.

So we know the peers spend about \$7,600 per FTE, what next? (next slide)

We'll start with the \$7585 peer average and make two more calculations. Because the peer average was a figure that included all sources of funding and we're only interested in the education and general portion, we need to develop a methodology for adjusting that figure. Here we'll look to our own campuses. For USM's IPEDS submission over recent years, 95.39% of all of their instructional spend has been in E&G. Here we'll multiply the  $\$7585 \times 95.39\%$  and get an adjusted peer average of \$7235. Earlier I noted that FTE count is the metric we have linked to instruction. USM's 3-year student FTE average is \$6493. We will multiply that figure by the adjusted peer average of \$7235 and we get about \$47,000,000.

We'll eventually repeat that process in the eight remaining cost centers and then we'll add them up to arrive at a campus-wide calculation. Let me show you three more examples.

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Next we'll look at academic support. Here we're looking at peer data for the University of Maine at Presque Isle. You'll see in the top right-hand corner of the slide, academic support is an area we measure using student headcount.

Again we've adjusted each campus's spending data by inflation.

As was the case in instruction, these peers' spending data is tightly grouped and no data falls outside our limits. So we'll move to the center of the chart.

Starting with Dickinson State University, we'll divide each figure by the student headcount at each campus. Here, Dickinson State University spends \$1,957 per headcount in academic support in fiscal year 2015.

As we did in instruction, we'll develop a three-year average for each peer, and then an average of the averages.

For the University of Maine at Presque Isle's 8 peers, they spend on average \$1,324 per headcount on academic support.

Now what? (next slide)

We'll pull that \$1,324 figure to the top again and look at Presque Isle's academic support spend.

Using the same process that we used at USM on the previous slides, our data shows about 89% of Presque Isle's spending on academic support comes from E&G spending.

We multiply the two figures to give us an adjusted peer average of \$1,178. Presque Isle's 3-year average headcount is 1360.  $1360 \times \$1,178$  gives us about \$1.6 million in academic support cost at the University of Maine at Presque Isle.

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Let's look at an example where we have missing data. Data could be missing for many reasons. It could be that a campus simply had no expenditures in a given IPEDS category, maybe it was user error. I'll show you the three ways we deal with these issues in the model.

Here we're looking at 8 peers from the University of Maine at Augusta. This chart represents research spending. In a category like this, it's not unusual to see missing data for the peers of some of our smaller campuses. Not every campus will have a research mission.

There are two examples on this slide.

Dalton State College reported no research expenditures in any year. Maybe they had no expenses. Maybe they put all their research expenses under academic support. While IPEDS provides guidelines, there is no penalty for reporting expenditures in the wrong bucket. And short of calling Dalton State, we have no way of knowing. So if we have three years of missing data, we will exclude all of the data, removing the peer from consideration.

In the case of Rogers State University, they have reported research expenditures in the two most recent years. But nothing in fiscal year 13. In a case like this, when we calculate the average for Rogers State we'll divide by 3 years. Although not shown here, the other issue we might deal with is a case where data falls outside the upper or lower bound.

What if Montana State University got one more award in fiscal year 14 and reported \$455,000 in research spending?

If that happened we would exclude the data point, but when calculating their average, we would divide by two. In other words, we wouldn't penalize them for spending above the average of their peers.

But back to the UMA peer set. We pulled the inflation-adjusted figures down to the middle of the spreadsheet, missing data points and all, and need to calculate averages.

For research, the team is recommending we multiply averages by the number of tenure track faculty on each of our campuses. The team originally used tenured faculty but expanded the definition after feedback from the campus community. This slide still reflects tenured faculty, but the working model has been adjusted.

So when multiplied, the annual research expenditures by the number of tenure track faculty at our peers to produce a peer average.

For the University of Maine at Augusta, their 8 peers spent on average \$4,133 in research per tenure track faculty member.

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Of UMA's research expenditures, nearly 93% are E&G.

Multiplying that figure by the \$4,133 peer average gives us an adjusted average of \$3,830.

We'll then multiply that by the number of tenure track faculty at UMA. Because this slide uses tenured

faculty, it's likely the number would be larger for final calculations.

Let's see one final area and then we'll pull all of this together.

(next slide)

The last cost center we will look at is in student services. We will look at the peer data from the 8 peers of the University of Maine.

Going back to the peer identification process, the University of Maine was able to identify peers they were closely aligned, those with similarity scores close to 0.

So when you look at the peer spending data across any of the nine cost centers, in this case student services, their figures are pretty consistent. Both the totals, as well as the per student spending.

As noted at the top of the chart, student services is a cost center measured by student headcount.

So here we will again divide the annual expenditures by the headcount at each institution. Starting with Montana State and moving through each of the eight peers. Within student services, we see that UM's peers are spending, on average, about \$1,800 per student.

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Looking back at our own IPEDS data, we'll see that about 90% of the University of Maine student services expenditures are in E&G dollars.

We'll multiply the peer average of \$1802 by 89.86%, and then we'll multiply that by the three-year average headcount at the University of Maine, In this case, \$11,170. This gives us \$18 million dollars under student services for the University of Maine.

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Here we are looking at the summary information for the University of Maine at Fort Kent. We walk through four of these categories: instruction, research, academic support, and student services.

The data and campus calculations for each of our institutions is also available online. In the interest of time, I'll fill in numbers for each of the other five areas...

For Fort Kent, the nine cost centers roll up to an unrestricted cost of \$19.38 million. That's the full cost. But what share of that amount are we suggesting is a state responsibility?

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Apologies for the small print. One of the first steps we'll take after finalizing the campus costs is to allocate them between undergraduate and graduate based on FTE calculations. In this case, because there are currently no grad programs available at the University of Maine Fort Kent, all of our costs are allocated to undergraduate. Campuses with Masters, doctoral or law programs would be broken out accordingly.

We finished the last night asking what part of that \$19.3 million total we thought was the states share. What's the right percentage? A couple of key data points.

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Our team is suggesting that state support should be at 60% of the total. That figure is consistent with state support in the late 1990's.

The model also recognizes that the generous support from state government is meant to subsidize education costs of Maine students.

Because this exercise is about distributing that state support, we'll discount that total unrestricted expense number for each campus, by the percentage of out-of-state students on that campus. This ensures that state support is targeted to Maine residents.

With those two numbers, we can determine the ideal state support at a campus.

We will start with the \$19.3 million dollar figure, total from our earlier calculations. We will first multiply that number by 82.16%, our percentage of in-state students at the University of Maine at Fort Kent. That gives us \$15.9 million.

60% of that figure is \$9.5 million. You see that number under the state calculated support column.

So the model is suggesting annual state support at the University of Maine Fort Kent of \$9.5 million. What's next?

(next slide)

We will do these calculations at each of our seven institutions We will follow UMFK for one more step and then display the full picture.

Moving from left to right on your spreadsheet, we will find our larger \$19.3 million dollar figure and the \$9.5 million in state support we calculated on the previous slide.

Next will look at the current appropriation to the University of Maine at Fort Kent, \$6.8 million. In this case, the model is suggesting that the campus is underfunded by about \$2.7 million annually in relation to its peers, or at about 72% of the recommended level.

This leaves us with a disparity percentage of 25.44%. (next slide)

Here you see the full picture, as the model and data exist in May. Figures will certainly shift based on additional feedback.

Any new appropriation received will be allocated based on the disparity percentage. The campus with the lowest percent funded, i.e., the highest disparity percentage, would receive the most appropriation. Any University with the disparity percentage greater than zero would receive new appropriation. With adequate state support, the goal is for each University to be 100% funded. This slide shows the distribution of a hypothetical \$1,000,000.

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Because data will be updated annually, and the new disparity percentages run each budget cycle, the model will be dynamic. In the example on the previous page, a \$250,000 increase in a single year at Fort Kent will greatly address historical funding shortfalls. As some campuses move closer to funding targets, the model will shift appropriation to other campuses that remain underfunded.

Assuming constant support at about 2.5% annually you can see the shift in appropriation that would occur over the first 6 years of the model, all things being equal. In reality, enrollments would likely shift and new IPEDS spending data would also have an impact on allocations.

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Thank you for making your way through the video. There are lots of backup materials online that I would encourage you to take the time to look at. They're available on the Think Mission Excellence website. Again that's [thinkmissionexcellence.maine.edu](http://thinkmissionexcellence.maine.edu). I encourage you to take the time to complete our online survey and share your feedback. Thanks.