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TO: Fiscal and Management Control Board

FROM: Jeffrey D. Gonneville, Chief Operating Officer

DATE: Thursday, April 6, 2017

RE: **Workforce Modernization Project Briefing**

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This memo describes the recommended Workforce Modernization program that will modernize the MBTA's systems for scheduling, tracking and managing operator work assignments for all bus, heavy rail and light rail operations. Building on existing, service-proven software this program, HASTUS, is projected to provide substantial benefits in year one, with an expected full project roll-out date within approximately 36 months.

### **Background**

In July 2015, the MBTA made the first step in modernizing the daily work assignment process. With funding of \$1.5M, Workforce Modernization project began operating with a team of five employees focused on implementing the process within the Southampton bus garage. Under this project, all of the components of the obsolete mainframe will be replaced by HASTUS software within Operations.

In February 2016, the MBTA allocated an additional \$9.1M to the Workforce Modernization Project for the purchase of seven HASTUS modules, Daily, Bid, BidWeb, MinBus, RosterOpt, Self Service and EPM (See descriptions in Appendix), which will fully modernize fixed-route operations.

In December 2016 an additional \$7.0M was allocated to the project to develop a high availability, redundant, sustainable, reliable physical architecture for HASTUS. This allocation included funding for server and network infrastructure upgrades to Bus and Rail facilities and staff positions to support these upgrades.

### **Overview of HASTUS Implementation**

The success of the Workforce Modernization project is dependent on a number of elements within the MBTA, including those outlined below.

### **Technical**

The MBTA has used HASTUS as the system of record for all schedules since the 1980's. The Modernization project will automate many of the mainframe systems that support the pick and daily operations. These modernizations allow for better integration with current and new systems such as PeopleSoft 9.2, under the HR 2.0 project.

The new system will provide a real-time capture of all operations within all areas allowing for informed decision making related to day-to-day operations, as well as planning and scheduling for service delivery and maintenance.

To support these efforts, technical hardware and software upgrades are required throughout the organization, from hand scanners in the local garages to network systems that support the integration of HASTUS modules and PeopleSoft 9.2.

## **Policy**

As the MBTA upgrades and modernizes each function, there is an opportunity to improve processes and streamline how data is collected.

In order to ensure this project is a success, the Workforce Modernization team is working with Senior Staff to discover current work processes, policy standards and implementation practices and data entry and garage management practices.

As part of this work, the team had worked with senior management to identify key function codes, out of a total of over 7,000, that are consistently used across the workforce. These function codes apply to the newly signed MOU, which outlines adopted 589 work rules.

The standard implementation of these function codes will allow for comparisons across areas, improve data accuracy and reporting, provide efficiencies in scheduling and will provide enhanced decision making for short- to mid-term investments related to operations.

## **Culture**

From a culture perspective, changes must take place in order to properly implement the policies and software to maximize utility and functionality. This project will fundamentally change the way in how we schedule and manage our front line operations. This level of change will require a great deal of support from senior management to ensure that as processes change, staff are given the tools to succeed.

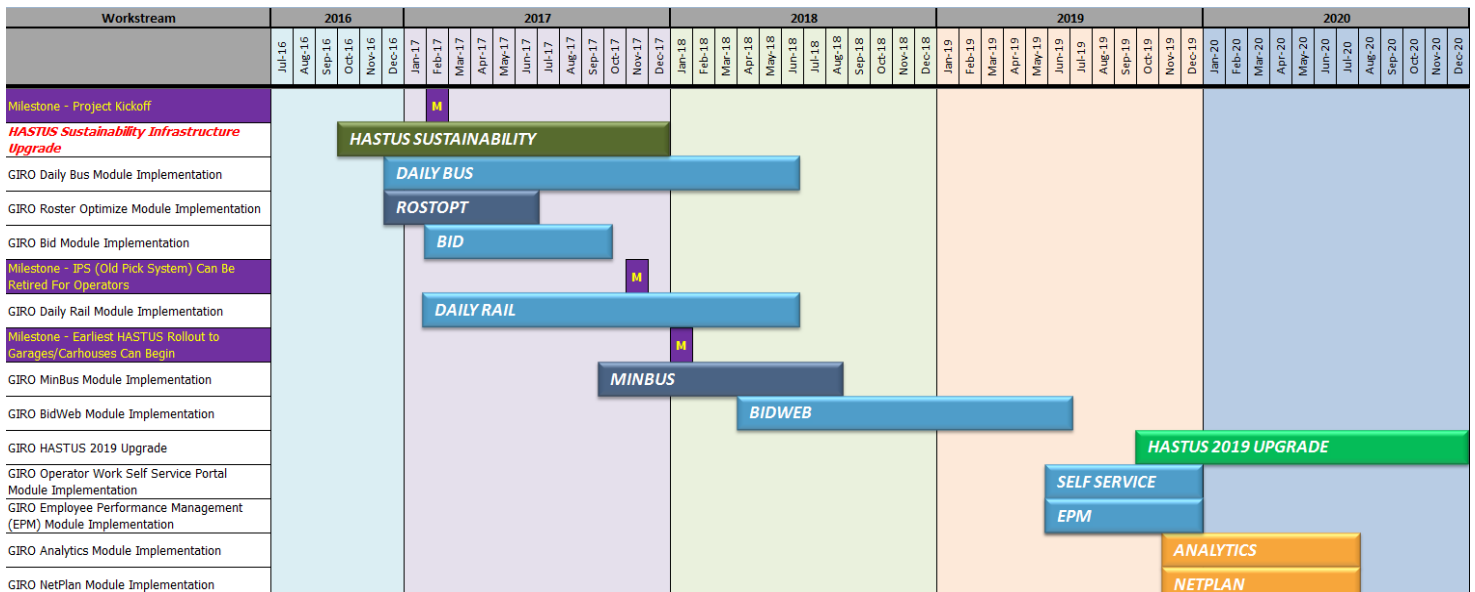
For example, currently the day-to-day work assignment changes —such as manually recording absences, vacant work, dropped trips and overtime assignments—are entirely performed on paper, using inconsistent procedures to track vacant work and assign

overtime. With strong leadership, HASTUS will provide tools for the MBTA to track, analyze and enhance decision making through data driven evidence.

To ensure success, the team is coordinating programs and facilities to train all front line MBTA employees in time for the full project roll-out scheduled for December 2020.

### Implementation Timeline

- Project Start Date: February 2017
- Project Completion: December 2020



### Potential Risks for On-Time Delivery

- Loading MBTA work rules into all HASTUS Software Modules
- Build out of new IT infrastructure to support an enterprise software system that is fully redundant and optimized for high performance
- Staff availability, including contract support
- Ongoing vendor support
- Change Management - Overcoming obsolete legacy business practices

**Appendix A – Module Overview, included in the Workforce Modernization Project**

Module	Start of Implementation	Cost	Benefits
<b>Roster Optimize</b>	February 2017	\$102K	<ul style="list-style-type: none"> <li>• Authorized by the Dec-2016 MOU this software builds work week “rosters” that more efficiently package the work picked by bus and rail operators.</li> <li>• Eliminates the violation of rest rules that result in employees paid to rest</li> <li>• Maximizes employee productivity</li> </ul>
<b>Daily Bus</b>	January 2018	\$1.9M	<ul style="list-style-type: none"> <li>• Ensures all scheduled work is covered</li> <li>• Generates workdays based on actual work performed</li> <li>• Improves contractual and regulatory compliance</li> <li>• Reduces administrative and operating costs in employee work</li> <li>• Better manages overtime</li> <li>• Improves off-duty time assignment and selection processes</li> <li>• Adds reporting and analysis tools</li> <li>• Improves operational flexibility, reporting, metrics gathering, and analysis tools</li> </ul>
<b>Bid (Bus &amp; Rail)</b>	September 2017	\$2.5M	<ul style="list-style-type: none"> <li>• Improves rules monitoring</li> <li>• Integrates Roster style work picking</li> </ul>
<b>BidWeb (Bus &amp; Rail)</b>	May 2018		<ul style="list-style-type: none"> <li>• Operational improvements and cost reductions to perform quarterly bids</li> <li>• Employee convenience</li> </ul>
<b>MinBus</b>	May 2018	\$421K	<ul style="list-style-type: none"> <li>• Cost savings in the form of reduced manpower costs, vehicle requirements, and vehicle mileage.</li> <li>• Improved service for the riding public as it helps with trip synchronization. Trip synchronization allows the next trip to be shifted slightly to help control hours and buses. In HASTUS 2013</li> </ul>

Module	Start of Implementation	Cost	Benefits
			<p>the create blocks feature cannot do this. It will deadhead a bus to a location because the trip being run cannot do the next trip it should be doing.</p> <ul style="list-style-type: none"> <li>Minibus will assist with helping the authority respond to state and federal oversight and union rules regarding continuous driving time and rest.</li> </ul>
<b>Additional Staff</b>	Ongoing	\$2.7M	<ul style="list-style-type: none"> <li>Employing contractor staff will allow for a faster implementation as we are not hindered by lengthy HR process.</li> <li>Training of contractor staff will make for an experienced candidate pool when we look to expand the permanent WMP team.</li> </ul>
<b>Daily Rail</b>	January 2018	\$1.3M	See Daily Bus above.
<b>Self Service</b>	Fall 2019	\$348K	<ul style="list-style-type: none"> <li>Access employee personal information over a secure Web network.</li> <li>View a calendar displaying daily assignments, days off, and absences.</li> <li>View and print reports such as Driver Time Card, Running Board, Vacations/Absences, and Individual Employee Payroll reports.</li> <li>Submit absence requests or enter absences, using an up-to-date calendar view of daily quotas for additional days off.</li> <li>Submit availability and preferences for overtime and on-call work.</li> <li>View current work assignments in the coming days/weeks.</li> <li>View messages displaying new/important information relating to the employee.</li> </ul>

Module	Start of Implementation	Cost	Benefits
<b>HASTUS Upgrade</b>	January 2020\$	\$792K	<ul style="list-style-type: none"> <li>• The ability use new cost-saving features and other improved functionality offered in newer version, and not continue to use old software that becomes increasingly difficult to support over time.</li> </ul>
<b>EPM</b>	Fall 2019	\$200K	<ul style="list-style-type: none"> <li>• List employees who meet award criteria or violate rules.</li> <li>• Access underlying information directly (e.g., absence records).</li> <li>• Define different criteria for different groups of employees (e.g., full- or part-time), or even by employee (e.g., probation period).</li> <li>• Provide information to supervisors so that they can investigate and decide what disciplinary measures or awards are appropriate (e.g., remove overtime availabilities, grant additional vacation days).</li> </ul>
<b>Analytics</b>	May 2019	\$300K	<ul style="list-style-type: none"> <li>• Provides real-time operational metrics – “How are we doing?”</li> <li>• High quality feedback to managers as to what factors and variables are related to costs to provide service, giving them more timely information to mitigate issues and reduce costs</li> </ul>
<b>NetPlan</b>	May 2019	\$400K	<ul style="list-style-type: none"> <li>• Will allow for better coordination of route and route segments to help provide more targeted service in high demand zones.</li> </ul>