

Planner Scorecards

21/07/2022

What is the Scope ? (Roadside Initially)

- Create a planner scorecard which enables visibility on what is happening at Roster Post out to its final position at D-1.
- Create visibility of what a planner influences between Roster Post Out and D-1.
- Create Cost Visibility of how much it costs to plan a planner area, and the cost impacts associated to over and under on hours.
- Visibility to be at Planner Area / Region / Cluster Size

Definitions

- The following definitions are assumptions I've made and are open to change.
- Organic moves are changes in sickness, leave and other. (This will help in looking at Impacts)
- Requirement changes come from the changes in Alex's "Uplifted and Rounded" metric.
- Planner moves (add) are changes in, T1POU, T2POU, WKENDINC, PPC and BANK.
- Planner moves (sub) are changes in training.
- Planner moves in/out are defined as the changes in duty that are not changes organic or training changes.
- Unders hours are charged at £150 and overs are charged at an extra £11 per hour.
- Superflex are included in the average cost per hour metrics.
- No Action Mape - Removal of Overtime Hours, add back in Training Hours, remove any Duty Moves, Remove Uplifted Hours, this results in a base position removing any changes.

SQL Code

A Single Horizon

Main Body

```
ALTER View [dbo].[vw_MART_Planner_Scorecard] AS
```

```
WITH Initial AS (select
    [Date Diff],
    [Date Target],
    [Date],
    Cluster,
    Region,
    [Hours Req],
    [Uplifted Hours],
    DUTY,
-- T1POU + T2POU + WKENDINC as OVERTIME,
    T1POU,
    T2POU,
    WKENDINC,
    PPC,
    BANK,
    SICKNESS,
    TRAINING,
    OTHER,
    [Total Hours],
    [Total Leave],
    [Hours Position],
    [SFDUTY Hours],
    [SFSICK Hours],
    [SFTRAIN Hours],
    [SFOTHER Hours],
    [Total Hours Inc SF],
    [Total Leave Inc SF],
    [Hours Position Inc SF] ,
    RANK() OVER (PARTITION BY [Date], Cluster ORDER BY [Date Diff]) AS [RANK],
    CASE
        WHEN [Date] >= '2022-03-12' AND [Date]<= '2022-04-08' THEN '2022-03-03'
        WHEN [Date] >= '2022-04-08' AND [Date]<= '2022-05-06' THEN '2022-03-31'
        WHEN [Date] >= '2022-05-07' AND [Date]<= '2022-05-27' THEN '2022-04-28'
        WHEN [Date] >= '2022-05-28' AND [Date]<= '2022-07-01' THEN '2022-05-19'
        WHEN [Date] >= '2022-07-02' AND [Date]<= '2022-07-29' THEN '2022-06-23'
        WHEN [Date] >= '2022-04-08' AND [Date]<= '2022-09-02' THEN '2022-07-21'
        WHEN [Date] >= '2022-04-08' AND [Date]<= '2022-09-28' THEN '2022-08-25'
        WHEN [Date] >= '2022-04-08' AND [Date]<= '2022-10-28' THEN '2022-09-22'
        WHEN [Date] >= '2022-04-08' AND [Date]<= '2022-12-02' THEN '2022-10-20'
        WHEN [Date] >= '2022-04-08' AND [Date]<= '2023-01-06' THEN '2022-11-24'
        WHEN [Date] >= '2022-04-08' AND [Date]<= '2023-02-03' THEN '2022-12-15'
        WHEN [Date] >= '2022-04-08' AND [Date]<= '2023-03-10' THEN '2023-01-26'
        ELSE '2022-02-16'
    END AS "Roster Post Out Date"
from db_Insight_DemandForecasting.dbo.[MART_Hours_Bridge_Roster_Build]
where [Date] >= '2022-04-01'
AND [Hours Req] is NOT Null
and [Date]<= DATEADD(day, -1, CAST(GETDATE() AS date))
),
```

```
, ONE.[Total Leave] + ONE.[SICKNESS] + ONE.[OTHER] - I.[Total Leave] - I.[SICKNESS] - I.[OTHER] AS "D-1 Organic Moves"
, CASE
    WHEN ONE.[DUTY] - I.[DUTY] >= 0 THEN ONE.[DUTY] - I.[DUTY] - (ONE.[SICKNESS] + ONE.[Total Leave] + ONE.[OTHER] - I.[SICKNESS] - I.[OTHER] - I.[Total Leave]) - (ONE.[TRAINING] - I.[TRAINING])
    ELSE ONE.[DUTY] - I.[DUTY] + (ONE.[SICKNESS] + ONE.[Total Leave] + ONE.[OTHER] - I.[SICKNESS] - I.[OTHER] - I.[Total Leave]) + (ONE.[TRAINING] - I.[TRAINING])
END AS "D-1 Planner Moves In/out"
, TH.[Uplifted Hours] - I.[Uplifted Hours] AS "D-3 Demand Change"
, TH.[DUTY] - I.[DUTY] AS "D-3 DUTY Change"
, TH.[SFDUTY Hours] - I.[SFDUTY Hours] AS "D-3 SF DUTY Change"
, TH.[SFSICK Hours] + TH.[Total Leave Inc SF] + TH.[SFOTHER Hours] - I.[SFSICK Hours] - I.[SFOTHER Hours] - I.[Total Leave Inc SF] AS "D-3 SF Organic Moves"
, TH.[SFTRAIN Hours] - I.[SFTRAIN Hours] AS "D-3 SF Planner Sub"
, TH.T1POU + TH.T2POU + TH.[PPC] + TH.[BANK] - I.T1POU - I.T2POU - I.WKENDINC - I.[PPC] - I.[BANK] AS "D-3 Planner Moves Add"
, TH.[TRAINING] - I.[TRAINING] AS "D-3 Planner Moves Sub"
, TH.[Total Leave] + TH.[SICKNESS] + TH.[OTHER] - I.[Total Leave] - I.[SICKNESS] - I.[OTHER] AS "D-3 Organic Moves"
, CASE
    WHEN TH.[DUTY] - I.[DUTY] >= 0 THEN TH.[DUTY] - I.[DUTY] - (TH.[SICKNESS] + TH.[Total Leave] + TH.[OTHER] - I.[SICKNESS] - I.[OTHER] - I.[Total Leave]) - (TH.[TRAINING] - I.[TRAINING])
    ELSE TH.[DUTY] - I.[DUTY] + (TH.[SICKNESS] + TH.[Total Leave] + TH.[OTHER] - I.[SICKNESS] - I.[OTHER] - I.[Total Leave]) + (TH.[TRAINING] - I.[TRAINING])
END AS "D-3 Planner Moves In/out"
, SE.[Uplifted Hours] - I.[Uplifted Hours] AS "D-7 Demand Change"
, SE.[DUTY] - I.[DUTY] AS "D-7 DUTY Change"
, SE.[SFDUTY Hours] - I.[SFDUTY Hours] AS "D-7 SF DUTY Change"
, SE.[SFSICK Hours] + SE.[Total Leave Inc SF] + SE.[SFOTHER Hours] - I.[SFSICK Hours] - I.[SFOTHER Hours] - I.[Total Leave Inc SF] AS "D-7 SF Organic Moves"
, SE.[SFTRAIN Hours] - I.[SFTRAIN Hours] AS "D-7 SF Planner Sub"
, SE.T1POU + SE.T2POU + SE.WKENDINC + SE.[PPC] + SE.[BANK] - I.T1POU - I.T2POU - I.WKENDINC - I.[PPC] - I.[BANK] AS "D-7 Planner Moves Add"
, SE.[TRAINING] - I.[TRAINING] AS "D-7 Planner Moves Sub"
, SE.[Total Leave] + SE.[SICKNESS] + SE.[OTHER] - I.[Total Leave] - I.[SICKNESS] - I.[OTHER] AS "D-7 Organic Moves"
, CASE
    WHEN SE.[DUTY] - I.[DUTY] >= 0 THEN SE.[DUTY] - I.[DUTY] - (SE.[SICKNESS] + SE.[Total Leave] + SE.[OTHER] - I.[SICKNESS] - I.[OTHER] - I.[Total Leave]) - (SE.[TRAINING] - I.[TRAINING])
    ELSE SE.[DUTY] - I.[DUTY] + (SE.[SICKNESS] + SE.[Total Leave] + SE.[OTHER] - I.[SICKNESS] - I.[OTHER] - I.[Total Leave]) + (SE.[TRAINING] - I.[TRAINING])
END AS "D-7 Planner Moves In/out"
, CASE
    WHEN I.[Uplifted Hours] > 0 THEN I.[Total Hours Inc SF]/ I.[Uplifted Hours] -1
    ELSE 1000 END AS "Original Variance"
, CASE
    WHEN ONE.[Uplifted Hours] > 0 THEN ONE.[Total Hours Inc SF]/ ONE.[Uplifted Hours] -1
    ELSE 1000 END AS "D-1 Variance"
, CASE
    WHEN TH.[Uplifted Hours]>0 THEN TH.[Total Hours Inc SF]/ TH.[Uplifted Hours] - 1
    ELSE 1000 END AS "D-3 Variance"
, CASE
    WHEN SE.[Uplifted Hours] >0 THEN (SE.[Total Hours Inc SF]/ SE.[Uplifted Hours]) -1
    ELSE 1000 END AS "D-7 Variance"
--INTO [db_Insight_DemandForecasting].[dbo].[MART_Planner_Scorecard]
FROM Initial_one I
INNER JOIN D_minus_one ONE ON I.Date = ONE.[Date] AND I.Cluster = ONE.[Cluster]
INNER JOIN D_minus_three TH ON I.Date = TH.[Date] AND I.Cluster = TH.[Cluster]
INNER JOIN D_minus_seven SE ON I.Date = SE.[Date] AND I.Cluster = SE.[Cluster]
```

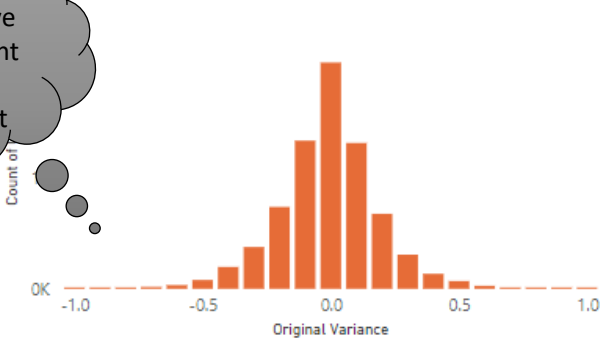
Original variance vs D-1 variance

Daily by Cluster Movement

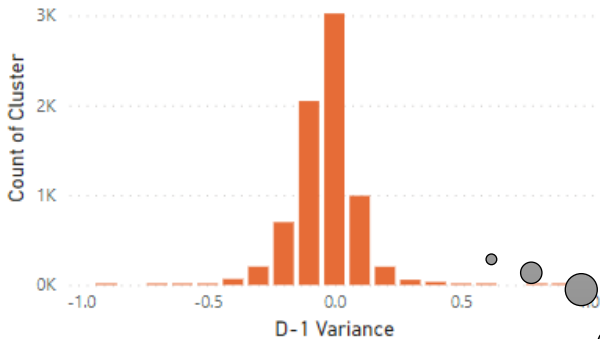
Filter Locations



Bell Curve Original Variance (Cluster Count)



Bell Curve D-1 Variance (Cluster Count)



Overall Movement



Date	Planner Area	Roster Post Out MAPE	D-1 MAPE
01 April 2022	Eastern 1		
01 April 2022	Eastern 2		
01 April 2022	Eastern 3		
01 April 2022	NIRE		
01 April 2022	Northern 1		
01 April 2022	Northern 2		
01 April 2022	Northern 3		
01 April 2022	Southern 1		
01 April 2022	Southern 2		
01 April 2022	Southern 3		
01 April 2022	Western 1		
01 April 2022	Western 2		
01 April 2022	Western 3		
02 April 2022	Eastern 1		
02 April 2022	Eastern 2		
02 April 2022	Eastern 3		
02 April 2022	NIRE		
02 April 2022	Northern 1		
02 April 2022	Northern 2		
02 April 2022	Northern 3		
02 April 2022	Southern 1		
02 April 2022	Southern 2		
02 April 2022	Southern 3		
02 April 2022	Western 1		
02 April 2022	Western 2		
02 April 2022	Western 3		
03 April 2022	Eastern 1		
03 April 2022	Eastern 2		
03 April 2022	Eastern 3		
03 April 2022	NIRE		
03 April 2022	Northern 1		
Total			

Planner Area

- ☐ Eastern 1
- ☐ Eastern 2
- ☐ Eastern 3
- ☐ NIRE
- ☐ Northern 1
- ☐ Northern 2
- ☐ Northern 3
- ☐ Southern 1
- ☐ Southern 2
- ☐ Southern 3
- ☐ Western 1
- ☐ Western 2
- ☐ Western 3

Region

- ☐ NIRE: NIRE
- ☐ Region 1: Northern
- ☐ Region 2: Eastern
- ☐ Region 3: Western
- ☐ Region 4: Southern

Size

- ☒ Big
- ☒ Medium
- ☐ Small

Date

- ☐ Qtr 1
- ☒ Qtr 2
- ☐ Qtr 3
- ☐ Qtr 4

Mobile View



Roster Post Out MAPE

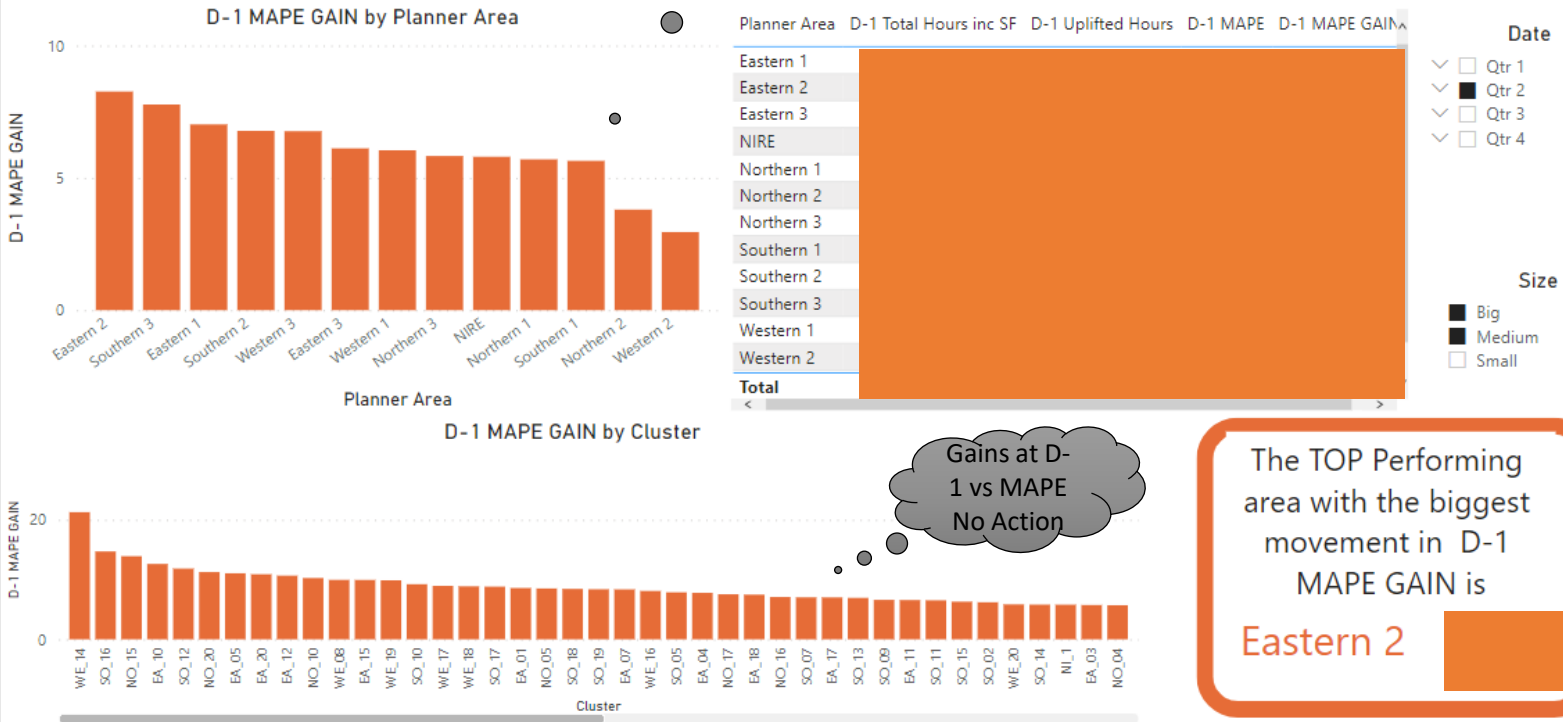
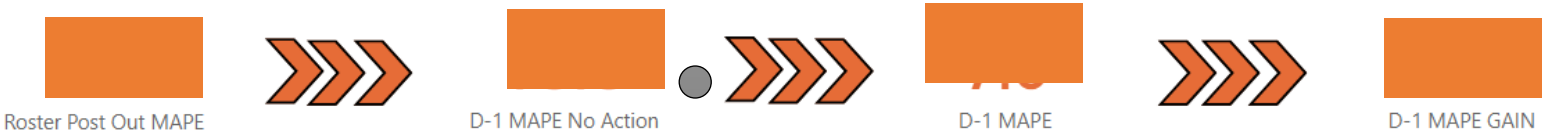


D-1 MAPE

Bell Curve Original Variance (Cluster Count)

D-1 MAPE gain

Gains at D-1
vs MAPE No
Action

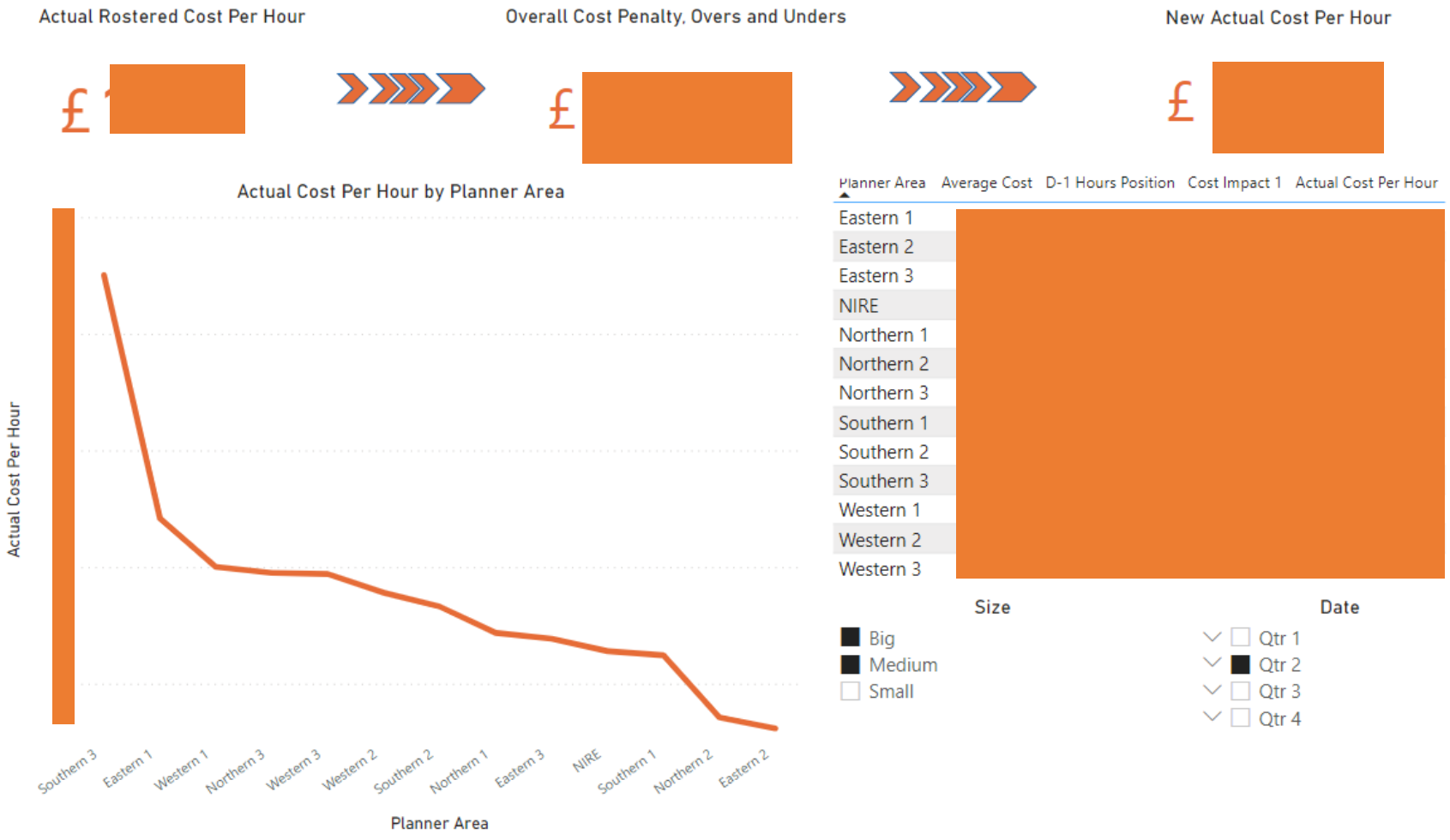


Mobile View

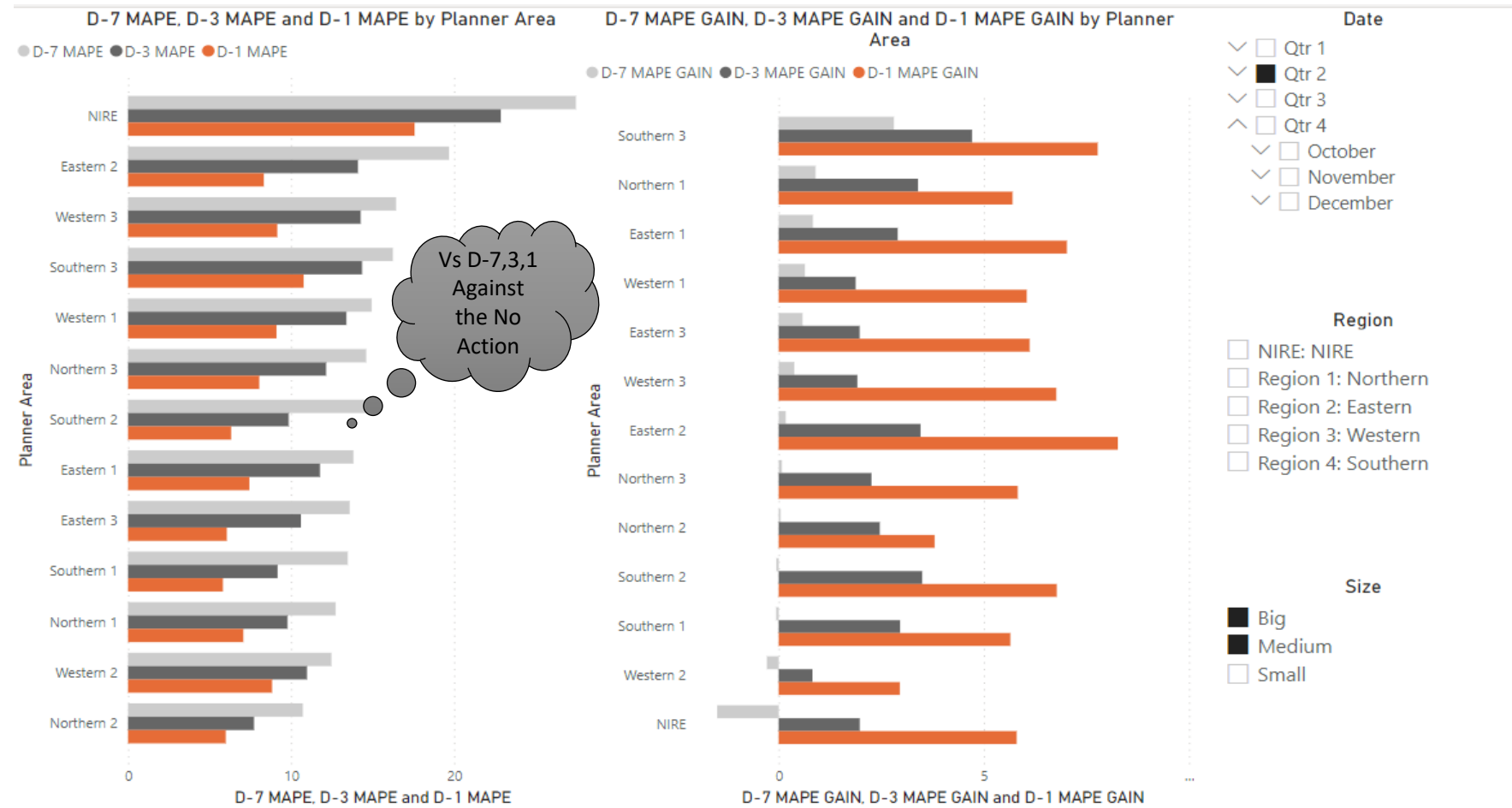
The TOP Performing area with the biggest movement in D-1 MAPE GAIN is Eastern 2



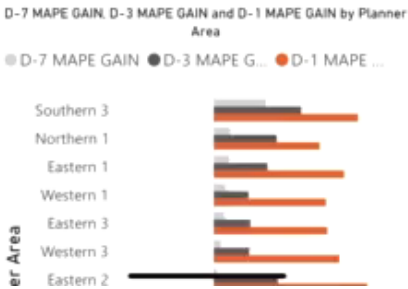
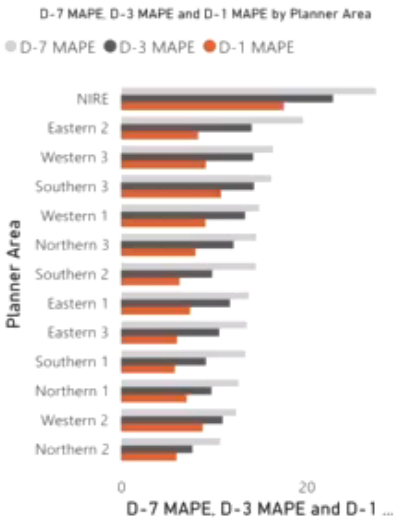
Cost impact per hour



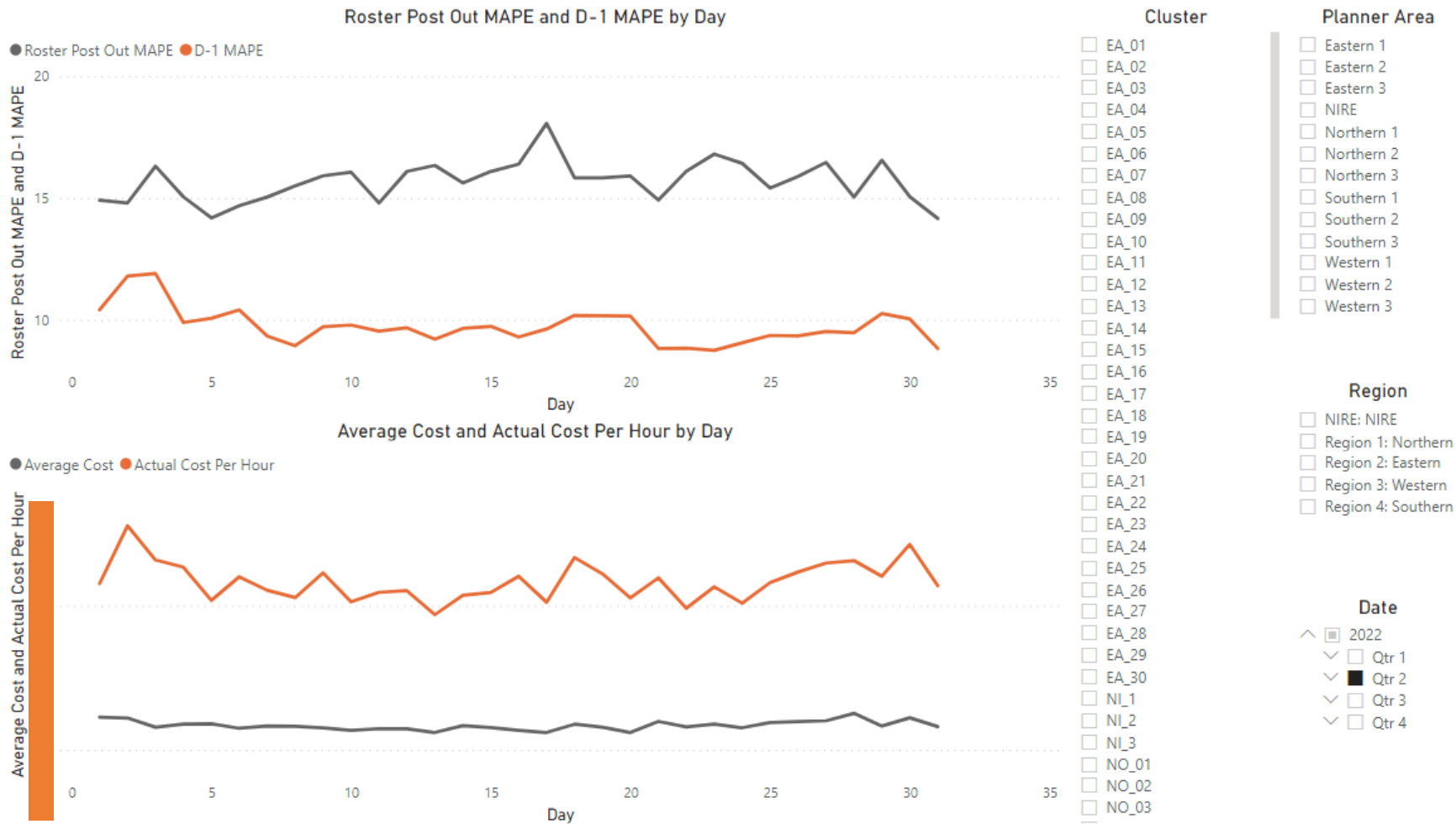
MAPE vs MAPE gain



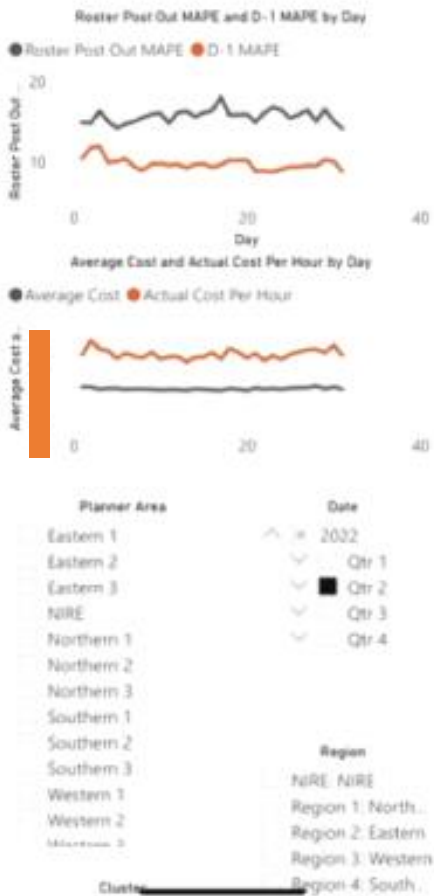
Mobile View



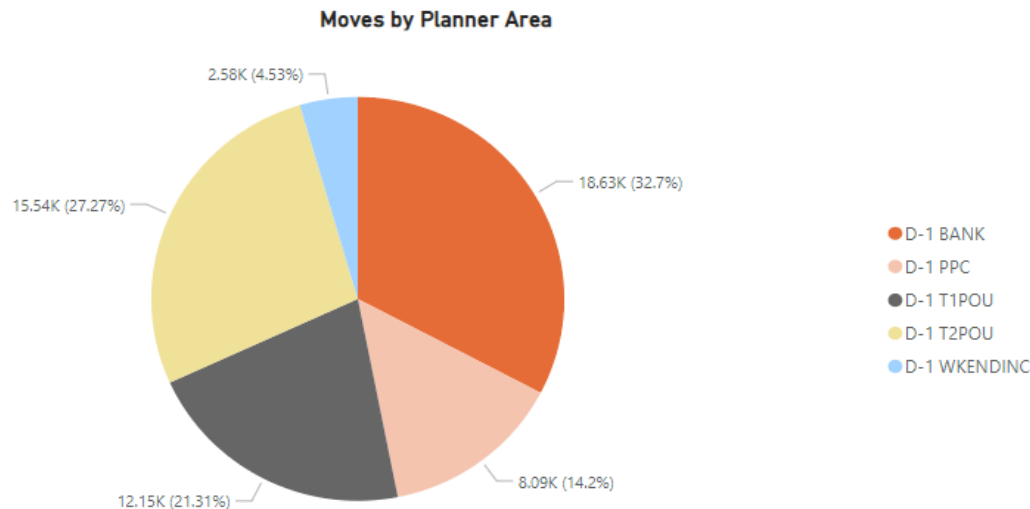
Long term trends



Mobile View



Planner moves in/out



Planner Area	abs planner moves in out	D-1 BANK	D-1 PPC	D-1 T1POU	D-1 T2POU	D-1 WKENDINC
Northern 2						
Northern 3						
Eastern 3						
Southern 1						
Eastern 2						
Northern 1						
Western 1						
Western 2						
Eastern 1						
Western 3						
Southern 2						
Southern 3						
NIRE						
Total						

Date

2022

Qtr 1

Qtr 2

Qtr 3

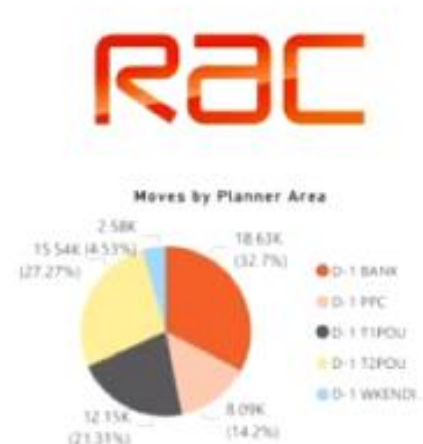
Qtr 4

- Planner Area
- ☐ Eastern 1
- ☐ Eastern 2
- ☐ Eastern 3
- ☐ NIRE
- ☐ Northern 1
- ☐ Northern 2
- ☐ Northern 3
- ☐ Southern 1
- ☐ Southern 2
- ☐ Southern 3
- ☐ Western 1
- ☐ Western 2
- ☐ Western 3

Cluster

☐ EA_01☐ EA_02☐ EA_03☐ EA_04☐ EA_05☐ EA_06☐ EA_07☐ EA_08☐ EA_09☐ EA_10☐ EA_11☐ EA_12☐ EA_13☐ EA_14☐ EA_15

Mobile View



Planner Area	abs planner moves in out	D-1 BANK
Northern 2		
Northern 3		
Eastern 3		
Southern 1		
Eastern 2		
Northern 1		
Western 1		
Western 2		
Eastern 1		
Western 3		
Southern 2		
Southern 3		
NIRE		
Total		

-
- **Bell Curves:** this page displays the original variance and the D-1 variance by planner area. It also displays the roster post out MAPE and D-1 MAPE.
 - **MAPE Gains:** to view the D-1 MAPE gains for each planner area and for each cluster. This also shows the D-1 MAPE with no action (if nothing was changed).
 - **Costs:** this page shows a rundown of the costs per hour by planner area, showing the effects of overs and unders (with penalty costs) to produce the actual costs per hour.
 - **MAPE Movements:** a clearer view for D-7,D-3 and D-1 MAPE and MAPE gain by planner area.
 - **Trends:** long term trends by day for roster post out and D-1 MAPE as well as the average cost and the actual cost per hour.
 - **Planner Movements:** this displays the moves in/out per planner area and by cluster.
 - The data will refresh every **Monday** initially. You'll be informed when it becomes daily. Refresh the visuals by clicking on the refresh button on the right side of the screen.

Review

- Please feedback any concerns or changes that may be required and we will look to complete these within the Phase 2 developments.
- please feel free to contact us if you require any help, or any major issues / discrepancies.