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GOLD COAST
11-12 NOVEMBER 2024

How Gold Fields Optimized Work Management by using Fiori & Mobile solutions

Belinda Muller

SAP EAM Specialist; Gold Fields

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What is the criteria for good maintenance

The criteria for good maintenance is:-

- Equipment available
- Appropriately Skilled resources
- Correct material
- Thorough and accurate work instructions
- Correct special tools
- Cost appropriate
- All at the right place at the right time

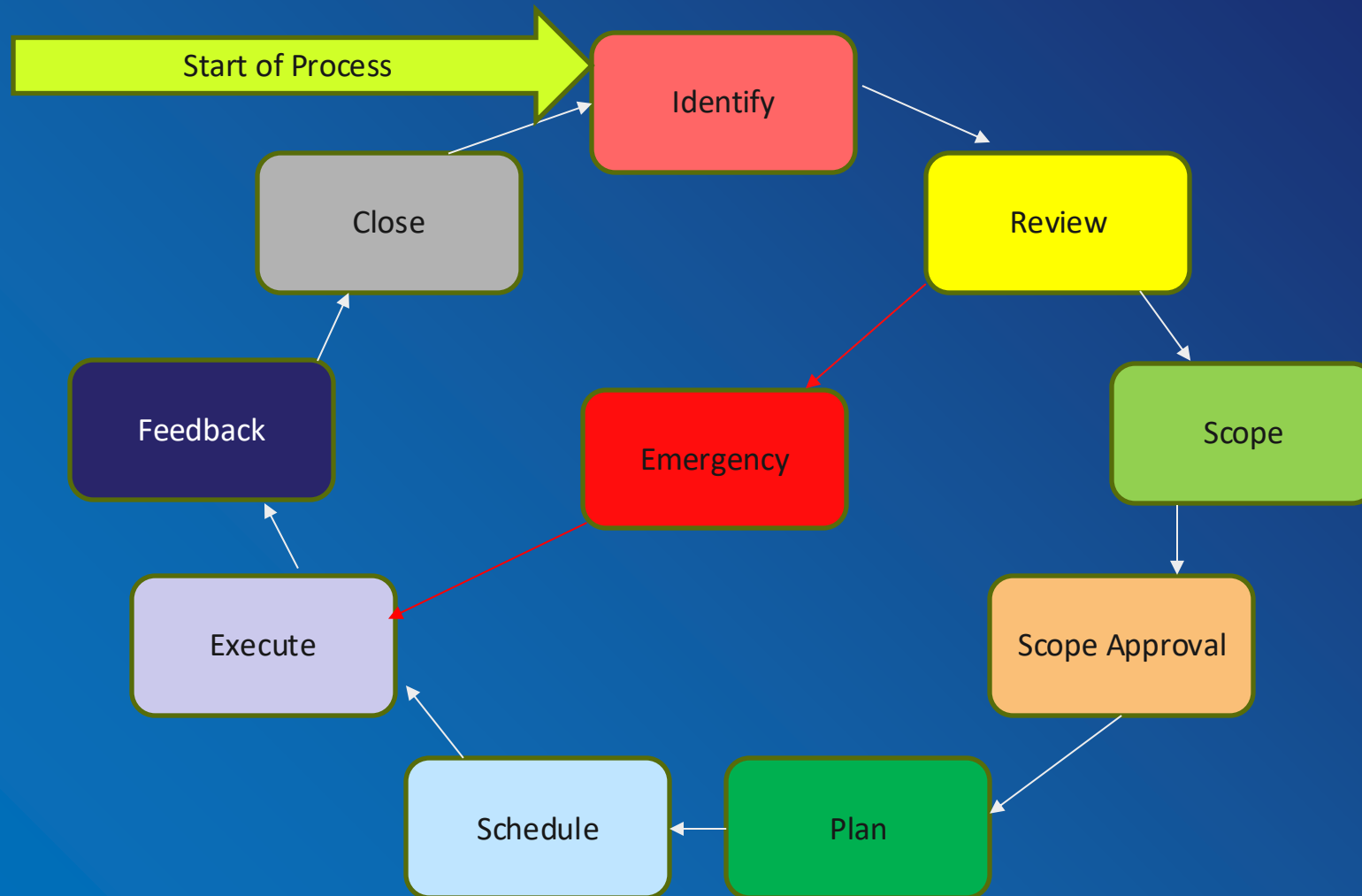
All of the above can be achieved with proper work management processes.

In this presentation, I will show you how Gold Fields overcame our challenges by using Fiori & mobile SAP solutions to enable us to optimize our work management processes.



Work Management Process Steps

A sufficient work management process should at least consist of the following steps:-



The Solutions implemented



Gold Fields consulted with SAP partner Collaborit and implemented a powerful suite of industry-specific Fiori and mobile SAP solutions tailored to our unique needs and in line with our goals to overcome our challenges with regards to our work management process.



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Work Management Process

Challenges

- Complex work management process caused lack of compliance
- Users required to process multiple different SAP transactions
- Work was planned for, but when artisan started the work, the spares were unavailable
- Outstanding work orders in 2022, before implementation were 32 245

Solution - Work Management Workbench (WMWB)



Improvements / Benefits

- Gold Fields specific calendar-based process enhances compliance
- Users transact from a single point of entry
- Materials availability check within process, transported to excel & send to materials controller ensures spares available at the right place at the right time
- Outstanding work orders at the end of Sept 2024 was 763.



Identify & Review Process Step

Challenges

Duplicate work orders for the same work

Notifications not reviewed resulted in inefficient use of resources and material

Solution - Work Management Workbench



Improvements / Benefits

Duplicate work orders is now identified and cancelled.

All work orders planned are relevant and does not waste resource time and material not needed which must be returned to stores

Scoping & Scope Approval Process Step

Challenges

Scoping of work orders done incorrectly, resulting in incorrect and/or incomplete data on work orders

Solution - Work Management Workbench



Improvements

Work orders handed to the artisans with correct equipment detail, material, work instructions and tools resulting in efficiency, minimize safety risk and compliance.



Planning Process Step

Challenges

Asset Planning was performed on a excel spreadsheet for maintenance and production meetings outside of SAP

Solution - Area Planner



Improvements / Benefits

Visual representation of agreed dates when assets will be available to do maintenance

Production & maintenance schedules aligned – no more assets not being available on agreed dates

Scheduling Process Step

Challenges

Planners extracted work orders from SAP and performed work order scheduling on an Excel spreadsheet to discuss the following weeks plan in engineering weekly meetings outside of SAP

Solution – Graphical Scheduler



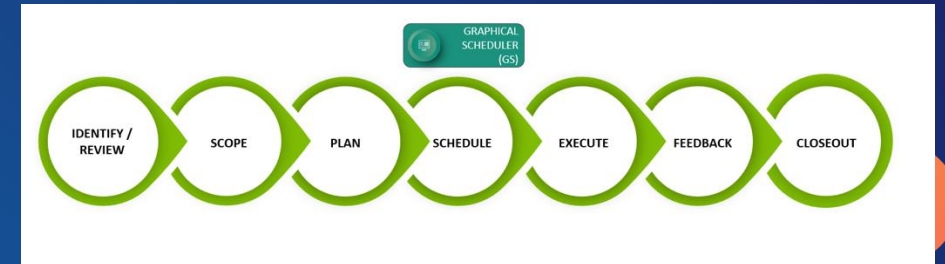
Improvements / Benefits

Provides both Gantt & Calendar view of work order operational scheduling within SAP

Visualization of work centre capacities

Visualization of critical path

Work order scheduled dates automatically updated on the work order within SAP



Scheduling Process Step

Challenges

It took the planner/clerks to print and manually collate only 50 work orders and documents between 2.5 and 3hrs

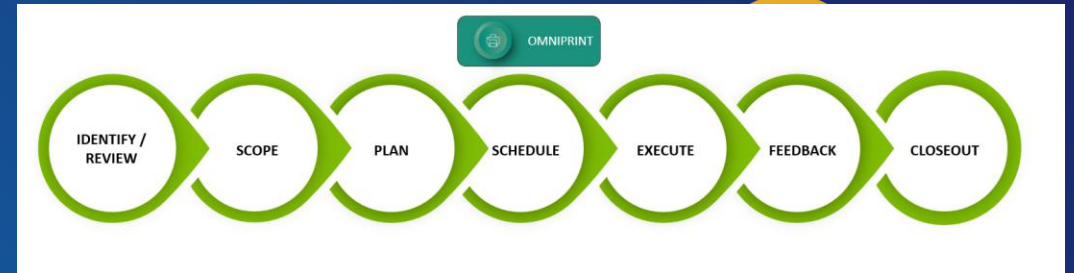
Solution – OmniPrint



Improvements / Benefits

All pages of a work order are easily identifiable, grouped & delivered to the foreman in logical work packages

50 Work orders can now be mass selected and printed within a few minutes



Execution Process Step

Challenges

Work orders allocated to artisans on a white board in the foreman's office outside of SAP

Solution – Workforce Allocator



Improvements / Benefits

Individual resource assignment of work order operations done in SAP

Total hours and % of daily and weekly resource allocation reflects in real-time

Fully integrated with mobility

Capability to assign operations to contractors without employee numbers



Execution/Feedback Process Step

Challenges

Feedback capturing was a time-consuming exercise - between 1800 to 2000 work order confirmations were done manually per week by clerks

Incomplete and inaccurate feedback capturing

Solution – Work Manager Mobile App



Improvements / Benefits

Paperless issuing & feedback capturing of work orders directly by maintenance personnel

Complete and more accurate feedback with actual start / end dates and time

Follow-on tasks automatically created from feedback based on rules

Barcode / QR code capabilities

Artisan can attach images from device camera, voice recording or file on any maintenance step performed.

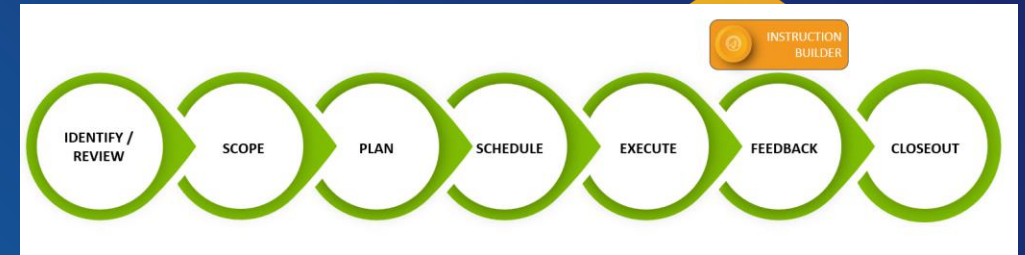


Scoping/Feedback Process Step

Challenges

Inspection condition & feedback not available for reporting & follow-on tasks

Solution – Instruction Builder Solution



Improvements / Benefits

Condition based feedback available for reporting and analysing

Improves our condition-based maintenance process and plans

Improved quality and consistency of feedback through rules engine

Breakdowns

Challenges

Multiple notifications created for one breakdown entry

Failure analysis incorrect or not always done on notifications

Actual breakdown hours incorrectly captured

MTTR, MTBF, OEE & Availability reports inaccurate and time consuming (3days in total)

Solution – Asset Performance Workbench (APW)



Improvements / Benefits

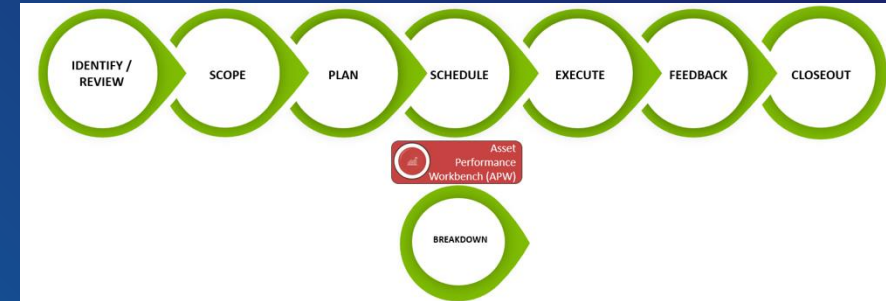
Equipment downtime, uptime & delays captured directly in APW using GF downtime/delay codes

Notifications are automatically created & closed in SAP from APW with real time start / end dates & times

Downtime entries cannot be closed if failure analysis is not filled in (specified GF dropdown list)

Data from APW pulls into power BI to create real-time OEE, MTTR, MTBF & Availability reports

Engineering Overseer approval of all time segments before data is posted to the reports



Costs

Challenges

Maintenance tactics did not drive forecasts, budgets, commitments & actuals
No view on equipment cost.
Lack granular in-time finance & maintenance cost reporting

Solution – Asset Cost & Lifecycle Manager (ACLM)



Improvements / Benefits

Accurate & up to date budget, actual, commitment & forecast figures driven from maintenance plans
Equipment level maintenance & finance reporting
Effort to perform scenario simulations, budgets & forecasts is significantly reduced.

Technical Detail

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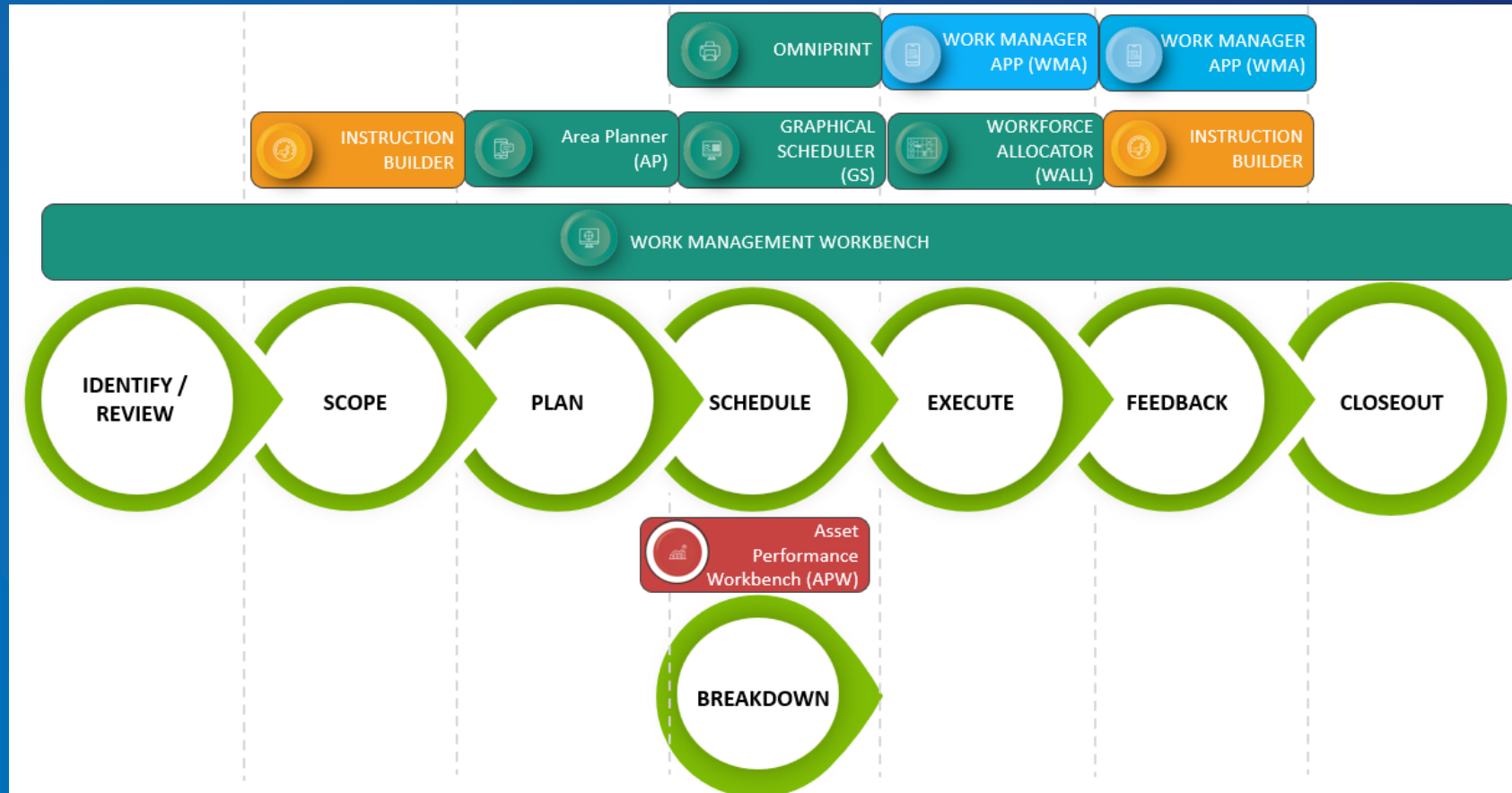
- All Collaborit Solutions above are built in SAP using standard SAP components – they are not loose standing third party solutions that require interfacing to SAP
- The solutions are compatible with both SAP ECC6 as well as S/4 HANA
- No additional hardware is required to host the solutions, other than the existing SAP system landscape
- The solutions complement and enhance the standard SAP functionality, and no customer SAP configuration will be required to be changed as pre-requisite for the deployment of the solutions
- The solutions do require their own configuration and setup, but this does not affect existing SAP configuration, master or transactional data in any way
- The Solutions are ported to Customer SAP environments using SAP transports



Conclusion

All the solutions contribute to effective work management processes which in turn enhances good maintenance practices at Gold Fields which results in:-

- Assisting in the prevention of costly downtime
- Ensures smooth, reliable operation of critical assets
- Enables Operational efficiency with long-term success



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How to Connect with Me

E: Belinda.muller@goldfields.com

M: +27 82 898 4761

Li: [linkedin.com/in/Belinda-muller-a1ab34b1/](https://www.linkedin.com/in/Belinda-muller-a1ab34b1/)

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