

Planning & Scheduling Best Practices & Solutions

-3 Ways to Optimize your Maximo P&S

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PROMETHEUS GROUP



Agenda

- 3 Ways to Optimize P&S
 - Managing Resource Availability
 - Job Plan Reviews
 - PM Forecasting
 - *Examples Throughout*
- Review Results
- Poll the Audience
 - *Simply raise your hand to respond*

Managing Resource Availability

- How are you capturing resource exceptions?
 - Whiteboard
 - Excel
 - Outlook Calendar
 - Other?



JANUARY						
MON	TUE	WED	THU	FRI	SAT	SUN
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						



Managing Resource Availability

- What level of detail do you need?
 - Available to work or not
 - Vacation
 - Sick
 - Training
 - Jury Duty
 - Bereavement
 - Extra Time



Managing Resource Availability

- Repercussions of not capturing availability
 - 10 resources
 - 3 weeks of vacation
 - 1 week of training
 - 1 week of sick time
 - = 250 days (2000 hours) unaccounted for
 - Roughly 10% of a resources time
- Directly impacts P&S

- Customer – First Year of P&S
 - 5500+ Availability Exceptions

Job Plan Reviews – Why Perform Them?

- Compare planned vs actuals
- Review technician feedback
- They've never been reviewed and updated
- Change of staff
- Process changes
- Implementation of new software

Job Plan Reviews – Compare Estimates to Actuals


- Ask DBA to export pertinent data
- Use pivot tables, formulas, lookups, etc..
- Massage data in Excel
- Identify variances $> |X|\%$
 - e.g. |20%|
- Summarize data to be updated
- Round data appropriately

$$|x| = \begin{cases} x & \text{if } x \geq 0 \\ -x & \text{if } x < 0 \end{cases}$$

Job Plan Updates


- Manual updates
 - Revise Job Plans
 - Update Job Plans
 - Activate Job Plans
- MIF Update
- MX Loader
- Use of Other Tools

Revise Job Plan

 Enter a description for the revised Job Plan. Click OK when finished.

Job Plan: INS11200

Revision: 1

+ Revision Description: 

Example

- 26,000 Active PMs; 700 Active Job Plans
 - A type of PM (6 year) is referenced 1400 times
 - 433 times in one year
 - Roughly 5% of the overall PM work performed
 - Planned Hours = 1.5 hours
 - Average = 2 hours
- $433 \times .5 \text{ hours} = 216.5 \text{ hours}$
 - 27 man-days of unknowingly overscheduling

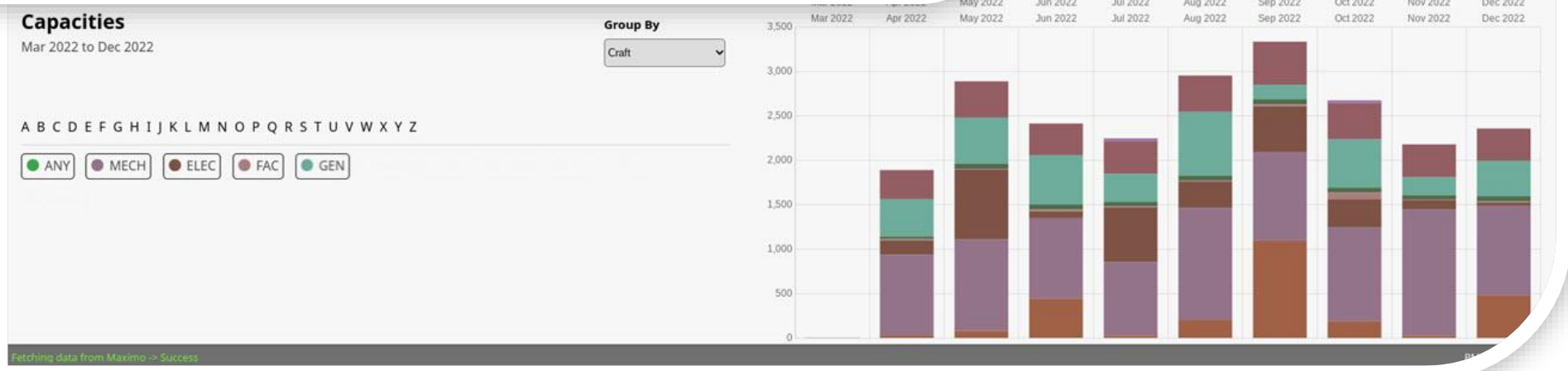
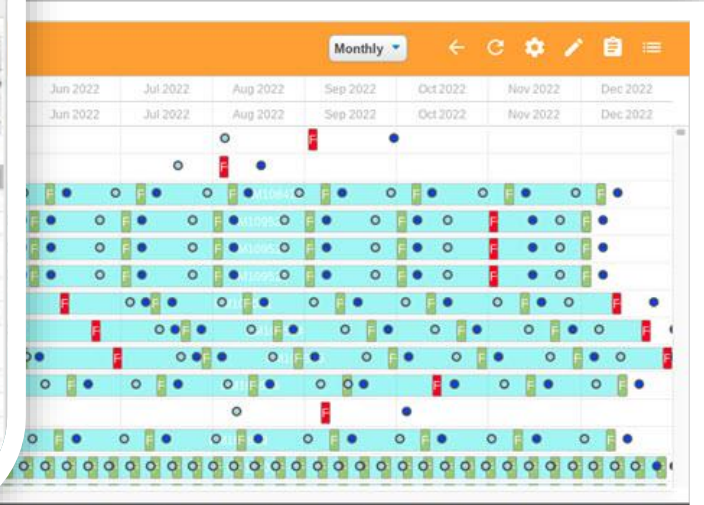
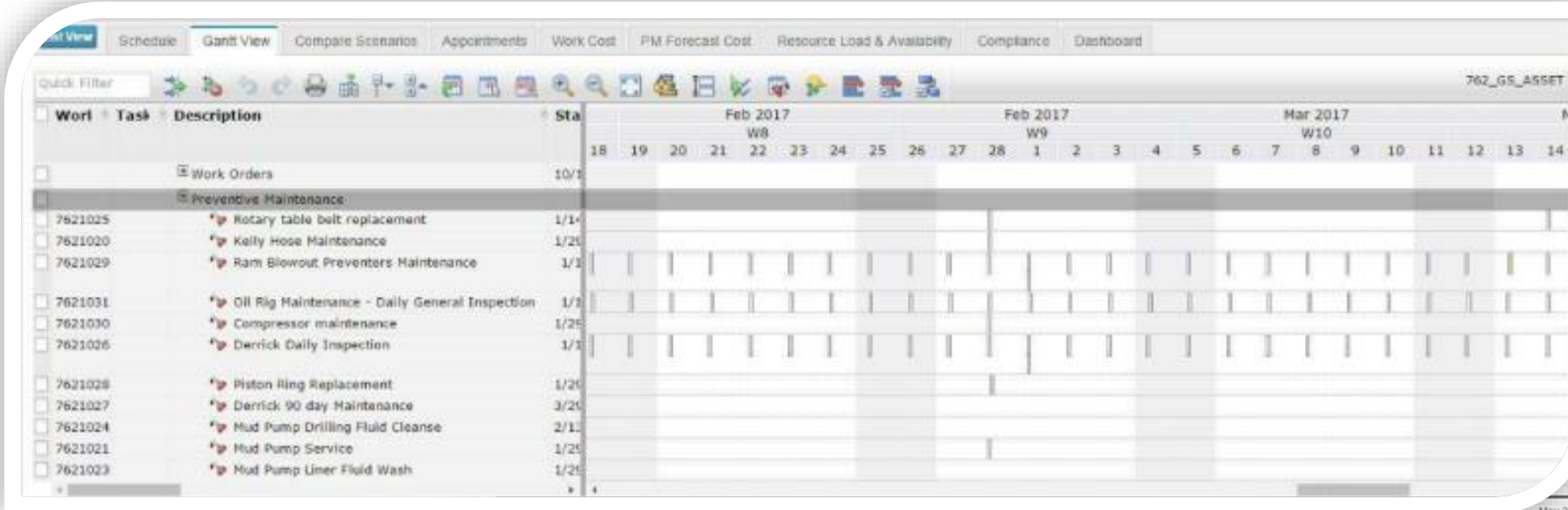
Why Use PM Forecasting?

- Future PM Visibility without generating WOs
- Resource Planning
- Cost of Preventive Maintenance
- Material Readiness
- Analysis of Data without PM Forecasting is very complex!

Forecasting Complexities

- PM Hierarchies
- PM Seasons
- Job Plan Sequencing
- Conditional Job Plans
- Meter Based PMs
- Lead Days
- Routes: Child WOs, Task WOs, Multi Asset Loc Cl
- Extended Dates
- Next Due Date vs. Last Completion Date
- Forecast New Dates
- Calendars / Shifts
- Availability Exceptions
- More...

Visualization Methods



What Are Your Results?

- Schedule Compliance ✓
- Healthy Backlog ✓
- Break-Ins/Break-Outs are low ✓

- We're doing good!



Step Back – Look at the Big Picture



Big Picture View

- Gross Available Hours
- Net Available Hours
- Total Unavailable Hours
- Total Workload
- Percent of Work Scheduled
- # of WOs Scheduled
- # of Scheduled PMs
- Backlog Hours
- # of Backlog WOs
- Schedule Compliance
- Schedule Effectiveness
- # Break-In WOs
- Break-In Hours
- # Break-Out WOs
- Break-Out Hours
- PM Compliance
- WOs Completed w/o Hours
- Actual Hours Charged
- Actual OT Hours Charged

Summary

- 3 Ways to Optimize P&S
 - Managing Resource Availability
 - Improves accuracy of P&S and PM Forecasting
 - Many Metrics are tied to capturing true Availability
 - Job Plan Reviews
 - Review Job Plans with the largest Est to Actual variations
 - Adjust Job Plans that are used most frequently
 - PM Forecasting
 - Level loading PMs will reduce work on Schedulers
 - Make informed decisions



