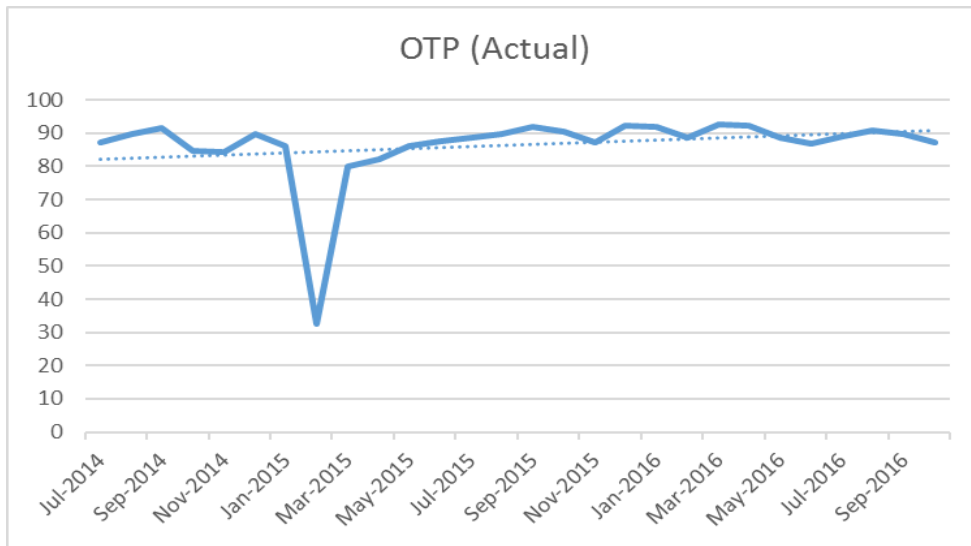




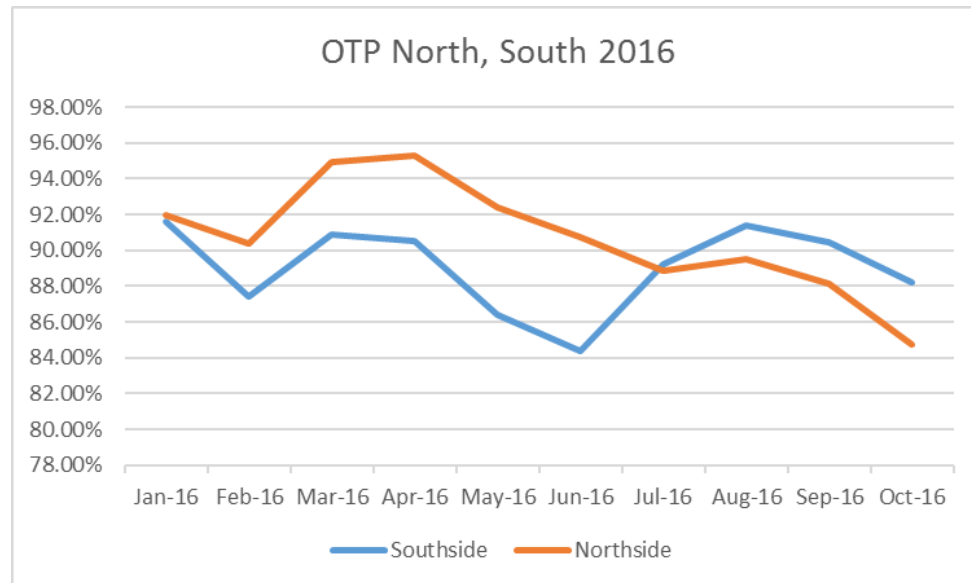
Commuter Rail Performance

October 31
2016

Background - overall performance



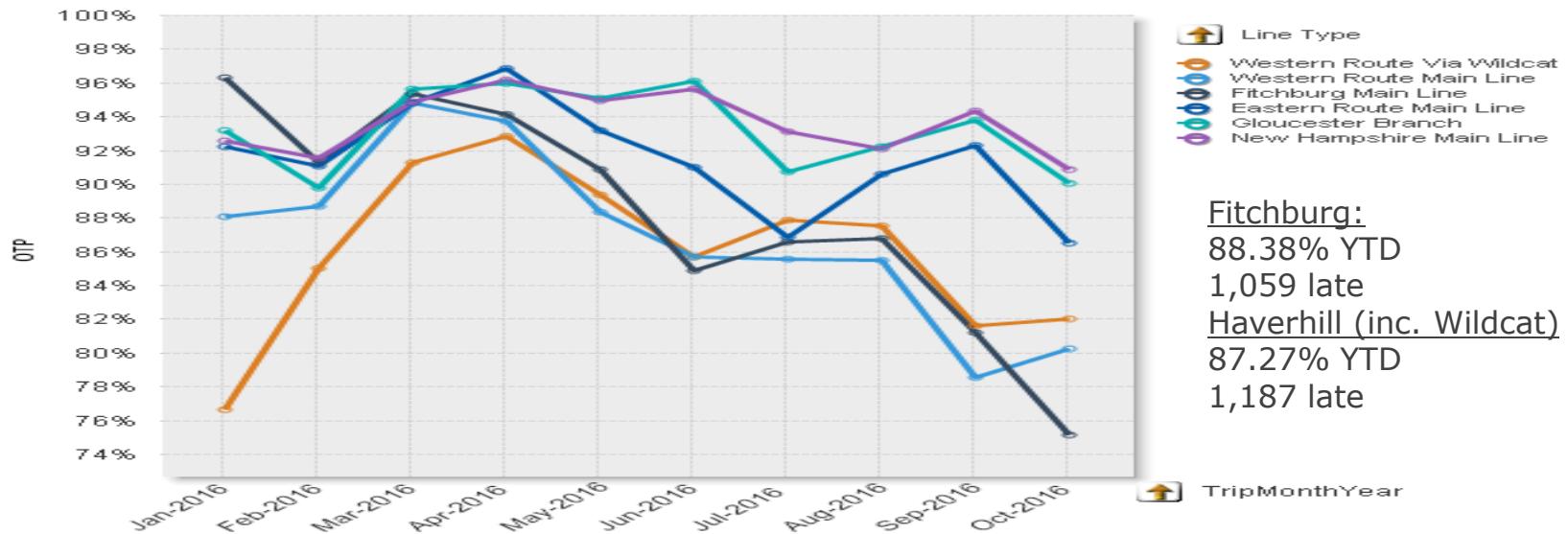
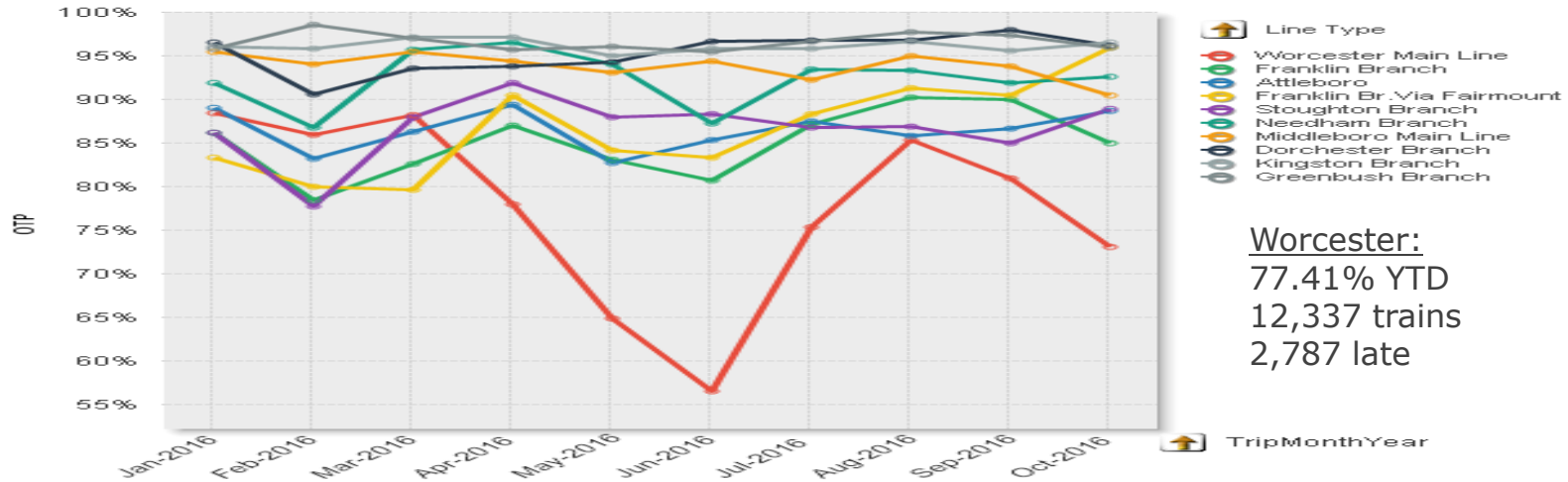
Year To Date:
89.67% YTD
125,629 trains



North:
90.79% YTD
48,426 trains

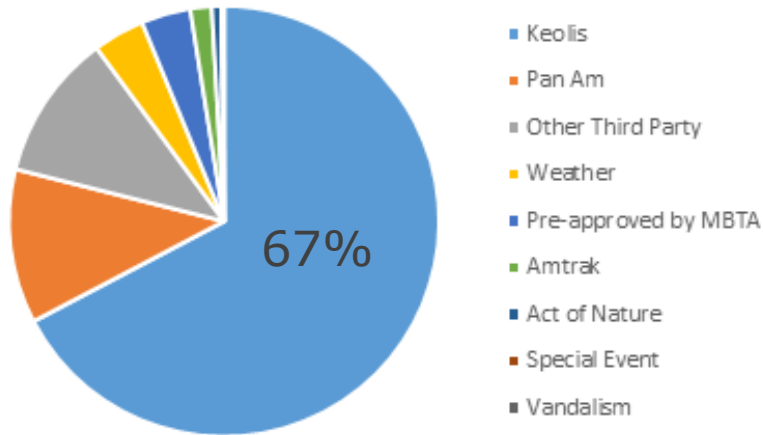
South:
89.07% YTD
77,203 trains

Background - overall performance

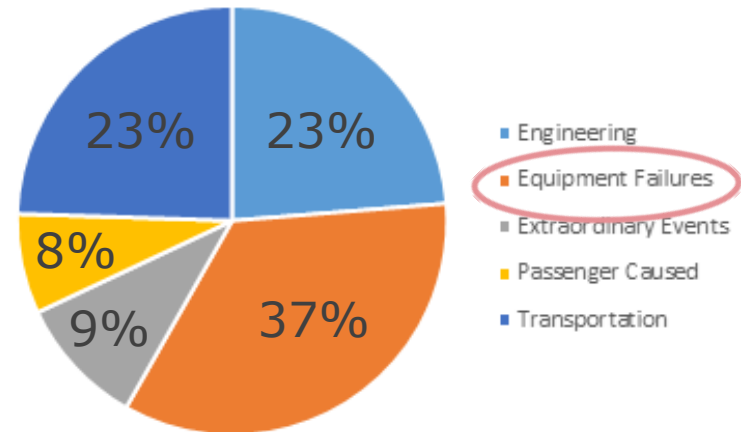


Causes of delay

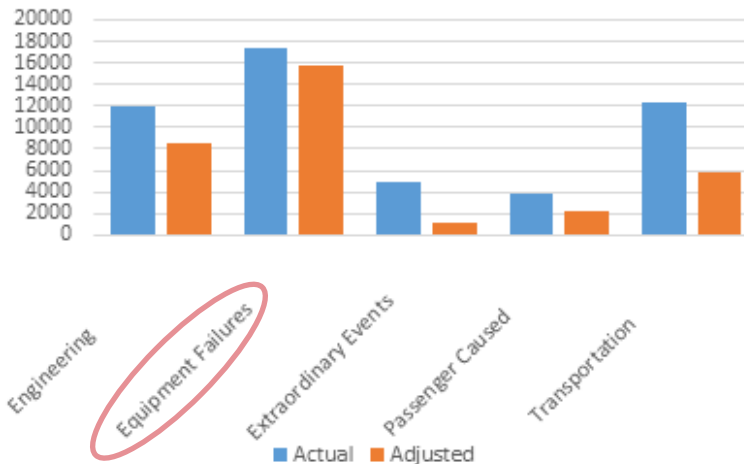
Top 10 - Sum of minutes delayed by Responsible Party from January to October 2016



Sum of minutes delayed by Delay Type from January to October 2016



Actual and Adjusted Sum of minutes delayed by Delay Type from January to October 2016

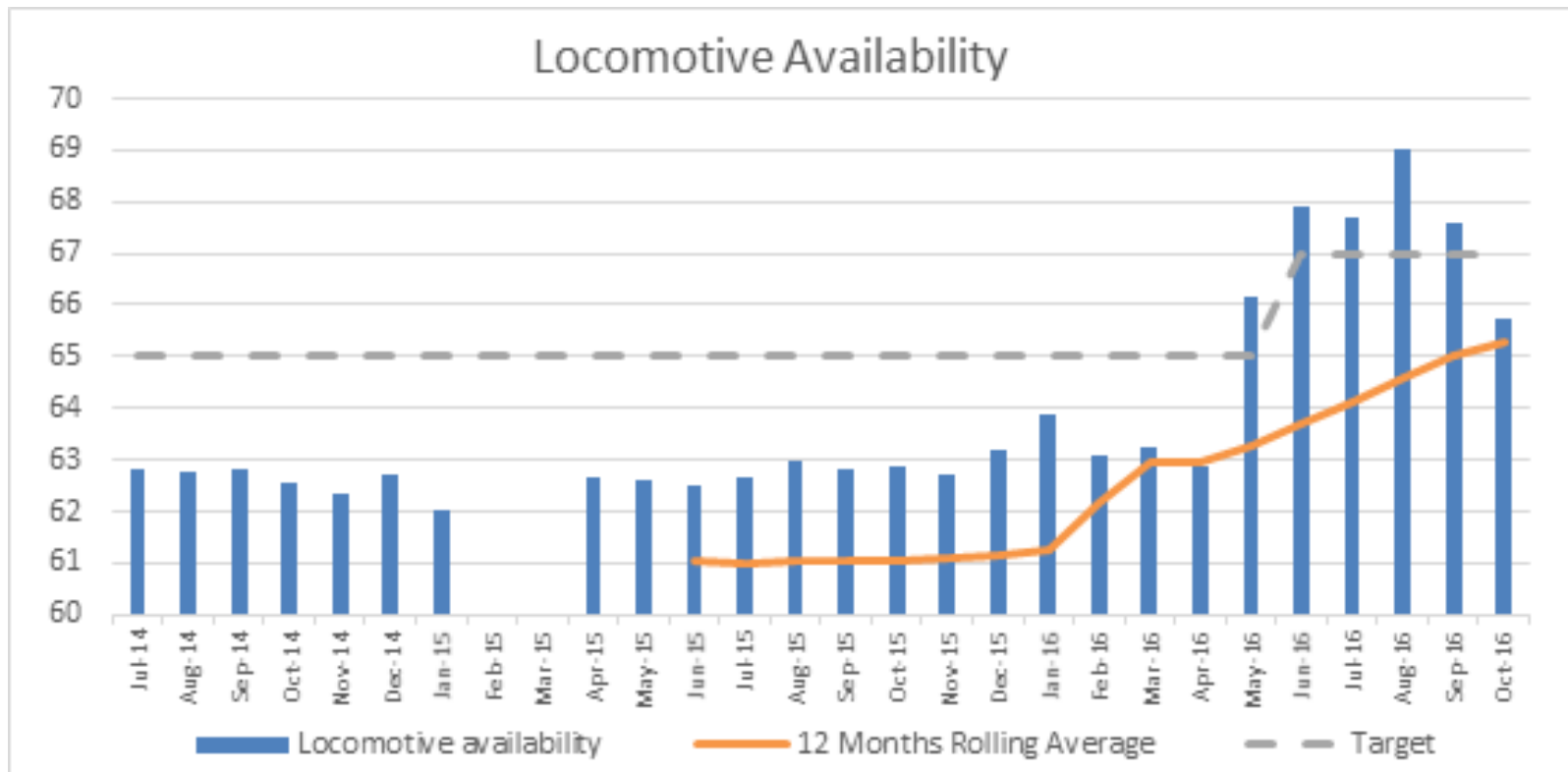


Priorities to improve

Action areas

1. Implement November 21st schedule adjustments, monitor performance closely to assess results
2. Increase consistency of Locomotive availability - deliver 67 daily
3. Increase consistency of Coach availability
4. Deep dive & rapid action plan on poorest performing lines, starting with Worcester to find short term mitigation ('Right Time Railway' principles)
5. Manage Winter conditions as well as possible
6. Improve passenger communications

Locomotive Plan



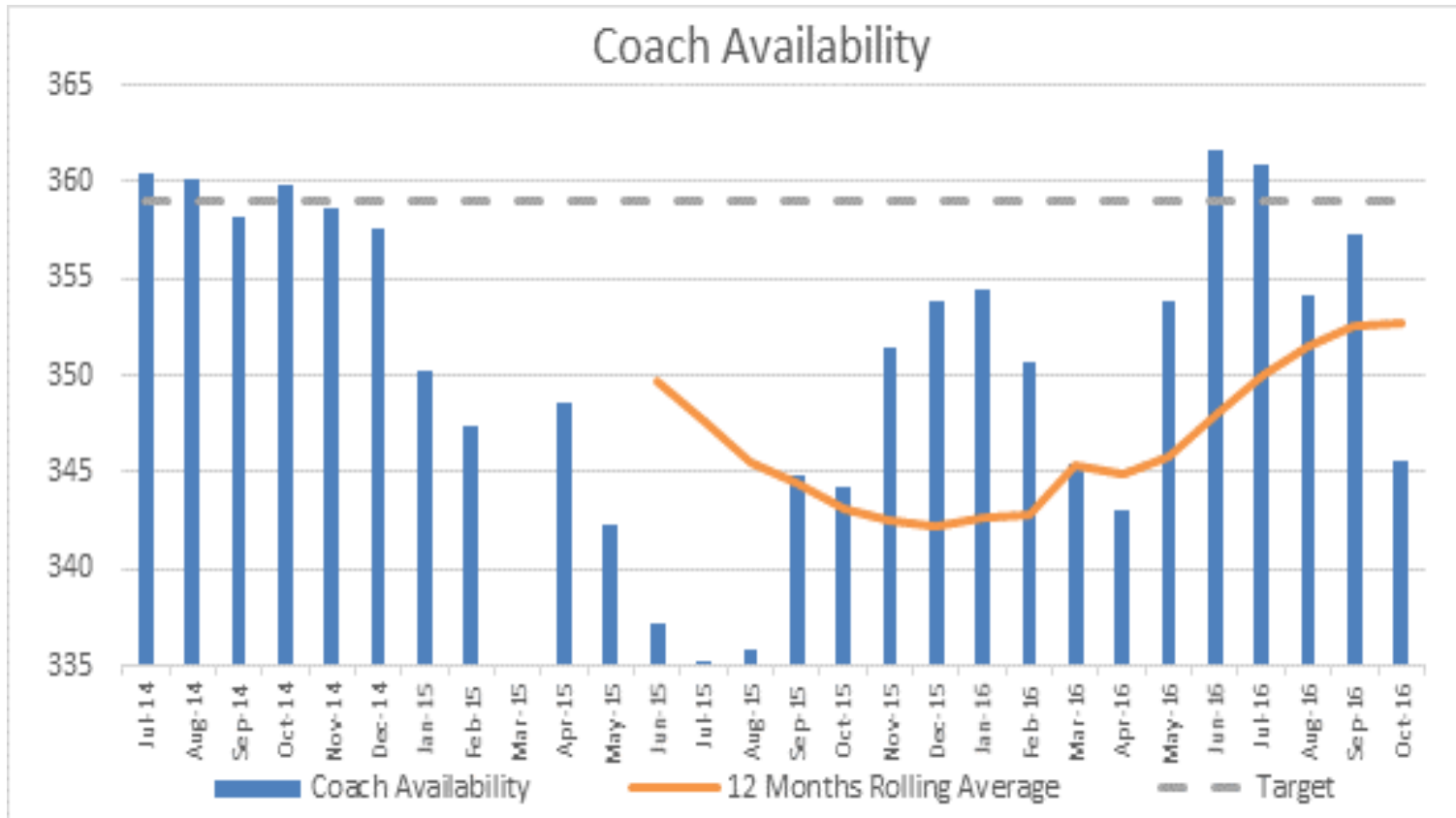
Summary

- Average availability trending positively over time as well as MPI reliability, but sporadic shortages must be prevented
- Have changed out 201 traction motors on legacy locos since Jan 2015 (4 times as many as expected under design life)
- We have designed lighter maintenance workload from November to January 2017 to assist with availability during winter
- PTC project will require 2 x locomotives for fitment through end of 2017

Locomotive Plan

Area	Short Term Plan & Milestones	31-Oct	7-Nov	14-Nov	21-Nov	28-Nov	5-Dec	12-Dec	19-Dec	26-Dec	2-Jan	9-Jan	16-Jan	23-Jan	30-Jan
Loco Plan	1 Pre-planned maintenance management benefits	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue		
	2 Develop paired wheel & TM sets	Blue	Blue	Red											
	3 Lease additional non revenue locomotives	Blue	Red	Red	Red										
	4 Legacy loco deep repair program										Blue	Blue	Blue	Blue	Blue
	5 New locomotive FM1 mods program	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
	6 Setup 7-day working organisation at BET	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Red		
	7 Continue root cause & reliability program	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
	*** Milestone - Loco availability consistently to 67							Red							

Coach Plan



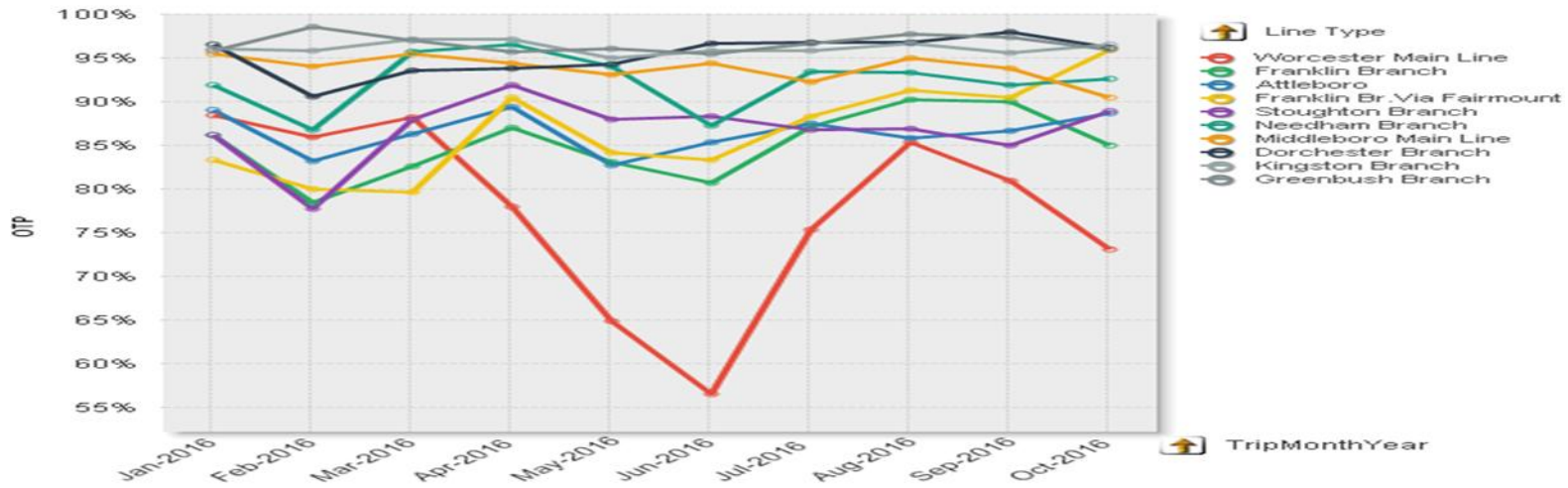
Summary

- Availability trend has shown improvement over time, but high levels of volatility create issues too often
- Unforeseen short term increase in PPM in last 3 weeks
- Ongoing high level of 4 year inspections
- Shortage of coaches (including control cars) resulted in recent shortage of consists

Coach Plan

Area	Short Term Plan & Milestones	31-Oct	7-Nov	14-Nov	21-Nov	28-Nov	5-Dec	12-Dec	19-Dec	26-Dec	2-Jan	9-Jan	16-Jan	23-Jan	30-Jan
Coach Plan	1 Send 19 coaches out to reduce backlog	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	2 Recreate set-consists to 67	█	█	█											
	3 Implement control car plan	█	█	█											
	4 Review planned consists	█	█	█	█	█	█	█	█						
	5 Short term planning and priority process	█	█	█	█	█	█								
	6 Increased staffing numbers	█	█	█	█	█	█	█	█						
	7 Dedicated line for short term repairs at BET	█	█	█											
	*** Milestone - Coach level returns to 359								█						

OTP & Performance on Worcester line



Summary

- Schedule amendments on most lines from November 21st expected to improve core network resilience
- Worcester line OTP is consistently lower than other lines on the network
- Worcester line schedule is known to be sub optimal but will not be changed before Spring 2017 (strong working group in place, led by MBTA)
- Worcester line has high level of essential repair and line upgrade work in progress

OTP & Performance on Worcester line

Area		Short Term Plan & Milestones	31-Oct	7-Nov	14-Nov	21-Nov	28-Nov	5-Dec	12-Dec	19-Dec	26-Dec	2-Jan	9-Jan	16-Jan	23-Jan	30-Jan
OTP/Worcester	1	Worcester Line Rapid Action Group	█	█	█	█										
	2	Milestone - WML action plan produced					█									
	3	Minimize Tie replacement impact	█	█	█	█	█	█	█	█	█					
	4	Worcester line schedule development	█	█	█	█	█	█	█	█	█	█	█	█	█	█
	5	Implement November schedule changes	█	█	█	█	█									

Worcester Line Actions in Preparation for I-90 work this week;

- Deployed extra response staff across network
- Deployed extra conductors across key trains
- Positioned spare train set at Framingham
- Slowed down tie replacement work

Passenger Communications

Enhanced "T alerts":

- Announce train delays from 8 minutes instead of 10 today: November 2016

Provide assistance to passenger with limited English proficiency:

- Live over the phone translation: Mid November 2016
- Translation of "Vital" documents on the web and on demand at Boston stations: December 2016

Improved passenger assistance in Boston stations:

- Provide tablets to Passenger Assistants: assistance of ADA passengers, demo of mobile apps (December 2016)
- Replacement of Back Bay PA system speakers : January 2017

Social Media management and reporting tool:

- Replacement of Tweetdeck by Hootsuite: December 2016

Enhanced on board passenger information standard:

- Requirement to announce as soon as delay occurs
- Crews will inform passengers of delays of five minutes and more (instead of 10 previously)
- Updates to be provided every five minutes

Winter readiness 2016/2017



State of Readiness

- Revised winter plan developed following Winter 2015 experiences
- Significantly more, modern equipment now available to combat heavy snowfall
- Improved coordination of activities across the organization
- 'Snow Manager' in place has led planning activity since May
- Simulation of severe weather events has been taking place since September
- Locomotive fleet in better condition to face winter conditions
- Improved communication protocols in place for crews & passengers
- Audits of layover facilities and key locations being conducted to ensure they are prepared

Update on July 11 FMCB approved performance schemes

	Item	Outcome	Current status	Action plan
1	Increase size of locomotive fleet from 81 to 90	Improved locomotive availability	Operative fleet currently 90 of which 5 are scheduled for upgrade program, and 2 MPIs are continuously on reliability improvement programs	Increase % of fleet in revenue service through bringing 'long term hold' locomotives back into service. Further short term plan to increase availability. Benefits delivered through 2017
2	Legacy loco upgrade program	Improved condition of legacy fleet, improved fleet size	Upgrade program being delivered to plan, materials & tooling on order, first locomotive overhaul starts February 2017	First locomotive upgrade starts Feb2017, materials on order, staff employed.
3	Increase size of coach fleet from 408 to 420	Additional coaches in service	Operative fleet is at 420, high volume of coaches stopped for 4 year inspections	Operative fleet in place, benefits delivered through short term action plan, improvements from December 2016
4	Increased staffing to support items 1,2 & 3	Enhanced maintenance & repair capability, 30% increase in productive capability at main Mechanical depot	85 new roles created and filled (recruiting started prior to FMCB action). Training in progress, all training completed January 2017	Continue to deliver as per plan, increased productive capacity delivered from December 16, full productivity (+30%) by March 2017

November 21st Schedule Change – Information Plan

Phase 1: Raise passenger awareness (10/26 - 10/31)

- New schedules published on MBTA's website
- Plan presented to FMCB prior to public sessions
- Station announcements (launch date + promote mbta.com)
- On board announcements (launch date + promote mbta.com)
- LED sign announcements
- Rail Mail with link to all schedules
- T alert announcing the release of new schedules

Phase 2: Hand out schedules to 100% of passengers the week prior (10/31 – 11/16)

- Rail Mail announcing the Handout Blitz
- "Meet the managers"
- Handout "Blitz" in Boston stations

Phase 3: 11/21 onwards

- T Alert on day 1
- Schedules available on all mobile apps