

Decreasing Your Maintenance Costs with MDaaS

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| **Shayaan Ahmad** – *Functional Consultant, Asset Master Data Practice*
| **Carolina Sierra** – *Functional Consultant, Asset Master Data Practice*



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Agenda

- Prometheus Group
- Maintenance cost and Master Data quality
- Master Data as a Service (MDaaS)
- Example record
- Demonstration of MDaaS



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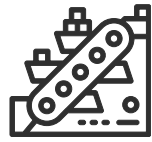
Prometheus Group

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



TOP 10

Oil & Gas



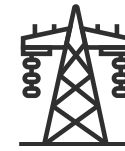
TOP 8

Mining & Metals



TOP 8

Pulp & Paper



TOP 8

Utilities



TOP 6

Chemical

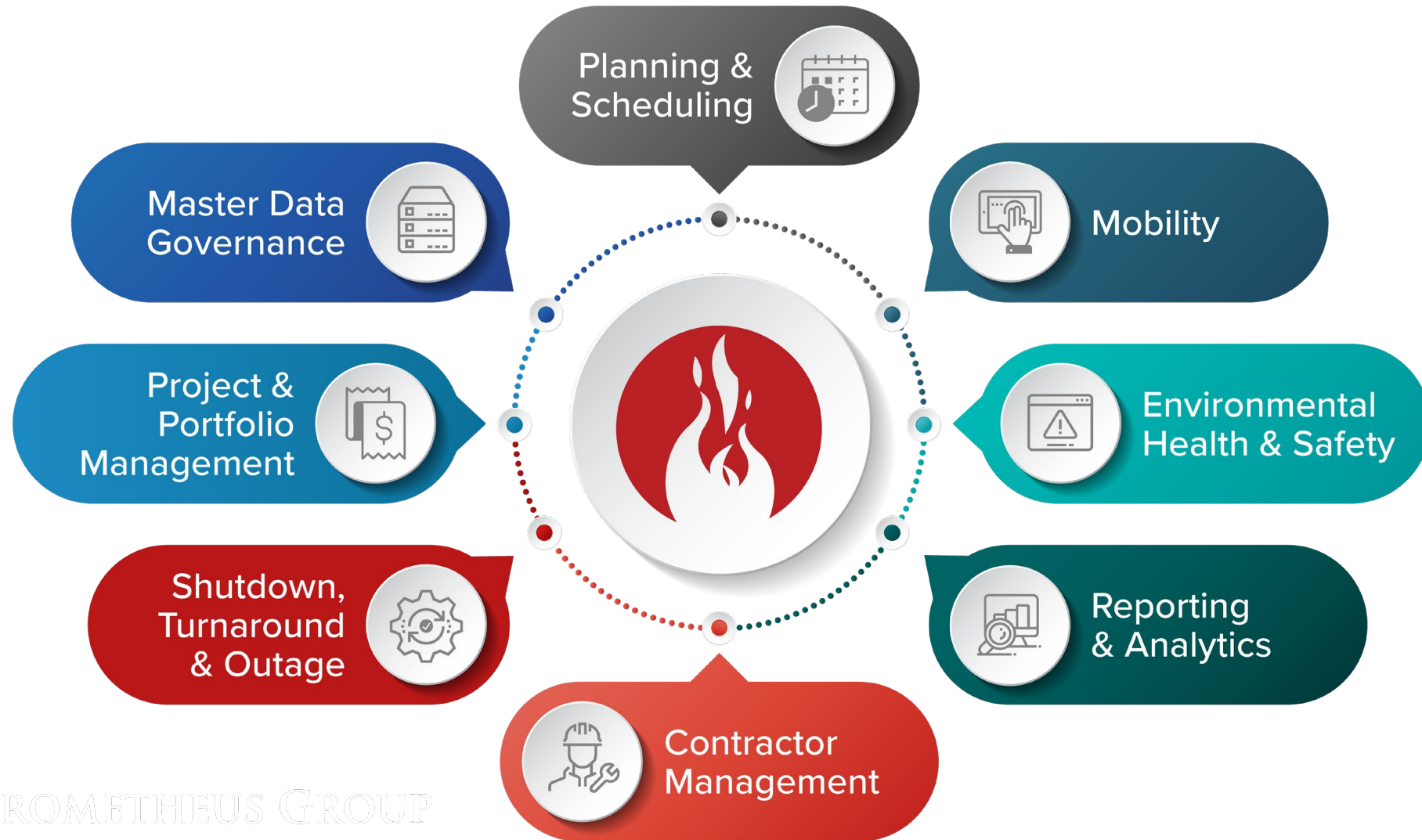


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Integration with SAP S/4HANA®

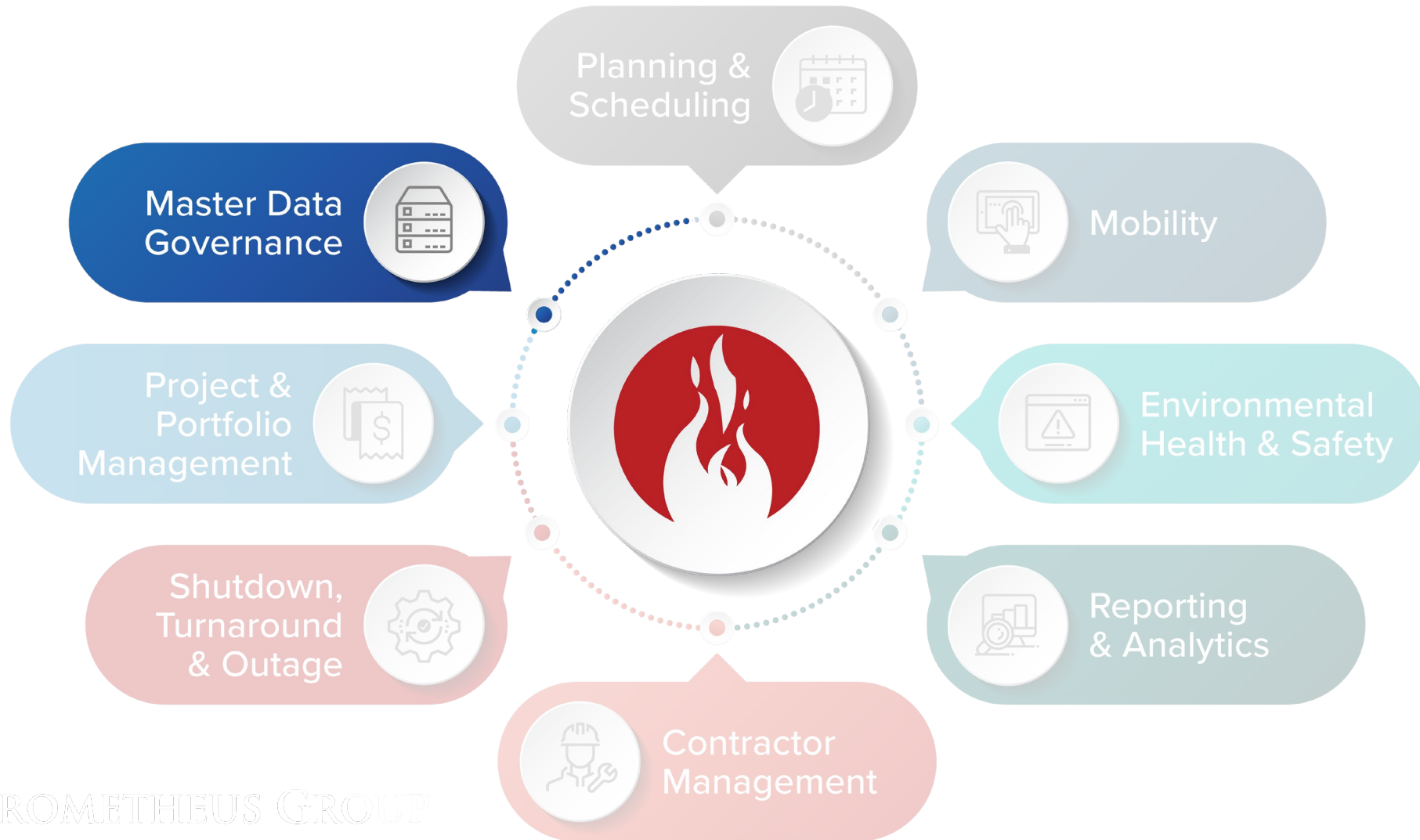
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The Prometheus Platform



The Prometheus Platform



Key Customers



ROUP

Maintenance cost and Master Data quality



Maintenance cost (Planned)

- **Planned Site shutdown**
- **Routine maintenance**
- **Warehouse Replenishment**
- **BOM Creation & Accuracy**
- **Maintenance team productivity**
- **Asset availability**

Maintenance cost (Unplanned)

- **Unplanned Equipment Downtime**
- **Break in work**
- **Deferred maintenance**
- **Unplanned ordering of parts & materials**
- **Lack of documentation or having the wrong information**
- **High mean time to repair**
- **Slow and/or wrong decisions**



The Business Impact

Improved Maintenance Productivity



- Increase maintenance 'wrench-time'
- Added cycles for deferred maintenance
- Improved asset information context for informed troubleshooting & repair

Increased Operational Efficiency



- Reduce downtime from equipment failure
- Lower mean-time-to-repair
- Increase asset availability

Reduced MRO Supply Chain Costs



- Enables accurate prediction of spares needs
- Facilitates identification of obsolete inventory
- Minimizes expedited procurement

Decreased EH&S Risks



- Accurate, complete information enables informed decisions, reduces risks for maintenance staff and operators

Improved Auditability



- Improved financial accountability
- Ensures regulatory compliance
- Reduces product liability risks from quality

Achievement of Operational Excellence






- Enables achievement of top quartile performance through advanced maintenance techniques such as reliability-centered-maintenance, risk-based inspection, performance analytics

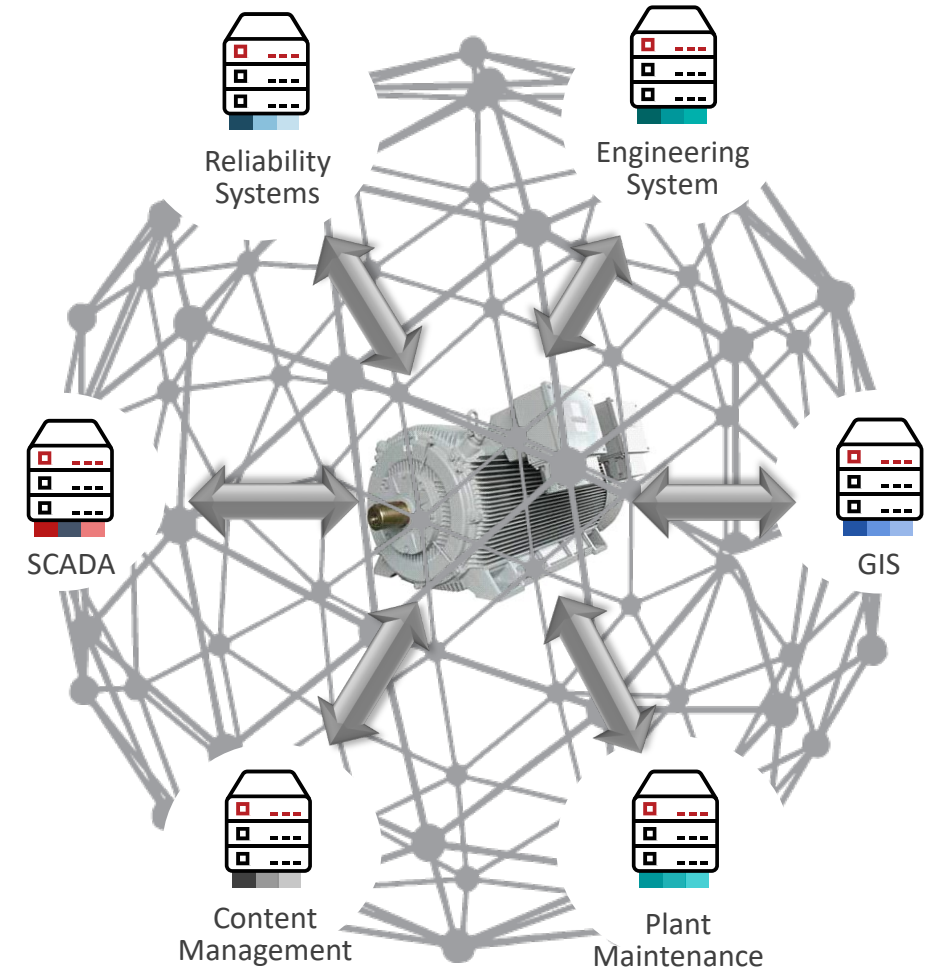
Ensuring accurate, complete asset master data can have a direct impact on reducing environmental, health & safety risks, improving operational performance and maintaining regulatory compliance.

Understanding the Business Challenge

Maintaining an accurate, complete Digital Twin in the key systems of record can have a direct impact on **reducing environmental, health & safety risks, improving operational performance** and **ensuring regulatory compliance**.

-  The assets are continuously changing due to maintenance, shutdowns/turnarounds, capital projects
-  The Digital Twin includes unstructured data (engineering drawings, operating manuals, repair manuals)
-  The Digital Twin is distributed among multiple Systems of record

Ensuring Synchronization of the Network of Digital Twins is essential to Safety, Efficiency and Operational Integrity



Master Data as a Service Explained



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Master Data as a Service (MDaaS)



Capture

Collect

MDaaS **CAPTURE**

Mobile app for photo-based field data collection

Intelligent image processing and data extraction

Crowd and AI-based data enrichment



Cleanse

Classify

Crowd

MDaaS **ENRICH**

Standards-centric classification

Drawing and manufacturer's website-based data mining

Machine learning-based data cleansing & enrichment



Combine

Create

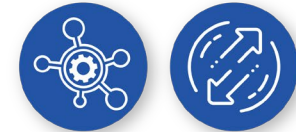
Control

MDaaS **SUSTAIN**

Master Data Management best practice templates

Workflow-driven review & approval

Automated business rules for data validation



Compare

Connect

MDaaS **MIGRATE**

Auditable file comparison and tracking

Integrates with commercial ETLs

Supports all major ERPs

Master Data Objects Covered by MDaaS



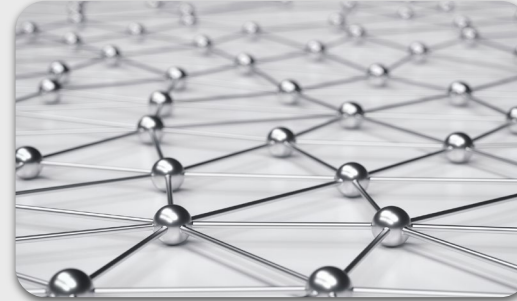
EAM

- Functional Locations
- Equipment Masters
- Bills of Material
- Maintenance Plans
- Task Lists
- Work Centers
- Measuring Points
- Service Masters



Supply Chain

- Material Masters
- Bill of Materials



Business Partner

- Customer Master
- Vendor Master



Finance

- Fixed Asset

Methodology: “Get it Clean, and Keep it Clean”



BUILD

- Internationally Recognized Standards
- Business Rules
- Enterprise Taxonomy
- Data Quality Culture

1

FIX

- Data Quality Improvement
- Data Quality Monitoring
- Control Data Process
- De-Duplication
- Unstructured Data

2

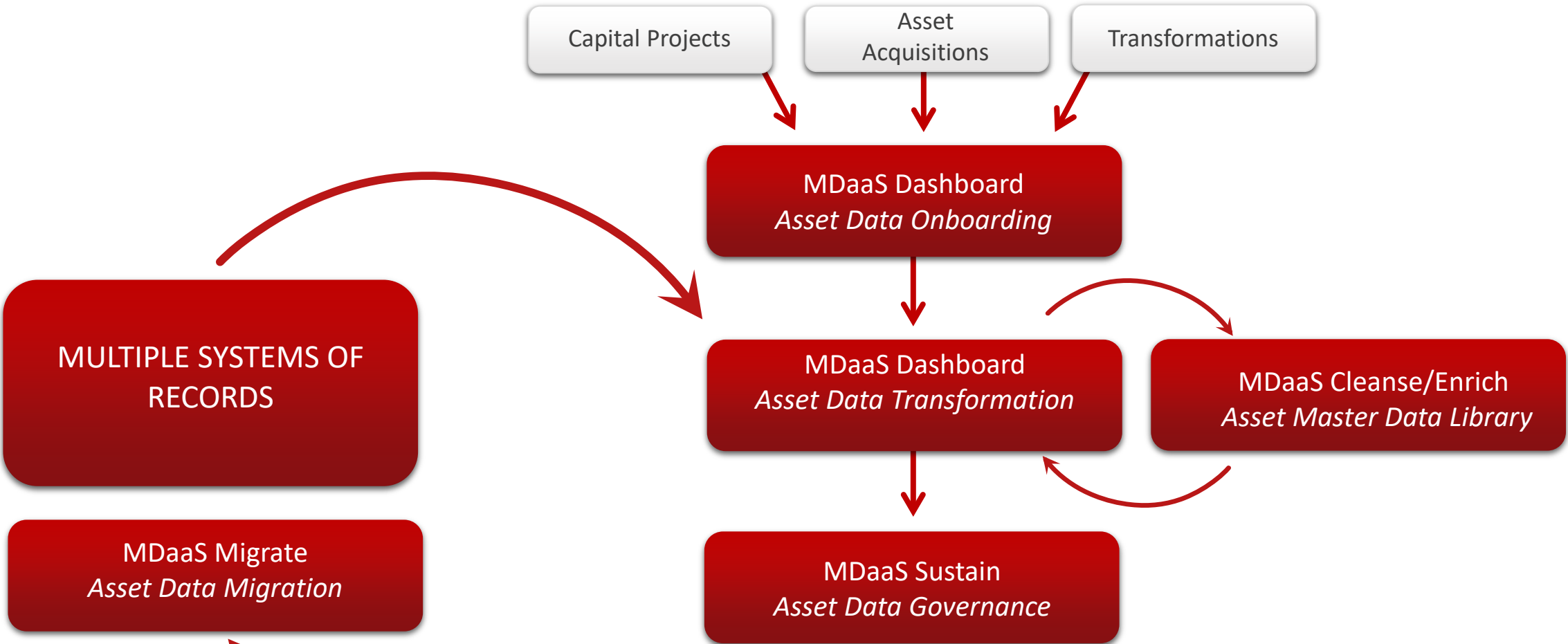
SUSTAIN

- Master Data as a Service
- SAP MDG EAM & AIW
- Data Governance Process
- Data Governance Organization

3

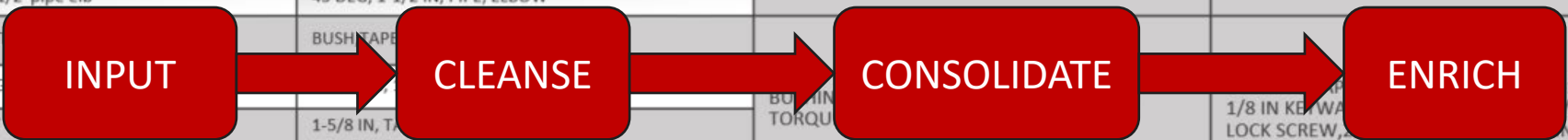


Master Data as a Service (MDaaS)



MDaaS Materials Process

INPUT DATA	CLEANSED DATA	CLEANSED, STANDARDIZED AND CONSOLIDATED DATA	ENRICHED DATA
BALL BEARING 15x35x11	BALL BEARING, 15MM,35MM,11MM	BEARING,BALL, 15 MM,35 MM,11 MM	BEARING,BALL;DEEP GROOVE,15 MM ID,35 MM OD,11 MM W,6200 SERIES,1 ROW,1 SHIELD, STEEL,PRESSED CAGE,2 DEG MISALIGNMENT,8.06 KN DYNAMIC,3.75 KN STATIC
BALL BRG 15 X35 X11 MM	BALL BEARING, 15MM,35MM,11MM		
BALL BEARING Ø15X11X35 MM	BALL BEARING, 15MM,35MM,11MM		
15X11X35 BEARING BALL	15MM,35MM,11MM,BEARING BALL		
CARTRIDGE FUSE FAST ACTING 600 VAC 30 A	CARTRIDGE FUSE, FAST ACTING, 600 VAC, 30 A	FUSE,CARTRIDGE, FAST ACTING,600 VAC,30 A	FUSE,CARTRIDGE;FAST ACTING,600 VAC,30 A,200 KA,END CAP,NICKEL PLATED BRASS,MELAMINE TUBE,CSA
CARTRIDGE FUSES FAST ACTING 600 VAC 30 AMPERE	CARTRIDGE FUSE, FAST ACTING, 600 VAC, 30 A		
FAST ACTING CARTRIDGE FUSES 600 VAC 30 AMP	FAST ACTING CARTRIDGE FUSE, 600 VAC, 30 A		
CARTRIDGE FUSES 600 VAC 30 AMPERE, FAST ACTING	CARTRIDGE FUSE, 600 VAC, 30 A, FAST ACTING		
45 DEG ELBOW PIPE ADTPTR	45 DEG, ELBOW, PIPE, ADAPTER	ELBOW,PIPE,ADAPTER,45 DEG,1-1/2 IN	ELBOW,PIPE;ADAPTER,45 DEG,1-1/2 IN,SCH 40,200 PSI,CARBON STEEL,BLACK OXIDE,ASTM A106,1-1/2 IN NPS X 1-1/2 IN NPS,1.94 IN CENTER TO END DISTANCE
1-1/2 INCH X 45 DEGREE PIPE ELBOW	1-1/2 IN, 45 DEG, PIPE, ELBOW		
pipe elbow 45° 1 1/2" n° 45	PIPE, ELBOW, 45 DEG, 1-1/2 IN		
45° 1 1/2" pipe elb	45 DEG, 1-1/2 IN, PIPE, ELBOW		
BUSH TAPER	BUSH TAPER	TORQUE 4300 LB-IN, TAPER BUSHING, LOCK	TORQUE 4300 LB-IN, TAPER BUSHING, LOCK
BUSHING	BUSHING		
1-5/8"	1-5/8 IN, TAPER BUSHING		
TORQUE 4300 LB-IN TAPER BUSHING LOCK	TORQUE 4300 LB-IN, TAPER BUSHING, LOCK		



Examples of MDaaS Record Enrichment



Raw Data Provided for MDaaS

Item Number	0101030348
Item Description	439569, ACTUATOR, PNEUMATIC, MODEL LT-A-101, LP-A-101, LVS
Vendor Item Number	439569
Vendor Currency	CAD
Vendor Contact	
Vendor Contract Reference	BISON - PRICE AGREEMENT JUL. 8/21
Vendor Location	CANADIAN VENDOR-OUTSIDE SASK.
Quantity on Hand	1
Quantity in Stock	Yes

Fully Cleansed/Enriched record

MANUFACT. NAME	MANUFACT. PART NO	SHORT DESCRIPTION	LONG DESCRIPTION	UNSPSC CODE	CLASS	CHARACTERISTIC NAME	CHARACTERISTIC VALUE
ANSUL	439569	ACTUATOR, PNEUMATIC, MODEL LT-A-101, LP-A-101, LVS	LT-A-101 PNEUMATIC ACTUATOR CLASS: ACTUATOR; SUB CLASS: PNEUMATIC; TYPE: PNEUMATIC CYLINDER; BORE SIZE: 3.93in; STROKE: 5.25in; INLET SIZE: 8.25in; CONNECTION TYPE: FTP; ROD SIZE: 16.5in; MATERIAL: BRASS; TORQUE RATING: 12 lb-ft; PRESSURE RATING: 1800psi; TEMPERATURE RATING: -65F to +210F; MOUNTING TYPE: TANK MOUNTING; CERTIFICATIONS / STANDARDS ROHS	31251504	ACTUATOR	BORE SIZE	3.93in
						STROKE	5.25in
						INLET SIZE	8.25in
						CONNECTION TYPE	FTP
						ROD SIZE	16.5in
						MATERIAL	BRASS
						TORQUE RATING	12 lb-ft
						PRESSURE RATING	1800psi
						TEMPERATURE RATING	-65F to +210F
						MOUNTING TYPE	TANK MOUNTING
						CERTIFICATIONS/ STANDARD	ROHS
						VENDOR NAME 1	BISON
						VENDOR PART NUMBER 1	439569
						VENDOR CURRENCY 1	CAD
						VENDOR CONTRACT REF 1	BISON - PRICE AGREEMENT JUL. 8/21
						VENDOR LOCATION 1	CANADIAN VENDOR-OUTSIDE SASK.
						VENDOR NAME 2	LAITETORI
						VENDOR PART NUMBER 2	8998
						VENDOR NAME 3	THE BIG RED GUIDE
						VENDOR PART NUMBER 3	439569
						VENDOR NAME 4	FIRE SYSTEMS PRODUCTS
						VENDOR PART NUMBER 4	439569
						VENDOR NAME 5	AB SUPPLY
VENDOR PART NUMBER 5	439569						
VENDOR NAME 6	IFAS						
VENDOR PART NUMBER 6	AN439569						
VENDOR NAME 7	L&J FIRE EQUIPMENT						
VENDOR PART NUMBER 7	439569						
DRAWING NUMBER	152-33						
MODEL NUMBER	30004457						
SERIAL NUMBER	160003345						

- Record Built to UNSPSC 31251504
- Material Descriptions Standardized
- Vendor and Manufacturer Information Added



Demostration



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Questions?



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Shayaan Ahmad- sahmad@prometheusgroup.com

Carolina Sierra- csierra@prometheusgroup.com