COMMONWEALTH of VIRGINIA

Auditor of Public Accounts

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March 30, 2011

Dr. Kim Luckes
Acting President
Norfolk State University
700 Park Avenue
Norfolk, Virginia 23504-8000

Dear Dr. Luckes,

We do not believe that Norfolk State University can successfully implement its Colleague system by July 12, 2011 as scheduled. Our Office monitors a variety of system development projects throughout the Commonwealth in an effort to reduce potential project failures. In conjunction with our financial statement audit, we reviewed your current implementation of the Colleague financial system.

We asked the Project Manager some basic questions in order to gain an understanding of the project and its progress; however, the responses provided led us to question the Project Manager's control over the project. For example, the Project Manager appears to have selected the July 12 implementation date based on when the University would like to have the system go live, rather than a date that considered what work remained and the staff available to do it. Without this type of analysis the Project Manager cannot know with any degree of certainty whether July 12 is a realistic, achievable goal.

In addition, the project team has no plan for how to handle the University's business operations and related data needs between fiscal year end at June 30 and the implementation date of July 12 or later. The Project Manager explained that upper management determined that Departments would not process transactions between these dates, but no formal plan exists outlining the process the University will follow and the risks involved with this plan. The Project Manager noted that the project is on track; however, if at any point she feels that the project is beginning to trend toward a later implementation date, she will address those issues immediately.

Finally, the Project Manager could not provide current plans or status reports and we have concerns because the project is less than four months away from its implementation. The Project Manager has not updated the project plan to reflect the current status of work or completed tasks since its original approval on January 31, 2011 and has not offered any other report or analysis that shows how the current work compares to the planned work at this time. As a result, we requested to attend project meetings but the Project Manager asked that we meet separately with her to discuss the project. Although we understand that our presence could possibly limit the candor of the project team, without project documentation, attending meetings is our best and most efficient way to understand how the project is proceeding.

The Project Manager's failure to adequately monitor and control the project creates risks affecting Colleague's successful implementation. Although the Project Manager believes the implementation is on schedule and Colleague will deliver as planned, we cannot independently validate this claim using the available project documentation.

The project documentation is missing critical information and deadlines normally necessary for successful project implementation as prescribed by the Project Management Institute's best practices. Attached in Appendix A, we provide greater detail and support regarding each of these missing critical components and what risk we have identified.

We recommend the Project Manager do the following.

1. Re-examine the project schedule and due dates and break the remaining tasks into smaller, more detailed and manageable units of work.

2. Assign specific team members to work on those detailed tasks rather than assigning tasks to a large, generic workgroup.

3. Examine team member assignments and availability to ensure they have the time availability to meet the completion of their tasks by a set deadline. Over committing team members in a given work week is setting them up to not deliver the completed task or make their deadlines.

4. Identify the tasks that create the critical path. The critical path is the series of tasks and deadlines that team members must complete for a project to finish on schedule. Identifying the critical path will allow the Project Manager to quantify how delays in completing critical path tasks affect the overall implementation date.

5. Establish a process to regularly and consistently collect actual team member hours worked on tasks and update, evaluate, and monitor task completion dates and the critical path. This monitoring process will allow the Project Manager to quickly determine when the project implementation date slips and adjust subsequent tasks or assign additional team members to bring the project back on schedule.

In late March, after providing a draft of this letter to the Project Manager, we met with the Project Manager to discuss our recommendations. The Project Manager explained that she is in the process of breaking the remaining tasks into smaller, more detailed and manageable units of work. We recommend the Project Manager continue implementing our recommendations and determine whether the July 12, 2011 implementation date is feasible and make adjustments as necessary.

Our intent with this letter is to contribute towards Colleague's successful implementation by providing recommendations that align with project management best practices.

If you have any questions regarding project management best practices or the recommendations outlined in this letter or Appendix A, please do not hesitate to call me or Tracy Surratt at (804) 225-3350.

Sincerely,

Walter J. Kucharski

cc: Mr. Edward L. Hamm, Jr., Rector

The Honorable Charles J. Colgan, Chairman
Senate Finance Committee

The Honorable Lacey E. Putney
Chairman, House Appropriations Committee

APPENDIX A

We do not believe that Norfolk State University can successfully implement its Colleague system by July 12, 2011 as scheduled, as a result of several project management risks outlined below. Our office monitors a variety of system development efforts throughout the Commonwealth. Our review goal is to detect problems at the earliest possible point and alert decision makers to this information, thereby reducing potential project failures. In conjunction with our financial statement audit, we reviewed your current implementation of the Colleague financial system.

Risk #1 – The Project Manager cannot effectively monitor and track project progress because she does not assign individual project team members directly to detailed tasks.

Best practice suggests that each task within the project schedule have at least one team member assigned and that project roles and responsibilities be clearly defined, preferably with no overlap of accountabilities. Further, only one person should be accountable for one assignment or multiple assignments, although any number of people may contribute towards those assignments. Two or more people should never have the same assignment as this leads to confusion and potential problems.

The Colleague Financials project plan shows tasks assigned to entire teams, rather than individual team members. In addition, the project plan assigns these teams at the summary task level, instead of assigning team members at the detailed task level as industry best practice recommends. By assigning entire teams to summary tasks, the Project Manager has no means of determining if sufficient project team members exist to complete the tasks on time.

For example, the project manager has assigned to two teams, the Core Team and Datatel, the summary task "Map IFAS processes to Colleague." This summary task spans 124 days and totals over 3500 hours of work. The Core Team has approximately a dozen individuals and the documentation does not explain how many individuals work on the Datatel team. The project documentation does not indicate the amount of time each team member must work on this task or the individual team member's availability. In addition, the individual detailed tasks that roll up to create the summary task, "Map IFAS processes to Colleague", have no teams or team members assigned to them.

Since receiving a draft of our recommendations, the Project Manager has begun to identify owners of each task. However, she needs to identify other team members and the amount of hours that they are expected to contribute to those tasks. This lack of detail prevents the Project Manager from using a best practice process called leveling, to determine if team members are being assigned more work than is feasible by the task due date. When a team member is over-allocated, he is assigned to work more hours than possible in a workweek. When under-allocated, he may finish tasks earlier than estimated and have downtime until his next task begins. The majority of the Colleague Financials project team is concurrently managing their regular work assignments while working on the implementation. This dual responsibility makes leveling the project even more important to ensure sufficient staff exists for a timely implementation.

We recommend the Project Manager assign individual team members to detailed tasks and level the work to determine if sufficient team members exist in order to complete the project by the July 12, 2011 implementation date.

Risk #2 – The Project Manager cannot monitor the impact of late tasks on meeting the implementation date because she does not break tasks down into small units of work.

Project management best practices recommend that the project manager break down project schedule tasks to the lowest possible level of work. Generally, no task should take longer than 80 hours to complete. This level of detail allows the project manager to monitor and control each task and make adjustments to the schedule and plan when tasks are late. Further, it gives the assigned team members a clear understanding of what they need to do to accomplish the task.

Our review of the project plan shows the current tasks define large groups of work that are often several hundred days in duration. In addition, the tasks are generic and lack the specification needed to adequately define the scope of the work. Vague tasks can lead to scope creep, as well as a product that does not meet the desired outcome.

For example the task, "Develop Payroll (CIPPS) Interface" had a schedule of 90 days to implement and involves both the Core Team and Datatel. However, the project plan does not identify the detailed tasks and duration of each task to support the 90 days summary level duration. In addition, as mentioned previously under Risk 1, the project plan did not identify which of the Core Team will work on the interface development and what level of involvement each member will have.

Since receiving a draft of our recommendations, the Project Manager has worked with the project team to begin breaking the tasks into more manageable units. She should now work to identify the project's critical path which will allow her to determine early on, whether delivering tasks late will affect the implementation date. The critical path is the series of tasks that dictates the calculated end of the project. If a single task is late on the critical path, the end date of the entire project will also be late.

As an example, when building a house, the contractor cannot build the walls until contractor completes the foundation. Likewise, the contractor cannot add the roof until contractor builds the walls. Each of these activities are in the critical path and a delay in one, such as pouring the foundation late, will impact the start date of the other, such as the day the walls can be built. The critical path can change from one series of tasks to another as you progress through the schedule; therefore, closely monitoring critical tasks is essential.

We recommend that the Project Manager continue to work with the project teams to break the remaining summary level tasks into smaller, more detailed and manageable units of work and assign team members to work on them. This will allow the Project Manager to identify the critical path and better monitor task completion so she can respond by adjusting the schedule and requesting additional team members to minimize the impact of late tasks on the scheduled systems implementation date.

Risk #3 –The Project Manager cannot monitor the project's schedule because she does not regularly collect information from team members such as hours worked on tasks and estimates to complete tasks.

Continuous monitoring gives the project management team insight into the health of the project and identifies areas that require special attention. Monitoring allows for the implementation of corrective and preventative actions that will positively affect the final project implementation. Monitoring includes collecting, measuring, and disseminating performance information and assessing trends through the project duration. Best practices recommend developing a project plan early in the project and managing the project to the plan.

As management tracks project progress, they can review the differences between planned, scheduled, and actual work. The actual work is the amount of work performed on a task or assignment. This helps management assess whether work on the project is progressing as expected. The Project

Manager must maintain the project plan in order for it to be an effective tool to monitor the project's progress.

Although the Project Manager assures us that the project is on schedule and will meet its scheduled completion date, we cannot rely on the project data provided to verify the scheduled progress and completion of work. The Project Manager has not provided evidence that she is regularly collecting detailed information from the project team regarding actual hours worked and remaining time required for each task. In addition, the Project Manager has no process to regularly update and maintain the project schedule. Infrequent updates make it difficult for the Project Manager to determine the impact of late tasks on the implementation date and to devise a plan to respond.

We recommend that the Project Manager develop a process to regularly collect from team members the actual hours worked on each task, estimate remaining work by task, and update the project plan to include that information. We recommend the Project Manager follow a disciplined approach with regular updates of the project plan and regular monitoring such as weekly, and use analysis reports to review the status often. The project plan and its analysis are management's most effective tools to indicate the status of the project.