AMTRAK OFFICE *of* INSPECTOR GENERAL
NATIONAL RAILROAD PASSENGER CORPORATION

INFORMATION TECHNOLOGY:

Operations Foundation Program—Restructuring Could Help Control Costs and Limit Risks

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Memorandum

To: Stephen Gardner
Executive Vice President, Planning, Technology and Public Affairs

From: Stephen Lord
Assistant Inspector General, Audits

Date: June 19, 2017

Subject: *Information Technology: Operations Foundation Program—Restructuring Could Help Control Costs and Limit Risks* (OIG-A-2017-011)

The Operations Foundation program (the program) is a large, complex information technology (IT) and business process initiative designed to improve train operations and the movement of passengers. It consists of a portfolio of 15 "themes," which are groups of ongoing and planned projects. The themes are designed to modernize specific business processes and tools, primarily through the use of new or upgraded IT systems. More than 80 percent of the workforce of Amtrak (the company) is covered by these improvement activities. Throughout this report, we refer to this portfolio of 15 themes as "the program" because many of the themes are interrelated.

When the company initiated the program in December 2014, it estimated that the program would cost at least $427 million and be completed in 2025. As of the end of fiscal year (FY) 2016, the company spent about $89 million implementing the program and has focused its efforts on seven themes. As part of a company-wide consolidation of all ongoing IT projects, the company plans to transfer the management of the program from the Operations to the IT department by June 2017.

Our objectives for this report were to assess the current status of the program and identify opportunities, if any, to strengthen the company's management and oversight of the program. To do so, we compared the company's management of the program to leading practices from the private and public sectors for cost, schedule and benefits estimation, and program management.

For additional details related to our scope and methodology, see Appendix A. For a detailed list of these leading practices, see Appendix B.

SUMMARY OF RESULTS

More than two years into its implementation, the Operations Foundation program is over budget and behind schedule. Additionally, the projected costs of the seven ongoing themes (i.e., groups of projects) collectively outweigh their quantified benefits by about $125 million. Because the estimated costs exceed their quantified benefits, continuing implementation of these themes appears contrary to leading practices for investing in capital projects and the company's strategic goal of achieving financial excellence. Moreover, the company risks spending additional funds on a program with limited prospects for success. These weaknesses are consistent with long-standing weaknesses in the company's ability to manage and oversee large and complex capital projects.[1] In the past, the company has struggled to successfully implement smaller and less complex IT programs; therefore, a program of this scope and complexity may exceed the company's capacity to manage it.

The recent reorganization of the company's IT functions presents an opportunity to conduct a strategic review of the program to determine the best course of action for meeting user's requirements, including whether to restructure or cancel parts of the program. For example, the company could avoid costs of about $52 million if it canceled four lower-priority themes that have not been fully defined. A strategic review could also help in addressing the following weaknesses.

Costs are increasing. The program's capital cost estimate for developing the seven ongoing themes has increased from the initial estimate of about $218 million to $249 million, as of November 2016. We estimate that the total capital costs for these seven ongoing themes and four planned themes might exceed the current program estimates by as much as $59 million because the program management office[2] did not follow leading practices from the private and public sectors in developing these estimates. Specifically, the company's cost estimates did not identify all of the technical requirements, had large margins of error that were not refined over time, and were not

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[1] For example, see *Amtrak: Top Management and Performance Challenges–Fiscal Year 2017 and 2018* (OIG-SP-2017-009), March 29, 2017.
[2] Throughout this report, we refer to the officials in the Operations and IT departments who were involved in managing the program implementation as the "program management office" or "program management officials," unless otherwise specified.

independently validated to ensure that they were reasonable. In the most recent business cases for four ongoing themes, the estimated margins of error are still plus or minus 50 percent, resulting in a risk of additional capital cost overruns.

Schedule is slipping. Two of the program's biggest themes are about a year behind schedule. The schedule for the Integrated Labor Management System theme has slipped by a year, primarily because of an increase in requirements and the need for additional field-testing, which were not factored into the original schedule. Similar to the cost estimates, the initial schedule estimates for four ongoing themes had estimated margins of error of plus or minus 50 percent and have not been refined in the latest business cases. Further, a review of the schedules for the seven ongoing themes by the company's Enterprise Project Management Office (EPMO) found that all of the program schedules did not fully reflect logical interrelationships in the planned activities. Without this information, the effect of the delays on the completion dates of the planned activities and the critical path for the theme cannot be accurately determined.

Program management is weak. The Operations and IT departments established a joint program governance structure to oversee the program; however, the program management office developed and managed each theme independently without full consideration of an enterprise-wide view of the technology solution underlying the program's business process improvements. In addition, the program management office did not develop a plan to mitigate the risk of poor contractor performance or develop a labor management strategy to mitigate concerns about the proposed business process changes and obtain greater employee support for them. Further, the company has never implemented a technology-based program of this magnitude.

We recommend that the company conduct a strategic review of the program to help mitigate program risks and focus company resources on projects with the best prospects for success. Restructuring or canceling parts of the program as part of this strategic review would allow management to focus on areas with the highest potential return and to better align it with the company's new spending and management priorities, and existing management capacity. This review could help the company avoid significant costs and free up at least $52 million that could be put to better use. Conducting a strategic review will also provide an opportunity to update cost and schedule estimates, revise the related cost-benefit analyses, and allow the company take an integrated, enterprise-wide approach to developing the technology for the program.

In commenting on a draft of this report, the company's Executive Vice President of Planning, Technology, and Public Affairs agreed with our recommendations and stated that the company will take steps to help control costs, limit program risks and focus company resources on projects with the best prospects for success.

BACKGROUND

Launched in 2014, the Operations Foundation program is divided into 15 themes—groups of ongoing and planned projects—that address specific functional areas of the Operations department's activities. The Operations and IT departments jointly established these themes through an analysis of gaps in the department's business processes and technology capabilities. The program also incorporated several ongoing technology projects in the Operations department. The following are the seven ongoing themes:

- **The Integrated Labor Management System (iLMS) theme.** iLMS is the program's largest theme. It began in FY 2012 and was incorporated into the program in December 2014. It currently consists of two IT projects primarily designed to replace one of the company's six time-keeping systems used for locomotive engineers and conductors, and onboard service attendants. The new system will automate and improve time-keeping functions. For example, it will require all train crews to electronically sign in and out for their work assignments using a mobile application or kiosk to increase accountability for hours worked[3] and to reduce time-keeping fraud.[4]
- **The Rolling Asset Management theme.** This theme currently consists of three IT projects designed to modernize the company's train equipment maintenance system by providing better visibility into the condition of locomotives and passenger cars and also to reduce maintenance costs and maximize their availability.
- **The Service Management theme.** This theme currently consists of two IT projects designed to improve the company's ability to plan and adjust train

[3] Currently, train crews are generally paid based on their scheduled hours rather than the hours they actually work.
[4] In 2017, we reported that an Amtrak supervisor admitted to fraudulently overbilling the company for regular and overtime hours when he was not present at work sites, resulting in a loss of more than $20,000. See *Amtrak Supervisor Admits Overbilling Fraud* (Investigative Press Release), January 13, 2017.

schedules and equipment to maximize revenue by better matching the mix of passenger cars on trains with demand. It is also intended to reduce costs associated with passengers missing their connections by developing better schedules. The program management office recently cancelled its system development contract, and the theme is temporarily on hold.

- **The Fixed Asset Management theme**. This theme currently consists of five IT projects focused on the proactive maintenance of railroad infrastructure, such as tracks, signals, bridges, and tunnels.
- **The Information Management theme**. This theme currently consists of seven IT projects designed to provide clear, consistent, and accurate data related to multiple areas—such as train and financial performance, labor, equipment maintenance, safety, and training—through personalized online reports and other tools to meet information needs in real time.
- **The Baggage Management theme**. This theme currently consists of three IT projects designed primarily to increase revenue by implementing an automated system to track and charge for checked bags and express shipments, similar to airlines.
- **The Food and Beverage theme.** This theme currently consists of four IT projects designed to help the company eliminate losses associated with providing food service on trains. It includes an automated point-of-sale capability that would reduce costs by eliminating inefficient manual ordering and accounting processes. It is also designed to increase revenue by improving the speed at which food is sold to customers, extending the period that food is available for sale, and focusing customer attention on high-margin food items. Our prior work has identified several opportunities for the company to conduct its food and beverage service on a more cost-effective basis.[5]

For descriptions of the other eight themes, see Appendix C.

[5] We previously recommended that the company develop a similar capability in *Food and Beverage Service: Potential Opportunities to Reduce Losses* (OIG-A-2014-001), October 31, 2013.

Table 1 identifies the various ongoing and planned themes included under the original program as well as their initial budgets and estimated completion dates, which could extend until FY 2025.

Table 1. *Operations Foundation Program's Initial Budget and Completion Date Estimates, as of December 2014 (dollars in millions)*

Theme	Estimated Capital Cost	Estimated Operating Cost	Estimated Budget	Estimated Completion Date
Ongoing Themes				
1. Integrated Labor Management System	$ 86.5	$ 102.0	$ 188.5	FY 2018
2. Rolling Asset Management	31.8	15.5	47.3	FY 2020
3. Service Management	24.9	17.8	42.7	FY 2018
4. Fixed Asset Management	33.2	3.1	36.3	FY 2019
5. Information Management	19.9	8.6	28.5	FY 2018
6. Baggage Management	10.2	6.3	16.5	FY 2018
7. Food and Beverage	11.3	3.8	15.1	FY 2017
Subtotal for ongoing themes	$ 217.8	$ 157.1	$ 374.9	N/A[a]
Themes Planned for Operations Dept.				
8. Dispatching	2.8	0	2.8	TBD[b]
9. Terminal Management	17.5	11.5	29.0	TBD[b]
10. Facilities Management	6.9	1.5	8.4	TBD[b]
11. Fuel Management	7.7	4.2	11.9	TBD[b]
Subtotal for Operations department's other planned themes	$ 34.9	$ 17.2	$ 52.1	N/A[a]
Themes Planned for Other Departments				
12. Brand Management	TBD[b]	TBD[b]	TBD[b]	TBD[b]
13. Human Capital	TBD[b]	TBD[b]	TBD[b]	TBD[b]
14. Marketing	TBD[b]	TBD[b]	TBD[b]	TBD[b]
15. Materials Management	TBD[b]	TBD[b]	TBD[b]	TBD[b]
Subtotal for other department's planned themes	TBD[b]	TBD[b]	TBD[b]	N/A[a]
Total	**$ 252.7**	**$ 174.3**	**$ 427.0**	**N/A[a]**

Source: OIG analysis of Amtrak financial data from initial program budget

Notes:
[a] N/A: not applicable
[b] TBD: to be determined

Initial cost estimates were developed for 11 of the program's 15 themes—totaling about $427 million—which was to be funded by the Operations department. This included a combination of $253 million in capital funds to develop the systems associated with each theme, and $174 million in operating funds to run the newly developed systems through FY 2025.

Seven of these 11 themes were initially estimated to cost about $375 million. The Operations department planned to invest about $218 million from its capital budget to develop and implement the technology capabilities associated with these themes, and $157 million from its operating budget to run them through FY 2025. The initial implementation dates for these seven themes ranged from 2017 to 2020. The other four themes were given a lower priority and have not yet started, but the company estimates that they will collectively cost about $52 million.

The four remaining themes, which support the Operations department's activities, were to be funded by the Finance, Human Capital, and Marketing and Sales departments. Cost and schedule estimates have not yet been developed for these four lower-priority themes. As part of the consolidation of all IT programs company-wide that occurred in November 2016, the company is in the process of moving the capital and operating budgets for all themes to the IT department by June 2017.

PROGRAM IS OVER BUDGET AND BEHIND SCHEDULE, AND ITS COSTS EXCEED QUANTIFIED BENEFITS

Two years into its implementation, the program is over budget and behind schedule. The cost overruns are likely to further increase because the Operations Foundation program management office did not follow leading practices in developing the cost estimates. Similarly, further schedule delays are likely because the program management office did not develop schedule estimates in accordance with leading practices. Additionally, the estimated costs of the seven ongoing themes significantly exceed their quantified benefits, although the program management office did not fully quantify the program's expected benefits.

Program Is Over Budget and Behind Schedule

In November 2016, the Operations Foundation program management office increased the initial $217.8 million capital cost estimate for developing the seven ongoing themes by about $30.8 million (about 14 percent) to $248.6 million. This increase in the cost estimate included overruns of $43.4 million on three themes and a reduction of about $12.6 million on the other four. Similarly, the initial schedules for five themes have slipped by up to 12 months, and they are likely to be further delayed because of work slow-downs and stoppages for the iLMS and Service Management themes primarily due to poor contractor performance that occurred after these estimates were developed, as discussed below.

Table 2 compares the capital cost projections as of November 2016 with the initial estimates as of December 2014 and identifies projected schedule delays.

Table 2. *Projected Capital Cost Overruns and Schedule Delays for the Operations Foundation Program, as of November 2016*

Theme	December 2014 Capital Cost Estimate (in millions)	November 2016 Capital Cost Estimate (in millions)	Difference between Projected and Estimated Capital Costs (in millions)	Projected Schedule Delay (in months)
1. Integrated Labor Management System	$86.5	$109.6	$23.1	12
2. Rolling Asset Management	$31.8	$26.8	($5.0)	3
3. Service Management[a]	$24.9	$38.7	$13.8	11
4. Fixed Asset Management	$33.2	$29.9	($3.3)	3
5. Information Management	$19.9	$26.4	$6.5	0
6. Baggage Management	$10.2	$6.5	($3.7)	0
7. Food and Beverage	$11.3	$10.7	(0.6)	11
Total	**$217.8**	**$248.6**	**$30.8**	**N/A[b]**

Source: OIG analysis of Amtrak financial data

Notes:
[a] The projected cost overrun and schedule delay for the Service Management theme do not reflect the subsequent cancellation of the system development contract that temporarily stopped work on the theme.
[b] N/A: not applicable

Cost Estimates Are Likely to Increase

> ***Leading practice:*** *Requirements should be adequately defined and collected to satisfy established business needs.*

Cost estimates for the program are projected to continue to increase because the program management office did not fully adhere to leading practices from the private and public sectors when developing cost estimates for the program's individual themes. In particular, program management officials did not always ensure that IT system requirements (technical specifications) were adequately defined, as leading practices call for.[6] For example, requirements for the iLMS theme have tripled from an initial estimate of approximately 2,300 requirements to more than 7,000. These requirements increased largely because program management officials and the contractor underestimated the complexity of the system and its integration with other existing and new systems. As a result, when the company revised the business case for the iLMS theme in November 2016, the capital cost estimate increased by at least $23 million (about 27 percent).

Similarly, the estimate for capital costs in the November 2016 business case for the Service Management theme are projected to increase by about $13.8 million (55 percent) because of shortcomings in identifying initial system requirements. These cost increases contributed to the decision of program management officials to cancel the contract with the developer for the Service Management theme in September 2016, which halted work. According to the Chief Information Officer, the company is in the process of determining a path forward for the Service Management theme to deliver this capability.

Program management officials have also not always followed other leading practices to refine costs estimates over time. The initial capital cost estimates for the 10 themes other than iLMS that were to be funded by the Operations department had error rates of plus or minus 50 percent. These error rates reflected the inherent unknowns in developing a multi-year program, consistent with leading practices. However, after two or more years of work, the cost estimate variances for four ongoing themes—Rolling Asset

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[6] According to the program management office, developing detailed system requirements and cost estimates requires capital funding. However, as we discussed above, the company does not have a disciplined, structured process to estimate project costs, which is inconsistent with leading practices.

Management, Service Management, Fixed Asset Management, and Food and Beverage—have not been refined in accordance with this leading practice and are still relatively wide. In the most recent business cases for these themes—updated in November 2016—the estimated margins of error are still plus or minus 50 percent, resulting in a risk of additional capital cost overruns. For example, the potential cost overruns for the Service Management theme, already estimated at about $13.8 million (55 percent), could further increase to $26.9 million and still be within their margins for error. Based on the company's current projections and estimated margins of error, actual capital costs for the seven ongoing and four planned themes could exceed the current estimates by as much as $59 million.

Leading practice: *Initial cost estimates may have a wide margin of error but should later be refined and independently validated to ensure they are reasonable and credible.*

Moreover, neither the capital nor operating cost estimates were independently validated to ensure that they are reasonable and credible, which is not consistent with leading practices. The program office developed the cost estimates with the help of a consultant, but independent validation by an external department such as Finance or another consultant would improve their reliability. Government Accountability Office has found that program management offices often underestimate costs and that independent estimates help ensure the accuracy of cost estimates. According to the program management office, monthly meetings are held with the Finance department to discuss actual versus budgeted expenditures and forecasts. However, the Finance department does not perform detailed cost validation as required by leading practices. Since May 2013, we have issued five reports that discuss significant systemic project management weaknesses in the company's ability to develop accurate and reliable cost estimates. Moreover, these weaknesses have resulted in cost overruns, which reinforces the importance of obtaining independent validation.[7]

[7] For example, in one report, we concluded that inaccurate cost and schedule estimates contributed to about $83 million in cost increases and schedule delays. See *Acquisition and Procurement: New Jersey High Speed Rail Improvement Program Has Cost and Schedule Risks* (OIG-A-2015-012), June 17, 2015.

Weak Project Schedules Have Created Uncertainty about Completion Dates

Schedules and completion dates are uncertain because the program management office did not follow leading practices for the private and public sectors when developing project schedules for individual themes. For example, the program management office has developed schedules[8] for each of the seven ongoing themes, but these schedules do not reflect all planned project activities, which is inconsistent with leading practices. This increases the risk that critical project milestones may not be met and that completion dates may be delayed. Some themes have already experienced delays, as described above. For example, the schedule for the iLMS theme has slipped by a year, primarily because of the increase in requirements and the need for additional field-testing, which were not factored into the schedule. Similarly, the Service Management theme slipped by 11 months—primarily due to requirements-gathering and system-development problems, which required additional testing that was not factored into the theme's schedule.

Leading practice: *Program schedules should reflect all planned project activities so critical project milestones can be met.*

Similar to the cost estimates, the initial schedule estimates had estimated margins of error of plus or minus 50 percent, and program management officials have not refined these margins of error in the latest business cases developed for four ongoing themes—Rolling Asset Management, Service Management, Fixed Asset Management, and Food and Beverage. An independent review of the schedules for seven ongoing themes completed by the company's EPMO found that all of the schedules needed improvements. Specifically, the schedules did not fully reflect the

Leading practice: *Project schedules should be refined over time, and analyze activity sequences, durations, constraints, and resource requirements.*

[8] According to the program management office, most project schedules were developed in conjunction with the IT department and followed its methodology for developing schedules. However, the schedules that the program management office developed were not consistent with leading practices as discussed above.

logical interrelationships in the project's planned activities, which is not consistent with leading practices. For example, the required logical interrelationships were missing for 24 percent of the planned activities in the iLMS schedule. Without this information, the effect of the delays on the completion dates of the planned activities and the critical path for the theme cannot be accurately determined.

In addition, the program management office has not developed an integrated master schedule for the overall program, which is not consistent with leading practices. An integrated master schedule would show how the themes could allow the company to balance potential resource conflicts by highlighting the "collision points" in the schedules and actively plan to avoid them. An integrated master schedule would also enable the program management office to identify the critical path for interrelated themes, such as the iLMS and Service Management themes, allowing managers to determine the amount of time that a planned activity can be extended without delaying the program's completion. The program management office plans to work with the EPMO to develop an integrated master schedule in accordance with company policy by October 2017.[9]

Leading practice: *An integrated master schedule should be developed to manage program resources and identify a critical path.*

Estimated Cost of the Program Exceeds Quantified Benefits

The program management office has updated its projections for financial benefits of implementing the seven ongoing themes, and its FY 2017 business cases show that their estimated costs collectively exceed their quantified benefits by about $125.4 million, raising questions about the program's cost effectiveness and future sustainability. The business cases for these themes state that they are needed to modernize the company's business processes and replace aging IT systems, such as the existing Labor Management System, which is failing, is costly to maintain, and no

Leading practice: *Invest in a capital project when the project's cost-benefit analysis is positive.*

[9] *Amtrak EPMO Project Management Center of Excellence,* P/I 1.11, September 23, 2016.

longer fully meets business needs. Because their estimated costs exceed their quantified benefits, continuing implementation of these themes appears contrary to leading practices for investing in capital projects and the company's strategic goal of achieving financial excellence.

However, the program management office did not fully quantify the program's expected benefits in its business cases, which could affect these projections and future decisions regarding the program. For example, the business case for iLMS does not include any quantified benefits, but the program management office's analysis shows that cost savings would be realized by restructuring the office that manages train crews. Specifically, the analysis concluded that iLMS will reduce the workload of this office by 46,000 hours (31 percent) by automating its process for various support roles, such as dispatchers and assignment clerks. Additionally, our past work has identified several instances of time-keeping abuse and fraud that an electronic sign-in and sign-out system could help address.[10] There also may be additional qualitative benefits that the program management office has not fully quantified, such as increased customer satisfaction and loyalty. As we have previously reported,[11] the benefits of a capital project should be fully quantified in its business case to the extent possible to ensure that it reflects the full benefits of each capital project.

PROGRAM WAS NOT EFFECTIVELY MANAGED

The Operations and IT departments established a joint program governance structure to oversee the program; however, each theme was developed independently without full consideration of an enterprise-wide view of the technology. In addition, the program management office did not develop a plan to mitigate the risk of poor contractor performance or develop a labor management strategy to mitigate concerns about the proposed business process changes and obtain greater employee support for them.

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[10] See *Amtrak Supervisor Admits Overbilling Fraud* (Investigative Press Release), January 13, 2017.
[11] See *Corporate Governance: Planned Changes Should Improve Amtrak's Capital Planning Process, and Further Adoption of Sound Business Practices Will Help Optimize the Use of Limited Capital Funds* (OIG-E-2013-020), September 27, 2013.

The Company Established a Program Vision and Management Structure

Program management officials established a clearly defined vision and program management structure for the program. To realize this vision, the Operations and IT departments worked with a consultant to identify and prioritize needed improvements in technology and business processes. In December 2014, this work resulted in a roadmap that articulated the Operations department's vision, goals, and priorities for the program through FY 2025. For example, the company envisioned deploying an automated point-of-sale capability for its food and beverage services that would (1) reduce costs by eliminating manual ordering and accounting processes and (2) improve revenue by increasing customer throughput and focusing customers' attention on high-margin food items, among other steps.

The management structure established for this program was an improvement over the structure the company had used for some previous capital projects. For example, the company established an executive leadership team that included the company's Chief Operations Officer and Chief Information Officer (portfolio sponsors), as well as a steering committee responsible for program review and oversight. This management framework was designed to give the portfolio sponsors and steering committee the ability to balance short-term and long-term goals, and to prioritize individual projects in the program to ensure that funds are allocated accordingly. It was also intended to help them provide better oversight by ensuring consistency in status reports for all ongoing projects within the program.

The initial program management framework identified the Program Managing Director as the single accountable official for implementing the program. (For additional details about the initial program management structure, see Appendix D.) However, after this management structure was established, two Senior Directors—one from the Operations department and one from the IT department—became jointly responsible for program implementation.

Technology Implementation Was Not Fully Integrated

> ***Leading practice:*** *An integrated, enterprise-wide approach provides the ability to manage risk and deliver capabilities to the organization.*

Each of the program's themes was developed without full consideration of an enterprise-wide view of the technology solution underlying the program's business process improvements, which is not consistent with leading practices. This resulted in a "stove-piped" department-level approach, rather than a comprehensive company-wide approach, in developing the IT architecture for the program. According to the Chief Information Officer, the company did not have the resources to develop an enterprise-wide architectural plan. However, not fully leveraging the existing enterprise systems can result in duplicate systems. It can also increase costs in building interfaces with other company systems, and data-integrity problems, as we have demonstrated in our past work on IT projects.[12] For example, because the iLMS theme is largely designed to replace only one of six existing time-keeping systems, the company will still have six separate time-management systems once the iLMS theme is completed.

Under an enterprise-wide approach, company resources would be devoted to developing a technical solution that could integrate some or all of the legacy time-keeping systems. Consolidating some or all of these systems could help reduce the company's operating and maintenance costs, as a company consultant recommended in 2016. In response to that recommendation, the company started a new enterprise-wide project in July 2016 to seek competitive bids to replace and consolidate as many of these legacy time-keeping systems as possible, potentially saving about $5.9 million in operating costs, consistent with leading practices. However, by not taking an integrated, enterprise-wide approach earlier in the program, program management officials missed an opportunity to consolidate some of the existing duplicate time-keeping systems and reduce the costs associated with running them.

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[12] See *Information Technology: Reservation System Infrastructure Updated, But Future System Sustainability Remains an Issue* (OIG-A-2015-010), May 19, 2015, and *Strategic Asset Management Program: Opportunities to Improve Implementation and Lessons Learned* (OIG-E-2012-012), May 31, 2012.

Potential for Poor Contractor Performance Was Not Fully Considered

The program management office did not take adequate steps to mitigate the risks associated with poor contractor performance in implementing the software selected for both the iLMS and Service Management themes, which is not consistent with leading practices. Several factors likely contributed to the contractors' poor performance and delays in both themes. Two are related to the software the company chose, which had not been previously implemented in the U.S. railroad industry, and which the contractor had no prior experience implementing. For example, the design approach for iLMS had to be changed midstream as a result of the contractor's lack of understanding of the software and the process to implement it. However, by using firm-fixed-price contracts with narrowly defined scopes, the program management office helped to limit the risk of poor contractor performance. In September 2016, the program management office canceled the contract for the Service Management theme. The company is studying options for a path forward to best deliver this capability and has not established a target date for completing work on this theme.

Leading practice: *A risk management plan should identify risks associated with contractor performance, experience, and reliability, and its impact on the project.*

Labor Management Strategy Was Not Fully Developed

Program management officials did not develop a Labor Management Strategy to mitigate concerns about the proposed business process changes and obtain greater employee support for the planned changes, which is not consistent with leading practices. This is a significant issue because the company has 12 unions whose members might be affected by the Operations Foundation program. These unions represent about 18,000 employees—85 percent of the company's total workforce. For example, employees have expressed several concerns about the changes to time-keeping processes that would be implemented with the iLMS theme, such as requiring all train crews to electronically sign in and out for work. These concerns range from the

Leading practice: *Organizational change should be effectively communicated and organizational support obtained to achieve desired results.*

potential administrative burden placed on employees to electronically sign in and out for work and the potential difficulty of doing so in remote locations. They also expressed concern that the information collected through iLMS could be used in a punitive manner. Program management officials have met with the company's Labor Relations department and union leaders on several occasions to discuss these business process changes; however, these concerns were not fully addressed as part of the change management plan.

Similarly, the program management office did not develop a comprehensive labor strategy that recognizes the potential need to modify existing labor agreements with unions and did not factor the time it might take to do so into its overall program schedule, which is not consistent with leading practices. For example, automating the current food and beverage processes may affect the job duties of employees on trains that provide food and may require modifications to labor agreements. Without a comprehensive labor strategy and change management plan, employee concerns about the planned business process changes and increased automation resulting from implementation of the program could diminish the prospects for program success.

The Company May Lack the Capacity to Effectively Manage This Program

In our most recent report on the company's top management and performance challenges, we identified strengthening project management capacity throughout the company as important to ensuring effective project management. Our report also noted that the EPMO rated the company's project management maturity at about 1.3 points on a 5-point scale. Further, the IT department has struggled in the past to successfully implement IT programs that were smaller and less complex than Operations Foundation. For example, as we previously reported,[13] the company's attempt to modernize its reservation system, which cost about $74.4 million and consisted of 62 projects, had mixed results. The program was closed without completing the full scope of work.

[13] See *Information Technology: Reservation System Infrastructure Updated, But Future System Sustainability Remains an Issue* (OIG-A-2015-010), May 19, 2015.

Leading practices state that a program of such large scope and complexity requires program managers with advanced project management skillsets and certifications.[14] However, according to the EPMO, only some program managers have the requisite training and certifications needed to manage large and complex technology-enabled business process improvement programs like the Operations Foundation program. To help address these weaknesses, all project management staff in the company will be required to hold appropriate project management certifications by October 1, 2017. The skills and experience that program management staff develop in obtaining these certifications will better position them to employ leading practices in managing program risks and ensure the successful outcome of this program.

Leading practice: *Project managers should possess performance competency, including project management skills and techniques necessary to monitor project performance.*

Further, because of the November 2016 centralization of the company's IT functions, the IT department's capacity will face the additional challenge of managing this large and complex program while simultaneously taking over all of the company's other ongoing IT programs. As part of this reorganization, the company is transferring the program's budget and associated implementation responsibilities from the Operations department to the IT department. Thus, the IT department will now be managing this large and complex program while simultaneously assuming the responsibility for managing all of the company's 87 ongoing IT projects. This includes two large and complex programs that were formerly run by the Marketing and Sales department, which are also over budget and behind schedule.[15]

Leading practice: *The scope of a program should be aligned with an organization's capability and capacity to manage it.*

[14] One such credential is the Project Management Professional certification from the Project Management Institute.

[15] One of these programs is intended to increase revenue and improve customer service by redesigning the company's customer-facing website and reservation system, and the other program is designed to improve passenger wireless connectivity in the Northeast Corridor.

In response to this challenge, the IT department is leading a process to prioritize funding for these 87 projects in an attempt to reduce the company-wide IT budget for FY 2017. In addition, the company's Chief Information Officer stated that this process is also intended to scale back the scope of the company's current IT programs to help increase the probability of successfully implementing the remaining prioritized projects. Consistent with this effort, scaling back the scope and budget of the Operations Foundation program could also yield financial benefits. For example, the company could avoid spending about $52 million if it canceled the four lower-priority themes that have not yet started.

CONCLUSIONS

The Operations Foundation program is over budget and behind schedule, and the projected costs of the seven ongoing themes collectively outweigh their quantified benefits by millions of dollars. As a result, the company risks spending additional funds on a program with limited prospects for success. In the past, the company has struggled to successfully implement other major IT programs, and the IT department is assuming additional responsibilities as part of company-wide reorganization; therefore, conducting a strategic review of the program would help mitigate program risks and focus company resources on projects with the best prospects for success. Restructuring or canceling parts of the program as part of this strategic review would allow management to focus on areas with the highest potential return and to better align it with the company's new priorities and existing management capacity.

This review could help the company avoid significant costs and free up at least $52 million that could be put to better use. Conducting a strategic review will also provide an opportunity to update cost and schedule estimates, revise the related cost-benefit analyses, and take an integrated, enterprise-wide approach to developing the technology for the program. Collectively, these actions will help ensure future success.

RECOMMENDATIONS

We recommend that the Executive Vice President of Planning, Technology and Public Affairs and the Chief Information Officer conduct a strategic review of the Operations Foundation program to reassess the feasibility and affordability of the program in its current configuration and identify alternatives that minimize cost and risk while meeting business requirements. As part of this review, the company should complete the following actions:

1. Revise the business cases and associated cost-benefit analyses of all themes, including updating and quantifying any known benefits, to the extent possible. The revised business cases should document how the leading practices identified in this report were followed, including:
   - updating cost estimates by fully identifying system requirements, reducing the estimated margins of error, and independently validating the estimates for reasonableness
   - updating schedule estimates by including all planned activities, establishing the logical interrelationships between project activities, and identifying a critical path for the overall program
2. Once the business cases and associated cost-benefit analyses have been updated, restructure or cancel themes whose costs exceed their quantified benefits to better align them with the company's existing capacity and capability, and put the funds that would have been spent on these themes to better use.
3. Take an integrated, enterprise-wide approach to develop any new technology for the program.
4. Develop and document a plan to mitigate the risks associated with contractor performance issues.
5. Develop and document a comprehensive labor strategy and change management plan to mitigate concerns and obtain greater employee support for the proposed business process changes and use of increased automation.

MANAGEMENT COMMENTS AND OIG ANALYSIS

In commenting on a draft of the report, the company's Executive Vice President of Planning, Technology, and Public Affairs stated that the company agreed with our recommendations and described actions the company has already implemented or plans to implement that meet the intent of our recommendations.

The company estimates that these actions will be completed by September 30, 2017, as summarized below:

- **Recommendation 1**: Management agreed with our recommendation to revise the business cases and associated cost-benefit analyses of all themes, including updating cost and schedule estimates. Management stated that IT, in conjunction with Operations, Finance, and the EPMO, will revise all business cases for FY 2018. As part of this effort, the company will use a standard estimation methodology to estimate project effort and cost, conduct independent verification and validation of the cost and schedule estimates where appropriate, and use master schedulers to establish project schedules to ensure that they include all planned activities, identify relationships between all project activities, and the critical path.

- **Recommendations 2 and 3**: Management agreed with our recommendation to restructure or cancel themes whose costs exceed benefits to better align them with the company's existing capacity and put the funds to better use. Management also agreed with our recommendation to take an integrated, enterprise-wide approach to develop any new technology. Management stated that IT inventoried and rationalized capital technology projects and programs across the company and reduced planned capital costs by more than $75 million—including about $19 million for Operations Foundation (based on additional documentation provided to us by the company). When this $19 million in cost savings is combined with the $52 million in cost avoidance identified in the report, the total funds that we identified that can be put to better use will be about $71 million.

- **Recommendation 4**: Management agreed with our recommendation to develop and document a plan to mitigate the risks associated with contractor performance issues. Management stated that IT, in conjunction with the Procurement department, has negotiated a Memorandum of Understanding with the contractor to address the performance issues and challenges experienced on iLMS and other large projects by incorporating a risk mitigation plan and a series of conditions that must be followed on current and future contracts. Going forward, management also plans to rely on a series of short-duration, firm-fixed-price task orders with clear scope and success criteria. Our office will monitor the company's progress in implementing this new approach to ensure these corrective actions fully meet the intent of this recommendation.

- **Recommendation 5**: Management agreed with our recommendation to develop and document a comprehensive labor strategy and change management plan. Management stated that a comprehensive labor strategy and change management plan should be required for all projects that have a potential to impact agreement-covered employee work processes and be consistently applied across the company. Management also noted that the change management methodology was used for both iLMS and Food and Beverage Point-of-Sale projects to get labor feedback regarding work process changes and to determine if proposed changes were within the scope of the existing labor agreements. Going forward, IT is expected to work with Operations to ensure that potential labor issues and timelines for resolution are developed and documented. Our office will review the labor strategy and change management plan once documented to determine whether this corrective action is complete and meets the intent of this recommendation.

For management's complete response, see Appendix E.

APPENDIX A

Scope and Methodology

This report provides the results of our audit to assess the current status of the Operations Foundation program and to identify opportunities, if any, to strengthen the company's management and oversight of the program. We conducted our audit work from April 2015 through March 2017 at company locations in Washington, D.C.; Wilmington, Delaware; Philadelphia, Pennsylvania; New York, New York; and San Luis Obispo, California.

The scope of our work focused on assessing the progress and challenges in managing the cost, schedule, scope, implementation, and performance of the program. We focused our effort on seven ongoing themes launched in 2014, with emphasis on the iLMS theme because it has the highest cost and was the farthest along in progress. We compared the company's management of the program to leading practices established by organizations in the private and public sectors. Our methodology included the following:

- reviewing the seven ongoing Operation Foundation program themes
- interviewing officials from the Operations, IT, and Finance departments; the Federal Railroad Administration; and the contractor for iLMS
- reviewing the program roadmap, key presentations, status reports, and business cases
- comparing actual costs to budget estimates from FY 2012 to FY 2016
- comparing the program governance structure to recommended program management standards included in the Project Management Institute Standard for Program Management
- reviewing the Government Accountability Office leading practice guides for estimating, assessing, and monitoring costs and schedules, as well as the leading practices established by American Productivity and Quality Center
- reviewing management control standards from the Committee of Sponsoring Organizations of the Treadway Commission for private entities and the

Government Accountability Office's *Standards for Internal Control in the Federal Government*

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Internal Controls

We reviewed the management controls used for implementing program and the processes used in preparing the cost estimate, assessing the program status, establishing an implementation plan, and managing the program. We met with officials from the Amtrak Controls Group to identify the management control process and controls established for the program. We tested compliance with the Finance department's capital planning process for funding the program in FY 2015 and FY 2016. We did not review the company's overall system of internal controls.

Computer-Processed Data

To verify the completeness and accuracy of this data, we interviewed Operations and Finance officials responsible for reporting program and financial information related to our audit objective. We received computer-processed data from Operations related to actual program expenditures from FY 2012 through FY 2016. Operations obtained this data from the company's financial system of record, the SAP Enterprise Resource Planning system. The team met with Finance and Operations officials to discuss, validate, and obtain an understanding of any potential limitations on using the data. Based on the review of documents and discussions with responsible officials and the limited use of company financial data in conducting this audit, we identified no limitations.

Prior Reports

In conducting our audit, we reviewed the following reports:

- *Amtrak: Top Management and Performance Challenges–Fiscal Year 2017 and 2018* (OIG-SP-2017-009), March 29, 2017.
- *Acquisition and Procurement: Adopting Additional Leading Practices to Manage the Baltimore Penn Station Redevelopment Could Help Mitigate Project Risks* (OIG-A-2017-002), December 14, 2016.
- *Amtrak: Top Management and Performance Challenges–Fiscal Year 2016 and Beyond* (OIG-SP-2015-015), September 30, 2015.
- *Acquisition and Procurement: New Jersey High Speed Rail Improvement Program Has Cost and Schedule Risks* (OIG-A-2015-012), June 17, 2015.
- *Information Technology: Reservation System Infrastructure Updated, but Future System Sustainability Remains an Issue* (OIG-A-2015-010), May 19, 2015.
- *Food and Beverage Service: Potential Opportunities to Reduce Losses* (OIG-A-2014-001), October 31, 2013.
- *Corporate Governance: Planned Changes Should Improve Amtrak's Capital Planning Process and Further Adoption of Sound Business Practices Will Help Optimize the Use of Limited Capital Funds* (OIG-E-2013-020), September 27, 2013.
- *Strategic Asset Management Program: Opportunities to Improve Implementation and Lessons Learned* (OIG-E-2012-012), May 31, 2012.

APPENDIX B

List of Leading Practices

The leading practices we relied on in this report are listed below.

Category	Leading Practice
Cost, Schedule, and Benefits Estimation	• Requirements should be adequately defined and collected to satisfy established business needs. • Initial cost estimates may have a wide margin of error but should later be refined and independently validated to ensure they are reasonable and credible. • Program schedules should reflect all planned project activities so critical project milestones can be met. • Project schedules should be refined over time, and analyze activity sequences, durations, constraints and resource requirements. • An integrated master schedule should be developed to manage program resources and identify a critical path. • Invest in a capital project when the project's cost-benefit analysis is positive.
Program Management	• An integrated enterprise-wide approach provides the ability to manage risk and deliver capabilities to the organization. • A risk management plan should identify the risks associated with contractor performance, experience, and reliability, and its impact on the project. • Organizational change should be effectively communicated, and organizational support obtained to achieve desired results. • Project managers should possess performance competency, including project management skills and techniques necessary to monitor project performance. • The scope of a program should be aligned with an organization's capability and capacity to manage it.

Source: OIG analysis of leading practices from the private and public sectors

APPENDIX C

Other Operations Foundation Themes

Descriptions of the eight Operations Foundations themes that have not been started are listed below.

#	Theme	Description/Intent
8	Dispatching	Improve train dispatching by standardizing systems internally and integrating them with other railroads.
9	Terminal Management	Reduce terminal delays by giving the company better insights into their causes and how to minimize them.
10	Facilities Management	Improve facilities management by enhancing visibility into cost allocation, maintenance costs, and energy consumption.
11	Fuel Management	Lower fuel costs by better monitoring of usage, accurate projections, and reduction in the need for emergency refueling.
12	Brand Management	Improve customer satisfaction and increase revenue (to be developed by the Marketing and Sales department).
13	Human Capital	Enhance training and succession planning to improve employee performance (to be developed by the Human Capital Management department).
14	Marketing	Improve customer satisfaction and increase revenue (to be developed by the Marketing and Sales department).
15	Materials Management	Enhance the company's ability to forecast demand and manage materials such as train parts to improve the efficiency of equipment maintenance (to be developed by the Finance department).

Source: OIG analysis of program roadmap

APPENDIX D

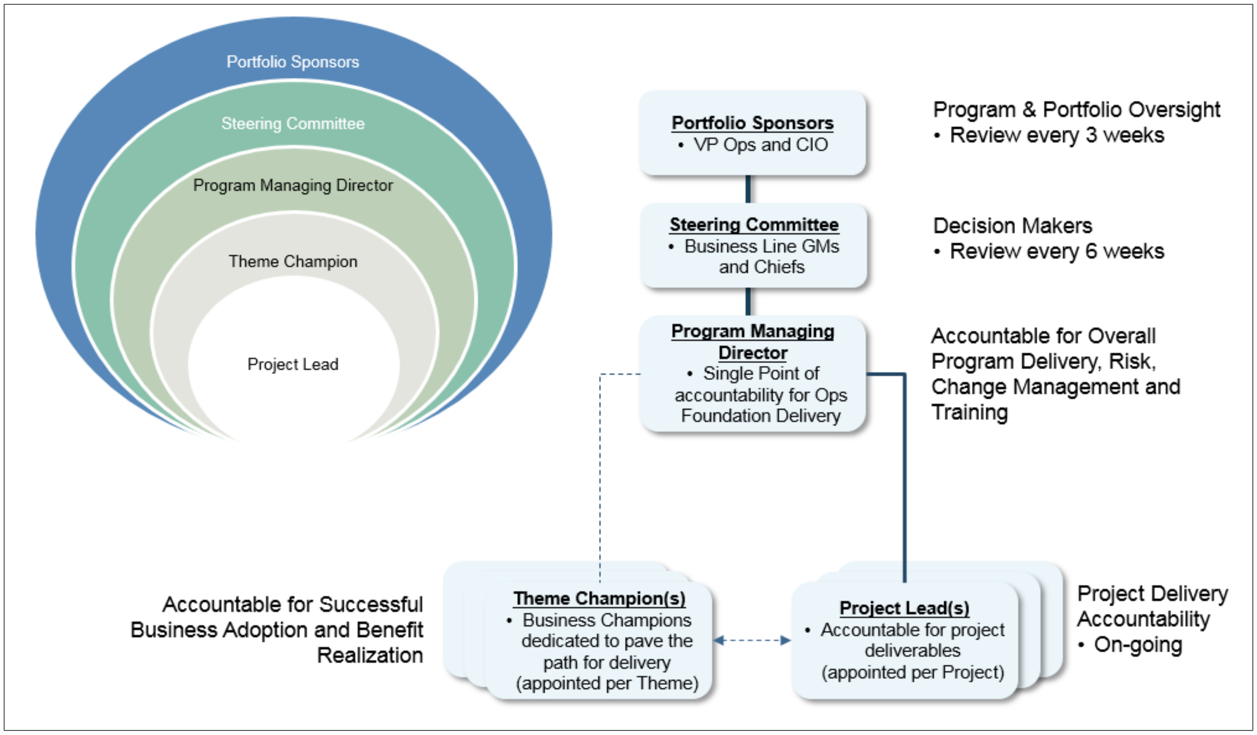
Initial Program Management Structure

The following five levels of executive and day-to-day oversight were established for implementing the Operations Foundation program:

- **Program portfolio sponsors** are the company's Chief Operations Officer and Chief Information Officer. They are responsible for executive oversight of the program, and they review the program's status every three weeks.
- **The steering committee** includes senior executives from the Operations and Information Technology departments, among others. They are responsible for reviewing and making decisions about key issues and risks every six weeks.
- **The Program Managing Director** reports to the Operations department and is the single accountable official for program implementation. The Program Managing Director is responsible for day-to-day management of the program, including overseeing the work of contractors developing the new technological capabilities needed to implement the themes, with the assistance of theme champions and project leads.
- **Theme champions in the Operations department** support the implementation of each theme. They are responsible for communicating project status to the employees and for ensuring that the new capabilities are adopted and benefits realized.
- **Project leads in both the Operations and IT departments** are responsible for project deliverables and ensuring that the contractors build the capabilities based on the requirements for each theme in accordance with their contracts.

The program management structure established in December 2014 is shown on the next page. After this management structure was established, both the Senior Director, Operations Technology, and the Senior Director, Information Technology, have been designated as accountable officials for program implementation.

Operations Foundation Program Management Structure as Established in 2014



Source: Operations Foundation program management office documents

APPENDIX E

Management Comments

NATIONAL RAILROAD PASSENGER CORPORATION

AMTRAK

Memo

Date	*June 5, 2017*	From	Stephen Gardner EVP/Planning, Technology, and Public Affairs
To	*Stephen Lord, Assistant Inspector General*	cc	Eldie Acheson EVP, General Counsel & Corporate Secretary Bill Feidt EVP/Chief Financial Officer Ghada Ijam VP, Chief Information Officer Bud Reynolds VP, Procurement & Logistics Matthew Gagnon, Senior Director, Amtrak Controls
Subject	Information Technology: Operations Foundation Program – Restructuring Could Help Control Costs and Limit Risks (Audit Report for Project No. 010-2015)		

This memorandum provides Amtrak's response to the OIG Audit Report: *Information Technology: Operations Foundation Program – Restructuring Could Help Control Costs and Limit Risks.*

We appreciate this opportunity to respond to the OIG recommendations. As indicated in our responses, we agree with all of the recommendation and have initiated actions to address each in a timely manner.

Recommendation 1:
Revise the business cases and associated cost-benefit analyses of all themes, including updating and quantifying any known benefits, to the extent possible. The revised business cases should document how the leading practices identified in this report were followed, including:

- updating cost estimates by fully identifying system requirements, reducing the estimated margins of error, and independently validating the estimates for reasonableness; and
- updating schedule estimates by including all planned activities, establishing the logical interrelationships between project activities, and identifying a critical path for the overall program

Management Response/Action Plan:
We agree with the recommendation and have taken the following actions to address the associated conditions. In November 2016, Amtrak CEO Wick Moorman directed that the management of all various ongoing business technology projects and initiatives be centralized under the CIO. To implement the mandate, IT initiated 'Project unITy' and the CIO initiated a quality assessment of the Operations Foundation program, as part of Project unITy. The quality assessment was also performed by an independent party, who recommended that Operations Foundation should be organized as a set of projects under the IT PMO.

The IT PMO started implementing this recommendation in conjunction with the transition of the Operations Foundation team into IT, which occurred on May 1st, 2017. As a result, IT will follow several best practices

NATIONAL RAILROAD PASSENGER CORPORATION

that are part of the Corporate Finance requirements, enterprise PMO standards, IT operating model and Amtrak Delivery Methodology before progressing any project:

1. *The IT department will adhere to the guidance set forth by Amtrak Finance and the ePMO with respect to business case development and review for every capital project. During the FY 18 planning, the expectation is that all projects business cases will be reviewed, revised, where necessary, and validated by Finance.*
2. *Use IT's estimation methodology, which involves the identification of all known system requirements, to estimate project effort and cost.*
3. *Where appropriate, engage a 3rd party to perform an Independent Verification and Validation (IV&V) of our estimates.*
4. *Master schedulers will guide the project managers when establishing project schedules, to ensure that they include all planned activities, relationships between all project activities, and the critical path. These schedules are subject to audit by the enterprise PMO master schedulers.*

Since May 2017, the IT PMO has discontinued the portfolio management approach for Ops Foundation and has focused on FY18 Capital Planning business case development and benefits realization. As part of the FY Capital Funding 2018 cycle, IT is partnering with Operations to assess the quality of the requirements and to complete a refresh of the Operations projects. Therefore, we believe that Management has already made substantial progress in implementing the OIG recommendations in this area. As an outcome of the FY18 capital planning process, we expect to produce a list of prioritized projects supporting operations and other departments within Amtrak. These approved FY18 projects will have business cases that are vetted by Finance and enterprise PMO.

Responsible Amtrak Official(s): AVP, IT Project Management Office

Target Completion Date: September 30, 2017.

Recommendation 2:
Once the business cases and associated cost-benefit analyses have been updated, restructure or cancel themes whose costs exceed their quantified benefits to better align them with the company's existing capacity and capability, and put the funds that would have been spent on these themes to better use.

Management Response/Action Plan:
We agree with the recommendation and have implemented it as follows: As a result of Project unITy (IT centralization), IT inventoried all capital technology projects and programs across Amtrak. In January 2017, IT presented a rationalized portfolio and investment recommendation for technology projects across Amtrak based on best effort business case reviews, business prioritization scoring, and an IT complexity assessment. This effort resulted in reducing planned spend on capital technology projects by over $75M. These funds are now available for the company to invest in other critical capital projects. The FY17 Technology CapEx plan (dated April 2017), which demonstrates the alignment of budgets, business cases, and cost-benefit analysis was provided to the OIG May 5, 2017. For FY18 CapEx planning and beyond, IT has hired a leader who has the industry credentials (PfMP, PgMP, PMP, ITIL certified), who is responsible for building up a practice for managing Amtrak's Enterprise Technology Portfolio. This activity includes the implementation of operating mechanisms to actively review the portfolio with the Executive Team on a regular basis, and revise, where appropriate per the Executive Team's instructions, to ensure that the portfolio is prioritized and aligned with Amtrak's overall strategy. Analysis and recommendations will also

be provided to make sure the portfolio considers Amtrak's capacity and capabilities, for optimized use of company resources. This work will be done in collaboration with ePMO and Finance, to make sure IT is following the appropriate framework, risk profile, policies and guidelines as set forth by the company.

Responsible Amtrak Official(s): AVP, IT Product Portfolio & Customer Management

Target Completion Date: September 30, 2017.

Recommendation 3:
Take an integrated, enterprise-wide approach to develop any new technology for the program.

Management Response/Action Plan:
See Response for Recommendation #2.

Responsible Amtrak Official(s): AVP, IT Product Portfolio & Customer Management

Target Completion Date: September 30, 2017

Recommendation 4:
Develop and document a plan to mitigate the risks associated with contractor performance issues.

Management Response/Action Plan:
We agree with this recommendation, and have taken the following actions to implement it:

Amtrak IT engaged the Procurement Department to assist in negotiating a Memorandum of Understanding (MOU) to address the performance issues and challenges we have experienced on iLMS and other large projects by incorporating a risk mitigation plan and conditions for these and future contracts/task orders for vendors and Amtrak's Project Management teams to follow. These conditions include, but are not limited to:

1. *Goal Alignment – Provisions to ensure that the vendor and Amtrak have consistent expectations on the scope and functionality. The Parties must agree that if issues are identified, the scope of the project will be adjusted and any additional work required outside of what is agreed to in the Statement of Work (SOW) will be executed via an order(s) against a newly awarded Indefinite Delivery, Indefinite Quantity (IDIQ) contract.*
2. *Goal Alignment – Provisions to ensure that the vendor and Amtrak have consistent expectations on the scope and functionality of the FY17 EPIC Release. The Parties anticipate that if issues are identified, the scope of the project will be adjusted and any additional work required outside of what is agreed to in the Statement of Work (SOW) will be executed via an order(s) against the newly awarded Indefinite Delivery, Indefinite Quantity (IDIQ) contract.*
3. *Transparency and Communications – Provisions incorporated into contracts and task orders so that Amtrak is regularly provided with a clear and up-to-date picture of the total costs for completing work and the impact of any changes.*
4. *Key Personnel Continuity – Provisions to ensure the spirit of the agreement is not modified as a result of a change in both the vendor and/or Amtrak personnel.*
5. *Organizational Focus – Conditions to resolve issues that may arise in the event of a change in leadership or business direction that would preclude moving forward as described.*
6. *Early Termination – Contract provisions in the event the parties mutually agree to terminate early. Notwithstanding the foregoing, the agreement shall also include a unilateral right for Amtrak to terminate the agreements for its convenience.*

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7. *Participation – Provisions clearly defining the vendor's and Amtrak's role and responsibilities, including the requirement that the vendor must have a significant role in governance on EPIC.*
8. *Issue Escalation – Provisions for escalating and resolving issues that take into account interests of both parties.*

The agreement is carefully aligned to the findings of Amtrak IT's analysis of our recent experiences with our vendors, particularly the challenges we have experienced in receiving expected value for our investments. Going forward, this agreement relies on a series of short-duration, firm fixed price task orders with clear scope and success criteria. This construct has been the hallmark of Amtrak's successful engagements with our key suppliers.

Responsible Amtrak Official(s): Director, Procurement and Logistics; Sr. Assoc. General Counsel; and Sr. Dir. Vendor and Contract Mgmt.

Target Completion Date: Complete

Recommendation 5:
Develop and document a comprehensive labor strategy and change management plan to mitigate concerns and obtain greater employee support for the proposed business process changes and use of increased automation.

Management Response/Action Plan:
We agree that a comprehensive labor strategy and change management plan should be required for all projects that have a potential to impact agreement-covered employee work processes, be an enterprise standard and consistently applied across Amtrak. Specific to the Operations Foundation portfolio, this methodology was used for both iLMS and POS as Labor Relations and union leadership were engaged from the onset of these projects to: (1) facilitate ongoing communication, (2) get labor feedback to fully assess and finalize work process changes, and (3) determine if proposed changes were within the scope of the existing agreement(s) or if additional negotiations were required for implementation. The individual Operations Foundation projects were transferred from Operations to IT on May 1, 2017. As such, they will be managed as individual projects with responsibility falling to the IT PMO working with the business to ensure that labor issues and timelines are developed and documented as required as part of the project management process.

Responsible Amtrak Official(s): VP, Labor Relations; VP, Network Support; and AVP, IT PMO

Target Completion Date: Complete

APPENDIX F

Abbreviations

EPMO	Enterprise Project Management Office
FY	Fiscal Year
iLMS	Integrated Labor Management System
IT	Information Technology
OIG	Amtrak Office of Inspector General
the company	Amtrak
the program	Operations Foundation

APPENDIX G

OIG Team Members

Vipul Doshi	Senior Director, Audits
Alexander Best	Audit Manager
Ashish Tendulkar	Audit Manager
Richard Kaplan	Contractor
Marshall Smith	Contractor

OIG MISSION AND CONTACT INFORMATION

Mission

The Amtrak OIG's mission is to provide independent, objective oversight of Amtrak's programs and operations through audits and investigations focused on recommending improvements to Amtrak's economy, efficiency, and effectiveness; preventing and detecting fraud, waste, and abuse; and providing Congress, Amtrak management, and Amtrak's Board of Directors with timely information about problems and deficiencies relating to Amtrak's programs and operations.

Obtaining Copies of Reports and Testimony

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Report suspicious or illegal activities to the OIG Hotline

www.amtrakoig.gov/hotline

or

800-468-5469

Contact Information

Stephen Lord

Assistant Inspector General, Audits

Mail: Amtrak OIG

10 G Street NE, 3W-300

Washington D.C., 20002

Phone: 202-906-4600

Email: Stephen.Lord@amtrakoig.gov