

IBM Cognos Software Demo Transcript K-12 Enterprise Planning

Introduction

This is a short presentation on Cognos's Performance Management Application for the K-12 market space. Cognos Performance Management Application is a Web-based application that allows many different types of users to access the application and through security they have access to different parts of the application that is relevant to their needs.

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Within our performance management application, there are three fillers that make up the system. We call it the visibility component, which is the traditional business intelligence reporting and analysis. This particular functionality allows users to access reports to real time queries against our financial data that we collect as well as information that are based in transaction systems.

That information will lead into the predictability side of our application performance management and allows users to do enterprise planning and budgeting to look at future projections in terms of what they need to do within their schools to make it more efficient and effective.

(00:58)

Then finally, through accountability, we can identify metrics that we want to collect information for and attach scorecards to them and see what metrics impact other metrics and have accountability for the metrics we define.

So throughout this presentation, we'll actually look at components of each of the components that make up performance management but mostly to focus on the predictability side of enterprise planning.

(01:22)

Within the left here, we can see various different links to predictability, accountability and visibility again. So, within this component we can see links to our planning and budgeting application. And within the accountability we have links to our scorecarding as well as to executive information type systems like teacher briefing books.

(01:41)

And within visibility there's information or links to various different reports including annual, financial report, as well as reports like the NCT report -- No Child Left Behind -- standardized test scores, and even down to transaction level data, whether they're in students systems, or general ledger or financial system or information sources.

Information that's within this application can be proactive from an application perspective, or we can send users information that they need either via e-mail or

through alerting capabilities. Or users can simply come in here and based on their security profile, click on the links that are relevant to them.

(02:19)

So, for example, from an alerting perspective when we look at a particular report that's been generated via e-mail, we can see that there's a performance alert report that's been generated.

If I double click on that, it shows me a performance report that says, Alpine School District, no child left behind, within math, language, arts and sciences, were actually underperforming.

(02:37)

I can click on the link and it will take me right to our application. And from here, I can start to do my analysis. So I click on the Accountability Scorecard piece. This is what takes me into the metrics component of our application.

So within our metrics underneath our K-12, I can see my Alpine School District metric as well as other metrics that shows the status of whether they're excellent or trending, getting better or trending downward.

(03:04)

If I look at a metric summary, you can quickly see the worst metrics is the fastest fallers; the best metrics is the fastest risers. Our interest from an alerting perspective was the Child Left No Behind within the Alpine School District.

(03:16)

So if we look at the particular metric we can see the trend, and within the system we can actually see the impact of that particular metric and other metrics that are impacting this metric as well. So within our No Child Left Behind, the reading, the percent grade reading is underperforming while the percent on grade math is performing well. These two metrics impact our No Child Left Behind Report within Alpine.

(03:41)

If I look at the report for this particular metric, we can actually start to do some analysis and see why our No Child Left Behind is underperforming for this particular school district.

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So here, within this report, we see various different measures. To the left here are information from a data perspective, so within Alpine we can see the school districts, the schools that make up this particular district. There's also information about grades, as well as student information and ethnic groups and so on.

(04:15)

On the grid here we see the math, the reading scale and then we see the math scale. So within our math scale, we're actually doing well from a participation perspective, and we're doing well from a test compliance perspective. On the reading scale within our Alpine school district, we're doing well from a participation perspective where 96 percent of our students are actually participating. We're falling behind on the test scores.

(04:40)

So we want to do some further investigation about why we're falling behind and where we're falling behind. And then from here, we'll actually delve into our planning component of our application and start to model and do somewhat-if scenarios and to start programs that may help this particular district.

(04:56)

So one of the things from an analysis perspective, if I click on any one of these links, I can start to drill into it. For example, if I click on the reading scale, I'm looking and concentrating only on the reading scale.

(05:08)

If I wanted to look at it from a different school within our school district and wanted to drill further into a particular school, I can open up the hierarchy and drill into that. Or, I can simply grab the Alpine School District and swap it with our reading scale.

(05:23)

So here I can quickly see that within my Alpine School District, my Alpine Elementary, my American Fork high school, junior high and Aspen elementary schools make up this particular district. And the particular school that is actually underperforming in terms of reading is my Alpine Elementary.

(05:41)

So, let me drill further into that. From here, I can start to swap other data elements. So for example, if I swap my grades across this particular school, I can see exactly what grade is causing that unfavorable variance in terms of reading test scores. So here it was in my grade three.

(05:58)

Further analysis, if I drag my students and scroll down, I can see exactly what type of students are actually underperforming in terms of reading. So here, it's my limited English proficient students that are underperforming. So if I drill further into that, I can start to do my analysis here.

(06:17)

And then finally, within my ethnic group on my LEP, I can see what students are actually underperforming within my ethnic group. So here, if I look at this my Hispanic students are underperforming within my LEP.

So what this analysis has shown me is within my Alpine School District, my Alpine Elementary School in grade three for limited English proficient students, Hispanic, they're underperforming in my reading scale. So what this allows me to do is take this information and start to plan for next year to see how we can improve our test scores for this particular school.

EP Portal

So from here, if I click on Enterprise Planning, we can go into the planning component of our performance management application. This allows us to not only plan for No Child Left Behind test scores, but also do some global or enterprise-wide planning across the school district, including financial data and so forth.

(00:22)

So here I can see my school district. And as Kathy first was logged in, I have access to the entire school district, which includes my Alpine school district as well as my Beavers district, Box Elders and so forth.

(00:36)

If I drill into my Alpine School District, I can see the four schools that make that up American Fork, Alpine Elementary and so forth. But then my Box Elders school district, we can see the schools that make that up, Box River High, middle school...Box Elder High Middle School, Box Elder Middle School and Box Elder High School.

And within my special schools I can see the various different schools that make up the district as well. Each of these schools are highlighted with a little symbol that actually tells the system or the user the current work in progress of this particular school.

(01:10)

So from a planning perspective, when we disseminate or allow users to enter their data via the Web, when they enter their data, this system will actually track to tell the user whether a particular school is done with their budgets or are continuing to work on their budget.

So for example, within my Alpine School District I can see that this little yellow symbol indicates that it's a work in progress. Within my Beavers school, my Bell Nap elementary school, that particular budget is actually locked.

What that symbolizes or indicates is that the superintendent or the principal in that particular school has completed their budgets and submitted it up for approval up to the Beaver district level. Now, within my Box Elder school district, all the schools have completed their budgets, it's now waiting for approval at the total district level.

(02:00)

Other examples is within the special schools. My outdoor education school, that little red symbol...red circle indicates that that particular budget has not started yet.

(02:10)

Other information that's available or relevant from a planning perspective are audit information in terms of who owns this particular budget. So we can see within ownership there's actually names attached to a particular school, as well as the date, the date and time when the data has last changed. For example, within my American Fork at 9057 PM on Tuesday September 27th is when that data has changed.

(02:36)

So other information to the users there at your fingertips are also things like, for example, whether that particular budget has been reviewed, has it been viewed and reviewed and so on.

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And if I click on links within this particular application, there's online help that's made available to the users via the Web. So symbols they may not be familiar with, click on that more link and get a detailed explanation about what these symbols represent.

(03:04)

Alternatively if I wanted to e-mail any one of these principals or owners of this particular budget I could simply click on this link and it will invoke our e-mail system so I can e-mail to the users to indicate work in progress or what they need to do from a budgeting perspective.

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So the analysis we saw earlier was that the Alpine school district was under performing in terms of No Child Left Behind, and the particular school that we found was the Alpine Elementary School.

(03:32)

So what I'm going to do is actually open up the Alpine elementary school district and look at their budgets and see what's happened from a planning perspective, look at their budgets. Also look at the No Child Left Behind and do some scenario testing in terms of what we can do for the Alpine elementary school and see how we can improve their test scores.

(03:54)

And while we're doing that, we can go ahead and incorporate some of the other components from a planning perspective and show you and to the user how this system works to collect data via the Web and then process that data so we can make better decisions.

Analyzing Budget Details

Going across this particular screen are various tabs. These tabs can be designed from an application perspective to make it easy for the users to just simply go through various different tabs to complete their budgets.

(00:13)

So the first tab we see here is the Budget Input tab. The second tab is General Projections, there's position planning, position summary, capital input, capital summary, and AYP test summary and so forth. Each of these tabs will have a series of drop down items to kind of indicate what junction in the data we're looking at.

(00:34)

So within my Budget Input tab I'm looking at the Alpine School District within my general fund at the current services funded level.

Going across on the grid are various columns of information. So for example, prior year to actual, last year's actual, there's the adapted budget, the amended budget, final estimate, which may be a forecast.

The maximum or baseline that's been set by the budget office, and then the requested amount, what we're looking for for next year. There's also an exception column in this to indicate whether we've exceeded the maximum that's been set by the budget office.

(01:07)

Coming down on the rows are the various object codes or accounts that we're actually planning for -- so for example, my revenues as well as my personnel services, whether it be contractual services and so forth.

(01:19)

If I use a drop-down list and select any one of these schools, let's say, for example, Alpine elementary school, I can see the budgets that make up the Alpine elementary school.

Cells that are gray indicate to the user that it's locked, so they can't enter data into any of these cells. So for example, if I try to enter data at last year's actual numbers, that's actually locked.

This information is coming from the general ledger, so we don't allow users to modify that data. Also within the maximum column, that's set by the budget office, so we don't want the users to modify this information as well.

(01:59)

Where they can enter data or modify data is this requested column, and within this requested column there's also cells that are gray. So for example, in my salaries and personal services set of accounts, I can't come in here and enter and modify that data. The user, they have to come into my Position Planning tab and actually modify the data here, which in turn will actually flow into my Budget Input tab.

By the same token, things like lines like bussing service costs or AYP improvement program costs will have to go through other tabs that are set up so we can capture more

detailed information as well as do some more detailed analysis about why we're budgeting that.

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So I want to start with the No Child Left Behind story and follow that story. So we started off at the Alpine School District, did some analysis with our visibility component or business intelligence piece of Cognos Performance Management Application, and drilled down to find that students within my Alpine elementary school in Grade 3 that are Hispanic that are limited English proficient students were the students that were having problems.

Analyzing Student Test Scores and Demographics

If I look at under...at the Go To tab, we have a tab that actually shows the student demographics and the various different test scores. So here within this particular tab we can see the Alpine elementary school, the reading scale of the year and so forth, and the test results and the test standards.

(00:20)

So if we look at this particular screen, there's the various different students coming down on the lefthand side, and then their test results, the test standards that have been set and whether they've actually met or failed the test standards that have been set, as well as their ethnic...ethnicity and grade and other demographics such as gender and whether they're LTP.

(00:46)

For my what-if scenario, we can just simply target several Hispanic students in this Grade 3 or LTP, and do some scenario testing. So if we modify their test scores, what would happen to their AYP test scores?

(01:01)

If I jump back to my AYP test summary, we can see within our Alpine elementary school that we've actually met the participation requirement on the reading and math scale, and we've failed on the state test scale for reading while we met the math scale which was the data that we were looking at earlier from an analysis perspective.

(01:24)

So we want to see how we can affect this particular test score within a reading scale, and what would happen if we were to modify a set of students that are in Grade 3 that are Hispanic and LTP.

(01:36)

So that's exactly what I'm going to do here. So if I go back to the student demographic screen, let's look at...let's go find a few Hispanic students that are LEP that are in Grade 3 and see if we can modify their scores.

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So here's a set of students that are LEP that have actually failed. So within this block of students here by coming to this particular grade and start to modify the test scores, let's just assume that we can modify five students and increase their test scores to 210.

(02:06)

By entering in the test scores and hitting enter, the system will actually quickly do some analysis and tell the user exactly what happens if I make that change. So what if I made a change to these five Hispanic students that are in Grade 3 that are LAP, and there you can see within the failed, meets and fails standards they will actually end up meeting their reading scale requirements. That data or that entry in turn will affect our AYP test summaries.

(02:40)

So if I go back to this particular tab in my AYP test summary, we can in fact see that by modifying five Hispanic students in Grade 3 that this particular school will meet the reading requirements or AYP or No Child Left Behind.

Managing Student Improvement

So once we have this data, what can we do from a planning perspective? We can go ahead and start to plan for some improvement programs to target these five students and help them meet the reading requirements so they can pass the test for next year.

(00:18)

And that's actually set up within this APY Improvement Program tab. So there's a series of different programs that are allowed...where schools can start to enter in their dollar amounts and start to budget for that.

So, for example, within this particular tab you can see that on the left there are various different programs such as after school tutorials, there maybe early morning tutorials, maybe a professional development, a permanent substitute, hire AYP consultants, buy more books and supplies and so forth. There's a line for additional staff. So, for example, we can hire staff on a part-time or a full-time basis to actually fund this particular program, and we'll see that in a little bit.

(01:01)

But one of the things we may want to do is an after school tutorial. And so starting in October and going into for the rest of the year, we may want to allocate \$2,000 to this program. So by typing in \$2,000 and with the little right carat symbol we can actually fill in the rest of the months and say, \$20,000 is what we're allocating for after school tutorials.

(01:27)

We may also want to buy some books and supplies, and we'll allocate \$100 for that. So our total cost for AYP improvement program is now \$21,000.

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But we also need to staff that. So in order to staff, that we'll look at our position planning component of our application and see how that affects total cost in terms of AYP program.

So by just doing this entry here, this simple entry in terms of after school tutorials and buying some additional supplies, we can see that there's \$21,000 we want to allocate for an AYP improvement program to target those three...or, those five Hispanic students that we found through our student demographics analysis.

(02:10)

If I go back to my Budget Input tab, we can actually see that \$21,000 is what gets allocated to my requested amount. And in this particular example, it's the exceeded maximum requirement that's been set by the budget office. That's okay.

(02:31)

So for this particular example we can see the drivers that make up the AYP and the detail behind this particular program are the after school tutorials and the books and supplies.

(02:43)

Other types of data entry from the user's perspective just simply to come in these particular cells and just enter in data. So for example, if I come into my telephone and I just simply say, here I would like to make this \$5,000, so typing in 5k will actually turn that telephone expense request from \$3,700 to \$5,000.

Or, I may want to say that I want to add \$10,000 to this number. So if I type in, add 10k, you can actually add \$10,000 to that number and we can quickly see that we exceed maximum as well.

(03:14)

So these flags with there to indicate to the users that they need to either reduce or provide an explanation about why they're planning for that dollar amount. So to provide an explanation, I may come in here just simply right mouse click, attach a note and simply say, add a note that says, telephone...telephone increase due to new marketing campaign.

(03:43)

Additionally, I can attach an annotation to this justification column that's been set up as well. So line by line within this particular system, we've set it up to attach annotations as well. Increase due to new campaign. So we have capabilities within the application to capture annotations not only at the cell level but also within the column or body of this template.

(04:17)

Other types of data entry features, we saw things like increase...we saw 5k for \$5,000, add \$10,000 to it, or we can just simply come in here and just simply say, I want to

increase this by 10. So if I type in, increase 10, and increase that particular cell, in this case by 10 percent.

If I type in increase 10 and use the pike symbol, which means take that particular command and copy it all the way down, I've now increased all the lines below equipment rental by 10 percent. So these are some data entry saving features that are available within our planning application.

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The effect of all this, we can quickly see what the operating impact is. Any time there's a change within any of these tabs or lines, we can quickly see what the impact of our change is to the rest of it, to our entire budget.

(05:08)

One of the things to note about Congo's Performance Management Application on the planning component is that it is a real-time aggregation of numbers. So as soon as numbers are entered it is made available immediately to the user to show the impact of this particular number.

(05:22)

In fact, this number also rolls up immediately to our Alpine School District as well. So if I have access to the Alpine School District at the total level, I can immediately see what happens as soon as I make those changes within my Alpine elementary school.

(05:38)

So other tabs that make up this particular model are things like enrollment projections as well as position planning. So within our position planning, as a user I can't come in here at this particular requested column and enter in data. I have to come to the position planning line and do my analysis here, just like we did with the AYP improvement program.

Driver-Based Planning

There's also driver-based components within our application as well so we can look at demographics of our particular location and start to plan for enrollment. So within this particular tab, when we look at enrollments, I can see things like projected enrollment, what are available in terms of number of classrooms for this particular school, average number of students in a classroom, the student capacity and so forth, and quickly see whether we have enough rooms within a school so we can start to plan adequately for that.

(00:33)

So, for example, within our Alpine elementary school within our ethnic group for white students, we can see over the next 10 years what our population would be or what our student projected enrollments would be. So if we anticipate a decrease in enrollment, we can simply say decrease that by 10 percent, and we can quickly see the effect of that.

(00:54)

Or if we wanted to make this \$10,000...or 10,000 students, by typing in a projected enrollment of 10,000 students, we can quickly see we don't have enough room given our current available capacity within our schools. So we'll have to plan for that as well, and one of the things maybe to put trailers within our schools or start to do some capital improvements to expand on our current capacity.

(01:21)

But let's just go 410 students for now, for projected, and then let's grow that at 10 percent. So typing in a command of grow 10 will actually take that number and actually start to grow it at 10 percent clip for the next 10 years. And based on this information we can see that we have enough rooms.

(01:41)

But also based on that projected enrollment, we can compare that to our position planning in terms of how many teachers we have in this particular school and see whether we're adequately staffed or not. So in this particular example, we are understaffed, so we'll have to go ahead and start to add more teachers to account for that projected enrollment growth.

(02:07)

Also within this particular tab there's other information that we can capture. So, for example, within our particular projected enrollment, if 75 percent of our students need bus service, need bussing service, and given the number of additional bussing services that are needed than what we have today, and the cost per bus, we can understand what the projected cost of that particular...of bussing service would be for this given number of students that are enrolled.

(02:39)

So for example, if we change this number to 500, 5,000 students, we can quickly say we don't have enough room. We're understaffed in our bussing costs, service cost will be \$118,425. That number in terms of bussing costs will actually flow into our bussing costs in terms of request amount.

(03:03)

So, let me go back and get back to 450. The next item I wanted to look at is our position plan -- so what do we need to do to staff the incoming students as well as staff for, set aside some staffing hours for our AYP or No Child Left Behind improvement program that we've identified earlier.

(03:27)

So if I go into our position plan, planning template or tab we can quickly see the various different positions that are available for this particular school. Going across are the position numbers and coming down on the rows is the various information we want to collect from a salary perspective or an employee perspective.

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So within each position we have a drop-down list that shows the employee name. So I can go ahead and select a particular employee to fill this particular position or have an open position and start to fill in for that. Each of these positions will require a job class.

(04:00)

At certification, we can start to look at certification, whether a particular teacher has a doctoral or LEP certified, if we're looking to target our three or five Hispanic students that are LEP and that are in need of tutorial for reading, we can hire teachers that are LEP certified and that in turn will trigger some other mechanisms within this application - whether they are fluent in their particular language and so on.

(04:29)

As well as what funds they belong in and information about grade and stuff and so forth. So for example, to show an example of this particular position, let's assume that within position 2001869, rather than Joanne Hamilton, we'll actually have Julie Murphy fill that particular position. Julie Murphy is in a job class of 3311, and if I hit enter, the system will pull information from our payroll and quickly show the users what Julie Murphy's current salary is at and what her projected biweekly salary would be given this particular job class and this grade and step level.

(05:10)

It also shows information about longevity date. So Julie Murphy started in 1973. She's been with the organization for 32 years. Fred Lesner, let's assume Fred Lesner, for example, sorry. Fred Lesner, his current salary is 2,523. And her projected biweekly salary is \$2,200. He started in 1998. He's been with the school for seven years and his longevity pay will be \$300. So this information is coming directly from our payroll system.

(05:45)

We can also assume that if we look at Fred Lesner, and if he was an LEP certified instructor who was fluent in Spanish, what would happen from a pay perspective? We can, based on those criteria, we would actually pay an additional \$350 on top of his projected biweekly salary.

(06:03)

If we look at grade and step, we can assume that maybe assign a grade of two and step three for Fred Lesner and we can start to see what are his projected salary would be. This information will actually now update his weekly salary so we can see total salary for Fred Lesner is 75,621.

So this is the type of information that the application's capable of doing. So based on the analysis that we did earlier in terms of No Child Left Behind as well as enrollment projections what do we need to do to hire more staff?

(06:41)

So within our new position, I'll just go ahead and open up and start an open position. So within this open position we don't have the employee name yet. Let's just assume that this particular position will have a job class of 3310, will also be LEP certified and maybe a headcount of four people, five people.

Rather than one person, we'll actually hire five new teachers. They'll be assigned to the general fund. And assign them a grade and step level when they're coming in. So based on this information we can quickly see what our projected salary is at.

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And then from a start month we can identify what month we plan to hire these teachers. So let's say within September, and they'll be with us for the full year, the rest of the year through July.

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So by entering in this information we can quickly see what our total projected salary would be for Alpine school of 237,916.

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There's also information about a collective bargaining unit. So, depending on what collective bargaining unit these teachers will come in at, let's assume that's EIU, this system will automatically pick up what that increase percent should be if we decide to provide entries for these new incoming teachers.

(08:03)

Let's say they should get increase of three percent, so we can see the projected salary dollars now turns out to be \$239,000. Of these five teachers, we may want to rotate them across some of these students that we've identified.

Or, Fred Lesner that we've identified for this particular position, we may say 10 percent of this particular salary should really fall into the AYP allocation. So we want to allocated 10 percent of Fred Lesner's salary to teach those five students that we identified that need help.

(08:38)

So if I go back to my AYP improvement program, Fred's salary, 10 percent of his salary will now actually come into this particular line for additional staff. Now that particular AYP program is now funded for 28,562. If I go back to my budget input, I can see that it's 28,562.

(09:00)

We can also see in terms of our personnel services that it's now at \$723,000 based on these five additional teachers that we've hired, which was based on our enrollment projections that we looked at earlier.

(09:16)

Some of the things from a district perspective, if I look at this from a district perspective, we saw earlier that we can look at the immediate roll-up of this information at the district level.

So I use my drop-down list and look at total Alpine, I can see immediately what the impact of my changes at the Alpine elementary school is at the district level. If I take my schools and swap it with requested amount, I can quickly see what the makeup of Alpine school is for our requested amount across the various different schools.

(09:52)

So within my Alpine School District, at my requested amount, I can see what number I can forecast in terms of planning budgeted and what Alpine elementary school has requested the changes that have been made at American Fork and Aspen elementary school.

(10:09)

One of the key components of Cognos' planning application is bottoms down. So once we've collected our budget data from Alpine elementary and American Fork, I can do some bottoms down budget.

(10:22)

But before I do that, let me first save this information. By highlighting, clicking on the save button and highlighting all the schools, I can immediately save this data.

Information that I'm not...once I enter in my data, the cells that are blue that show the impact of my changes, if I wanted to revert back to the last date, I can simply come in under file and reset all and this will actually take me back to the last saved state that's in the database.

Bottom-Down Budgeting

But once we've saved our information, I can go ahead and start to do some bottom-down budgeting. So, for example, within my equipment rental rather than 287,415, I can simply say this really should be \$250,000 by typing in 250k. The result of that is to break it back or allocate that number across my American Fork elementary, Fork junior high and Aspen elementary schools. This is a proportion allocation of the values that are existing in these cells.

(00:35)

Alternatively, I can also come into total contractual services and simply say, this should really be \$1.5 million instead of 1.17. So by doing that I can affect all the sales that make up my total contractual services across the schools that make up my district if I wanted to hold certain cells intact.

(00:55)

So, for example, equipment rental, real estate rental or my Alpine elementary, I want to hold those cells intact as well as within my Aspen elementary school, I want to hold my real estate rental maintenance and so forth, these accounts intact.

(01:10)

I simply go into a cell, selecting, right mouse clicking and holding will indicate that I'm holding this cell. If I come back to contractual services, if I wanted to increase this by 10 percent or decrease this by 20 percent by typing in decrease 20, go ahead and decrease that particular number by 20 percent, adjust the other cells but holding intact the cells that I've highlighted in blue.

(01:37)

Once the budgets are done, then we simply go ahead and submit this budget and now it's ready for approval at the next level up within the organization. So let me do that.

(01:48)

If I just simply go ahead and highlight these budgets and say, want to save that and submit it, the system will actually automatically save it and indicate to the user that it is now locked and it's ready for approval by the district or the superintendent for the next level up within the organization. So I can't come in here and start to modify this information, because now I played with my budget and submitted it for approval within the hierarchy.

(02:23)

So that takes us to our performance management application for Cognos' K-12 practice. Our performance management application, again, is made up of three pillars: the visibility for business intelligence and reporting and analysis, as well as our predictability component for enterprise planning and budgeting, and then our scorecarding component for enterprise scorecarding and metrics reporting. Thank you.

[END OF SEGMENT]