Simulation Engine

Monday, November 12, 2018 8:40 PM

To code:

1. NA handling and special character treatment post all input files
2. Engine for the availability and Inventory DOI to script
3. Demand tallying scripts

Observations:
SLOC-Material: 409800
PLANT-SLOC-Material: 409832
Sum of all demand quantities: 8924832

1. Check on if all dataset base is a good proposition to use for comparison
2. Rounding offs to discuss
3. Other data treatments to validate with Likeati

Data required/Discussion:

1. Is the part number in new demand file ITC transformed ? Yes
2. Is the forecast at lgort or plgort level ? plgort
3. Moving Average results on SLOC-Material level: Shared on aggregate, tomorrow will share for the rankwise
4. Which field is SLOC in the SALES file and which is amount of sales

Notes:

1. Demand data needs transformation through Master file
2. Check for NA's and whitespaces in the new files
3. Sales data doesn't have march data
4. List down checks needed for any file that is being shared by UT for the simulation purpose

Filters in the demand data fed to forecast:

1. That has no plant
2. Quantity demand <1
3. Quantity demand>1,000,000
4. That has no match in master depo

To write:

1. DOI calculations: need to validate with pak Ali on this

Ran simulation with below results:
DoI went down from 26 to 12 which doesn't seem realistic

Forecast Engine

Thursday, November 15, 2018 11:06 AM

1. Setup to remove NA's and whitespaces post each file input
2. Remove lines with NA Plant(SLOC)-Material values
3. Check on logging etc to be proper and remove overwrites in logging

Simulation results

Wednesday, December 5, 2018 9:43 AM

Based on production ASL:

Stock outs:-

```
> sum(STCKOUT2$JanSO)/sum(DMDBaseOUT$JanCalls)
[1] 0.8002143
> sum(STCKOUT2$FebSO)/sum(DMDBaseOUT$FebCalls)
[1] 0.936225
> sum(STCKOUT2$MarSO)/sum(DMDBaseOUT$MarCalls)
[1] 0.9436861
> sum(STCKOUT2$AprSO)/sum(DMDBaseOUT$AprCalls)
[1] 0.8975136
> sum(STCKOUT2$MaySO)/sum(DMDBaseOUT$MayCalls)
[1] 0.8995628
> sum(STCKOUT2$JunSO)/sum(DMDBaseOUT$JunCalls)
[1] 0.8701366
> sum(STCKOUT2$JulSO)/sum(DMDBaseOUT$JulCalls)
[1] 0.8166865
> sum(STCKOUT2$AugSO)/sum(DMDBaseOUT$AugCalls)
[1] 0.7825552
```

86.875 %

Avg DoI = 25.84

Based on new engine ASL:

```
> sum(STCKOUT2$JanSO)/sum(DMDBaseOUT$JanCalls)
[1] 0.7810033
> sum(STCKOUT2$FebSO)/sum(DMDBaseOUT$FebCalls)
[1] 0.9264597
> sum(STCKOUT2$MarSO)/sum(DMDBaseOUT$MarCalls)
[1] 0.9552857
> sum(STCKOUT2$AprSO)/sum(DMDBaseOUT$AprCalls)
[1] 0.9135515
> sum(STCKOUT2$MaySO)/sum(DMDBaseOUT$MayCalls)
[1] 0.9323008
> sum(STCKOUT2$JunSO)/sum(DMDBaseOUT$JunCalls)
[1] 0.9363818
> sum(STCKOUT2$JulSO)/sum(DMDBaseOUT$JulCalls)
[1] 0.9070001
> sum(STCKOUT2$AugSO)/sum(DMDBaseOUT$AugCalls)
[1] 0.9079516
```

90.75 %

Avg DoI = 15.44