Massachusetts Bay Transportation Authority

The RIDE Update

February 25th, 2019

Summary

This presentation will cover:

- A review of The RIDE's overall system performance

- A discussion of The RIDE's projected FY19 and FY20 budgets

- A discussion of current initiatives and future investments to improve performance, highlighting:

  - A new reservations, scheduling and dispatching software system

  - The dedicated service provider contract redesign and procurement
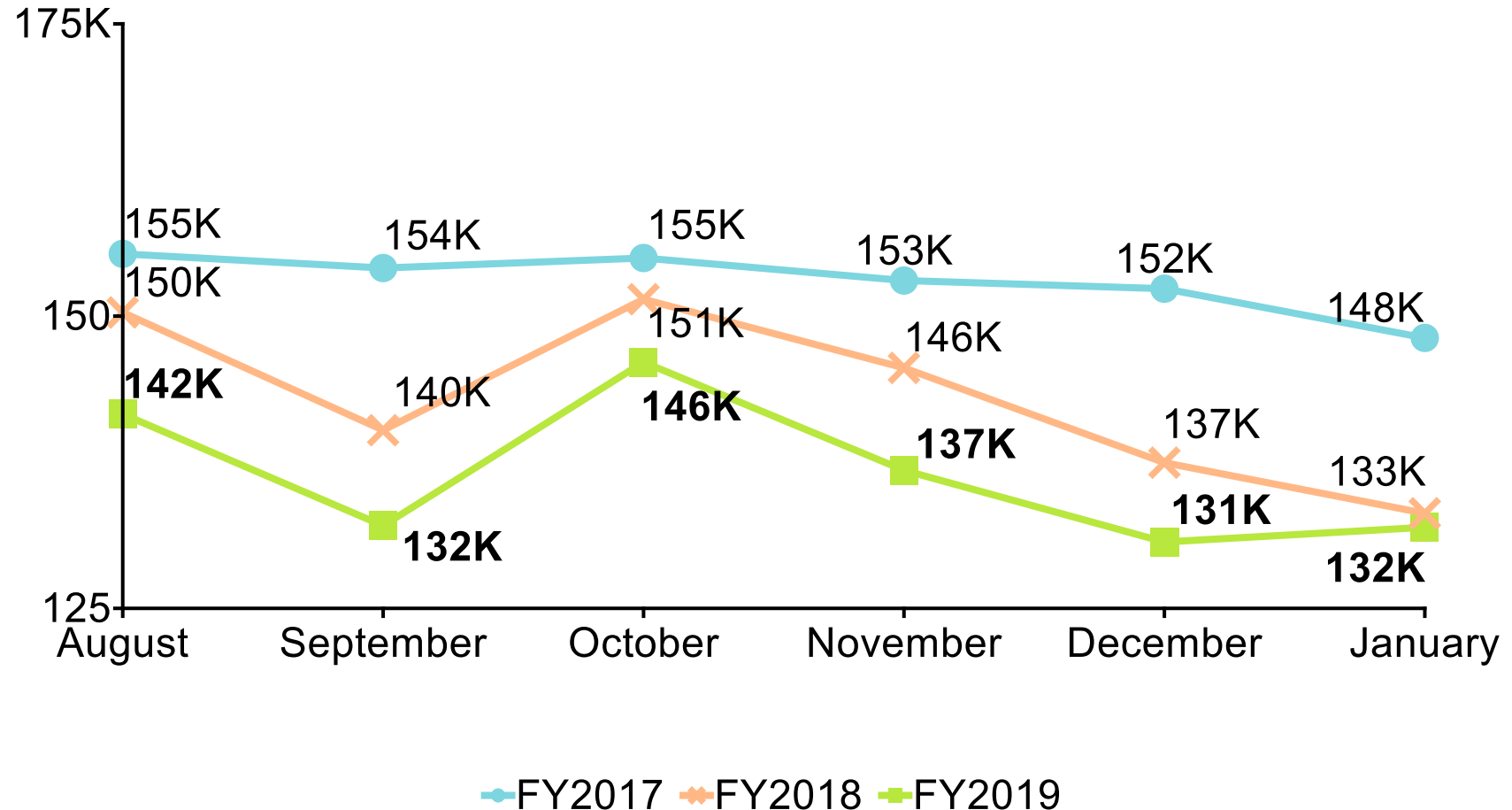
System Performance Update

- **February – June 2018:** Procured and implemented a new call and control center provider, Transdev, who took over TRAC operations on June 1st

- **June – August 2018:** Planned for and executed the third and final service provider transition into TRAC on August 4th

- **August 2018 – February 2019:** Focused on providing reliable service and high on-time performance during the third service provider integration and ongoing TRAC employee training and operational improvements

- **February 2019 onward:** Will focus on system reliability and efficiency and customer service enhancements

One-Way Registered Passenger Trips (Dedicated Only, no Uber/Lyft)

Legend: FY2017, FY2018, FY2019

FY2017: August 155K, September 154K, October 155K, November 153K, December 152K, January 148K
FY2018: August 150K, September 140K, October 151K, November 146K, December 137K, January 133K
FY2019: August 142K, September 132K, October 146K, November 137K, December 131K, January 132K

One-Way Registered Passenger Trips (Dedicated and Uber/Lyft)
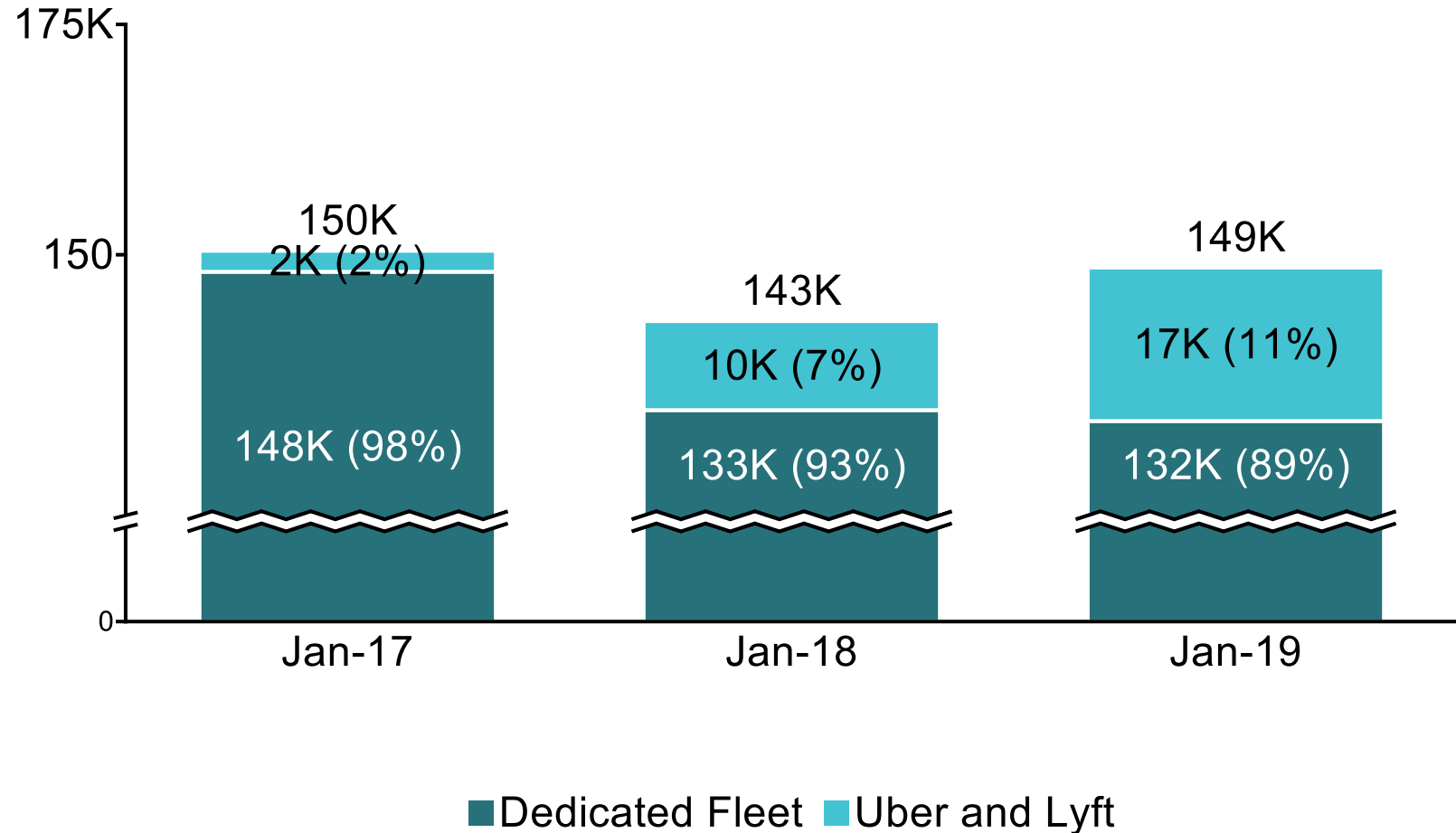
Jan-17
150K
2K (2%)
148K (98%)

Jan-18
143K
10K (7%)
133K (93%)

Jan-19
149K
17K (11%)
132K (89%)

■ Dedicated Fleet ■ Uber and Lyft

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Note: Includes all dedicated providers (NEXT, GLSS, and VTS) for all years

On-Time Performance (% within 15 min)
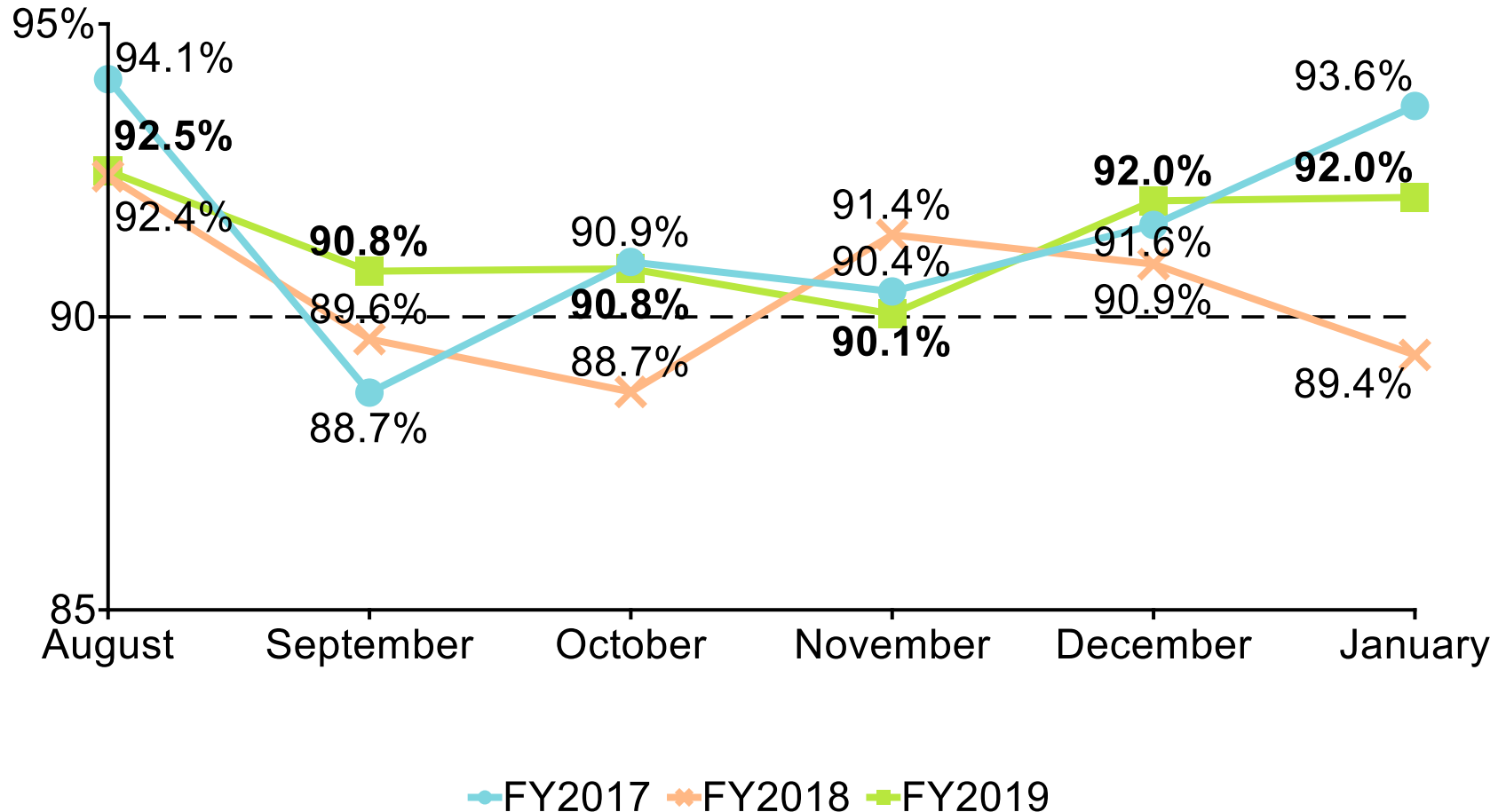
Legend: FY2017, FY2018, FY2019

Note: Includes all dedicated providers (NEXT, GLSS, and VTS) for all years

Registered Passengers per Revenue Hour
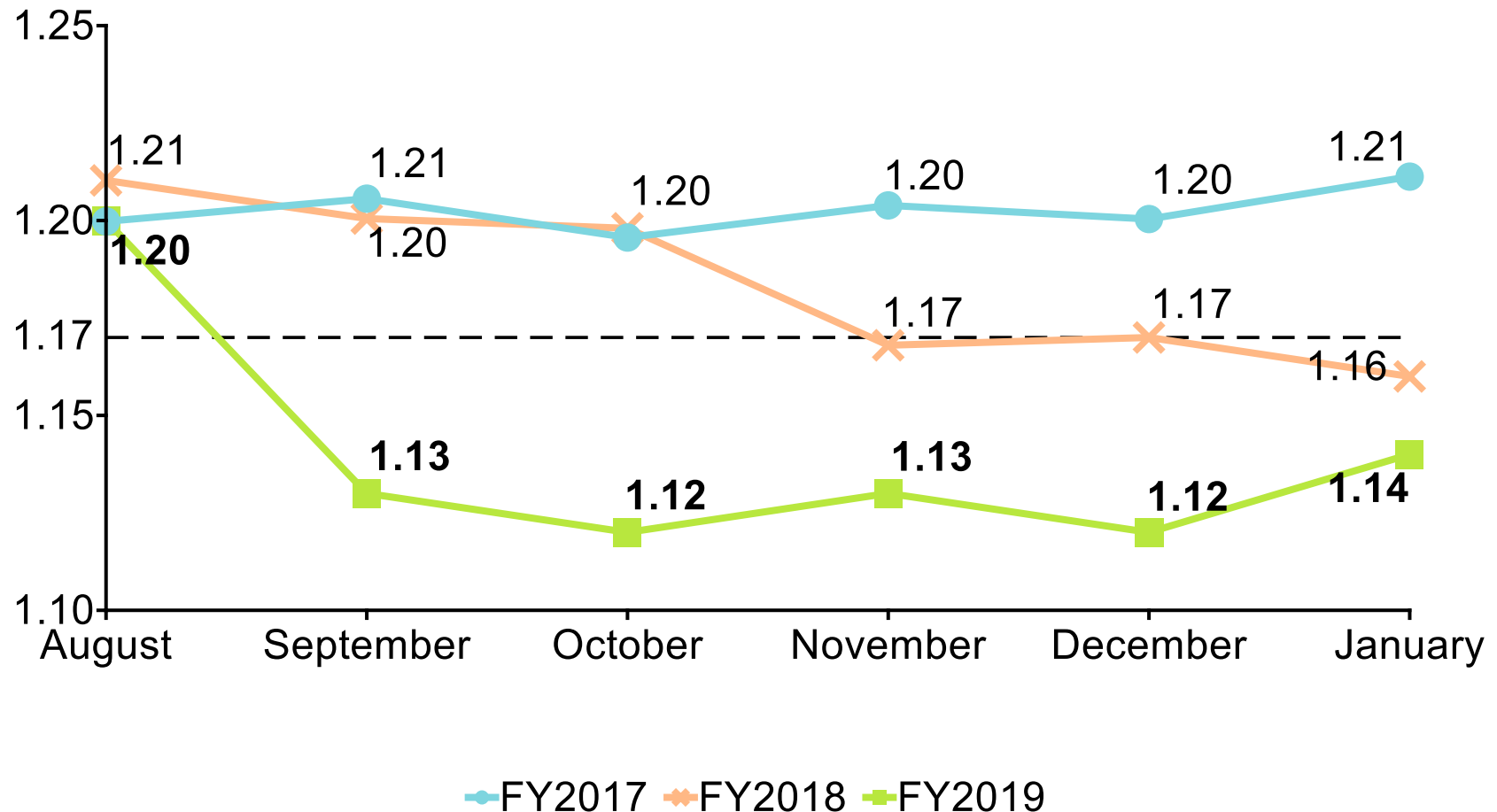
Legend: FY2017 · FY2018 · FY2019

Pick-Up 30+ min Late per 1,000 Trips
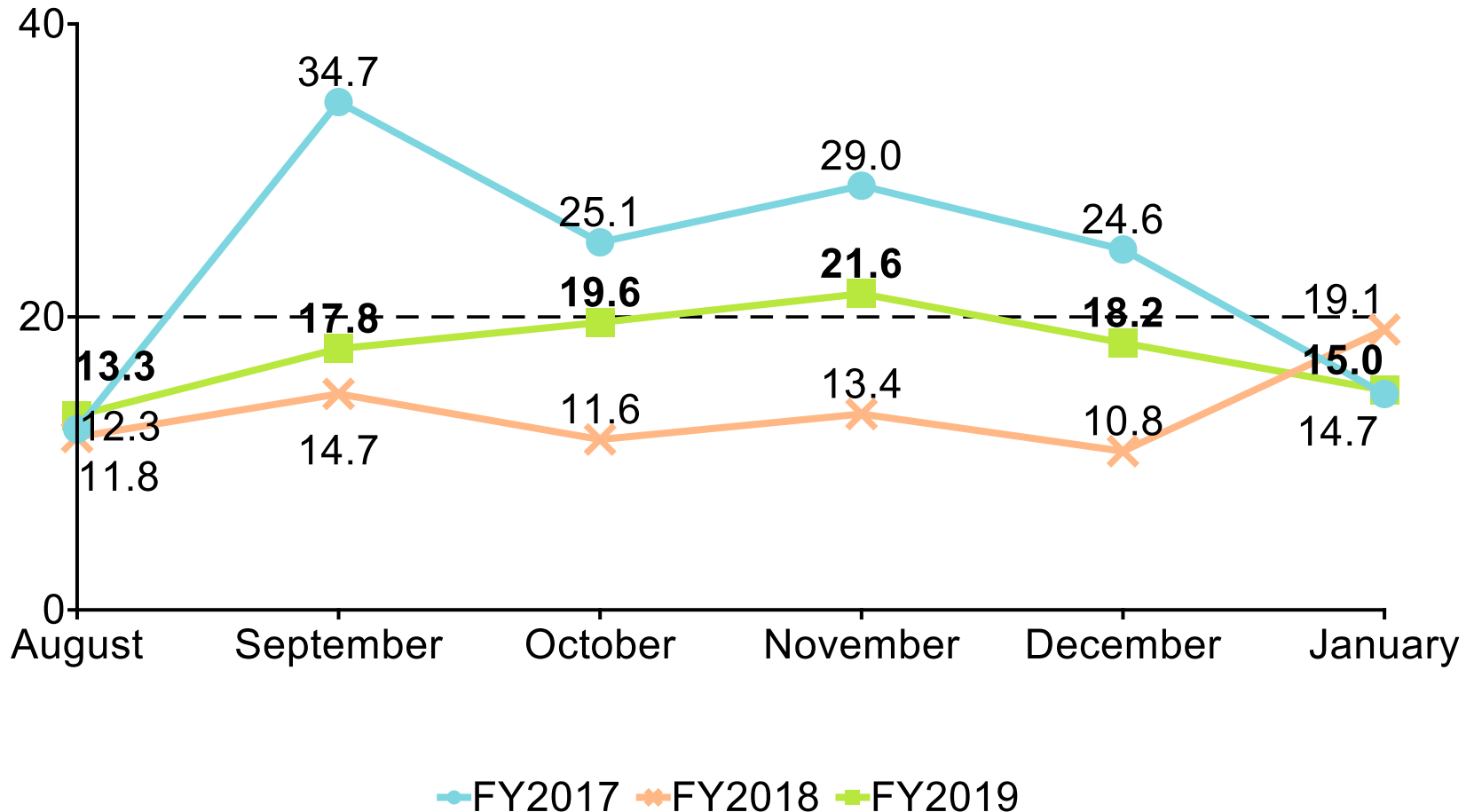
Legend: FY2017, FY2018, FY2019

Month	FY2017	FY2018	FY2019
August	12.3	11.8	13.3
September	34.7	14.7	17.8
October	25.1	11.6	19.6
November	29.0	13.4	21.6
December	24.6	10.8	18.2
January	15.0	19.1	14.7

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Note: Includes all dedicated providers (NEXT, GLSS, and VTS) for all years

Missed Trips per 1,000 Trips
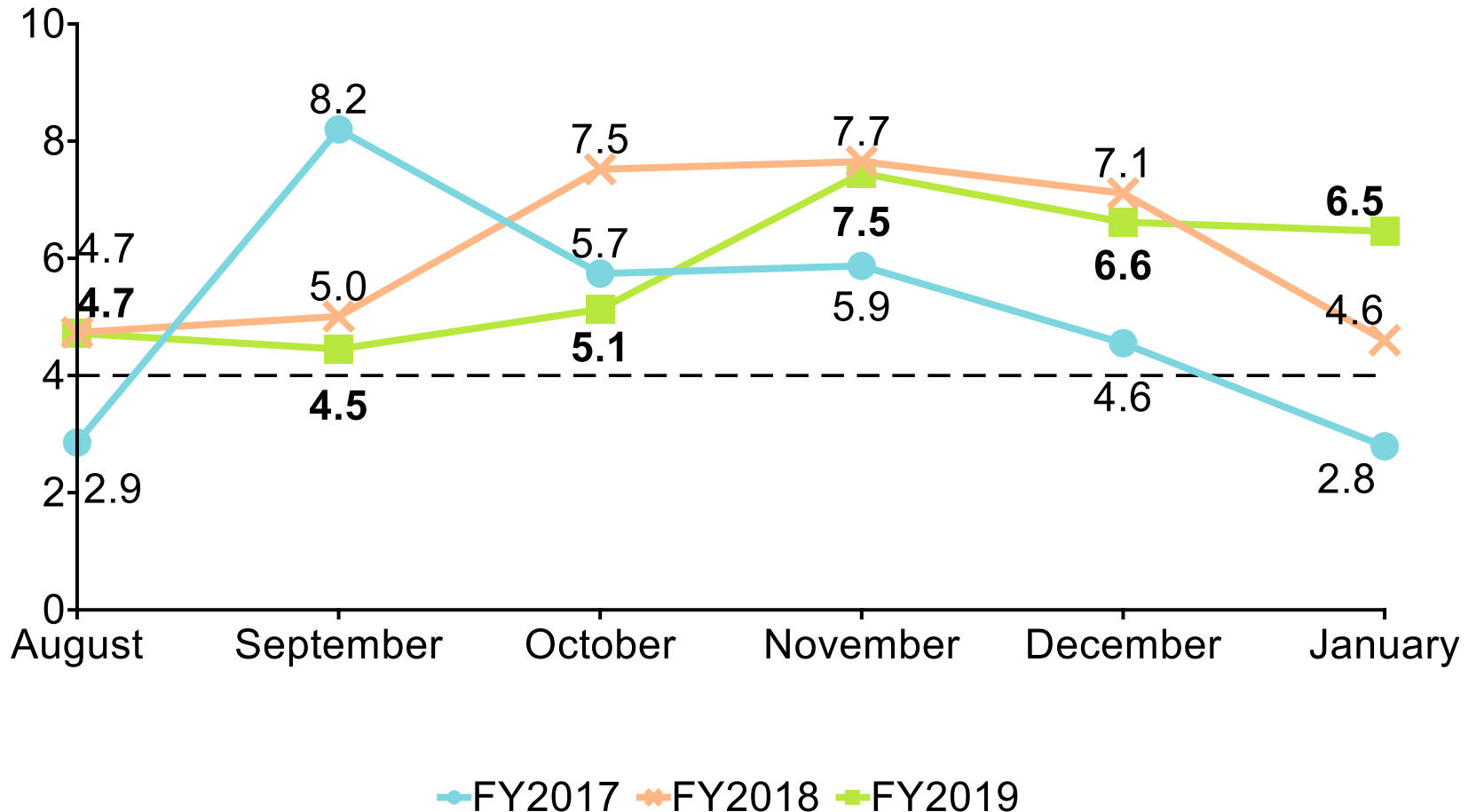
Note: Includes all dedicated providers (NEXT, GLSS, and VTS) for all years

Customer Issues per 1,000 Trips
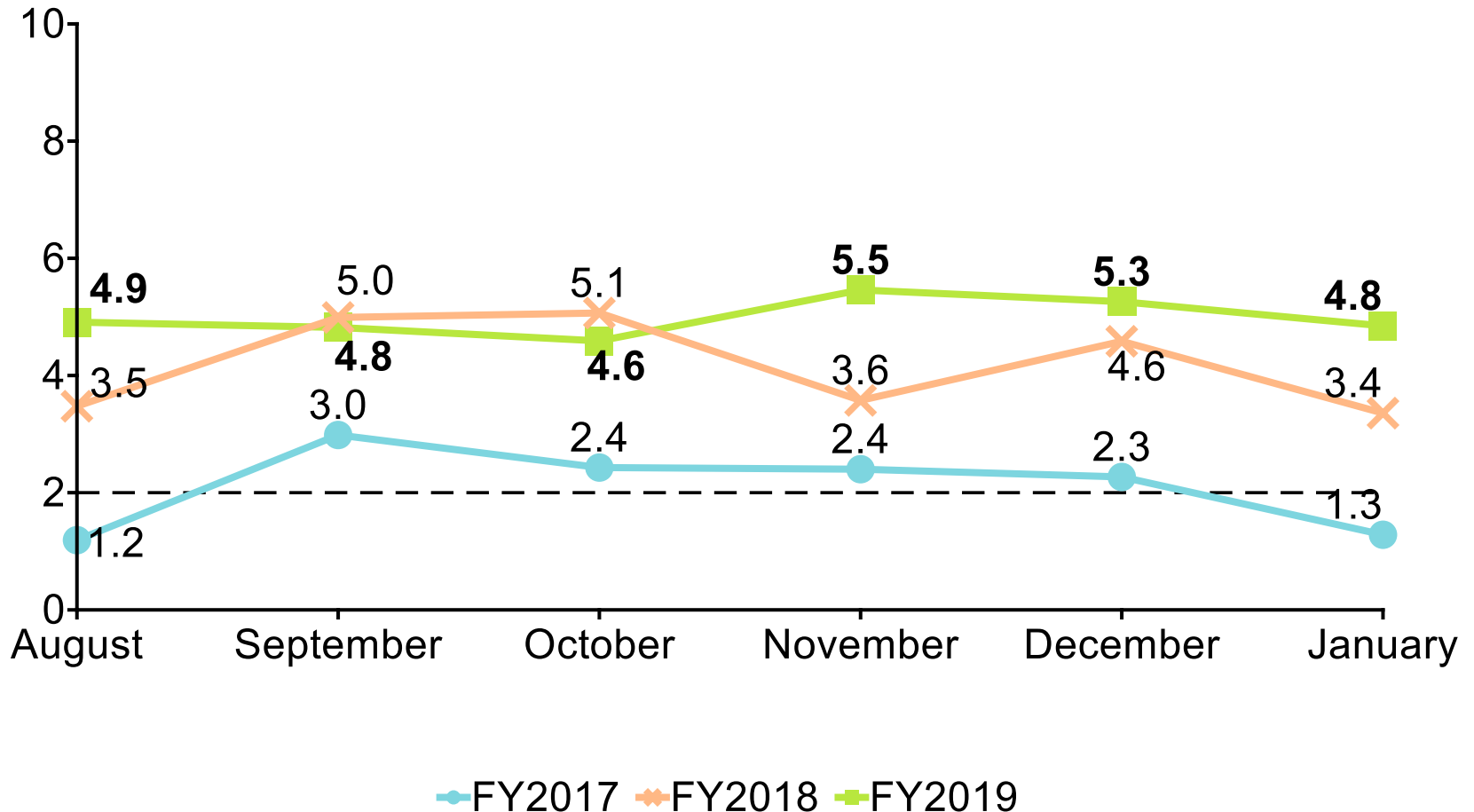
Legend: FY2017, FY2018, FY2019

Month	FY2017	FY2018	FY2019
August	1.2	3.5	4.9
September	3.0	5.0	4.8
October	2.4	5.1	4.6
November	2.4	3.6	5.5
December	2.3	4.6	5.3
January	1.3	3.4	4.8

Note: Includes all dedicated providers (NEXT, GLSS, and VTS) for all years

Initiatives to Improve Service

- Implement software system tuning

- Conduct driver run structures rebids

- Hold quarterly TRAC business reviews

- Implement adjusted penalty structure for dedicated service providers

- Continue to implement TRAC operations and training enhancements

FY19 and FY20 Budget Projections

FY19 and FY20 Budget Projections
FY19 costs are projected to increase over FY18 actual and FY19 budget costs

Paratransit Budget (OTA and LSS)

Opportunities and Challenges

- **Excess revenue hours** resulted in **higher OTP** than goal of 90%

- **Unrealized aggressive provider productivity targets increased revenue hours** needed to deliver trips (expected 6.2% increase in productivity vs. current 3.4% decrease)

- **Delayed Uber/Lyft pilot policy changes increased on-demand ridership** and increased **the per-trip subsidy** paid to Uber/Lyft

■ Local Service Subsidy (LSS) ■ Office for Transportaiton Access (OTA)

Paratransit Budget (OTA and LSS)

Bar chart — Paratransit Budget (OTA and LSS), in $M:

	FY18A	FY19P	FY20B
Total	113.5	121.2	118.4
OTA	4.9	4.5	2.7
Local Service Subsidy (LSS)	108.6	116.7	115.7
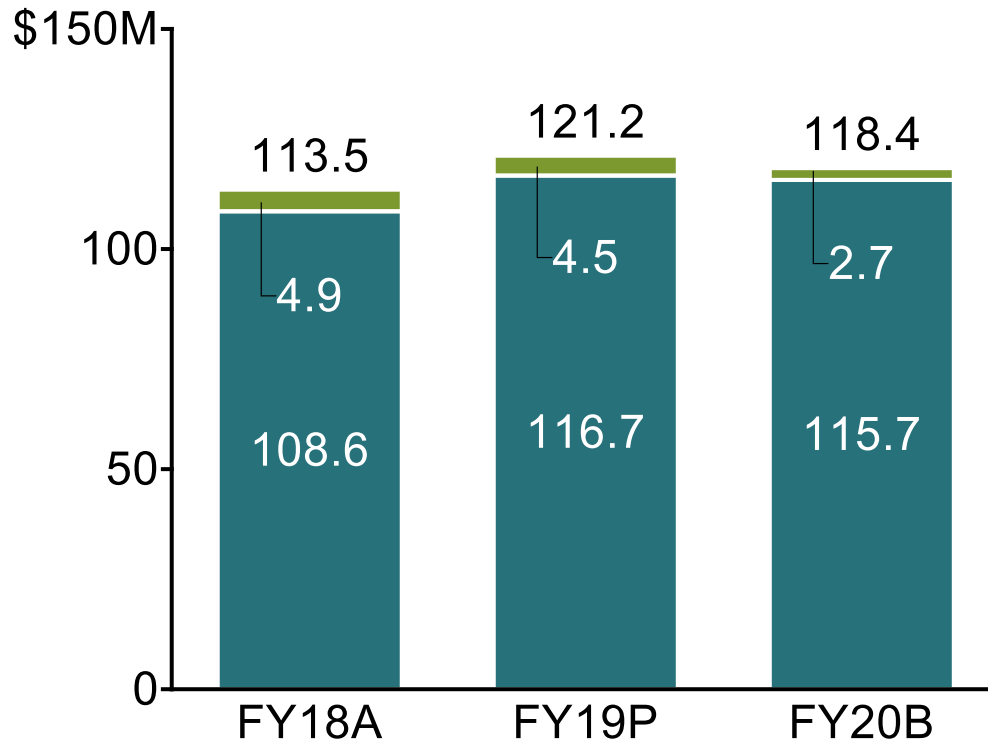
Legend: ■ Local Service Subsidy (LSS) ■ Office for Transportation Access (OTA)

Key FY20 Budget Assumptions

- **Total Ridership:** up 0.5%
  - **Dedicated:** down 2.6%
  - **Non-Dedicated:** up 22.5%
- **Average DSP Cost / Trip:** down 10.4% (includes fixed and variable, excludes call center costs)
- **Productivity:** up 8.3%
- **Other Key Changes:**
  - Software costs and eligibility center (TREC) costs were reallocated from OTA to LSS as they have a direct impact on the cost of daily service

FY19 and FY20 Budget Projections
The RIDE has multiple initiatives under way to control costs in FY20

FY20 Cost Savings Initiatives		
Initiative	**Description / Impact**	**Est. Net Savings***
Implement new software	• Increase productivity (and reduces hours needed to deliver customers) through a more sophisticated scheduling algorithm	$3.1M
Implement Non-Dedicated Service Providers (NDSP)	• Replace inefficient DSP trips with cost-effective TNC/taxi service • Initial NDSP piloting will utilize existing Uber/Lyft contracts • Full implementation will require a new procurement over the spring/summer	$1.6M
Modify On-Demand Service (Uber/Lyft)	• Reduce cost per On-Demand trip • Reduce number of excess On-Demand trips	$1.6M
Implement New Dedicated Service Provider (DSP) Contracts	• Reduce fixed and variable costs for DSPs • Require new procurement run in spring/summer and includes potential de-mobilization cost to expedite implementation	$1.3M
	TOTAL	**$6.6M**

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* Actual net savings over baseline FY20 costs includes any potential costs associated with implementing an initiative in FY20

FY19 and FY20 Budget Projections
Significant investments are expected to improve the customer experience

FY20 Customer Experience Initiatives		
Initiative	**Description / Impact**	**Investment**
Purchase new vehicles	• Upgrade aging fleet of vehicles	$7.5M**
Implement new software	• Better routing, more accurate ETAs, and better self-service tools (app, website)	$5.4M*
Complete radio upgrade	• Reduce chatter that customers hear over radios	$800K*
Complaint process redesign	• Increase accuracy of complaint intake process and speed of complaint response process	$160K
Increase travel training	• Enable customers able to take fixed route some of time to be more confident in their ability to do so	$90K
Impact of weather research	• MIT Masters in Analytics students will develop tool to determine impact of weather on service • Results will be incorporated into the software to better serve customers during and after storms	$50K
Increase customer education and communications	• Technology trainings and educational videos will teach customers to use the service and its modes • Quarterly flyers and call-outs will keep customers abreast of ongoing changes	$35K
	TOTAL	**$14.0M**

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* Includes capital or other funding source
** Part of larger capital vehicle replacement plan totaling $30M over FY19-FY21

Software Procurement

SOFTWARE RFP: SYSTEM REQUIREMENTS
A state-of-the-art software system is essential to the future of The RIDE

Reliability and Efficiency

- Dynamic Routing
- DSP and NDSP Optimization
- Daily Fleet and Shift Optimization
- Predictive Capabilities

Customer Service and Reliability

- Accurate Real-Time Information
- Multiple Communication Channels and Services

Scheduling Engine

Dispatcher Interface

Customer Interface / Self Service Options

Eligibility / Customer Database
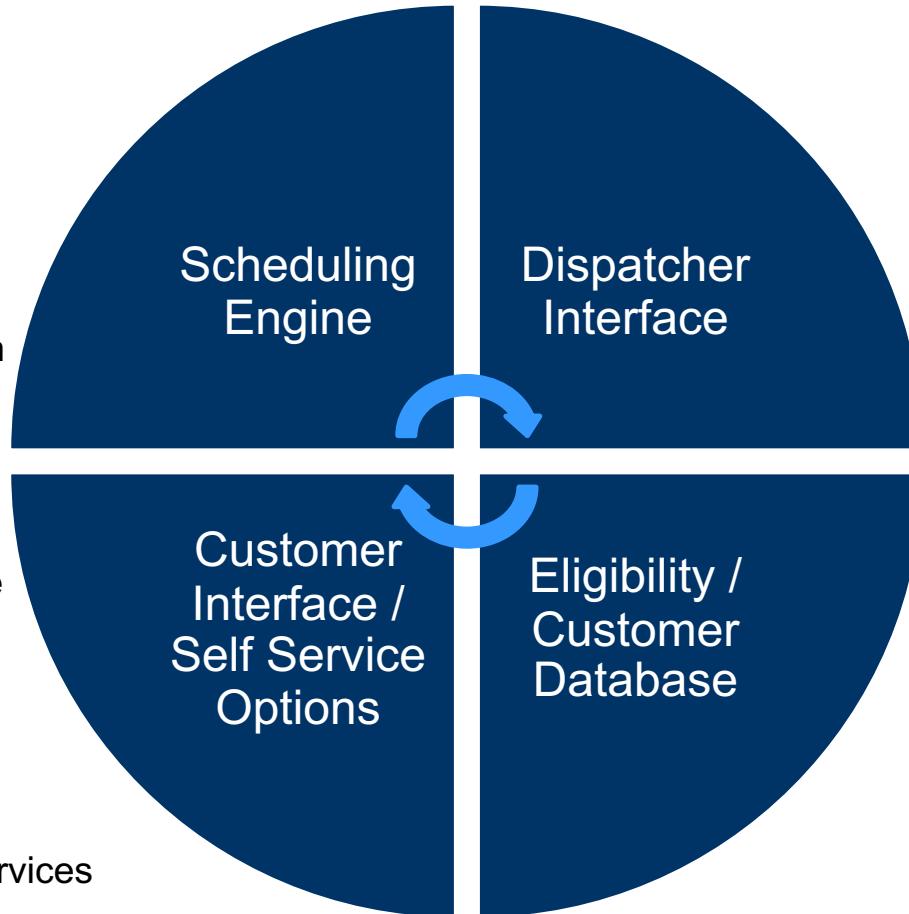
Reliability and Efficiency

- Accurate Real-Time Information
- Automated / Assisted Decision-Making
- Predictive Capabilities

Customer Service and Reliability

- Data Security
- Cloud-Based Solution
- Easily Updatable Customer Profiles

New software will drive improved customer experience, enhanced service reliability, and increased productivity and efficiency

SOFTWARE RFP: EVALUATION PROCESS

The team completed a comprehensive design, procurement, and evaluation process

Developed RFR	Prepared Proposals	Received Proposals	Conducted On-Site meetings	Tested and Clarified	Final Negotiation
Over 1 year to scan the industry and develop the RFR	**6 weeks for Bidders to prepare proposals**	**3 weeks for initial evaluator review**	**1 week for on-site product-demo and live test**	**4 weeks for clarifications and additional testing**	**4 weeks for price scoring and negotiation**

Four days of meetings and initial technical scoring including reviewing the first scheduling test

Two vendors were selected for deeper analysis including two additional scheduling tests on-site

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- Extensive experience providing paratransit software, 2 of top 10 paratransit systems (SEPTA and RTD) and 600+ across the entire US

- Strong paratransit solution with innovative partnerships:

  - **WAYE** – new generation scheduling engine from the former CTO of Stratagen and creator of the ADEPT dispatching algorithm

  - **LYFT** – full bi-directional NDSP integration with Routematch's paratransit software

  - **MOBI** – advance analytics and intermodal routing allows for future integration with the fixed route

SOFTWARE RFP: IN-DEPTH PARATRANSIT EXPERIENCE
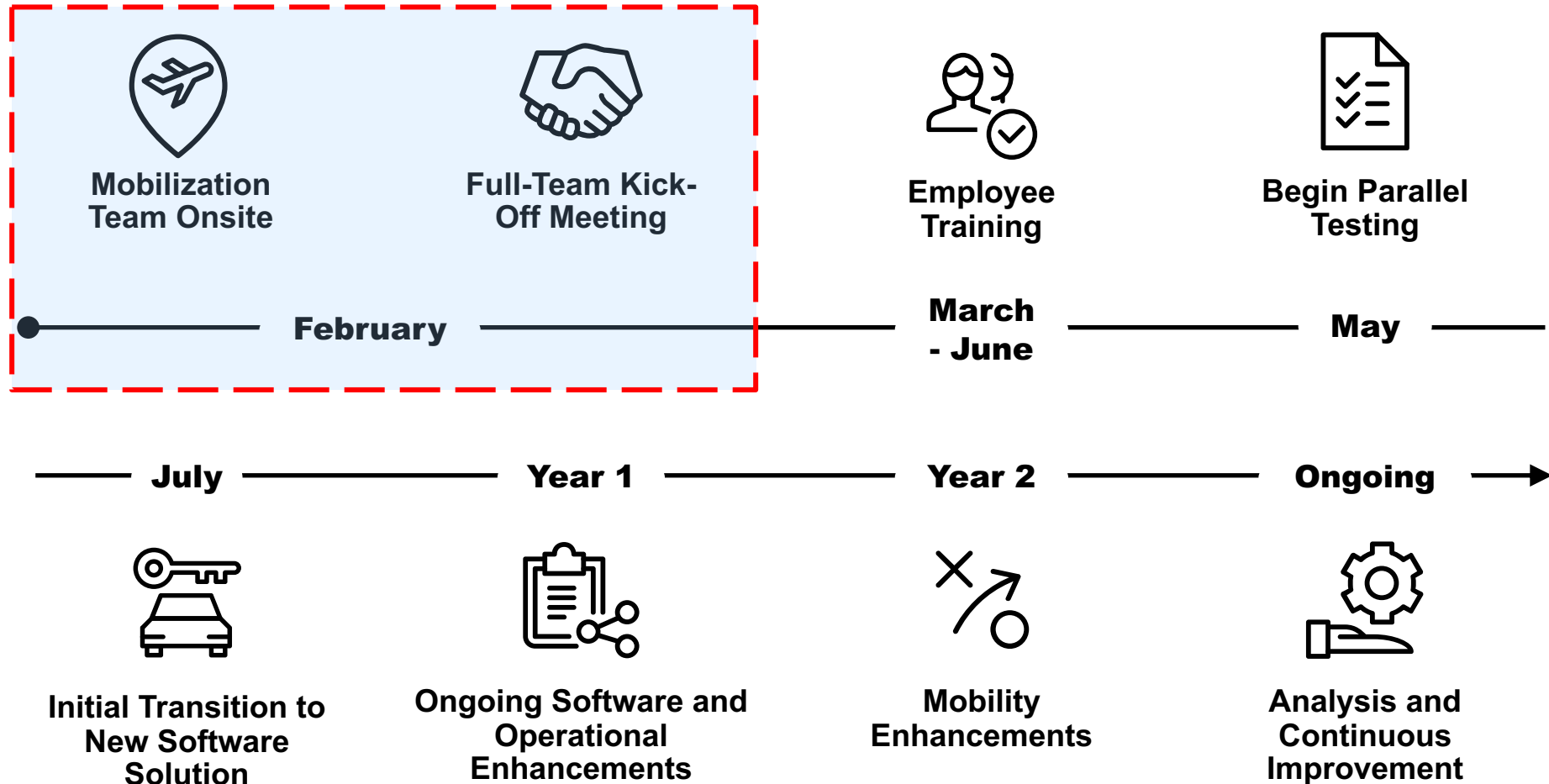Routematch's solution combines past experience and new innovations

Key Features and Functionality

- **The state-of-the-art scheduling and dispatch engine** will incorporate historical RIDE data and real-time traffic information

- The engine will also incorporate an innovative solution for **DSP / NDSP optimization**

- **New customer self-service options** will be available including web booking and a mobile app with **vehicle tracking and enhanced ETA information**

- The solution has a **disintegrated front-end and back-end**, which allows for future productivity improvements without changing the entire software

- **Integration with Lyft** as a Non-Dedicated Service Provider

- An **improved driver application** w/ turn-by-turn navigation, traffic information and enhanced communication with TRAC

- Leverages **Amazon cloud (AWS) as the underlying IT infrastructure** and technology for secure and robust environment for RIDE data

SOFTWARE RFP: IMPLEMENTATION TIMELINE
A detailed, multi-phased timeline will guide implementation activities

Mobilization Team Onsite

Full-Team Kick-Off Meeting

February

Employee Training

March - June

Begin Parallel Testing

May

July

Year 1

Year 2

Ongoing

Initial Transition to New Software Solution

Ongoing Software and Operational Enhancements

Mobility Enhancements

Analysis and Continuous Improvement

1. **Transition Planning and Execution**

   - Commit involvement of key SMEs (RIDE staff, ERB Transit Consulting, Transdev IT, TRAC operators, MBTA IT, and MBTA CTD)

   - Work with a team of 21 Routematch resources involved in the transition, including full time Routematch resources on-site throughout Transition, Go-live, and Year 1

   - Create a phased transition approach that delineates developments as Go-live, Year 1, Year 2 and On-Going efforts

2. **Knowledge Transfer**

   - Share knowledge and materials developed while improving TRAC operations

   - Provide a full review of current operating processes and policies

3. **Training**

   - Develop a combined training plan with the MBTA, Routematch, Transdev and Service Providers

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SOFTWARE RFP: RISK MANAGEMENT AND PARTNERSHIP STRATEGY
Improved contract management will hold Routematch accountable

1. **Strong Contract Management Team**

   - Dedicated Director, Technical Project Manager (+20 years of Software implementation experience), and Analyst within RIDE organization

2. **Ongoing Business Planning and Reviews**

   - Quarterly business reviews and twice yearly business planning meetings

3. **Robust Incentives and Penalties**

   - Payments tied to milestone with MBTA acceptance as clearly defined in the Service Level Agreement and Master Service Agreement

   - Significant portion of fees at risk along with clear penalties and incentives creates accountability for performance and focus on continuous improvement

Dedicated Service Provider Contract Redesign and Procurement

What does a dedicated service provider do?

Operate Vehicles

Contractors employ drivers to operate MBTA vehicles to pick-up customers and supervisors to ensure safety

Assist Customers

Contractor drivers provide "door-to-door" service for MBTA customers, assisting them to the vehicle and while onboard the vehicle

Maintain Vehicles

Contractors maintain and repair all MBTA vehicles and in-vehicle technology, focusing on regular preventative maintenance

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Current Contract: Three companies currently provide this service to the MBTA, Greater Lynn Senior Service, Veterans Transportation, and National Express.

Procurement and Implementation Timeline: Procurement is expected to be completed by the end of the summer, with mobilization completed for go-live by Winter 2020.

Contract Length: The new contract is expected to be a five and a half year base period, with two one-year options. This duration aligns to the fiscal year and, when combined with option years, lines up to other RIDE contract end dates to provide the MBTA future flexibility to determine its service model.

Contract Value: Total expected dollar value of the combined contracts is approximately $500M over the base years of the contract.

> **The contract has been completely redesigned to take advantage of the RIDE's centralized call and control center and new software system**

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DEDICATED SERVICE PROVIDER PROCUREMENT
Key changes are expected to drive enhanced value for customers and MBTA

Customer Experience

- All contractors will follow a unified, simplified lost-and-found policy
- No trips will explicitly require a transfer; transfers will occur per software algorithm

Operational Efficiency

- Move to a centralized zoning model from a three-zone decentralized system
- MBTA will supply all Revenue Vehicles and initial In-Vehicle Technology
- Run structure design / bidding adjusted to increase operational flexibility

Administrative

- Tolls will now be paid via MBTA E-ZPass and waived in-line with rest of MBTA

Facility Location Selection

- Facilities will not be initially proposed by Bidders and instead selected by the Contractor and the MBTA in a post-award Facility Planning Process

Insurance

- Umbrella increased from $10M to $20M and automobile reduced from $2M to $1M
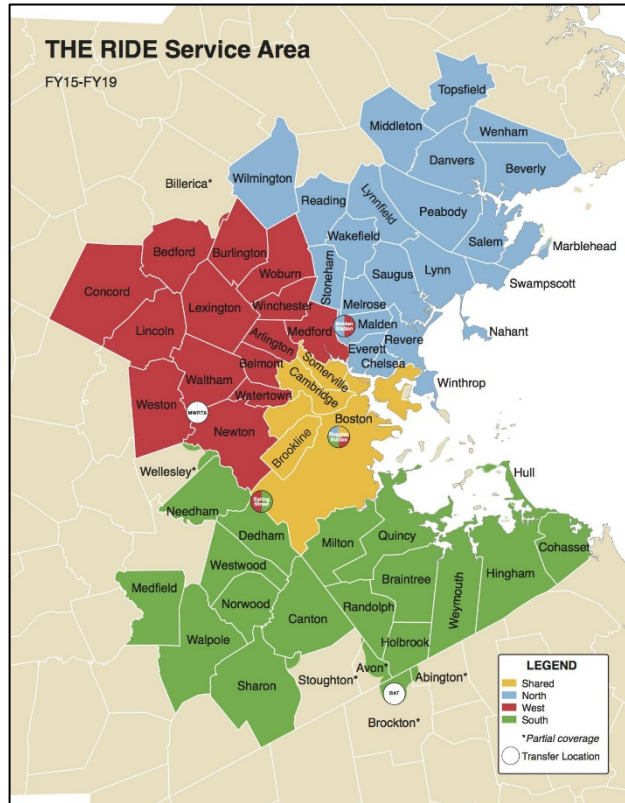- MBTA reserves the right to provide all or a portion of the insurance

Penalty / Incentives

- Streamlined to drive performance on elements within Contractor's control

DEDICATED SERVICE PROVIDER PROCUREMENT
The new zoning system will take full advantage of the new software and TRAC
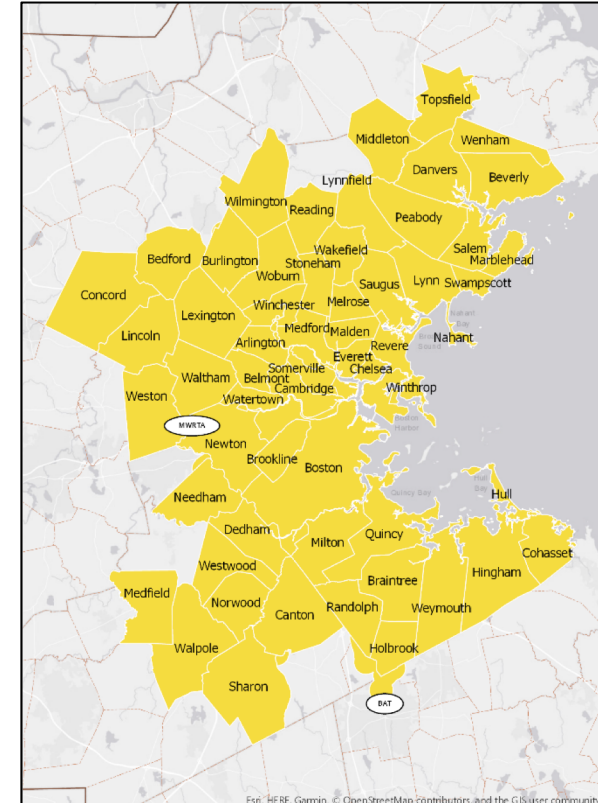
FY15-FY19
Three-Zone Decentralized

New Contract Period
Centralized Zoning

- Contractors awarded all work in their service area (each at ~33%)

- Contractors provide only trips in their area or in the core area

- Contractors awarded Service Levels and Hours (each between 20-50%)

- Contractors can provide trips anywhere in the service area

A diverse procurement team has developed a strong contract to drive performance

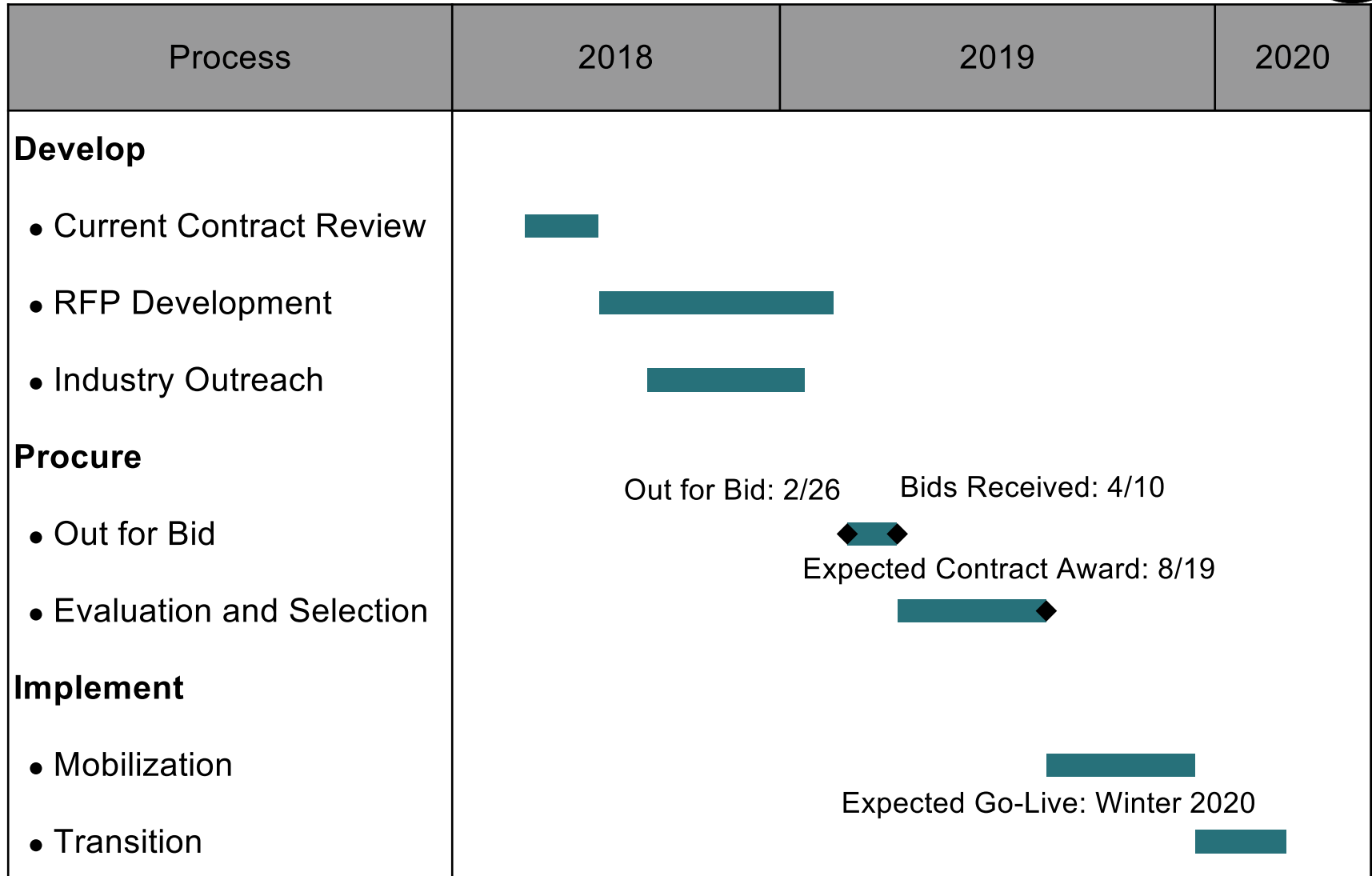**Evaluators and Subject Matter Experts**

MBTA Support

- The RIDE

- Systemwide Accessibility

- Safety

- Occupational Health Services

- Lean Strategy

- Bus Operations

- Treasury / Accounting / Finance

- Legal

- Procurement

External Support

- Riders Transportation Access Group

- The RIDE Taskforce

- Paratransit Operations Consultants

- Outside Legal Counsel

DEDICATED SERVICE PROVIDER PROCUREMENT
Contract award is expected in Summer 2019, with "go-live" in Winter 2020

Process	2018	2019	2020
Develop			
• Current Contract Review	▬		
• RFP Development	▬▬▬		
• Industry Outreach	▬▬		
Procure			
• Out for Bid		Out for Bid: 2/26 Bids Received: 4/10 ◆ ◆	
• Evaluation and Selection		Expected Contract Award: 8/19 ▬▬◆	
Implement			
• Mobilization		▬▬	
• Transition		Expected Go-Live: Winter 2020	▬

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Questions?