



Improving access
(or how to get something from nothing)

Gordon Williams

We are Europe's premier railroad



Source: European Commission Rail Study, March 2013

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The case for change



The case for change

Targeting a State of Good Repair

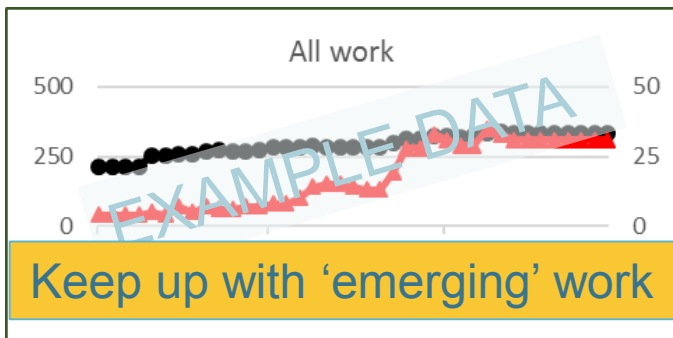
ZERO E D



Making the case: reducing 'backlog'



Making the case: emerging defects



Reducing the no of speed restrictions

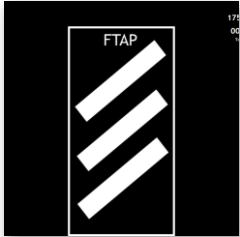


Aggregate passenger delay
1,150 hrs / day

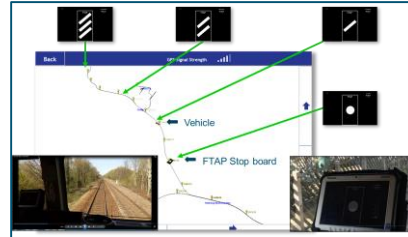
Experience from the United Kingdom



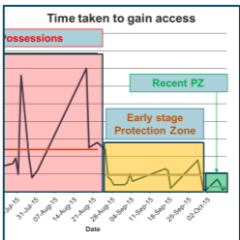
Driving Productivity and Safety



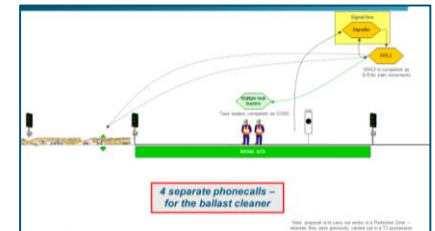
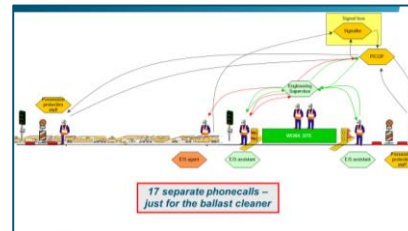
On-time equipment arrival



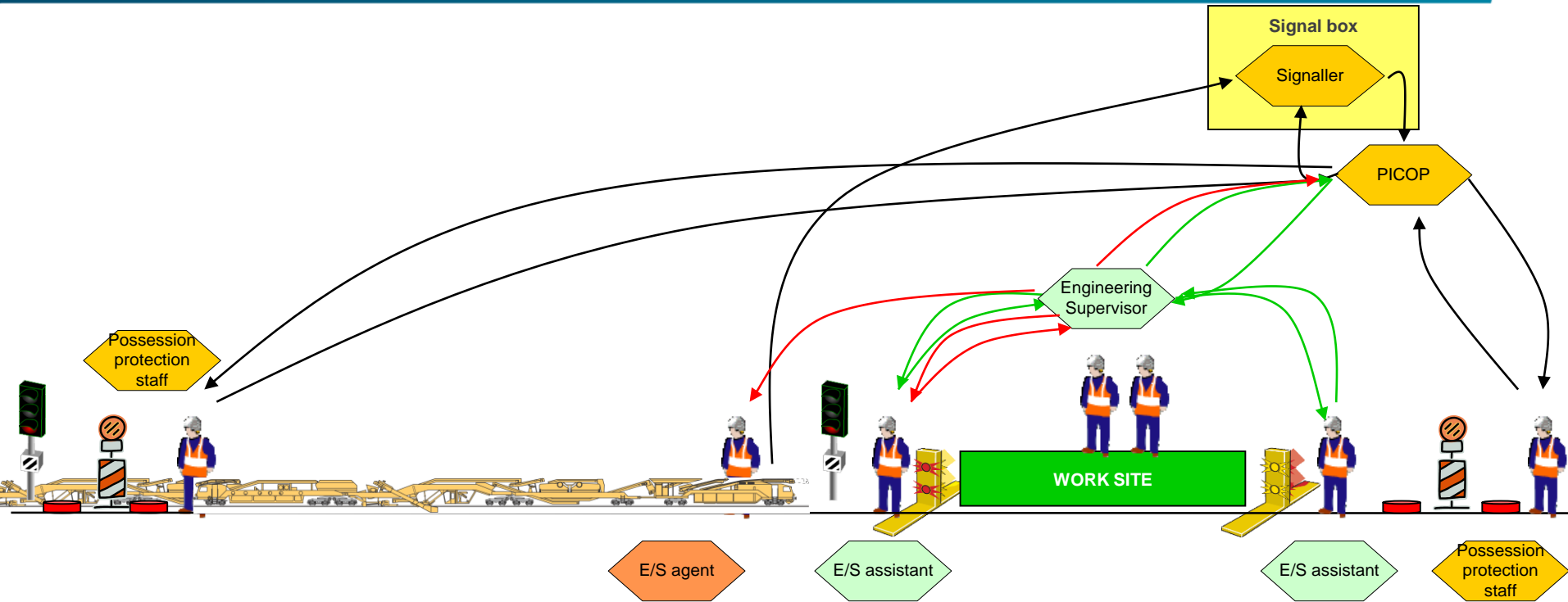
Accessing the RoW quickly: Technology solutions



Accessing the RoW quickly: Process and rules solutions

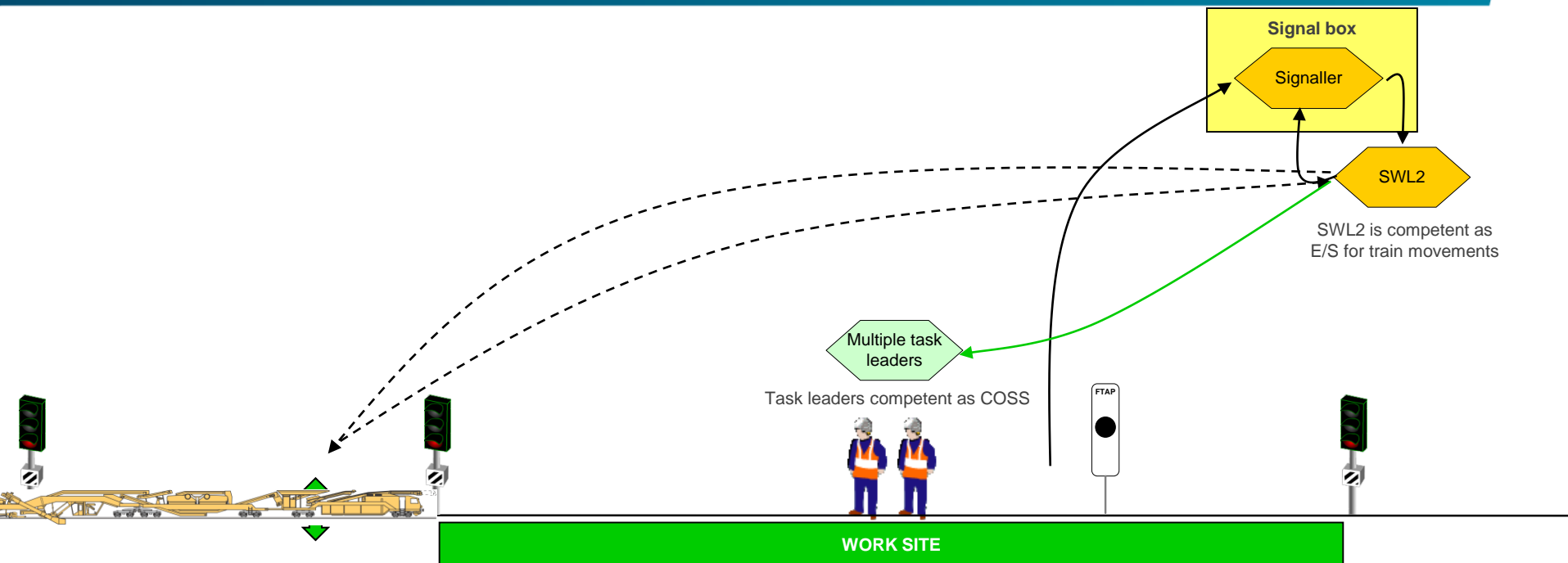


Original protection arrangements



**17 separate phonecalls –
just for the ballast cleaner**

New protection arrangements



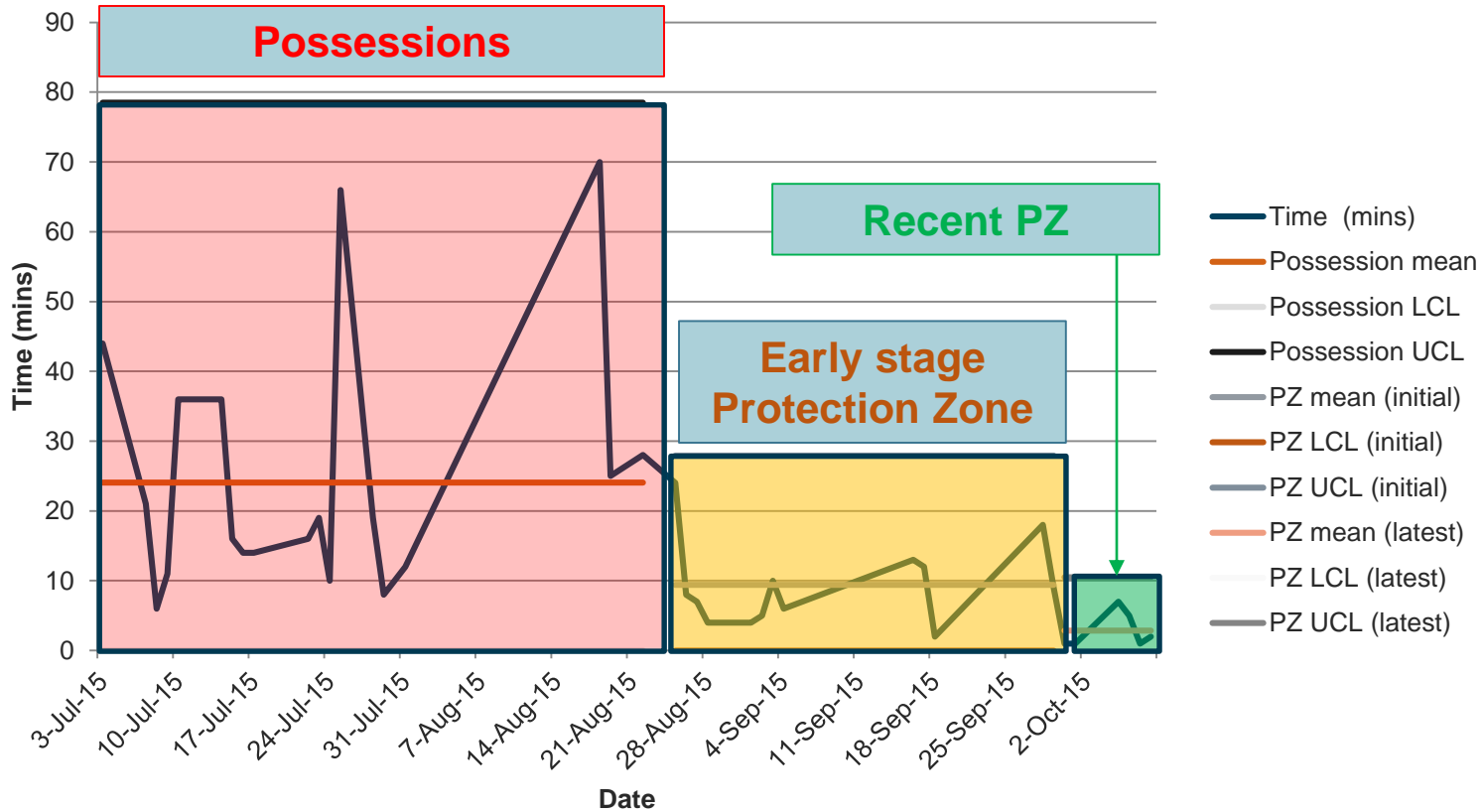
**4 separate phonecalls –
for the ballast cleaner**

Note: proposal is to carry out works in a Protection Zone – whereas they were previously carried out in a T3 possession

Possession v Protection Zone



Time taken to gain access

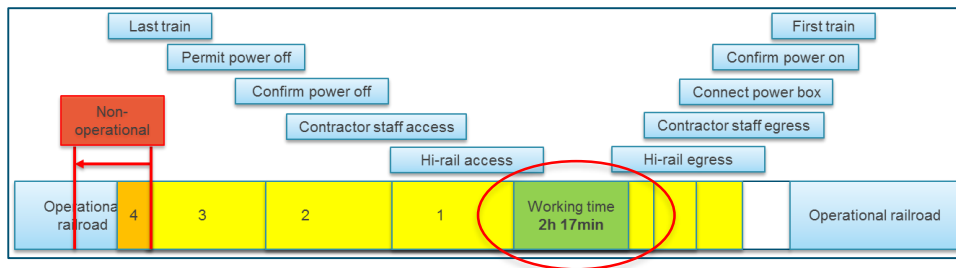


The opportunities

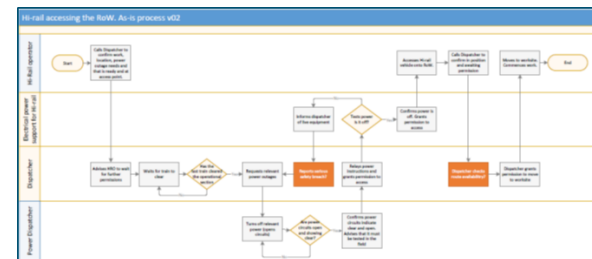


Increasing access from 3h36' to 5h12'

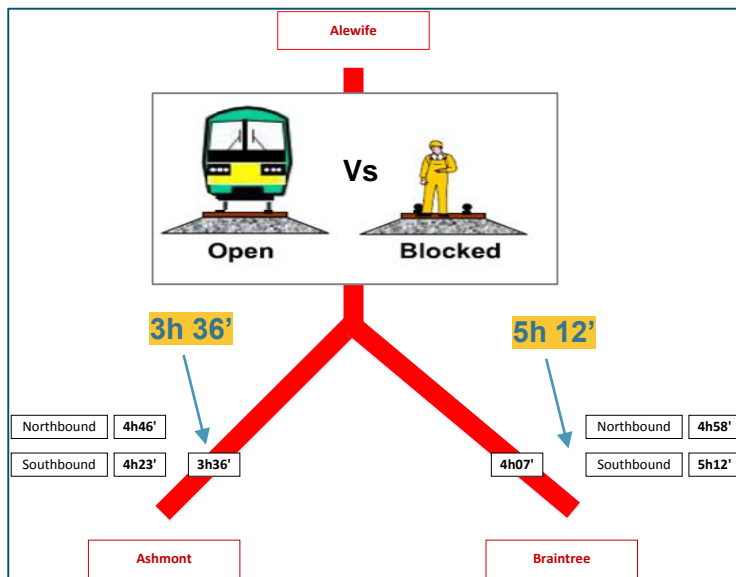
The opportunity: streamlining the process



The opportunity: changing the process



The opportunity: changing what we take



Use time between last and first train (locally).
Increase from 3h 36' to 5h 12'

Extend working time by 1h 30'

The opportunity: changing the protection



The safety case and trial strategy



MBTA is changing

From

Accessing RoW only when trains have stopped running

Operating with no Hirail on the line

Delivering work from 130am-5am

Delivering a modest level of renewals

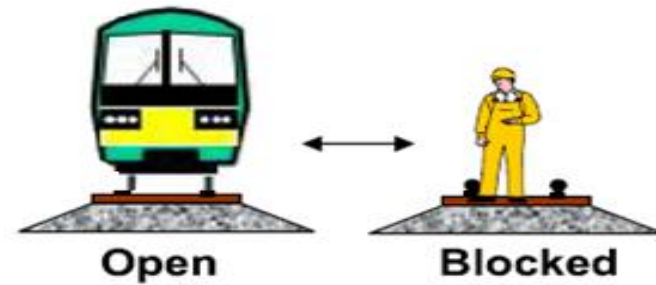
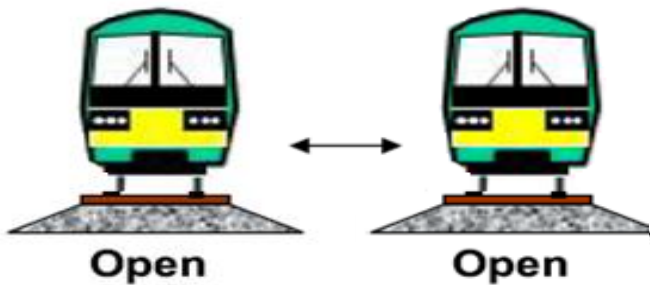
To

Working with the adjacent line open

Operating with Hirail vehicles on the adjacent line

Delivering work from 10pm-5am

Delivering a large renewal program



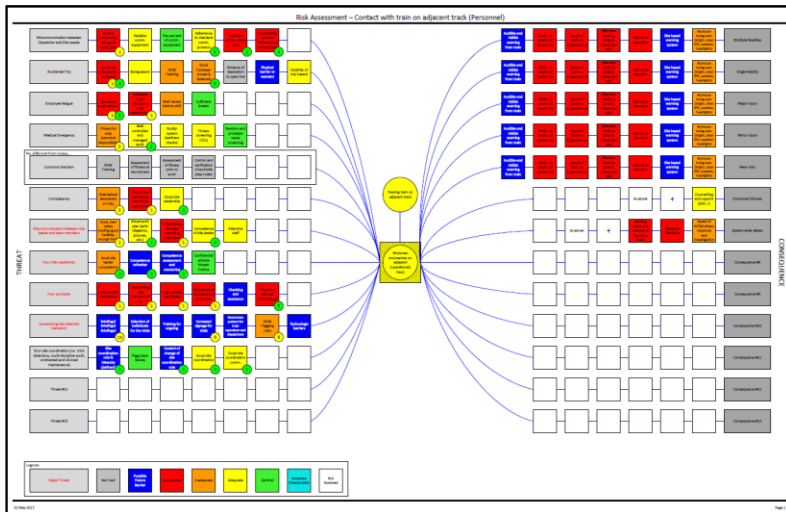
The consequential increase in risk needs to be controlled.

Increasing access from 3h36' to 5h12'

Agreed the protection



Assessed and mitigated the risk



Defined the trial strategy

1	No exposure
2	Protection only
3	People only
4	People & Hi-rail vehicles from storage track
5	People & Hi-rail vehicles from truck pad

Trialled it...

T

SINGLE SITE PROTOTYPE
 MBTA Safe Non-Operational Zone (SNOZ)
 working with an adjacent line open (ALO)
 Planning Tool

T

Plan ID Number:	TRIAL 4 - STAGE 1B
Line:	BRANTREE
Name of Location:	BRANTREE
Line of SNOZ:	Northbound
Start Landmark:	Route 3 Bridge
Finish Landmark:	Quincy Adams Station
Date:	11/04/2017
Organiser/workations:	NR
Work delivery:	NR
Planner:	David Davidson NRC

1a. Protection Diagram

1b. Power Section Map

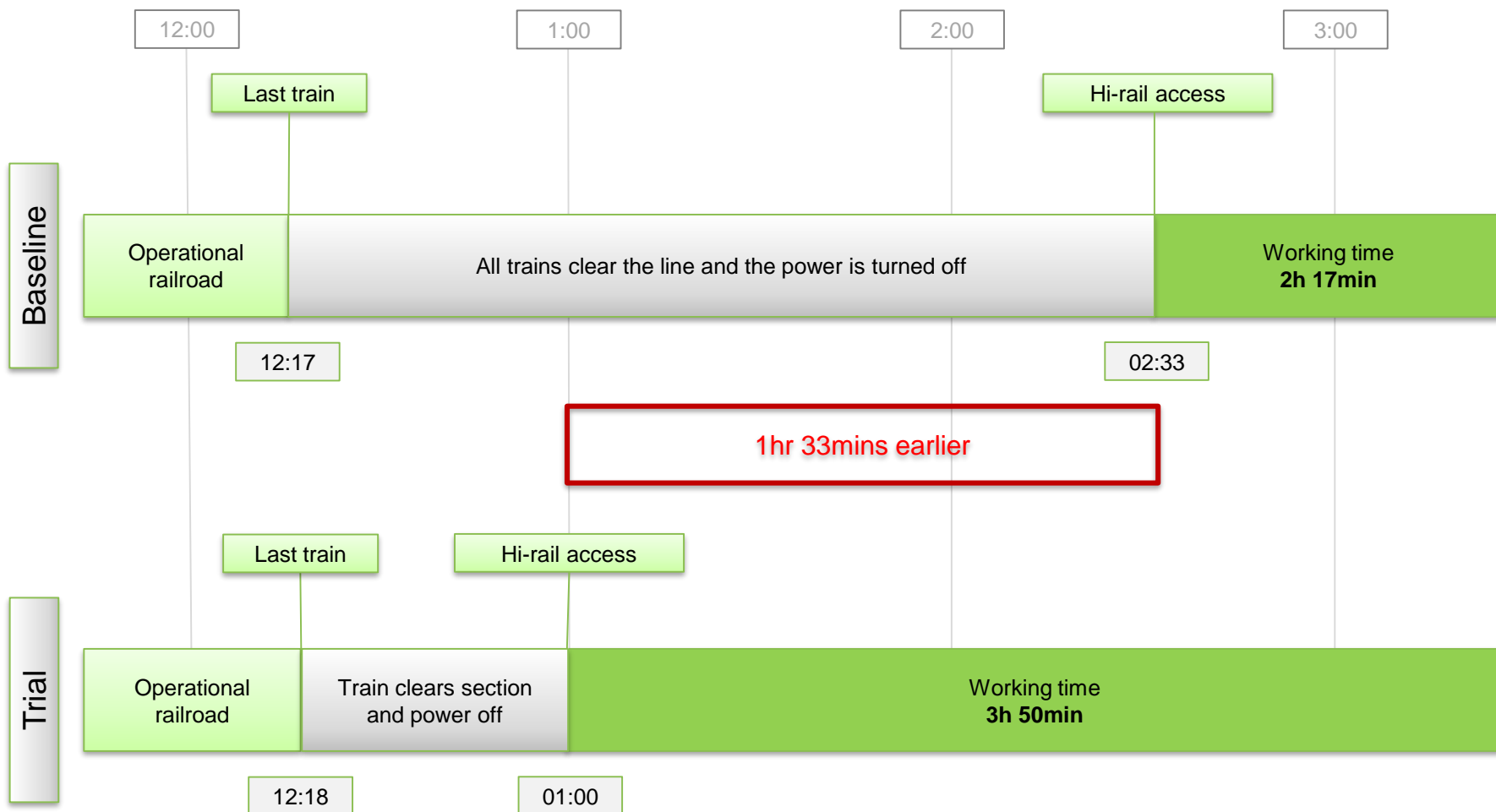
The results



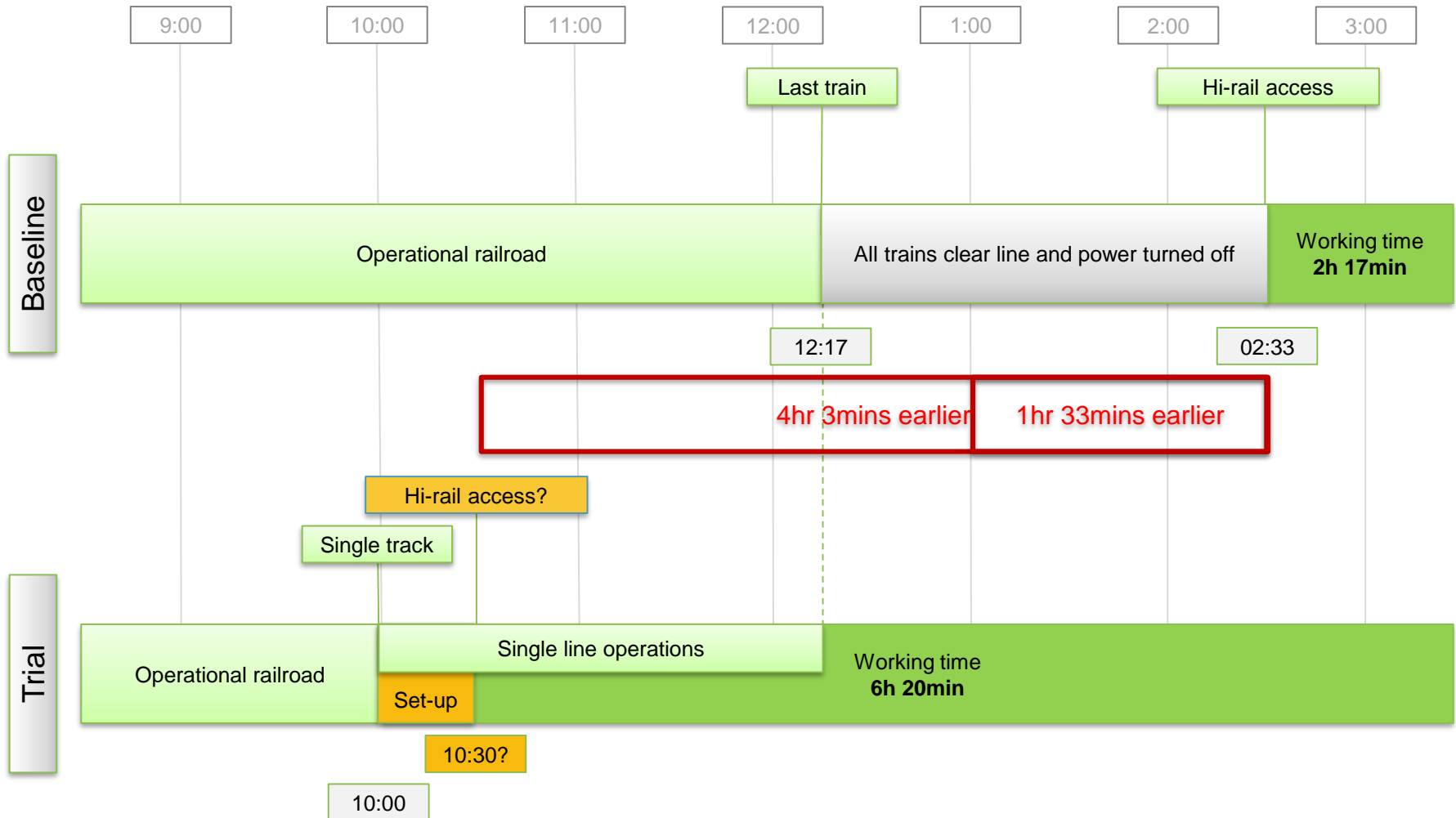
Trial success criteria and results

<i>Trial stage</i>	<i>Description</i>	<i>Aim</i>	<i>Success criteria</i>	<i>Results</i>	<i>Success?</i>
1	No exposure	To confirm the 3 rd rail turned off correctly.	No safety or operational incidents	No safety or operational incidents.	Yes
2	Protection only	To confirm that protection arrangements can be safely set up.		No safety or operational incidents.	Yes
3	People only	To confirm safety of personnel in protected area.		No safety or operational incidents.	Yes
4	People & Hi-rail (on rails)	To confirm safety of personnel and hi-rail in protected area.		No safety or operational incidents.	Yes
5	People & Hi-rail (at truck pad)	To confirm safety of personnel and hi-rail in protected area.		No safety or operational incidents.	Yes

The simplified results (Proof of concept - Dec 2017)



The simplified results (Single track – Feb 2018)



MBTA is changing

From

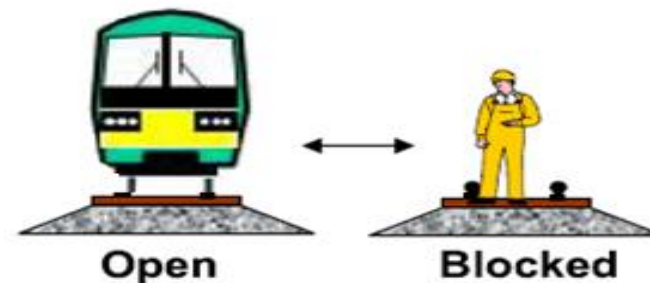
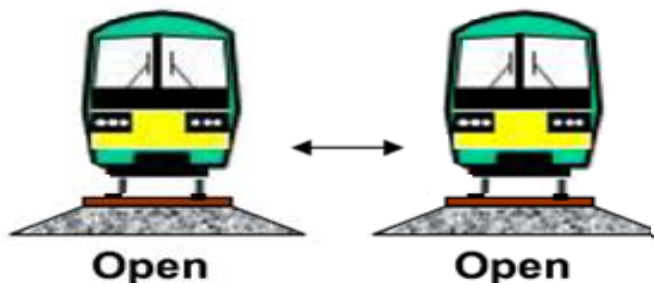
Delivering work from 130am-5am

Delivering a modest level of renewals

To

Delivering work from 10pm-5am

Delivering a large renewal program



To strengthen risk controls we are now rolling out *site leadership* training and *safety critical communications* training. Then 'live' trials until it becomes business as usual.

Critical to success



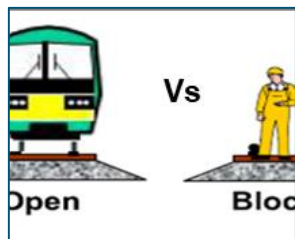
Critical to success



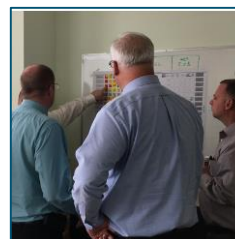
Having a need



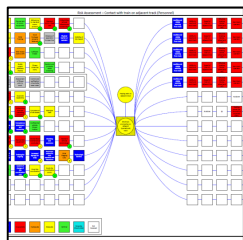
Motivated, honest leadership



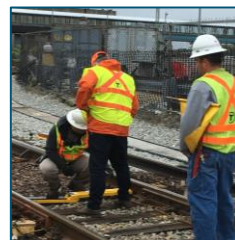
Agreeing a vision



A willingness to challenge, learn and change

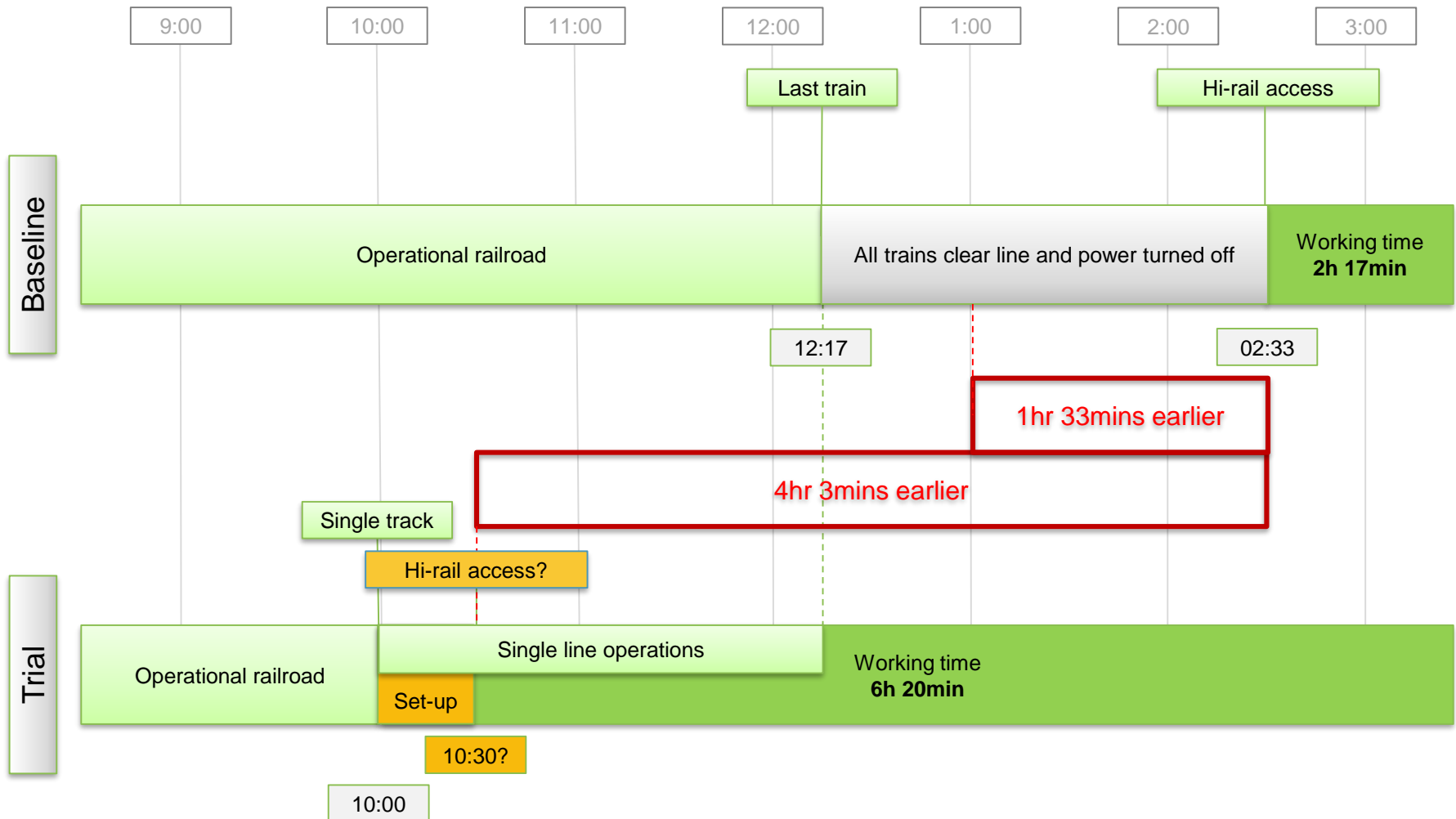


A measured approach to managing the risk



Considering the people, process and the technology

The simplified results



Thank you

