AMTRAK

OFFICE of INSPECTOR GENERAL
NATIONAL RAILROAD PASSENGER CORPORATION

Asset Management:

Lessons Learned from the Company's Rolling Stock Acquisitions and Management

OIG-SP-2026-007 | July 16, 2026

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OFFICE of INSPECTOR GENERAL
NATIONAL RAILROAD PASSENGER CORPORATION

Memorandum

To: Roger Harris
President and Acting Chief Executive Officer

From: Kevin H. Winters
Inspector General

Date: July 16, 2026

Subject: *Asset Management: Lessons Learned from the Company's Rolling Stock Acquisitions and Management* (OIG-SP-2026-007)

Acquiring, maintaining, and managing a rolling stock fleet is a continuous core competency of any railroad. As you know, Amtrak (the company) is now making the three largest rolling stock acquisitions in its history: the $1.5 billion NextGen Acela purchase to replace its aging, legacy high-speed fleet; the $3.6 billion Airo acquisition to replace its intercity trainsets; and the multi-billion-dollar replacement of its long distance fleet. The nation's investment in these acquisitions provides a generational opportunity for the company to increase ridership and modernize the passenger rail experience. At the same time, these acquisitions are complex, significant undertakings that require sustained and integrated management to ensure fiscally prudent operational success.

The purpose of this report is to identify key lessons learned to help inform the company's acquisition and lifecycle management of its rolling stock and assist the company's Board of Directors, the Federal Railroad Administration (FRA), and Congress in their oversight duties. The primary basis for these lessons is a 13-year series of our reports that identified opportunities to improve the company's rolling stock acquisitions and its related maintenance and technical support contracts. We also drew on leading industry and government practices for successfully executing major acquisitions and buying new technology, as well as common transportation industry

standards for asset lifecycle management.[1] For more information on our scope and methodology, see Appendix A.[2]

In the sections that follow, we identify 10 key lessons to help inform the company's ongoing NextGen Acela and Airo acquisitions and the forthcoming replacement of its long distance rolling stock. To help the company apply these lessons, we align them with the company's standard phases of a major acquisition,[3] which Table 1 shows.

Table 1. Key Lessons for Rolling Stock Acquisitions and Lifecycle Management by Company Acquisition Phase

Acquisition Phase	Lesson
Strategic Planning	1. Align the rolling stock program with company goals.
Initiating the Acquisition	2. Develop a well-supported business justification before initiating a rolling stock acquisition.
	3. Engage all relevant stakeholders early and throughout the acquisition.
	4. Develop realistic and feasible requirements.
Planning the Acquisition	5. Establish a comprehensive management framework for the program.
Executing the Acquisition	6. Establish specific, measurable performance standards.
	7. Perform rigorous oversight of the new rolling stock's quality and functionality before accepting it.
Closing and Operational Transition	8. Assess the longevity and utility of existing rolling stock as part of an asset lifecycle management process.
	9. Maximize the use of maintenance and parts contracts.
Benefit Realization	10. Iteratively capture and implement any additional lessons learned.

Source: OIG analysis of our prior audit work, company policies and standards, leading practices for complex asset development and acquisitions, and common transportation industry standards for asset lifecycle management. For more details, see Appendices A and B.

As programs age and staff leave, the ability to retain lessons learned from operational experience may be short-lived. Accordingly, we offer these lessons for your

[1] For more information on these industry practices and standards, see Appendix B.
[2] This report contains findings from prior audits and provides our perspectives on key lessons learned. It is not an audit performed under Generally Accepted Government Auditing Standards. We provided management with a draft of this report prior to issuance.
[3] Amtrak, *Enterprise Project Management Procedure Manual,* April 2025; and Amtrak, *Enterprise Project Management Standards,* April 2026. For more details, see Appendix B.

consideration to appropriately incorporate them into your acquisition processes and internal controls. We believe that doing so would not only assist the company's current acquisition portfolio but also preserve more than a decade's worth of institutional knowledge for future rolling stock replenishments. We acknowledge the company's many accomplishments during these acquisitions. Although these successes are beyond the scope of this report, we suggest that the company capture those lessons as well.

BACKGROUND

The company's multi-billion-dollar investment in rolling stock includes the following three programs:

- **NextGen Acela program.** The company is replacing its fleet of 20 Acela trainsets[4] operating on the Northeast Corridor (NEC) with 28 new NextGen Acela trainsets.[5] The new trainsets will increase capacity from 304 to 386 seats per trainset and provide new amenities, such as enhanced seating and food service. FRA approved the company to operate the trainsets at speeds up to 160 miles per hour. In 2015, the company updated its business case for this program and signed a contract in 2016 with a trainset vendor. The company initially planned to launch revenue service in May 2021; the actual launch occurred in August 2025.

- **Airo program.** The company is replacing more than 450 aging Amfleet I passenger cars[6] operating on the NEC and state-supported routes with 83 trainsets.[7] The company intends for the new trainsets to increase reliability, efficiency, and on-time performance. In 2018, the company started the procurement process and signed a contract in 2021 with a trainset vendor. In July 2025, the company started testing the first Airo trainset. It plans to launch revenue service on the Cascades route in the Pacific Northwest this year, and on the NEC in 2027.

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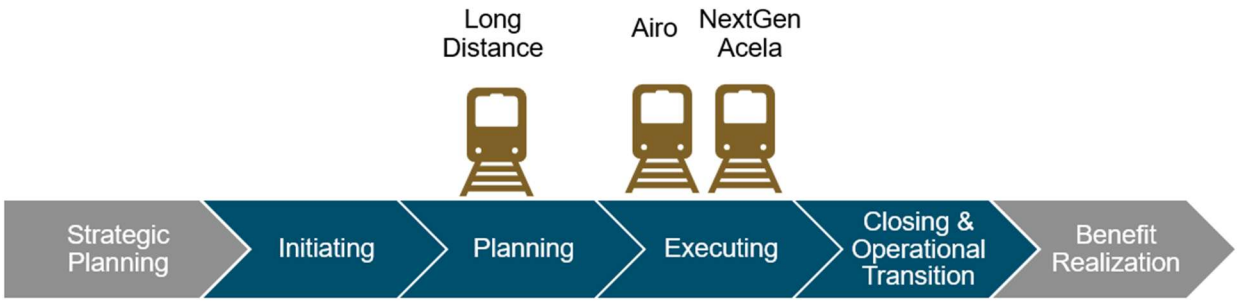
[4] A trainset is a group of semi-permanently coupled railcars that the company intends to operate together on a consistent basis.
[5] As of June 2026, the average age of the legacy Acela fleet was approximately 26 years old.
[6] As of June 2026, the average age of the Amfleet I fleet was approximately 49 years old.
[7] The Airo base contract is for 73 of these trainsets. In August 2023, the company executed an option under the contract to purchase 10 more trainsets. The company also has an option to purchase an additional 130 trainsets.

- **Long Distance Fleet Replacement program.** The company intends to replace its aging long distance fleet—including the Superliner I and II, Amfleet II, and Viewliner I and II passenger cars—with more reliable, efficient, and accessible rolling stock.[8] In December 2023, the company issued a Request for Proposal (RFP) for bilevel long distance rolling stock. In February 2026, the company announced that it revised its long distance fleet strategy to standardize its fleet and transition all of its long distance rolling stock to single-level equipment. In March 2026, the company issued a new RFP for universal single-level rolling stock.

Figure 1 shows the status of these three acquisitions.

Figure 1. Status of Long Distance, Airo, and NextGen Acela Acquisitions by Program Phase



Source: OIG analysis of company program status reports for its three ongoing passenger rolling stock acquisitions compared to its April 2025 *Project Management Procedure Manual*

Note: Company standards require a concurrent Monitoring and Controlling Phase, which starts during Initiating and continues through Closing and Operational Transition and includes oversight work, such as producing monthly status reports for leadership.

LESSONS LEARNED

In the sections that follow, we outline 10 key lessons, including a brief description of the company's acquisition phase in which they fall. We then describe the lessons, offer our insights on how the company can apply them going forward, and provide examples to illustrate each lesson.

[8] As of June 2026, the company's long distance rolling stock consisted of at least 5 different fleet types, many of which were delivered more than 40 years ago.

STRATEGIC PLANNING

During the **Strategic Planning** phase, the company defines its strategic goals and identifies new programs and projects that align with those strategic goals. We identified one lesson that applies to the Strategic Planning phase of rolling stock acquisitions.

Lesson 1

Align the rolling stock program with company goals.

At the start of a rolling stock acquisition, the company must align the various components of its rolling stock program with its strategic goals, such as the number and frequency of trains it plans to operate on a given route to meet ridership and revenue targets. Such coordinated planning provides a cohesive vision for the program and helps ensure that the company's rolling stock acquisitions and other supporting efforts, such as related infrastructure, evolve in tandem. In particular, the company should align its support activities to ensure that it has adequate space to receive, commission, and maintain its new rolling stock.

Example. In 2010, the company established broad goals for its fleet strategy. In 2025, however, we reported on a misalignment between these goals and the dozens of maintenance facility projects supporting them.[9] In fact, the company's facility planning lagged its fleet planning by about 15 years even though the two efforts are closely interconnected. As a result, some of the company's maintenance facilities may not be ready in time to service its new trains. In 2025, we reported that the company anticipated operating only the first 24 of the 28 NextGen Acela trainsets and the first 12 of the 83 Airo trainsets without additional maintenance facility capacities. Our work found that if the company maintained its anticipated schedule for receiving new trainsets, it would likely be unable to fully operate the remaining incoming trains without additional facility modifications and may need to store some new trains intermittently, which could postpone its ability to capture additional revenue.

[9] *Major Programs: Improved Planning for Maintenance Facility Upgrades Could Help the Company Better Meet Its Fleet Goals* (OIG-A-2026-002), December 18, 2025.

INITIATING THE ACQUISITION

During the **Initiating** phase, the company kicks off a program, assigns a program team, and focuses on establishing the scope of its efforts. We identified three lessons that apply to the Initiating phase of rolling stock acquisitions.

Lesson 2

Develop a well-supported business justification before initiating a rolling stock acquisition.

Developing a well-supported business justification before initiating a rolling stock acquisition is fundamental to fully evaluating the acquisition's pros and cons. A business justification should comprehensively articulate why the new rolling stock is necessary and weigh options for achieving the company's proposed outcomes, including a "do nothing" or "base case" option, per the company's own standards. It should also assess the costs and benefits of each option, including the estimated total cost of ownership—the cost to own, operate, staff, and maintain each rolling stock type—compared to expected revenue. This is a key step since each rolling stock purchase may commit the company to operate a given fleet for the next 20 to 40 years.

This process should also involve an evaluation of the legacy rolling stock's condition to inform decisions about when and how to replace and decommission it (discussed further in Lesson 8). Conducting such analyses can help the company assess the complex trade-offs involved with each option, including how to balance the net financial return on investment with any impacts to broader railroad operations and the level of customer service and amenities that passengers will receive. Ultimately, this process can help the company make better decisions about which options would optimize its rail service and maximize its use of taxpayer dollars.

Example. In 2014, we reported that the company developed a preliminary business case for its acquisition of high-speed trainsets—now known as NextGen Acela—but missed several key factors.[10] The preliminary business case identified 6 options and determined that buying up to 28 trainsets would provide the most benefits. The company did not,

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[10] *Asset Management: Amtrak Followed Sound Practices in Developing a Preliminary Business Case for Procuring Next Generation High-Speed Trainsets and Could Enhance its Final Case with Further Analysis* (OIG-E-2014-007), May 29, 2014.

however, identify or fully assess other important factors. For example, the business case included estimated costs to overhaul the new equipment that were about one tenth of the cost to overhaul legacy Acela trainsets but did not provide detailed support for this assertion. In addition, the business case projected revenue through 2045 but projected ridership only through 2030. Moreover, the company based its projections of total maintenance costs on comparisons with foreign railroads, which may have further understated the new trainsets' true operating expenses. As a result of our recommendation, the company amended its final business case and incorporated the missing elements we identified to help company executives make more informed decisions about the financial benefits of these new trainsets.

Lesson 3

Engage all relevant stakeholders early and throughout the acquisition.

In a rolling stock acquisition, engaging all relevant stakeholders—both internal and external—is important to a program's success. Early substantive stakeholder engagement, extended throughout the acquisition, can help a program team thoroughly identify and vet requirements, quickly modify those requirements when necessary, and communicate essential information as program needs evolve. Effective and efficient communications and established processes for conflict resolution can help teams avoid cost increases and schedule delays that could hinder the company's ability to achieve its expected goals, including additional ridership and revenue from the new rolling stock.

Example. In 2022, we reported that the company did not adequately engage internal stakeholders for its Airo program, including business end-users responsible for maintaining and operating specific aspects of the rolling stock.[11] As a result, the company received significant feedback on its trainset designs late in the process. This late feedback caused the company to redesign the food service cars and incur a $42.5 million change order and a five-and-a-half-month delay in the initial delivery of the first trainsets.

[11] *Train Operations: Company Has Improved Management of Intercity Trainset Acquisition and Can Improve Stakeholder Engagement on Major Capital Programs* (OIG-A-2023-005), December 22, 2022.

Lesson 4

Develop realistic and feasible requirements.

After deciding to pursue an acquisition, the company should develop realistic and feasible requirements that favor proven designs, when available. Although novel designs and amenities may initially be appealing, they are inherently risk-prone and slower to develop than designs and improvements that are tested and proven. This is particularly true given the regulatory safety standards that all new rolling stock must meet to be certified for public use. In addition, the company should consider establishing requirements for a "minimum viable product"—new trains that meet all safety, operational, and customer service requirements, but do not complicate the acquisition with extensive additional features. More complex features and premium amenities could be considered later as contract options. Developing realistic and feasible requirements early in the process may help minimize the risk of delays to manufacturing, testing, and revenue service launch. It can also help minimize maintenance and service problems that are often endemic to new, unproven mechanical systems. Further, opting for less complexity early on would likely help reduce the risk of cost increases in the procurement, design, and manufacturing processes.

Example. In 2023, we reported that the NextGen Acela program proceeded to serial trainset production without validating that the new, unproven designs met regulatory safety standards.[12] Challenges in meeting these standards resulted in multi-year delays, lost revenue, and impacts to the company's reputation. As of 2026, the trainsets are operating in revenue service, but defining characteristics meant to improve trainset performance are not functioning to the contract specifications. For example, the company is not using the signature train tilting system designed to improve trip-times and passenger comfort. As a result, the new trainsets are not achieving the faster speeds and shorter trip-times specified in the contract.

As another example, we reported in 2024 that the company experienced challenges developing design requirements for its bilevel long distance rolling stock acquisition.[13] The company received repeated industry feedback that its initial request for nine

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[12] *Major Programs: Company Improved Management of New Acela Program, but Additional Delays and Cost Increases are Likely* (OIG-A-2023-013), September 29, 2023.
[13] *Major Programs: Company Established a Management Framework for Long Distance Fleet Replacement Program but Can Improve Risk Management and Clarify Lines of Authority* (OIG-A-2025-001), December 13, 2024.

different car types would significantly increase the technical complexity and create production capacity constraints, posing schedule risks. Despite this pushback, the company continued pursuing nine different car types with unproven designs and amenities, such as elevators, that pushed the limits of what vendors said was feasible. In 2025, in the face of this pushback—and at the direction of FRA—the company abandoned its initial complex, bilevel procurement in favor of simpler, single-level designs. This process delayed the acquisition by at least two years at a time when the company no longer has enough rolling stock to meet customer demand and continues to remove aging legacy fleet from service.

PLANNING THE ACQUISITION

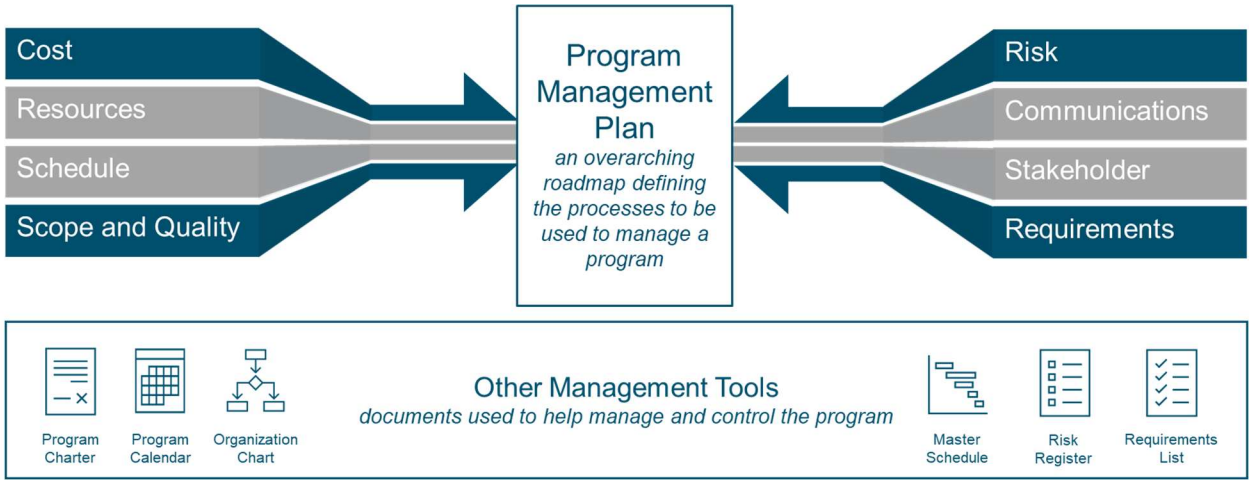
During the **Planning** phase, a team develops the management framework to govern and execute the program. We identified one lesson that applies to the Planning phase of rolling stock acquisitions.

Lesson 5

Establish a comprehensive management framework for the program.

The precursor to effectively managing these complex, multi-year programs is establishing an early, comprehensive management framework that defines and addresses the specific needs of a rolling stock acquisition. Figure 2 provides an overview of the various components of a management framework.

Figure 2. Management Framework Subcomponents



Source: OIG analysis of *A Guide to the Project Management Body of Knowledge* (PMBOK Guide, Sixth Edition, 2017); and Amtrak, *Project Management Procedure Manual*, October 2018. In 2022, we published this graphic in *Governance: Company Needs a Comprehensive Framework to Successfully Manage its Commitments to the Gateway Program* (OIG-A-2022-006), February 4, 2022.

An established framework provides the company with the resources, management structure, and tools needed to plan and coordinate the numerous—and often concurrent—activities on a rolling stock acquisition. Each component contributes to ensuring success.

In recent years, the company strengthened its program management capabilities, including creating a new department to execute major capital programs, developing project management guidance for staff, and improving schedule management on the Airo program. Building on these improvements, the company should continue to strengthen all components of its program management framework for each rolling stock acquisition, as follows.

Managing resources and establishing roles and responsibilities

Program teams should develop a comprehensive resource management plan that outlines the roles and responsibilities of all stakeholders for the acquisition. The plan should recognize that different phases of a rolling stock acquisition require different skillsets. For example, in the Executing phase, teams need mechanical engineers to verify that trainset designs meet contract specifications. In addition, given the long timelines of a rolling stock acquisition, personnel will naturally cycle in and out. Due to these two factors—changing needs and natural attrition—the company should develop a resource management plan to ensure that it has staff with the requisite skills at the right time to successfully deliver each rolling stock program.

Example. In 2025, we reported that the company established the National Facilities program to manage and coordinate the maintenance facility upgrades needed to support its three new fleets. As of July 2025, however, the company was still separately managing dozens of facility projects rather than managing them as a single, coordinated effort, which is contrary to company and industry standards.[14] This occurred in part because the company did not develop a resource management plan to effectively oversee this effort, which limited leadership's visibility into project-level workforce challenges that might affect schedules and costs. As a result, the company likely missed opportunities to more effectively manage its $4 billion facility modifications.

Establishing clear lines of authority

Defining lines of authority reduces uncertainty and helps program teams progress more efficiently through the decision-making process. A key component of this is establishing a senior accountable official as the responsible decision-maker on any given program.

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[14] *Major Programs: Improved Planning for Maintenance Facility Upgrades Could Help the Company Better Meet Its Fleet Goals* (OIG-A-2026-002), December 18, 2025.

This ensures accountability, efficient decision-making, and a unified vision, all of which helps the company advance the acquisition and reduce the risk of delays.

Example. In 2024, we reported that the Long Distance Fleet Replacement program's lines of authority and decision-making structure had been unclear since its inception, contrary to company standards.[15] One of the company's key project planning tools—the Responsible, Accountable, Consulted, and Informed (RACI) Matrix—did not fully reflect how the company was making day-to-day decisions on the program. As a result, program officials were uncertain how to escalate decisions, which caused confusion and program delays on the multi-billion-dollar effort.

Managing risk

Acknowledging and effectively managing risk and uncertainty will contribute to successfully executing any large, complex acquisition. For this reason, the company should establish a comprehensive risk management plan, process, and tools for each rolling stock acquisition—such as risk registers and contingency plans. Doing so should involve systematically identifying and documenting program risks, assessing their likelihood and impact, and developing contingency plans to minimize any potential impacts. Any risk management plan should be ongoing and iterative throughout the acquisition lifecycle.

Example. In our four most recent reports on the NextGen Acela program, we noted that despite multiple indicators of program delays, the company had not developed a full range of risk management tools to identify, manage, and address these risks and assess their potential impacts.[16] For example, in 2020, the company acknowledged that it could face significant additional costs because several legacy trainsets were due for FRA-required overhauls in the near-term. It had not, however, developed a full range of contingency plans to weigh the costs and benefits of other potential options, like temporarily reducing Acela service at lower-demand times or using different rolling

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[15] *Major Programs: Company Established a Management Framework for Long Distance Fleet Replacement Program but Can Improve Risk Management and Clarify Lines of Authority* (OIG-A-2025-001), December 13, 2024.
[16] *Train Operations: The Acela Express 2021 Program Faces Oversight Weaknesses and Schedule Risks* (OIG-A-2018-002), November 16, 2017; *Train Operations: Acela 21 Program Continues to Face Significant Risk of Delays, Warranting More Contingency Planning* (OIG-A-2020-004), January 21, 2020; *Observations on Risks to the Acela 21 Information Technology Program Element* (OIG-MAR-2020-009), April 22, 2020; and *Major Programs: Company Improved Management of New Acela Program, but Additional Delays and Cost Increases are Likely* (OIG-A-2023-013), September 29, 2023.

stock. In 2023, we reported that, as a result of delays to the NextGen Acela program, the company had incurred cost increases and reliability risks in its legacy fleet and delayed the capture of additional revenue from the new larger fleet.

Managing schedule

Rolling stock acquisitions include many interdependent elements that must be precisely coordinated and sequenced. Thus, actively managing the schedule for a rolling stock acquisition will contribute to timely delivery and service launch. Central to this task is the development of an integrated master schedule. This tool helps a company program team coordinate and sequence day-to-day tasks, assign resources, prioritize activities, track progress, mitigate program risks, and communicate with stakeholders to keep production on schedule. This can help a program team avoid scheduling difficulties that can lead to cost increases, service launch delays, lost revenue, and eventual impacts to the company's reputation if delays become extensive.

Example. In 2017, we reported that nearly a year into the NextGen Acela program, the acquisition faced significant risks to completing it on time because, in part, the company had not finalized a program-wide integrated master schedule.[17] Ultimately, the program was more than four years late. Developing an integrated master schedule from the start and using it consistently throughout the acquisition could have helped the team better manage and mitigate potential delays along the way.

[17] *Train Operations: The Acela Express 2021 Program Faces Oversight Weaknesses and Schedule Risks* (OIG-A-2018-002), November 16, 2017.

EXECUTING THE ACQUISITION

During the **Executing** phase, the company delivers the tasks in the management plan for scope, schedule, and budget to satisfy its requirements and meet program goals. We identified two lessons that apply to the Executing phase of rolling stock acquisitions.

Lesson 6

Establish specific, measurable performance standards.

Establishing specific, detailed measurable performance standards in each rolling stock contract can help ensure that the vendor meets the company's requirements. These performance standards should define milestones that are tied to meaningful financial incentives or disincentives for the vendor. This process should start when the team chooses a vendor and begins negotiating specific contract terms and conditions. Once established, the company should consistently hold vendors to those terms and conditions. This is especially relevant for technical milestones, which can impact the new rolling stock's functionality and are directly tied to timely delivery and deployment. Doing so can help the company reduce the risk of cost increases and schedule delays while minimizing quality issues. It can also help the company maximize its return on investment by putting new, modern rolling stock into service sooner, which should improve operational reliability and help it meet ridership and revenue goals.

Example. In 2023, we reported that federal regulations require FRA to certify new trains as safe, in part, by relying on a vendor-generated computer model.[18] Contrary to leading practices, however, the vendor started producing NextGen Acela trainsets before it validated this model. This increased the risk that designs would change in ways that would require significant rework to finished units. Because the company's contract did not require the vendor to complete model validation before it started building the trainsets, it had no mechanism to prevent the vendor from initiating production. Accordingly, the delay in model validation became the primary driver of a four-year delay to launching revenue service, which required the company to continue operating and maintaining aging legacy Acela trainsets longer than planned. As a

[18] *Major Programs: Company Improved Management of New Acela Program, but Additional Delays and Cost Increases are Likely* (OIG-A-2023-013), September 29, 2023.

result, the company incurred cost increases, reduced service reliability, and reduced service frequency in its legacy fleet. It also suffered delayed revenue and sustained reputational risk to its premier-branded Acela service.

Lesson 7

Perform rigorous oversight of the new rolling stock's quality and functionality before accepting it.

Aggressive, top-driven, quality control should start at the very beginning of production—including any prototypes—and continue throughout final production, testing, and service launch. Key to this process is establishing detailed quality assurance metrics that the vendor must meet, and then consistently enforcing them under the contract, with only rare exceptions. In addition, rigorous oversight before acceptance helps establish the company's high expectations with the vendor to ensure that the company receives a product that meets its needs, expectations, and standards. This can also help minimize production delays and costly repairs and retrofits, thereby improving the performance of final, delivered trainsets.

Examples. The company has experienced systemic challenges managing the quality of its rolling stock acquisitions. For example, in 2023, we reported that prior to revenue service launch, the NextGen Acela trainsets had defects, and the schedule for addressing them was incomplete. In an effort to receive the new trainsets faster, the company did not fully enforce the quality metrics in the contract—an approach that is contrary to industry standards.[19] As a result, since launching revenue service, the NextGen Acela trainsets have experienced significant quality issues across multiple train systems. These include issues with customer-facing amenities, such as malfunctioning and sometimes unusable bathrooms, as well as faulty customer communication systems.

The new trainsets are also experiencing mechanical problems with traction motors, train control systems, exterior doors, and other issues, all of which have resulted in chronic en route operating delays and have kept some new trainsets out of service for extended periods. In addition, on at least two occasions, a side exterior panel came loose on the new trainsets and contacted a third rail, causing significant damage, including starting a fire in the East River Tunnels near New York Penn Station on May 14, 2026.

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[19] Federal Transit Administration, *Quality Management System Guidelines,* October 2019.

The company is pushing the vendor to fix these issues, but the problems have already negatively impacted the customer experience on the company's premier business line.

As another example, in 2016, we reported that company inspectors identified defects on the newly purchased single-level, long distance cars.[20] This occurred because the initial procedures for accepting delivered cars were unclear despite the company having repeatedly identified defects with the cars previously. As a result, overall project costs increased, and the Mechanical department had to make significant efforts to improve the quality control process. The resulting delivery delays also deferred the expected benefits from using the new cars in long distance service.

Also, the Government Accountability Office reported in 2005 that prior to launching the legacy Acela trainsets in revenue service, the company abbreviated testing meant to uncover defects.[21] At the time, an FRA official stated that the company was under financial and time pressures to place the trainsets into service, in part because of delays in trainset production. Ultimately, the company had to withdraw its legacy Acela trainsets from service to address equipment problems in 2002 and 2005—resulting in at least a $17 million revenue loss and damage to its reputation.

[20] *Asset Management: Additional Actions Can Help Reduce Significant Risks Associated with Long Distance Passenger Car Procurement* (OIG-A-2016-003), February 1, 2016.
[21] Government Accountability Office, *AMTRAK: Acela's Continued Problems Underscore the Importance of Meeting Broader Challenges in Managing Large-Scale Projects* (GAO-05-698T), May 11, 2005.

CLOSING AND OPERATIONAL TRANSITION

During the **Closing and Operational Transition** phase, teams finalize deliverables and formally transfer the rolling stock to the operational team. This includes initiating maintenance activities on the new rolling stock, often under a Technical Support and Spares Supply Agreement provided by the vendor. We identified two lessons that apply to the Closing and Operational Transition phase of rolling stock acquisitions.

Lesson 8

Assess the longevity and utility of existing rolling stock as part of an asset lifecycle management process.

To ensure a smooth transition between old and new rolling stock, the company should continuously evaluate the condition and longevity of its existing and new fleets. Implementing a regular cadence for assessing the structural integrity and passenger-facing systems of legacy rolling stock—perhaps as part of periodic maintenance—can provide much-needed data on the serviceability of each unit and each fleet type and also can establish where the rolling stock falls in the standard asset lifecycle management process.[22]

The company should use this information in two ways. First, during the acquisition planning phase, it can help ensure that the vendor will deliver new rolling stock before each legacy fleet reaches the end of its service life, and also can ensure that the company always has enough rolling stock to meet customer demand. Second, it can help the company develop a plan to decommission its legacy fleet and commission its new rolling stock in a sequenced, orderly fashion. Understanding the condition of the company's existing fleets as part of the asset lifecycle management process will also help improve operational reliability and avoid the necessity to hastily remove units that are no longer fit for service.

Example. In 2025, the company removed from service its entire Horizon fleet (about 80 passenger cars) after the Mechanical department[23] found extensive structural

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[22] Asset Lifecycle Management is a common practice used to operate and maintain assets efficiently, and to actively monitor where an asset is in its lifecycle.

[23] An FRA inspector initially found indications of corrosion that the Mechanical department investigated further.

corrosion on multiple units, which they deemed unfit for service. Mechanical department officials told us they had not conducted any comprehensive assessments of the integrity or longevity of state-supported and long distance rolling stock before that point.[24] As a result, the company had to quickly transfer rolling stock from other routes to replace the Horizon cars it removed from service, which negatively impacted service and timetables across the national network.

Lesson 9

Maximize the use of maintenance and parts contracts.

Effectively utilizing maintenance and parts contracts with the rolling stock vendor can help improve the operation and lifespan of new trains. Modern rolling stock are complex machines that use both highly technical hardware—such as traction motors and braking systems—and corresponding software, including train control and communication systems. For each of the company's ongoing fleet acquisitions, it intends to sign a Technical Support and Spares Supply Agreement to maintain the new rolling stock. These long-term maintenance contracts are intended to provide the company with reliable and timely access to technical expertise it may not otherwise have, as well as an inventory of spare parts that could potentially be more costly for the company to purchase and manage itself. Taking full advantage of the varying provisions and services in these contracts can help the company improve the reliability of a new fleet, minimize regular and one-off maintenance, minimize mechanical service disruptions, and reduce overall maintenance costs.[25]

Example. In 2015, we reported that the company had not fully and effectively used its parts contract for its legacy Acela fleet because it paid little attention to the contract's management and oversight.[26] As a result, the company did not assess the parts contractor for as much as $19 million in penalties for late deliveries. It also accumulated

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[24] In 2021, the company had a third party complete an assessment of the structural remaining life of its Superliner I fleet. In addition, the company recently considered executing similar assessments for its Superliner II and Viewliner I rolling stock.

[25] Our office plans to initiate a review of the company's management of its multi-billion-dollar spare parts contracts.

[26] *Acquisition and Procurement: Improved Management Will Lead to Acela Parts Contract Cost Savings* (OIG-A-2015-008), March 10, 2015.

more than $18 million in outstanding warranty claims against the contractor, which it did not settle and collect for at least two years.

BENEFIT REALIZATION

During the **Benefit Realization** phase, after the company closes the program, it achieves the acquisition's intended benefits. We identified one lesson that applies to the Benefit Realization phase of rolling stock acquisitions.

Lesson 10

Iteratively capture and implement any additional lessons learned.

Formally capturing and implementing lessons from ongoing and prior rolling stock acquisitions can help the company learn from successes and avoid pitfalls that other programs experienced. In an industry where one rolling stock acquisition can last a decade or more—and individual acquisitions can be spaced apart even further—learning from missteps and memorializing those lessons will help the company from repeating them. Key to such a process is conducting regular, formal lessons learned assessments throughout the life of an acquisition and formalizing those lessons into documented processes that other rolling stock acquisition teams can replicate. Doing so would be consistent with company guidance and industry standards and would allow current and future program teams to leverage hard-won knowledge to minimize cost increases and delays. This report—and the company's nascent actions at collecting such lessons—could provide a useful starting point.

Example. In 2023, we reported that the company's pattern of program management challenges appeared to recur partly because it had not consistently captured lessons learned from its rolling stock acquisitions and distilled them into guidance for managing ongoing and future acquisitions. In response, the company updated its policies and procedures to require program teams to capture such insights and store them in a centralized database for all Capital Delivery program teams to use.
The company's subsequent challenges in launching the NextGen Acela trainsets, our observations of the Airo acquisition, and our reporting on the long distance fleet acquisition and its multi-year delays, however, demonstrate the need for the company to take additional actions to improve its acquisition and management of rolling stock.

APPENDIX A
Scope and Methodology

To compile these lessons learned, we reviewed our prior reports related to rolling stock acquisitions from September 2013 to December 2025. In general, our prior work involved comparing the company's plans and actions to its policies and commonly accepted standards for program, acquisition, and asset management. In addition, we reviewed current company documents and rolling stock acquisition status reports. We also interviewed company personnel and FRA officials to obtain their perspectives on the company's rolling stock acquisitions. Lastly, we reviewed leading practices for acquiring new technology and making major acquisitions.[27]

Prior Reports

In conducting our review, we reviewed the following Amtrak OIG and GAO reports:

Amtrak OIG Reports

- *Major Programs: Improved Planning for Maintenance Facility Upgrades Could Help the Company Better Meet Its Fleet Goals* (OIG-A-2026-002), December 18, 2025
- *Major Programs: Company Established a Management Framework for Long Distance Fleet Replacement Program but Can Improve Risk Management and Clarify Lines of Authority* (OIG-A-2025-001), December 13, 2024
- *Major Programs: Company Improved Management of New Acela Program, but Additional Delays and Cost Increases are Likely* (OIG-A-2023-013), September 29, 2023
- *Train Operations: Company Has Improved Management of Intercity Trainset Acquisition and Can Improve Stakeholder Engagement on Major Capital Programs* (OIG-A-2023-005), December 22, 2022
- *Observations on Risks to the Acela 21 Information Technology Program Element* (OIG-MAR-2020-009), April 22, 2020

[27] Company policy and external leading practices generally cover requirements for large, multifaceted programs but are not specific to rolling stock acquisitions and therefore do not provide a comprehensive list of steps to successfully execute them.

- *Train Operations: Acela 21 Program Continues to Face Significant Risk of Delays, Warranting More Contingency Planning* (OIG-A-2020-004), January 21, 2020
- *Train Operations: The Acela Express 2021 Program Faces Oversight Weaknesses and Schedule Risks* (OIG-A-2018-002), November 16, 2017
- *Acquisition and Procurement: Improved Management and Oversight of GE Diesel Locomotive Service Contract Could Lead to Savings* (OIG-A-2017-005), February 3, 2017
- *Acquisition and Procurement: Opportunities Exist to Improve Management of Technical Support Services Contracts* (OIG-A-2016-013), September 30, 2016
- *Asset Management: Additional Actions Can Help Reduce Significant Risks Associated with Long Distance Passenger Car Procurement* (OIG-A-2016-003), February 1, 2016
- *Acquisition and Procurement: Improved Management Will Lead to Acela Parts Contract Cost Savings* (OIG-A-2015-008), March 10, 2015
- *Asset Management: Amtrak Followed Sound Practices in Developing a Preliminary Business Case for Procuring Next-Generation High-Speed Trainsets and Could Enhance its Final Case with Further Analysis* (OIG-E-2014-007), May 29, 2014
- *Asset Management: Amtrak is Preparing to Operate and Maintain New Locomotives, but Several Risks to Fully Achieving Intended Benefits Exist* (OIG-E-2013-021), September 27, 2013

GAO Report

- GAO, *AMTRAK: Acela's Continued Problems Underscore the Importance of Meeting Broader Challenges in Managing Large-Scale Projects* (GAO-05-698T), May 11, 2005

APPENDIX B
Standards, Reports, and Other Guidance

We also reviewed the following standards, reports, and guidance from the company, governmental organizations, and industry—including transit-specific guidance:

Company Management Standards

- Amtrak, *Enterprise Project Management Procedure Manual,* April 2025
- Amtrak, *Enterprise Project Management Standards,* April 2026
- Amtrak, *Project Management Procedure Manual,* October 2018

Governmental Reports and Guidance

- Department of Defense, Instruction 5000.85, *Major Capability Acquisition*
- Federal Transit Administration,[28] *Asset Management Guide Supplement: Asset Category Overviews & Lifecycle Management* (report No. 0138), September 2019
- Federal Transit Administration, *Quality Management System Guidelines*, October 2019
- GAO, *Leading Practices: Iterative Cycles Enable Rapid Delivery of Complex Innovative Products* (GAO-23-106222), July 2023
- GAO, *Weapons Systems Annual Assessment: Limited Use of Knowledge Based Practices Continues to Undercut DOD's Investments* (GAO-19-336SP), May 2019

Industry Management Standards

- American Association of State Highway and Transportation Officials, *Transportation Asset Management Guide*, March 21, 2022
- National Rail (United Kingdom), *The Twenty Point Plan: Fleet Management Good Practices Guide* (Issue 16.1), July 2025
- Project Management Institute, *A Guide to the Project Management Body of Knowledge* (PMBOK Guide, Sixth Edition, 2017)

[28] The Federal Transit Administration is part of the Department of Transportation, as is Amtrak's regulatory body, FRA.

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.

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