



XVII Congreso de Confiabilidad

25 y 26 de noviembre de 2015. Parque Científico
y Tecnológico de Bizkaia. Zamudio (Bizkaia)





*Integración de información para
una gestión sostenible de las
estrategias de gestión de activos*

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Meridium



- Quick Introduction
- What is Intelligent Asset Strategy and the value proposition
- Solution Details
- About Meridium

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**meridium**



Agenda

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Quick Introduction



Our World is Changing Rapidly



Wave 1: WWW
Connecting PCs

350M PCs Annually



Wave 2: Mobile/Cloud
Connecting People

2.32B Annually



Wave 3: WWW
Connecting Everything

50B by 2020



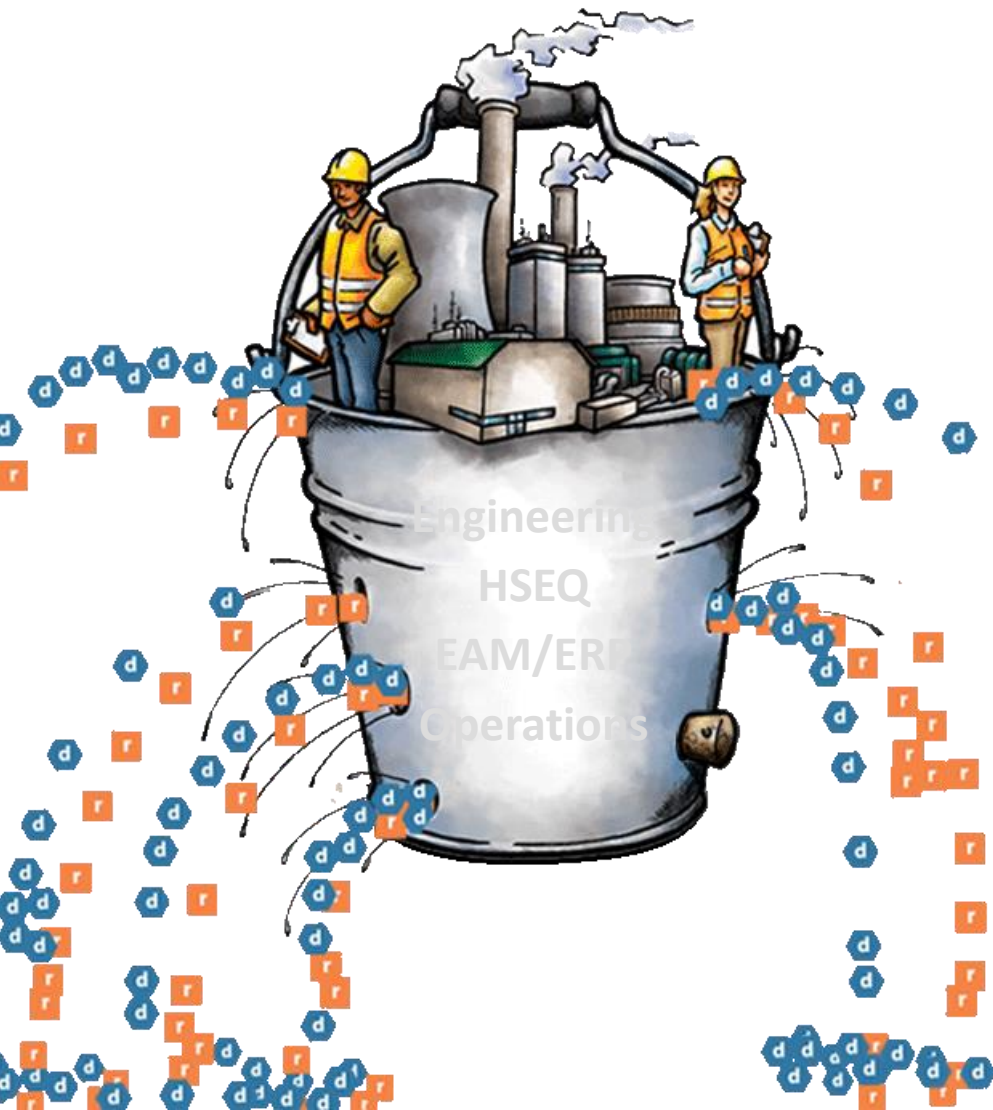
Data is Doubling Every Two Years



- 90% of world's data created in last two years
- More data generated in 2012 than prior 5,000 years
- By 2020, 40% of data will come from sensors



One Turbine
**500 gigs of data
every day**

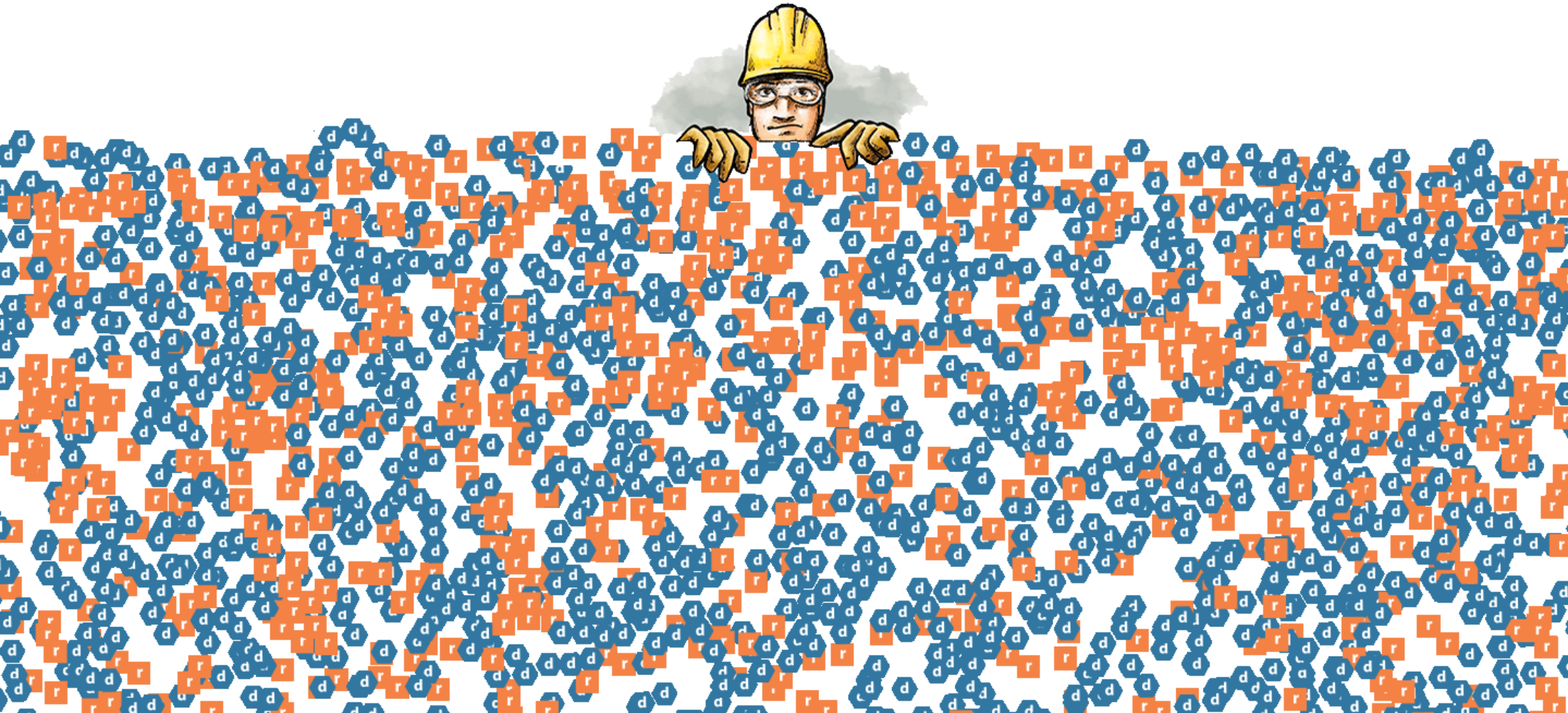


The Challenge:

- You can store the data, but how do you evaluate all the data?
- What happens if something goes wrong?



What's Your Strategy to Deal With It?



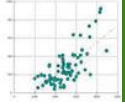

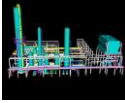





Intelligent Asset Strategies

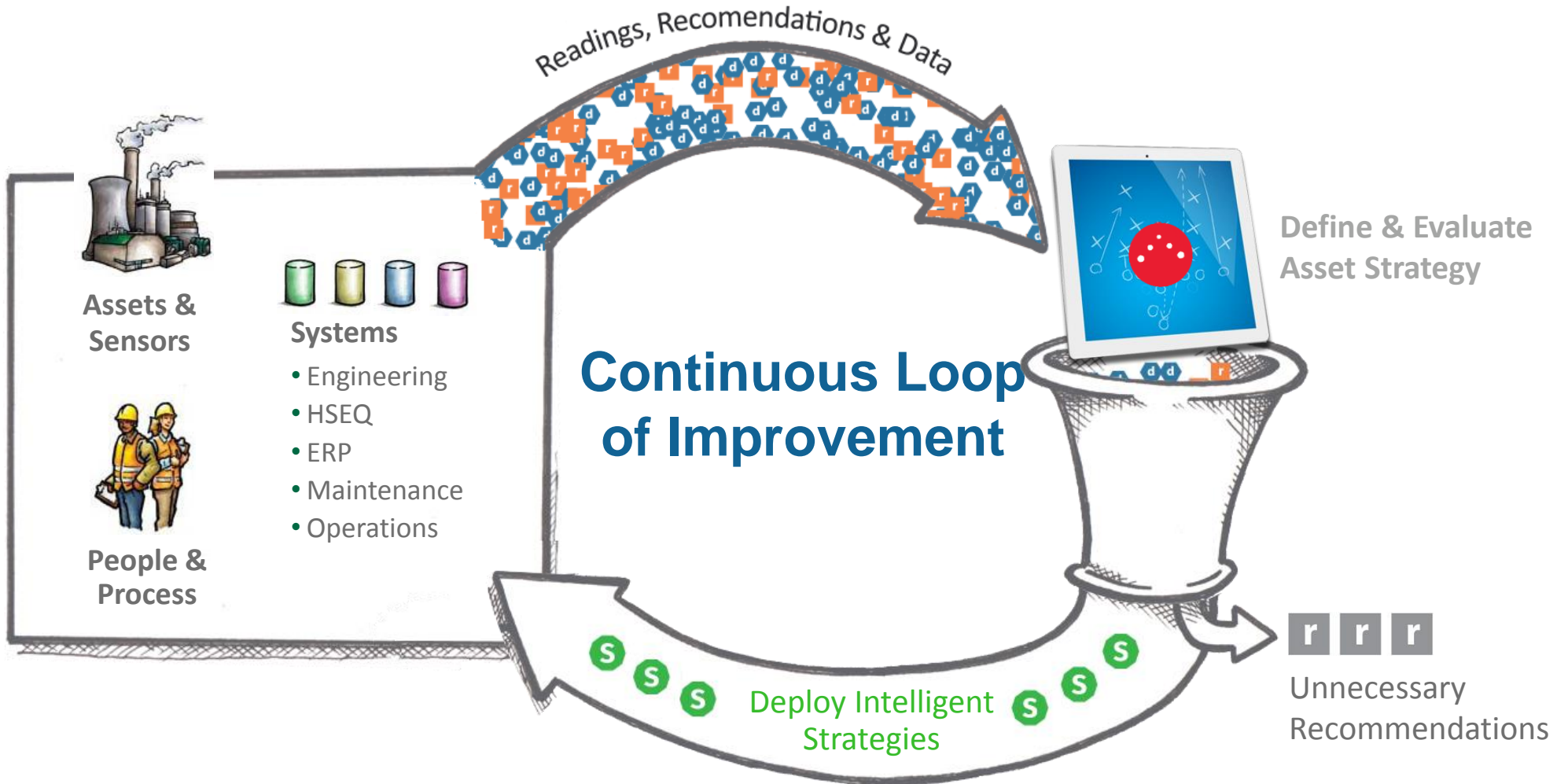


Different Views of Asset Data

	Transaction View	Enterprise Asset Management (EAM/ERP) <ul style="list-style-type: none">• SAP • IBM • Oracle
	Strategy View	Asset Performance Management (APM) <ul style="list-style-type: none">• Meridium • Point Solutions
	Trend View	Condition Monitoring & Process Historians <ul style="list-style-type: none">• SKF • Rockwell • GE • Emerson • OSI
	Control View	Control Systems <ul style="list-style-type: none">• Honeywell • Emerson • Rockwell • GE • Siemens
	Picture View	Engineering & Design <ul style="list-style-type: none">• Intergraph • Aveva
	Regulation View	Government regulation & Classification Societies <ul style="list-style-type: none">• EPA • DOT • OSHA • EU • ABS • DNV • GL • BV, etc...



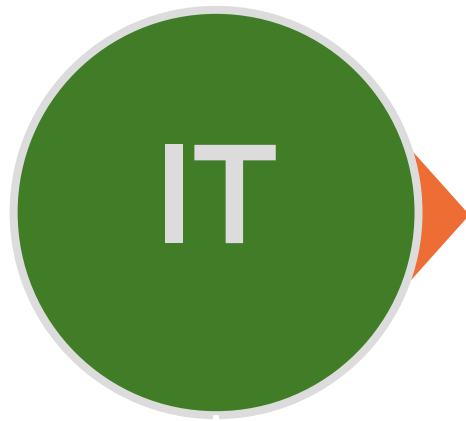
{ Intelligent Asset Strategy }





Opportunity to Connect IT and OT

BIG DATA



- Cost
- Orders
- Constraints
- Specs



- State
- Location
- Condition
- Events



- ERP
- CRM
- Demand Management
- Financial Planning
- Network Optimization

Intelligent
Asset Strategies
provide context

- Control Systems
- Smart Machines
- Location Systems
- Environmental Sensors
- Barcodes/RFID



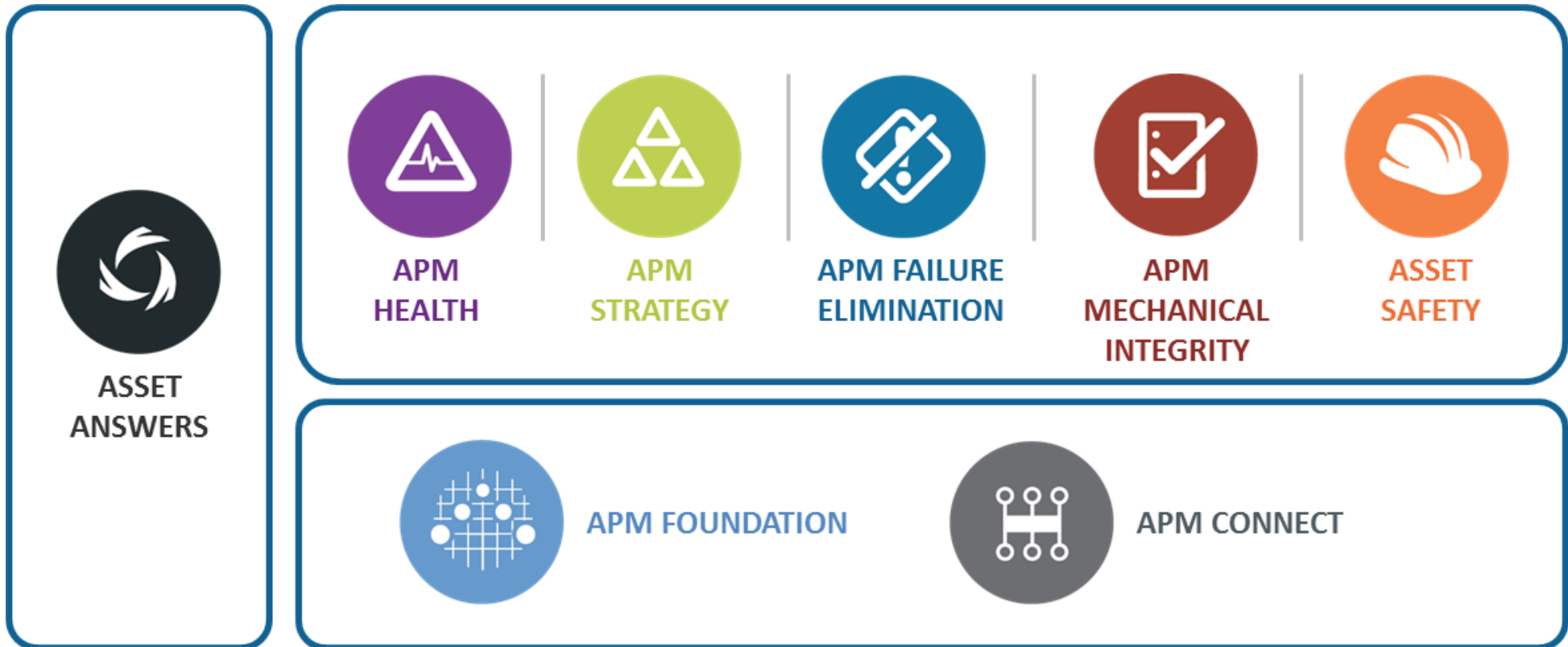
Solution Details

Enterprise Asset Performance Management Solution



What We Do

Enterprise APM Solution





Meridium APM Software



ASSET ANSWERS

- Bad Actor Identification
- Comparative Analysis
- Data Quality



APM HEALTH

- Performance Indicators
- Rounds
- Policy Designer



APM FAILURE ELIMINATION

- Root Cause Analysis
- Reliability Analytics
- Production Loss Analysis



APM STRATEGY

- RCM / FMEA
- Asset Strategy Management
- Asset Risk & Cost Modeling



APM MECHANICAL INTEGRITY

- Risk-Based Inspection
- Inspection Management
- Thickness Monitoring



APM FOUNDATION

- Asset Criticality Analysis
- Metrics & Scorecards
- Administration



APM SAFETY

- Hazards Analysis
- SIS Management
- Calibration Management



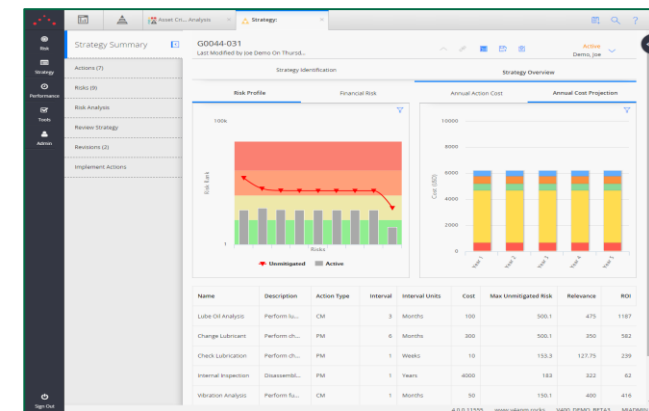
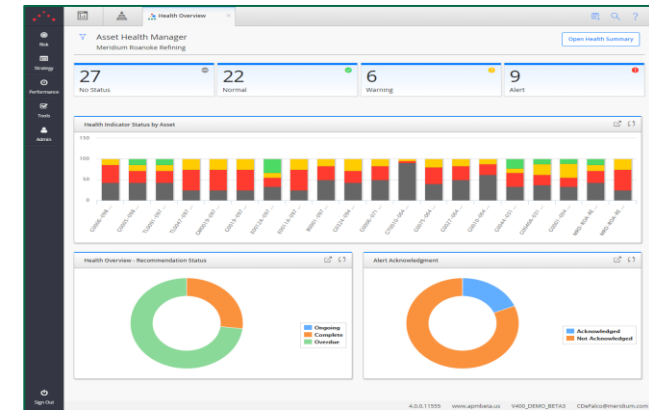
APM Connect

- Enterprise Integration
- Analytical Integration
- Data Adapters
- Custom Integration



Asset Strategy Implementation & Optimization

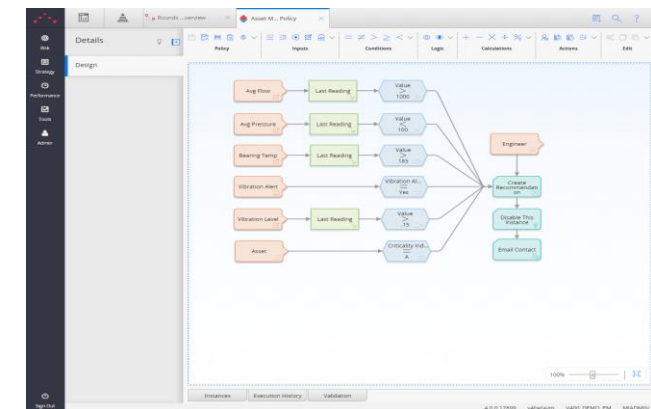
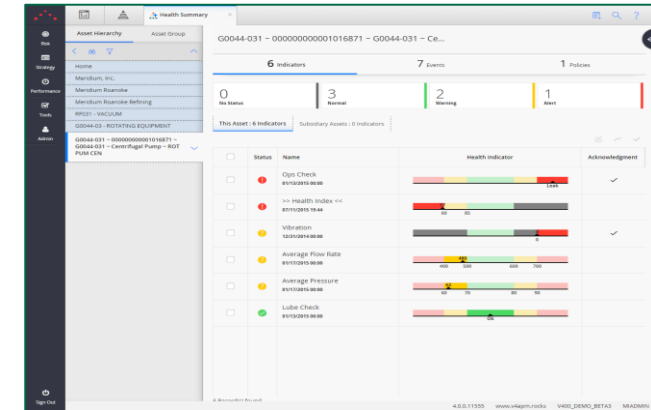
- Optimizes asset management plans to proactively balance cost and mitigate business risk
- Proactively manage asset failure modes with intelligent strategies
- Imbedded RCM and FMEA tools
- Asset strategy library
 - 524 equipment types; 40,800 failure mechanisms, 3,600 PM tasks, 126,800 As-Found codes





Overall Asset Health Management

- Condition monitoring with health indices
- Asset and system health views
- Integrated flexible policy (rule) manager
- Failure mode identification with tracking
- Integration with predictive analytics and other CM applications

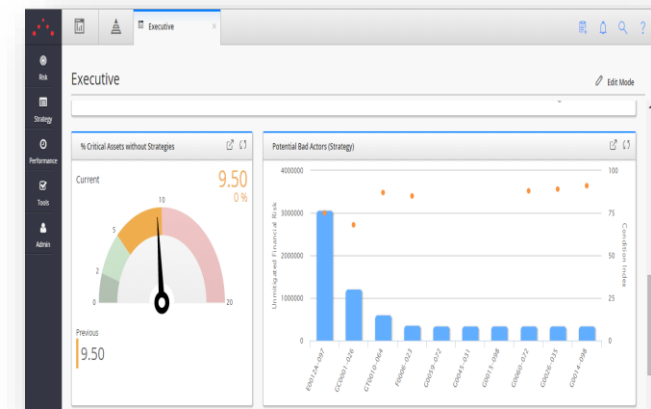
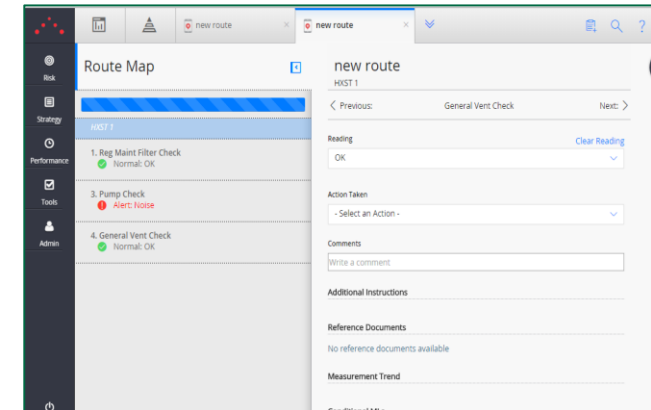




Effective Operations Tools

- Flexible and extensive Rounds
- Electronic Logs
- Prioritized attention list of critical assets
- Operational risk view of assets
- Timeline visualization of asset incidents
- Generation production analysis

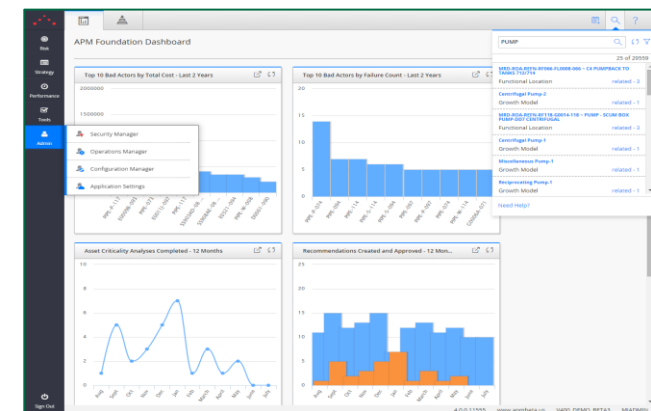
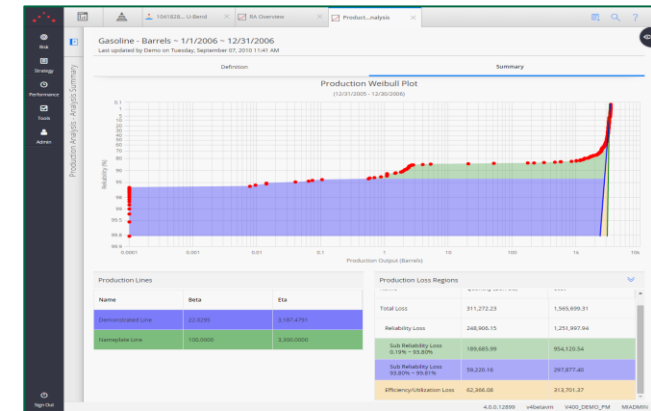
[Capacity incident tracking -NERC, CEA]





Reliability Analytics and Metrics

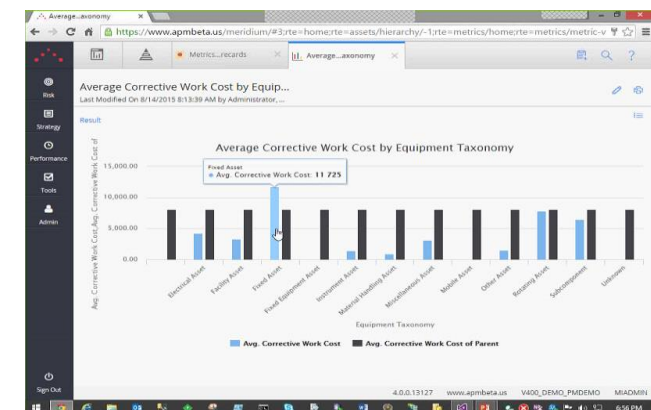
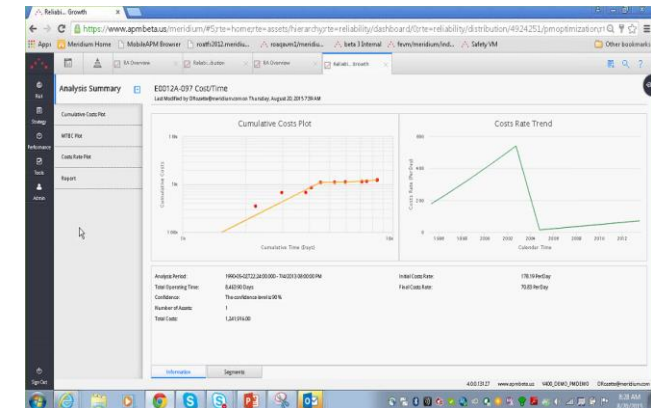
- Weibull Analytics
- Growth & Distribution Analysis
- Monte Carlo simulations
- User configurable KPIs
- Flexible metric determination and visualization
- Compliance performance tracking





Life Cycle Management Tools

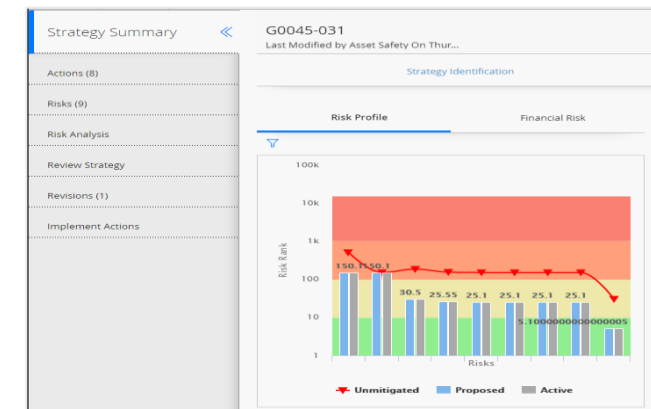
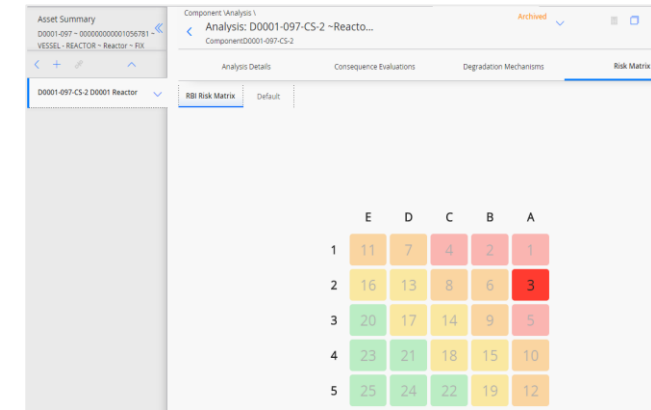
- What if analysis capability – based upon time, cost, maintenance plans
- Asset Life Cycle costing tools
- End of life analysis with integrated maintenance history insight
- Timeline visualization of asset incidents





Maintenance Management Optimization

- Managing production assets with a risk-based approach
- Change management and revision history
- System and unit strategy implementation
- Resource modeling and simulation analysis
- Thorough asset history
- Compliance tracking





APM Business Benefits

\$10 THOUSAND Manitoba Hydro **saves \$10,000 per hour** in unplanned outages with Root Cause Analysis

2 MINUTES Kimberly-Clark increased efficiency of their records analysis **from 30 days down to just 2 minutes**

\$690 THOUSAND Russian Metal Company **saved \$690,000 per year** after identifying root cause analysis of a recurrent failure, before even completing the implementation project

2 MILLION Kochi Refinery increases crude oil production by **2 million metric tons per annum** with Inspection Management

45 PERCENT In less than one year, Super Octanos / SuperMetanol **eliminated 45 percent of rework**

14,4 MILLION By using Mechanical Integrity suite, a refinery **achieved 14,4 million euros in savings** in production losses through reduction in plant shutdown time



25 PERCENT Silcar's APM Implementation led to a **25 percent company growth rate**

2 WEEKS With only two weeks of installation time, Anglo Platinum's RCM program significantly increased safety performance and reduced downtime

7:1 RATIO By using Asset Strategy Management, ISAB **implemented tasks with 7:1 Benefit-Cost ratio**

10 PERCENT Basin Electric Updates Calibration Management, **Cuts Failures 10%**

\$3-5 MILLION Marathon Oil estimates a **\$3-\$5 million savings** per plant since their Meridium implementation

40 PERCENT Eastman Chemical **reduced reactive maintenance by 40 percent** in less than one year

Business cases from Meridium customers at:

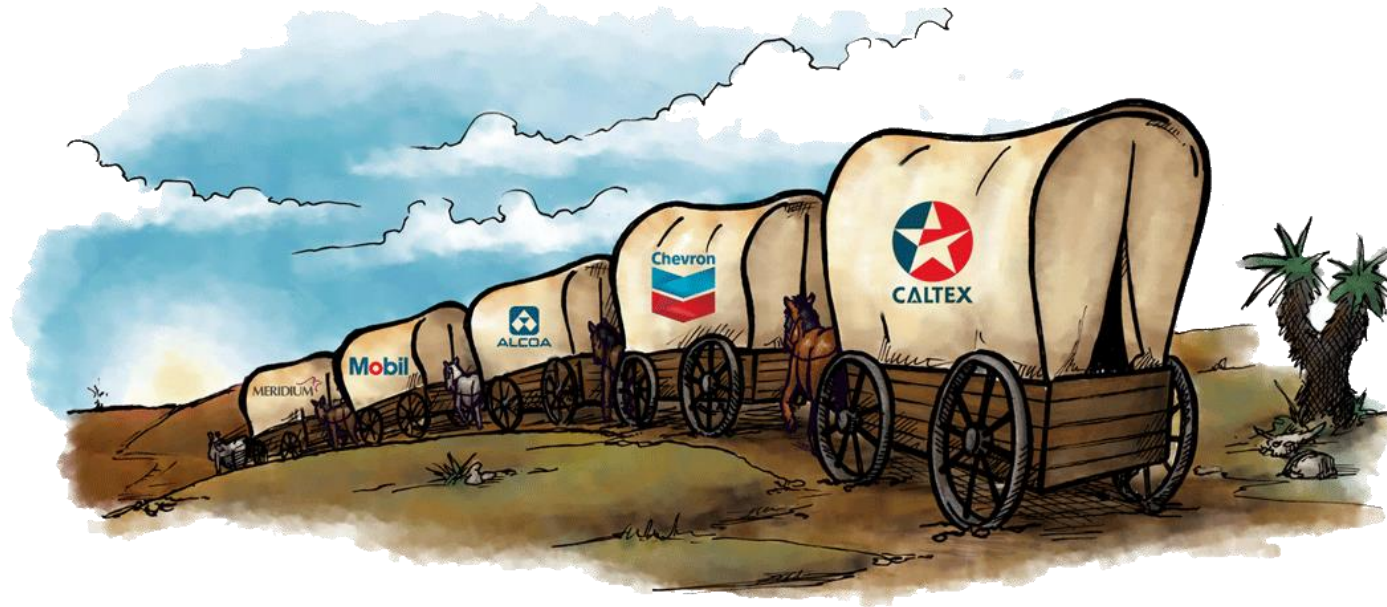
<https://www.meridium.com/knowledge-center/>



About Meridium



Meridium Industry



- Partnering with major corporations since 1993
- Began industries with high cost of failure: Oil & Gas, Power & Utilities, Chemical and Mining
- Now over 1,200 licensed sites ~ 150 clients in 80 countries
- Clients in all Asset Intensive Industries



Meridium Industry Presence



Chemical

Bulk, specialty,
pharmaceuticals, fertilizer



Oil & Gas

Upstream, midstream, and
downstream operations



Power & Utilities

Electricity, water



Mining

Metals, minerals



Manufacturing

Discrete, packaged goods, pulp
and paper, food and beverage



Transportation & Aerospace

Air, Rail, Road, Water



- **Roanoke, Virginia – Corporate Office**



Global Offices



Unique

We created the
APM
space in
1993

Independently
Owned

GE Minority
Investment

Multi-
language
And Scalable

GLOBAL
Benchmarking

{ ASSET ANSWERS }

We've been doing
IoT since
1995

ONLY SAP
Endorsed Business
Solution in
the space

(Endorsed Business Solution)

Our demonstrated
engagement model:
Over 100 SD's



**meridium**

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