

Diamonds & Specialty Products Fertilizers

Work Planning & Execution



bhpbilliton

Planning Personnel

- Six MEO's at QFO
 - Ammonia / Granulation
 - Beneficiation / Phos Acid
 - Utilities
 - Electrical / Instrumentation
 - Materials Handling and Port Facility
 - Mt Isa Acid Plant
- Outage Coordinators x 2

Where we are now

- All work planned utilising CMMS (SAP) – Scheduling done in external system eg MS Excel
- Creating Four week schedule
- Producing a One week daily schedule
- Scheduling 80% of available labour
- PM's developed utilising RCM principles
- Creating separate Minor Shut schedules
- Most work requests approved by Asset owners (Prod)
- Weekly scheduling meetings involving AMG
- Planning done predominately by Team Leaders

Maint Scheduling Activity List

JO	ACTIVITY DESCRIPTION	DEADLINE		RESPONSIBILITY			
		DAY	TIME	MECH	ELEC	PROD	MEO
1	Clear completed work (Final Confirmation on Maintenance Orders)	Mon	1200	X	X		X
2	Produce Pre Scheduling Report	Mon	1400				X
3	Distribute Scheduling Report to Area Management Group	Mon	1400				X
4	Review and select jobs for the next four schedule periods and forward to planner	Tue	1000	X	X	X	
5	Update Work Centre Capacity	Tue	1000	X	X		
6	Produce Draft Schedule	Wed	1000				X
8	Scheduling Meeting	Wed	1000	X	X	X	X
9	Produce schedule for next four periods	Wed	1500				X
10	Release for Purchase orders for next plus one schedule period.	Wed	1500				X
10	Release orders for next schedule period	Wed	1500				X
11	Print Order documents	Thur	1500				X

Planning Tools

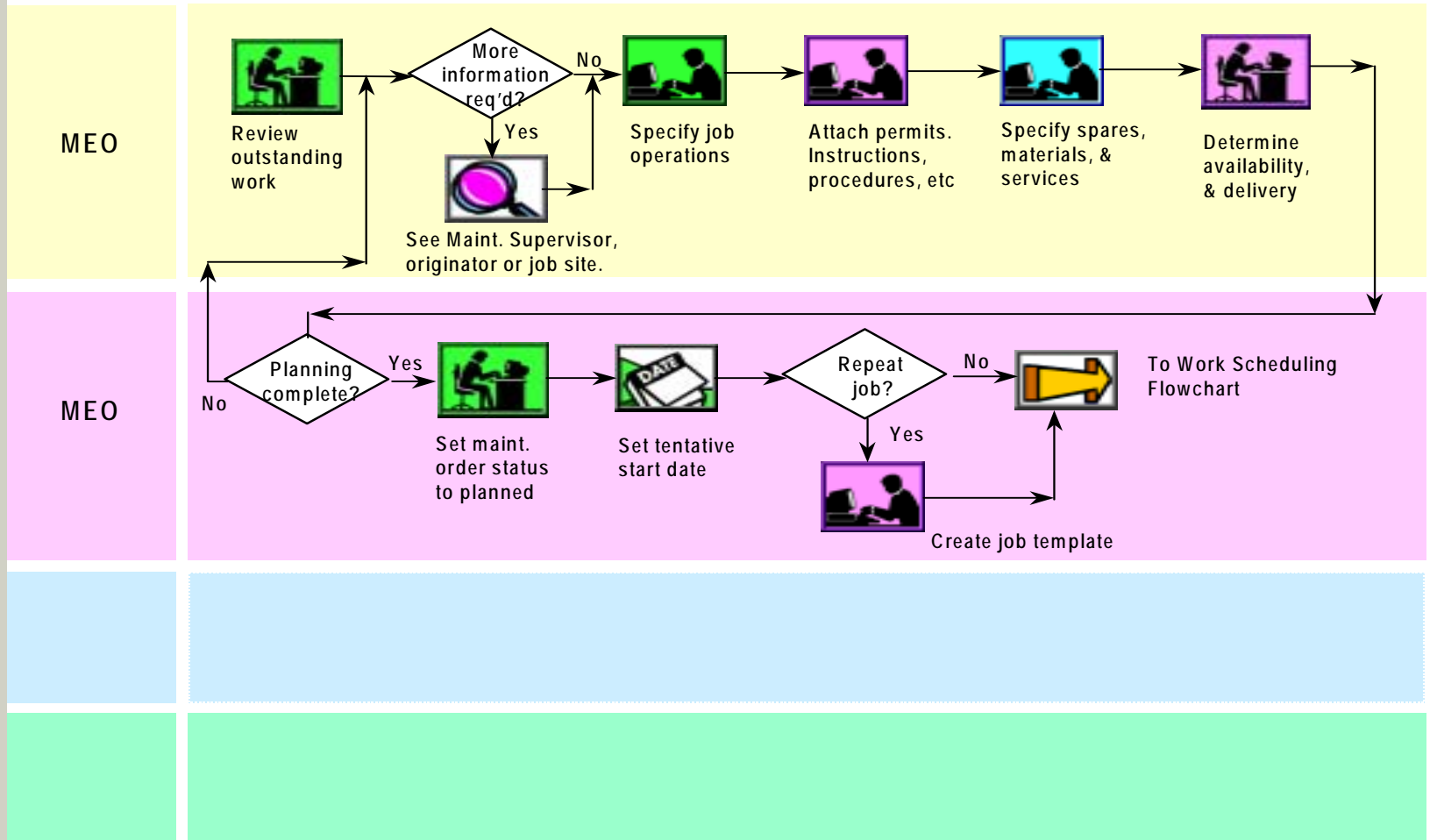
- SAP
- RCM (RCM Turbo)
- Condition Monitoring
 - VA
 - Oil Analysis
 - IR Thermography
 - Ultrasonics
- MS Project (Minor Outages)
- Primavera P3E (Major Outages)
- SCID (Major Outages)

Work Management

- Plan and Schedule approx 500 Maintenance Orders weekly
- Average approx 3400 Labour Hours weekly
 - In house resources
 - Alliance contractor (UKG)
 - General Contractors
 - Operations
- Minor outages occurring regularly on average 3 weekly basis requiring additional planning input

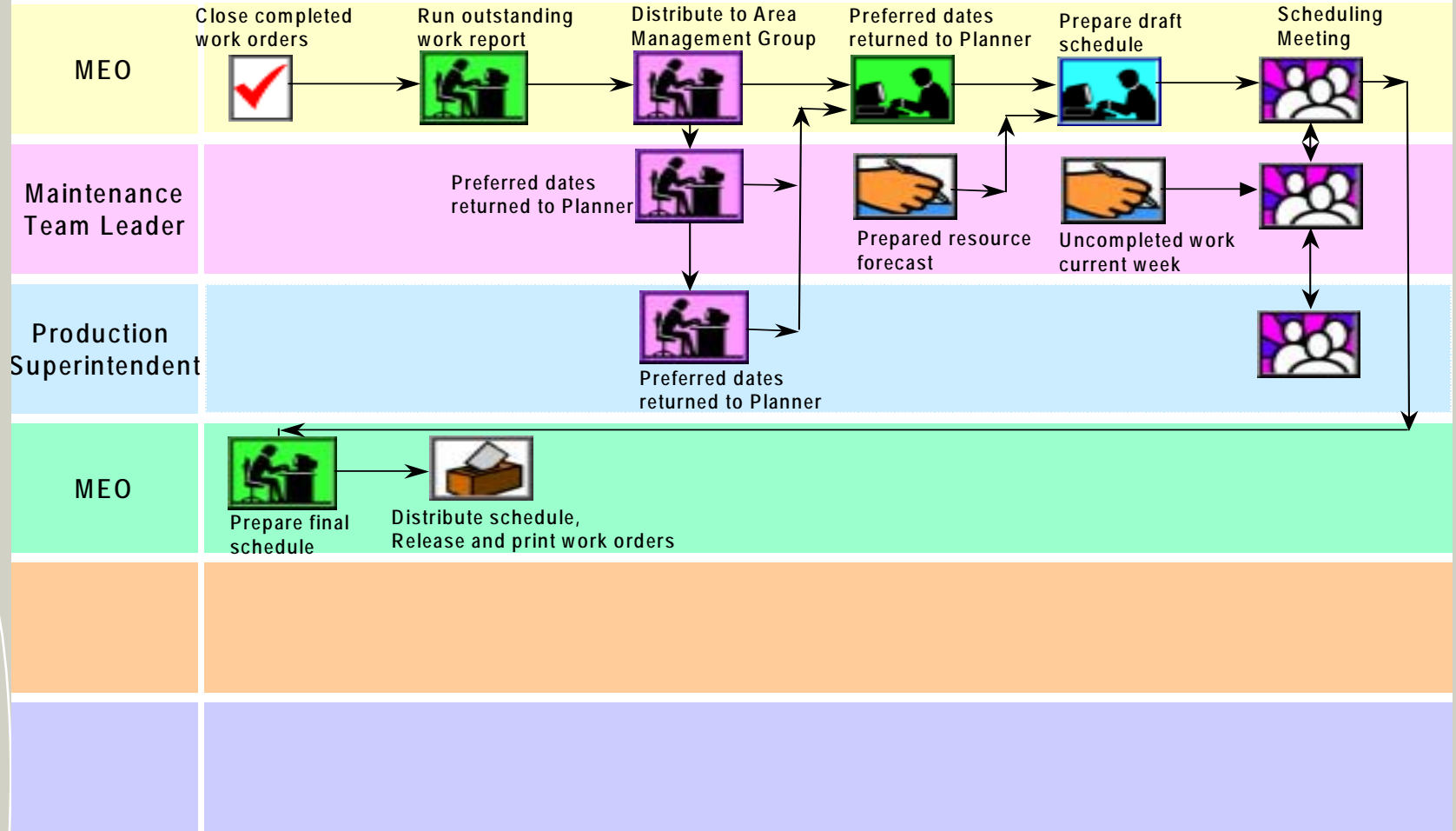
Planning Process Overview

Maintenance Order Planning



Scheduling Process Overview

Scheduling and Capacity Management



Opportunities

- All work requests approved by Asset Owners
- Target >90% of all resources scheduled
- Reduce reliance on temporary labour
- All Planning and scheduling done in SAP
- Task Lists created for ALL repetitive jobs
- Detailed standard work instructions to replace the need for THA's on many repetitive jobs
- Increased involvement from Operations and Engineering in scheduling process
- Remove majority of minor inspection tasks from maintenance and allocate to operations personnel
- Notifications for ALL maintenance requests

• Questions????