

Reducing Costs and Increasing Efficiency of Projects With Co- Console

Introducing Our Speakers

- David Cole - Manager, Engineering & IT, McDermott
- Thomas Parsons – Global Completions Lead, McDermott
- Mike Kirst – Sr. Co-Console Expert, Prometheus Group
- Sean McWhirter – Global Sales Engineering Manager, Prometheus Group

Agenda

- What is Co-Console and Doc-Console?
- Why McDermott thought the tools were a good fit
- How McDermott has applied the tools and the results they have seen

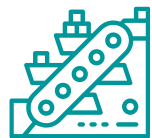
Prometheus Group

- Founded in 1998
- Headquartered in Raleigh, NC, USA
- 13 global offices
- Integrated and intuitive software
- Partnerships with industry leading companies



TOP 8

Oil & Gas



TOP 7

Mining & Metals



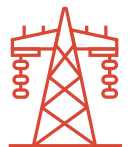
TOP 7

Pulp & Paper



TOP 6

Chemical



TOP 6

Utilities

SAP® Certified
Integration with SAP® S/4HANA



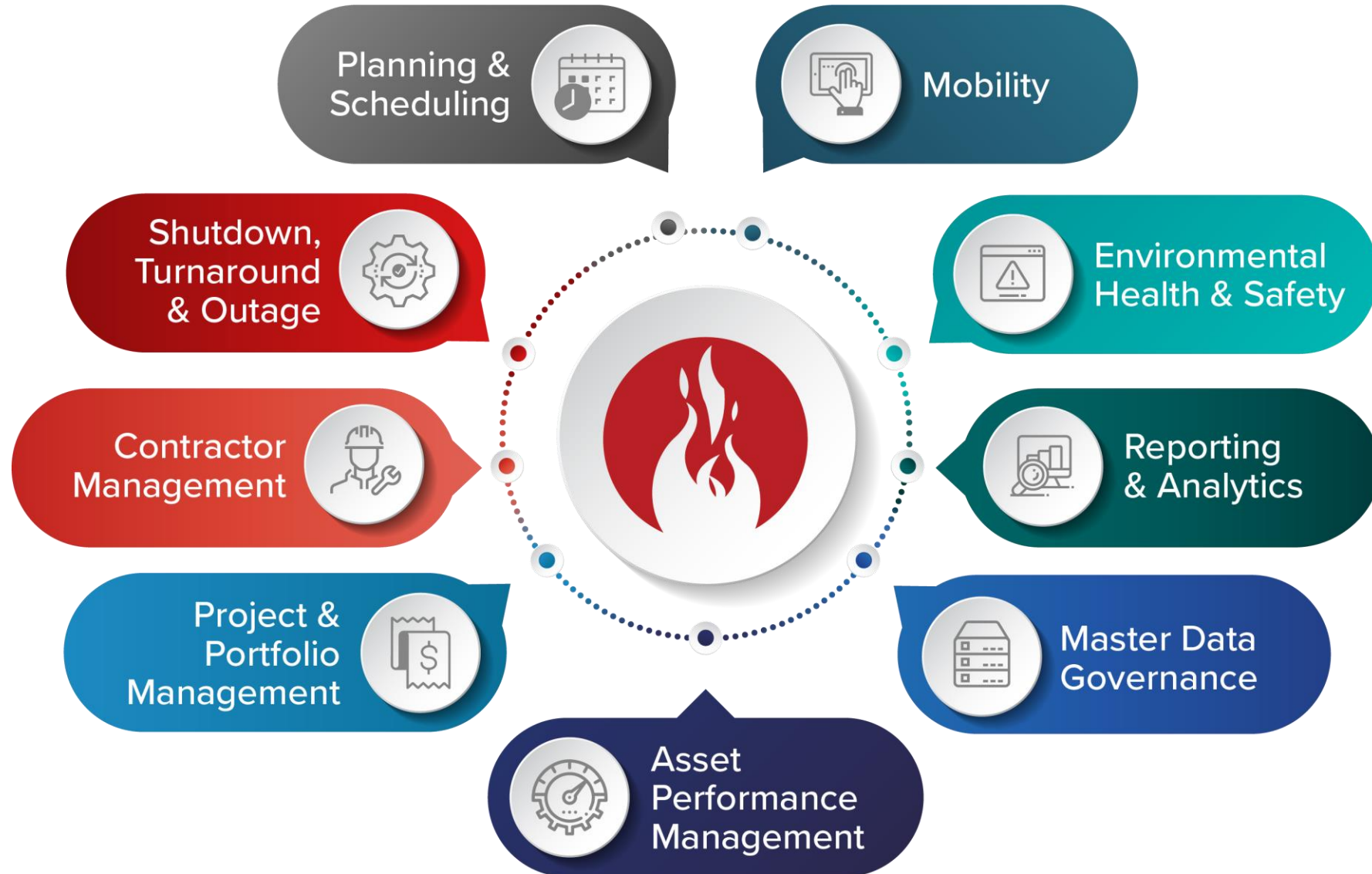
ORACLE Gold Partner



Key Customers



The Prometheus Platform



Product Offerings

- **Co-Console and Doc-Console:** Executes and delivers multi-discipline projects
 - Offers inspections, pre-commissioning, commissioning, punching to manage project completion and turnover
 - Improves quality and safety of project execution while reducing the risk of costly delays
- **Weld-Console:** Weld and flange management
 - Turns complex welding requirements into simple daily instructions
 - Validates and ensures projects comply with contract and law
 - Maximizes quality, control, compliance, and technical integrity
 - Minimizes administration and management cost and efforts

What Co-Console Does

A Completions Management System Designed to:

- Monitor Construction Installation, Pre-Commissioning and Commissioning Completion Activities
- Tracks Completion Activities by Area, Module, Construction Work Package/Installation Work Package, System/Sub System, Tagged Assets, Milestones and Priorities
- Tracks Preservation Activities by PO Number, Tag Number and Work Order
- Retains Records for Auditing of tracked items
- Generate Sub System Boundary Packages (via Doc-Console)
- Generate Piping Test Packages (via Doc-Console)
- Generate Loop Packages
- Generate Completion Certificates
- Generate Handover/Turnover Dossiers
- Generate Reports



What Doc-Console Does

- A “Plug-in” to Co-Console
- Linked to the EDMS to pull across relevant/ require documentation
- Creates Document – Tag relationships (Metadata/ Drawing Tag Recognition)
- Create Tag – Package relationships (System/Sub System/ Test Packages etc.)
- Creates exception reports (Tags on Documents but not in Engineering Lists and Vice-Versa)

Customer Spotlight: McDermott

An aerial photograph of a large industrial complex, likely a refinery or chemical plant, featuring numerous tall distillation columns, a complex network of pipes, and various processing units. A yellow crane is visible in the middle ground. The sky is filled with soft, white clouds, suggesting a late afternoon or early morning setting. The image is partially overlaid by a large green and blue graphic on the left side.

**SOLVING
THE WORLD'S
ENERGY
CHALLENGES**

>100

YEARS OF OPERATION

30,000

EMPLOYEES

54

COUNTRIES

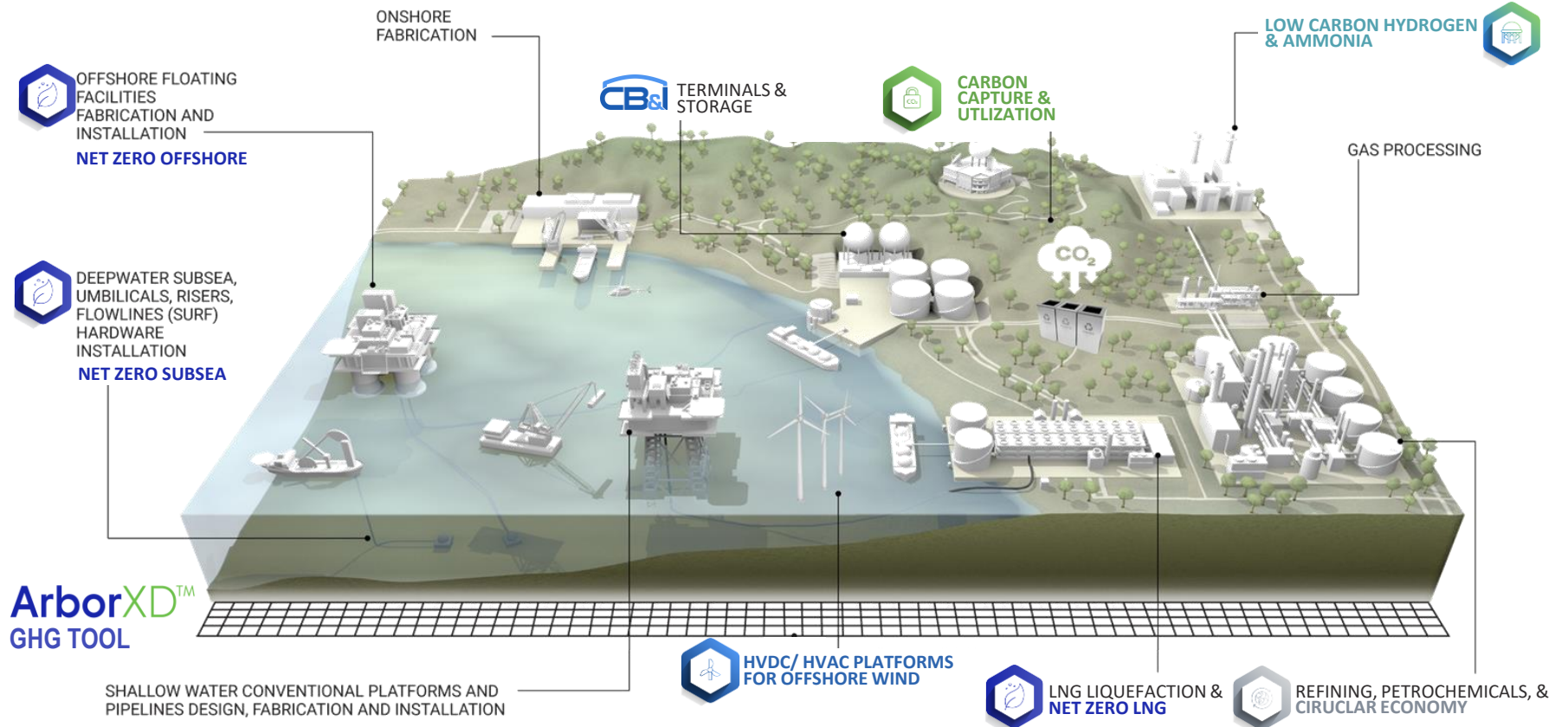
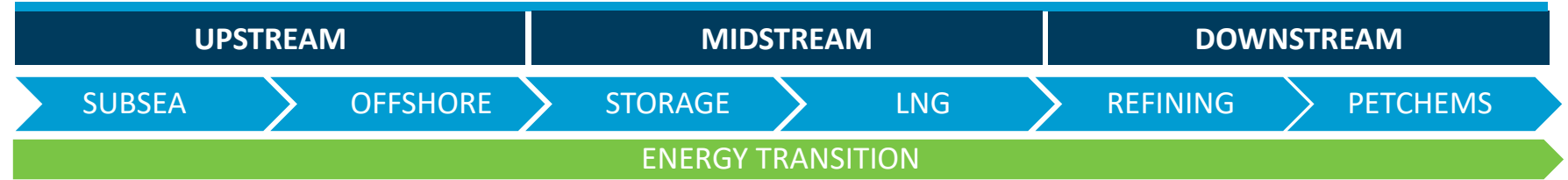
5

FABRICATION FACILITIES

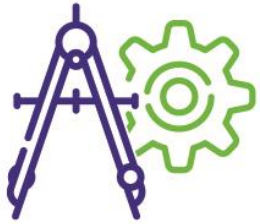
>\$20 billion

IN BACKLOG

SOLUTIONS ACROSS THE ENERGY VALUE CHAIN



FULLY INTEGRATED EXECUTION



ENGINEERING

Our digital-centric approach transforms how we work together and the tools we use to increase efficiency and productivity and deliver sustainable solutions for our customers.



PROCUREMENT

Employees at our offices around the world efficiently locate, evaluate, purchase and arrange for the transport of materials and services to any project site.



FABRICATION

Our local fabrication facilities adhere to the same international set of standards, regardless of geography or location.



CONSTRUCTION

Specializing in both field and modular construction, we construct our projects using consistent tools, systems and standards to safely deliver superior results even in the most challenging environments.



INSTALLATION

Performing onshore and offshore, subsea and above-surface installation, our ability to mobilize personnel and vessels safely, optimizes productivity and mitigates risks across operations and projects.

Previous State

- Had another software solution in use starting around 2005
- Sought other solutions because:
 - Poor vendor relationship
 - Exorbitant price increase
 - Needed additional functionality

System Requirements

- Needed a way to digitize their systemization
- Wanted a better way to recognize tags
- Needed a system that was configurable to their needs
- Wanted an automated way to create reports
- Needed a mobile app to streamline processes



Why Co-Console & Doc-Console

Overall completions management functionality on par with CMS competitors – Doc Console was the major differentiator

Doc Console

- Integration with iDocs (McDermott EDMS) to ensure latest issued revisions are available to the site
- Ability to scrape tags from project documents, validate them against tagging requirements and issued engineering information
- Streamlining handover

Why Co-Console & Doc-Console

- **Mobile applications**

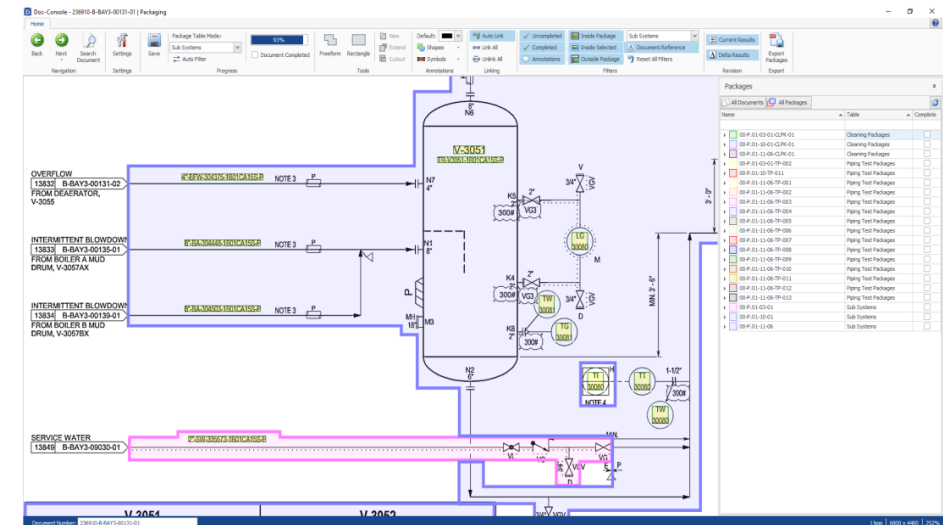
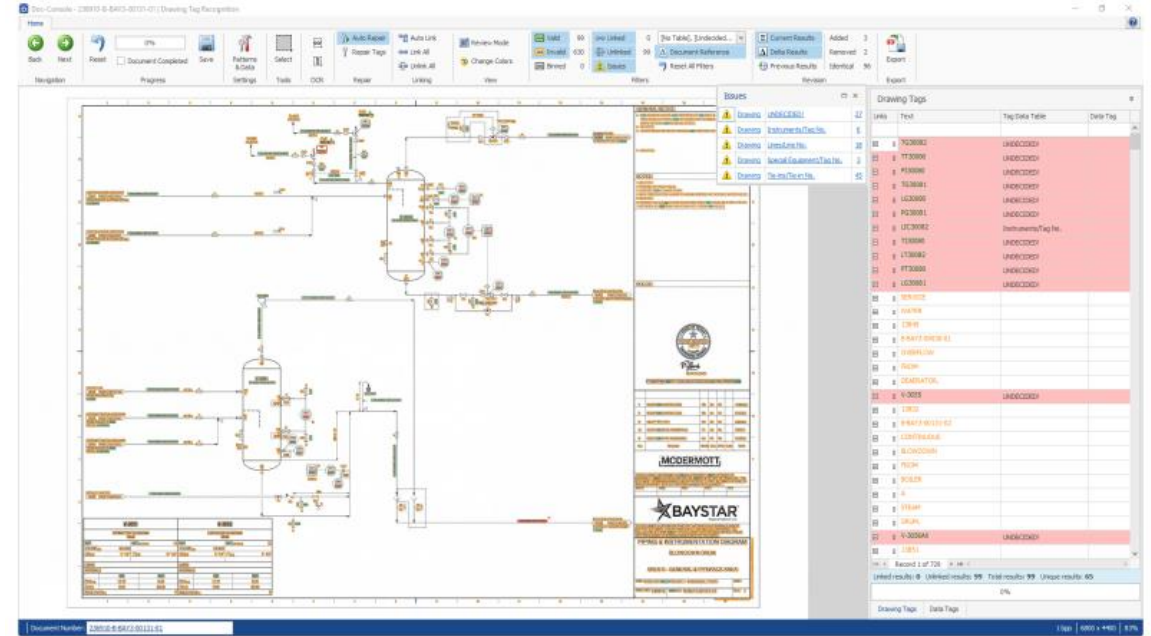
- Available to streamline and expedite incremental information capture – both status and redline information
- Available across all major operating systems (e.g., Windows, Android, and iOS)
- Mobile friendly interface

- **Reporting**

- Ease in creating customized queries and reports to meet project information requirements
- Able to flexibly schedule and distribute reports to project team via email or to network file share for common access
- Able to feed project information to PowerBI dashboards

Doc-Console

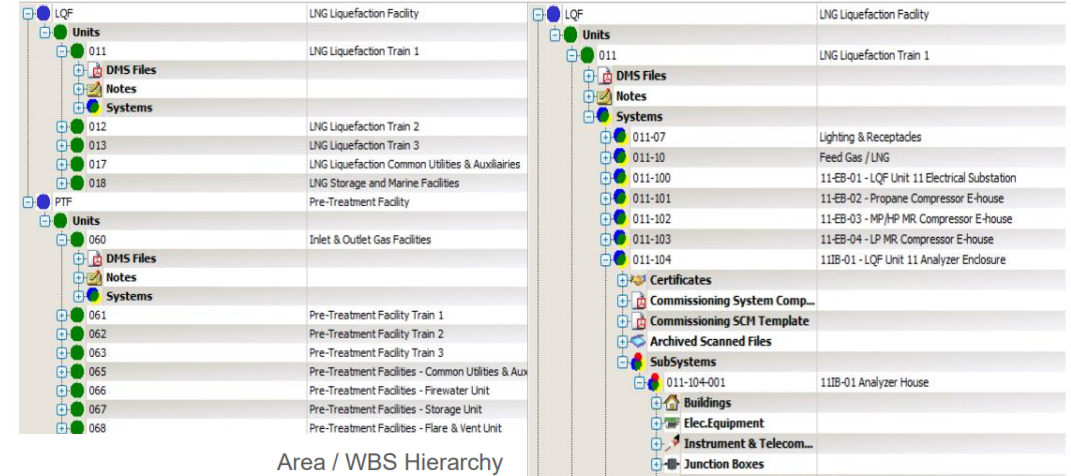
- Recognize tags via text searchable P&IDs, single-line drawings, etc.
- Highlight and link tags to validate engineering data.
- Create system boundaries and layers.
- Update the hierarchy from doc-console tagging.
- Perform commissioning activities within one tool to avoid manual, time-intensive processes



System Configurability

- Configure the system to match the type of data they collect in the field.
- Create multiple hierarchies to match system and project complexity.
- Design global templates for projects to save time.

Site/Project > Unit > System > Sub System Hierarchy



Area / WBS Hierarchy

Construction Work Package > Installation Work Package Hierarchy

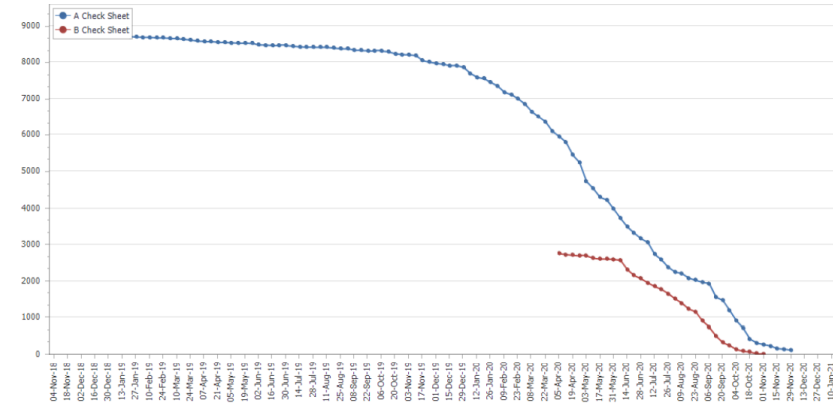
CWP No.	Description
121-IC50	HRSG IB: Instrumentation GF Charge
121-IN01	HRSG IB - Insulate HP Steam Drum
121-IN02	Piping Insulation - Area 121 - Pipe System CCW
121-ME01	Unit 1B - Set Fuel Gas Drains Tank - 1B-FGS-TK-0250
Installation Work Packages	
121-ME01-001	Unit 1B - Set HRSG Blowdown Sump Pumps
Mech.Equipment	
1B-MBL-P-0100A	1B HRSG BLOWDOWN SUMP PUMP A
1B-MBL-P-0100B	1B HRSG BLOWDOWN SUMP PUMP B
DMS Files	
121-ME01-003	Unit 1B - Set Fuel Gas Drains Tank - 1B-FGS-TK-0250
121-ME50	HRSG IB: Set Foundation Sole Plates
Installation Work Packages	
121-ME50-100	HRSG IB: Set Foundation Sole Plates
121-ME50-101	HRSG IB: Install Sole Plate Shear Keys (After Columns Setting)
121-ME50-102	HRSG IB: Erect Modules Casing Bays (Primary Panels and Roo...
Mech.Equipment	
1B-MBS-HRSG-8900	1B HEAT RECOVERY STEAM GENERATOR
DMS Files	
121-ME50-103	HRSG IB: Erect Firing Duct (Columns 4 to 5) Secondary Walls an...
121-ME50-104	HRSG IB: Erect SCR and AIG Spool Duct Walls and Floor Panels...
Mech.Equipment	
1B-MBS-HRSG-8900	1B HEAT RECOVERY STEAM GENERATOR
DMS Files	
121-ME50-105	HRSG IB: Erect Difuser Duct - (Columns 0.1 to 1)
Mech.Equipment	
1B-MBS-HRSG-8900	1B HEAT RECOVERY STEAM GENERATOR
DMS Files	

001	North Yard
002	East Yard
003	South Yard
004	West Yard
110	Unit 1A HRSG Under Ground
111	Unit 1A HRSG Above Ground
120	Unit 1B HRSG Under Ground
121	Unit 1B HRSG Above Ground
Buildings & Shelters	
1B-NJS-PDC-0005	HRSG 1B PDC
S04A	Structural Packaged Building Inspection Record
X14A	Coating and Painting
154879-044420-01-SD-000076	UNIT 1B HRSG PDC Item 400 Approval Drawings
154879-044420-01-SD-000154	B HRSG PDC O&M
S04A_Building No._1B-NJS-PDC-0005 (326-10885)	Archived: 2020-02-12 09:14:45
X14A_Building No._1B-NJS-PDC-0005 (326-7081)	Archived: 2020-11-09 08:11:27
154879-PO-044420-01	INST. WATER HEATER PANEL
CIV-03	Area 120, 121, 153 - Unit 1B HRSG Under / Above Ground and Pin...
121-AR01-001	HRSG 1B - Set HRSG PDC
Civil Tags	
Electrical Cables	
Circuits	
Electrical Equipment	
Instrument & Telecom Cables	
Instruments	
Isometrics	
Junction Boxes	
Lines	
Mech.Equipment	
Equipment Skids	
Piping Test Packages	
Structural Tags	
Telecom Tags	
Tracing Tapes	
Valves	

Reporting on Progress

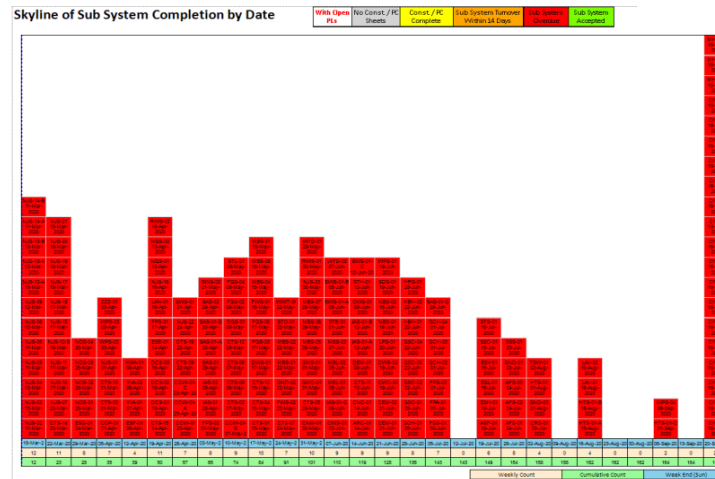
- Configurable global report generation.
- Multiple configurable trend and report types.
- Report scheduling to automate progress reporting to other departments/personnel.

Check-Sheet Progress Chart

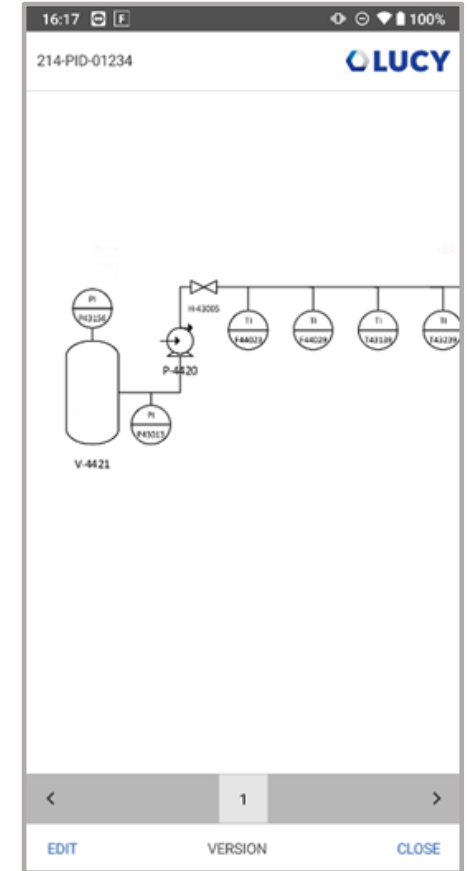
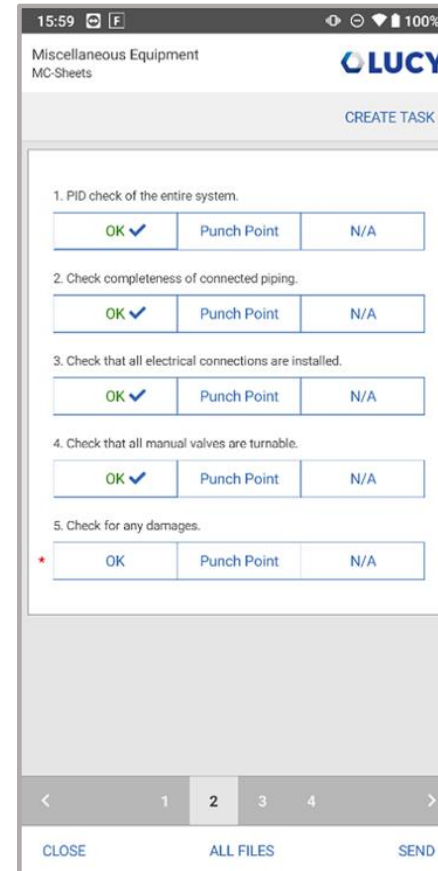
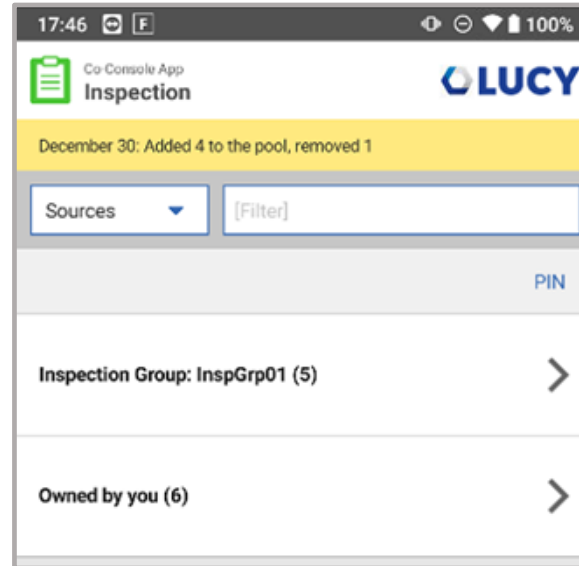


Overall SubSystem Status Report

Sub System	Construction				Commissioning				Open Punch Items		
	Plan	Actual	Not-Done	Actual (%)	Plan	Actual	Not-Done	Actual (%)	A	B	C
WPS-04	480V Welding Receptacles - UNIT C	18	18	0	100.00%	0					
System: WTD		354	354	0	100.00%	98	98	0	100.00%		
WTD-01	Deminerlizer Water System	258	258	0	100.00%	83	83	0	100.00%		
WTD-02	Deminerlizer Water Supply-Tank And Pumps	96	96	0	100.00%	15	15	0	100.00%		
System: WWT		125	125	0	100.00%	34	34	0	100.00%		
WWT-01	Waste Water Treatment	125	125	0	100.00%	34	34	0	100.00%		
System: YVA		40	40	0	100.00%	6	6	0	100.00%		
YVA-01	1A CTG 120kV SWYD & GSU	20	20	0	100.00%	3	3	0	100.00%		
YVA-02	1B CTG 120kV SWYD & GSU	20	20	0	100.00%	3	3	0	100.00%		
System: YWA		33	33	0	100.00%	7	7	0	100.00%		
YWA-01	STG 230 KV Swyd, Breaker And Steam Turbine GSU	33	33	0	100.00%	7	7	0	100.00%		
System: ZZZ		11	11	0	100.00%	0					
ZZZ-01	Satellite Clock, RTU Cab, Main PDC Fiber PNL, Weather Station	11	11	0	100.00%	0					
Overall:		8607	8607	0	100.00%	2732	2732	0	100.00%		



Paper to Mobile



Results Summary



Increased time savings on pipe test package revisions



Enhanced efficiency of document collection and collation



Streamlined the process of creating project reports



Reduced paper burden, printers, and need for clerical staff



Improved flexibility and accuracy of field preservation



Increased automation and efficiency of subsystem scoping



Reduced administrative cost of project completion system



Eliminated rework through improved tracking and systems



Prevented litigation over delays through improved processes



Improved ability to update upper management in real-time

Questions?

A background image showing two hands shaking, symbolizing agreement or partnership. The image is overlaid with a semi-transparent blue filter. A white horizontal line is positioned above the text.

Thank you

PROMETHEUS | USER
GROUP |
CONFERENCE