



Reliability Business Intelligence®

Enterprise System Focused on
Asset Performance Management

ReliaSoft®

The Company

- Founded in 1992 (Tucson, Arizona – USA)
- World leader in reliability engineering
- Offering complete solutions for implementing reliability: software, training, consulting and enterprise systems
- Transforming data into information and information into strategic decisions
- Helping our customers to improve the bottom line by applying reliability tools in maintenance, production lines and product development



Core Competencies



SOFTWARE

Acclaimed for their ease of use, analytical power and unparalleled technical support, ReliaSoft's reliability engineering software tools facilitate a comprehensive set of modeling and analysis techniques. ReliaSoft offers 10 software tools for analysis and 3 enterprise systems for analysis and data management.

TRAINING

ReliaSoft offers a complete array of reliability engineering training courses designed to advance the knowledge and skill set of the practicing engineer. ReliaSoft offers 17 training courses in different methodologies.



CONSULTING

ReliaSoft's expert consulting services team offers a uniquely powerful combination of industry insight, unparalleled subject mastery and, most important of all, direct access to all of ReliaSoft's global resources, expertise and contacts.



ReliaSoft Consulting

◆ Consulting

- Determining the Maintenance Policy
 - Corrective
 - Preventive
 - Inspections
- Defining the Optimum Time



ReliaSoft Consulting

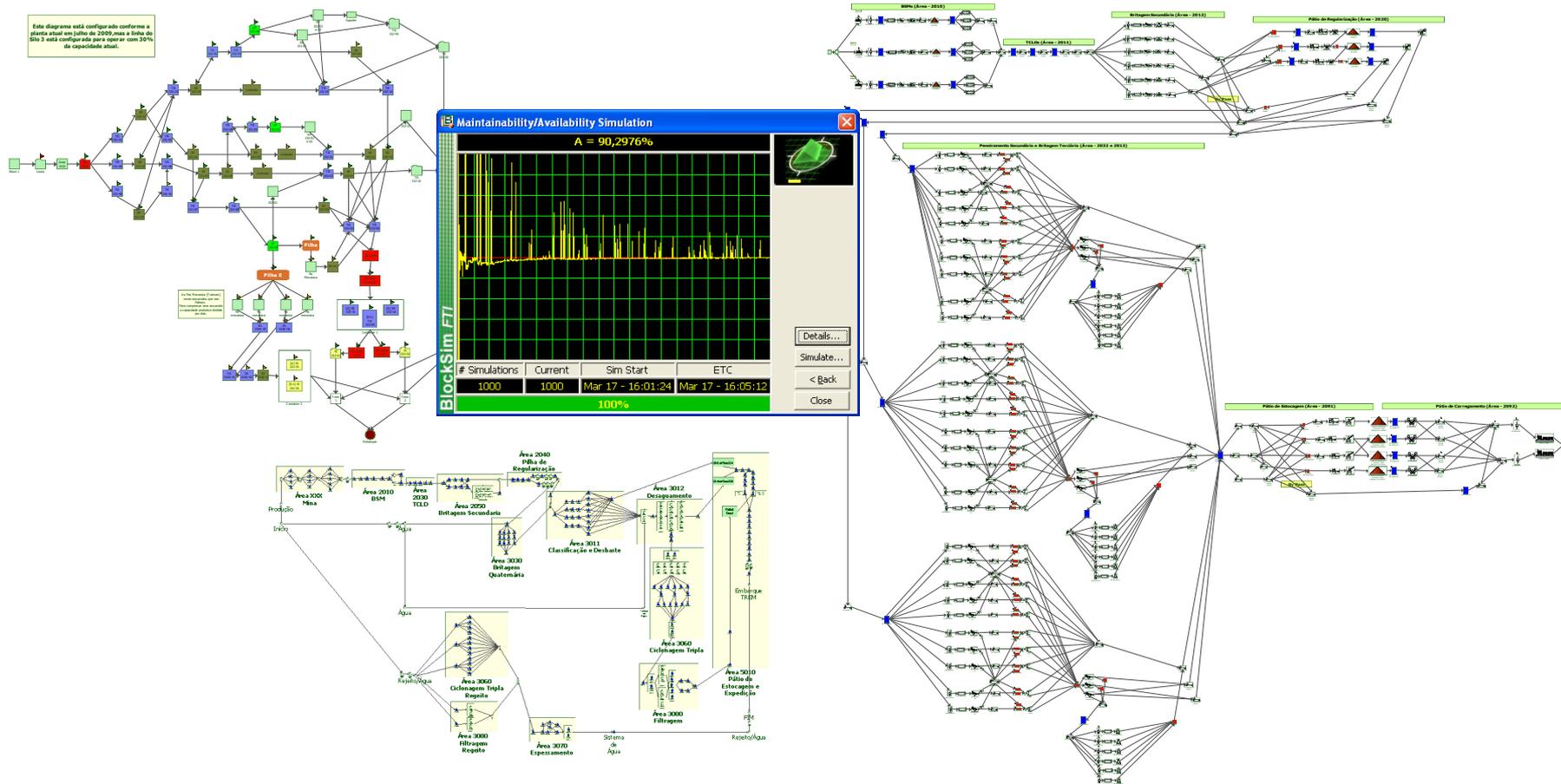
- ◆ Consulting
 - Determining the Optimum Spare Part Policy



ReliaSoft Consulting

Consulting

- RAM Analysis (*Reliability, Availability and Maintainability*)



ReliaSoft Worldwide

ReliaSoft has offices and independent distributors strategically located throughout the world to address market-specific business needs and assist our customers in their own language.



ReliaSoft Professionals

ReliaSoft has over **100 skilled professionals** working in five offices around the world.



~20%



~10%



~20%



~10%

Certification and Symposia

ReliaSoft has introduced and continues to promote multiple initiatives for advancing the effectiveness and reputation of the reliability discipline, including:

Certified Reliability Professional (CRP) Certification



The Certified Reliability Professional (CRP) initiative is a professional certification program for reliability engineers. It is designed to distinguish professionals who have gained and successfully demonstrated unquestionable expertise in the field of reliability engineering.

Site: www.ReliabilityProfessional.org



International Applied Reliability Symposium - ARS

The ARS provides a forum for expert presenters from industry and government to come together with reliability practitioners from all over the world to discuss the application of reliability principles to meet real world challenges. ReliaSoft organizes annual events in: **North America, South America, Europe, Asia Pacific** and **India**.

Site: www.ARSymposium.org

Some of our Customers

Oil & Gas



HALLIBURTON



ExxonMobil



Mining



ALUMAR



Electronics



Automotive



Mercedes-Benz

VOLVO



DELPHI



Ford Motor Company

GENERAL MOTORS COMPANY

Telecom



Some of our Customers

Aerospace

Honeywell



BOMBARDIER



GE Aviation

Gulfstream®



Rolls-Royce



IT Hardware



Microsoft®



invent



LEXMARK™



Defense

GENERAL DYNAMICS
Strength On Your Side®

LOCKHEED MARTIN

NORTHROP GRUMMAN

Raytheon



BAE SYSTEMS

SAIC
From Science to Solutions

ATK

Military



ROYAL AIR FORCE



National Defence
Défense nationale



Ministry of Defence

Healthcare

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Abbott
A Promise for Life

GE Healthcare

Boston Scientific
Delivering what's next.™

Medtronic

PHILIPS
sense and simplicity

BECKMAN COULTER

Some of our Customers

Semiconductors



CORNING



TEXAS INSTRUMENTS



Heavy Equip.



JOHN DEERE



CATERPILLAR®

KOMATSU



VOLVO TRUCKS GLOBAL

CLAAS



Energy



ALSTOM | Power



Chemicals



EASTMAN

Braskem



Transportation

ALSTOM | Transport

CANADIAN PACIFIC

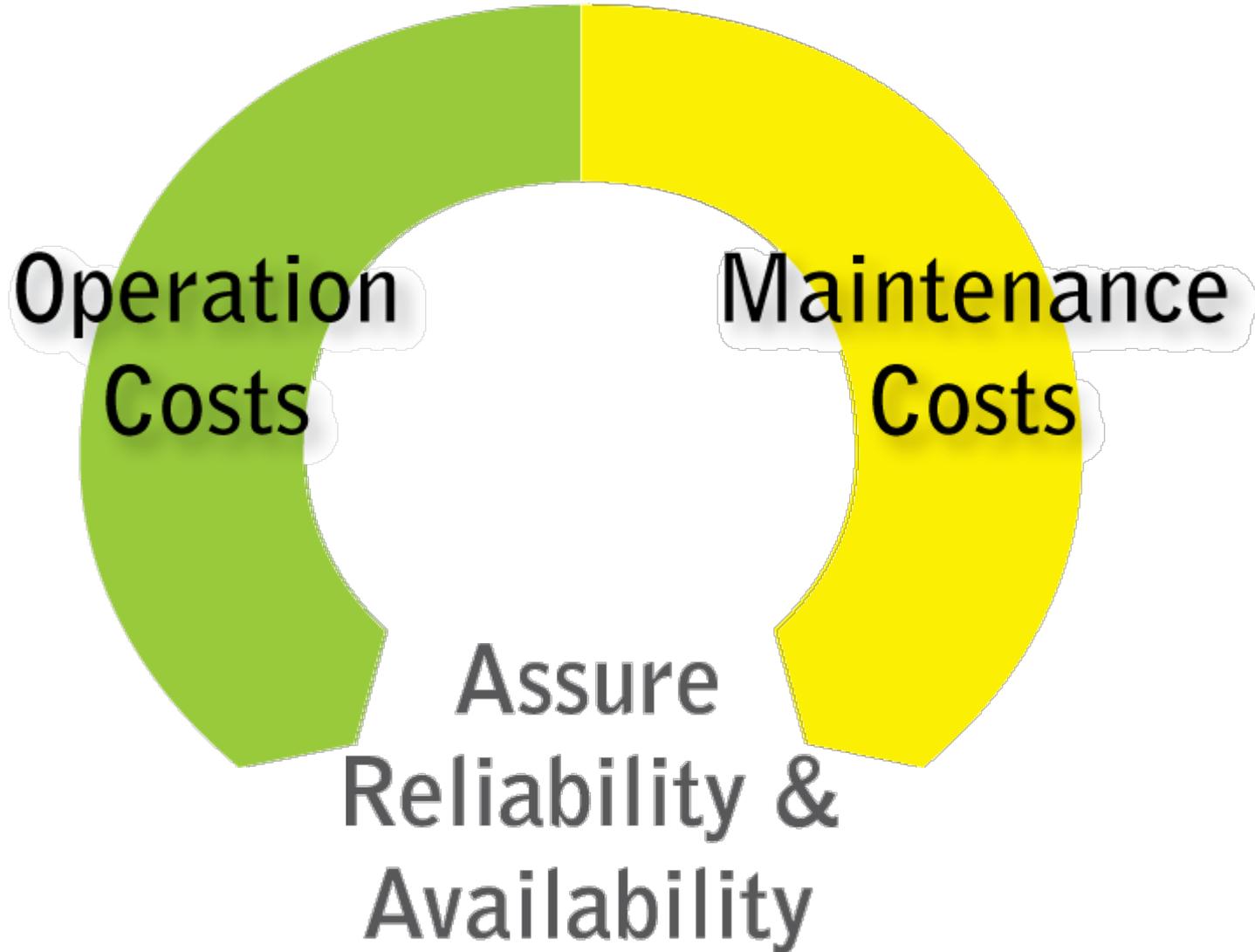
GE Transportation



Asset Management



Asset Management

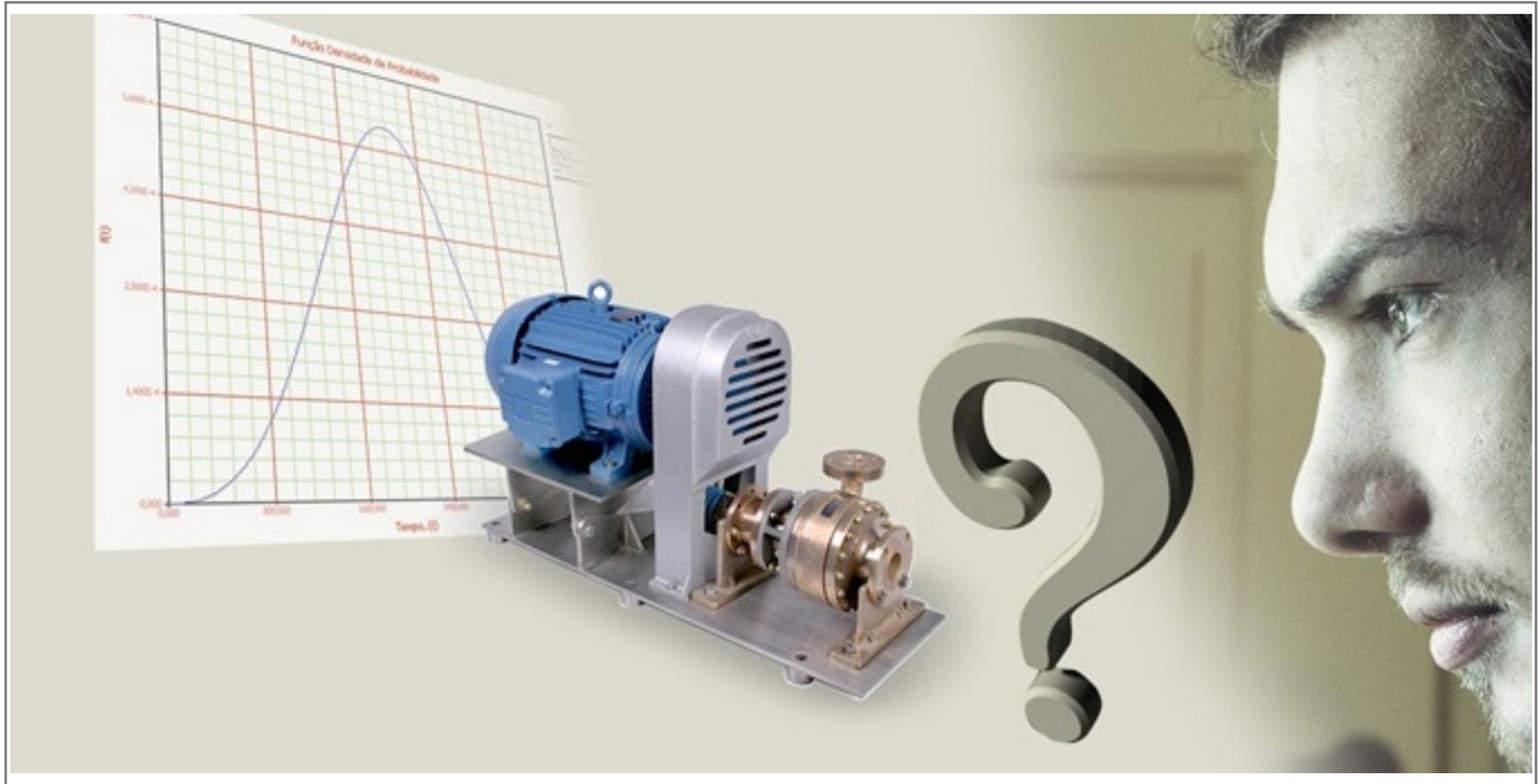


Asset Management - Overview

- ◆ Asset management is the key for companies to reach their business objectives
- ◆ To correctly manage costs and maximize availability and throughput, companies need to focus on asset management
- ◆ To have effective asset management, companies need to apply a system to generate a good set of key performance indicators (KPIs)
- ◆ Effective and accurate asset management does not exist without reliability

Asset Management Supported by Reliability

- ◆ How can you manage your asset if you do not have the ability to know the reliability performance during the operational lifetime?



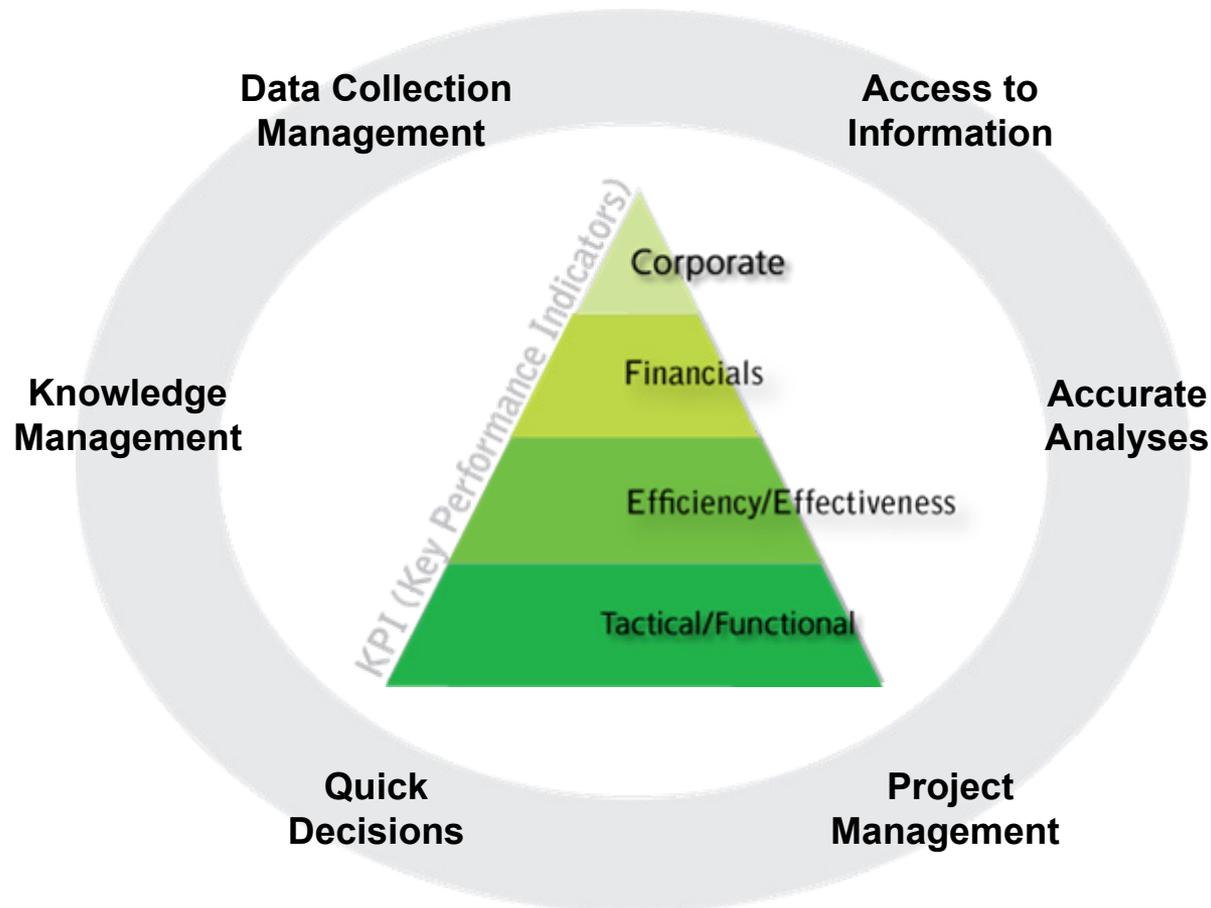
Asset Management Supported by Reliability



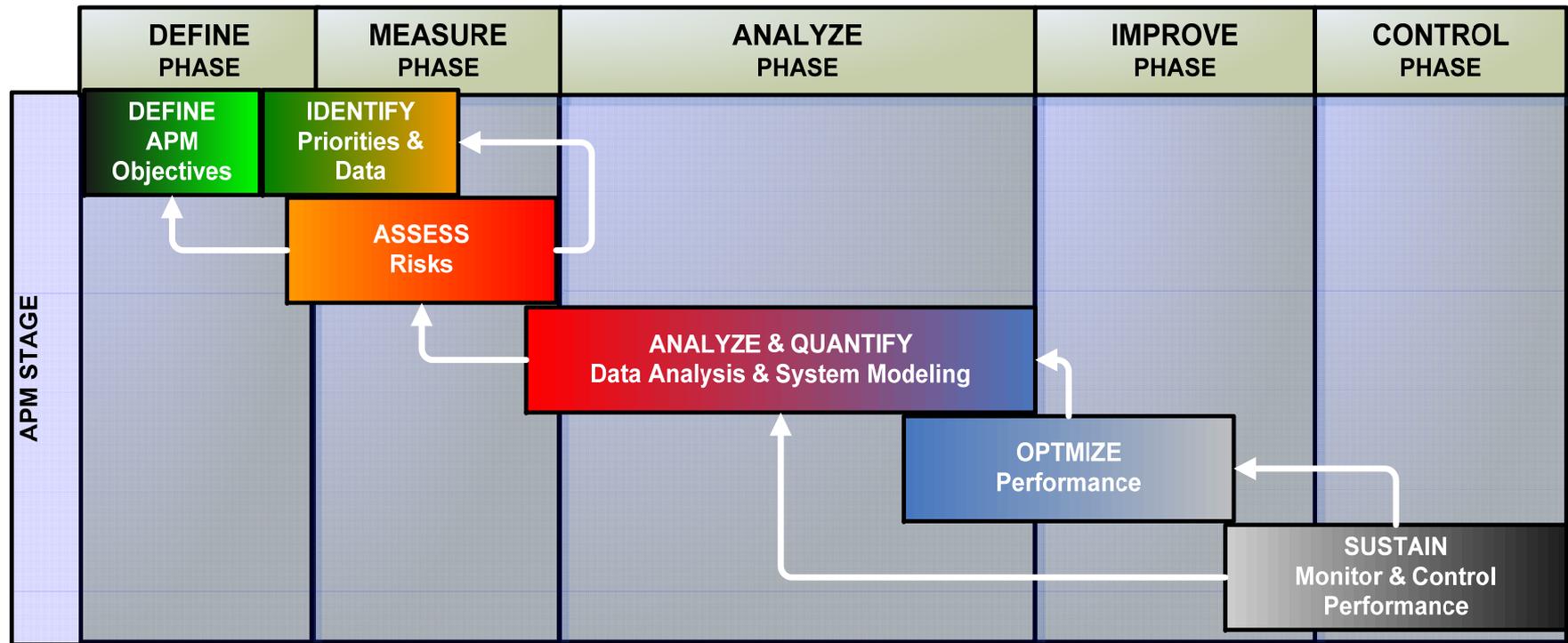
**Reliability is the Key to Successful Asset
Management**

Asset Management

- ◆ An effective and accurate asset management process is a set of activities/actions:

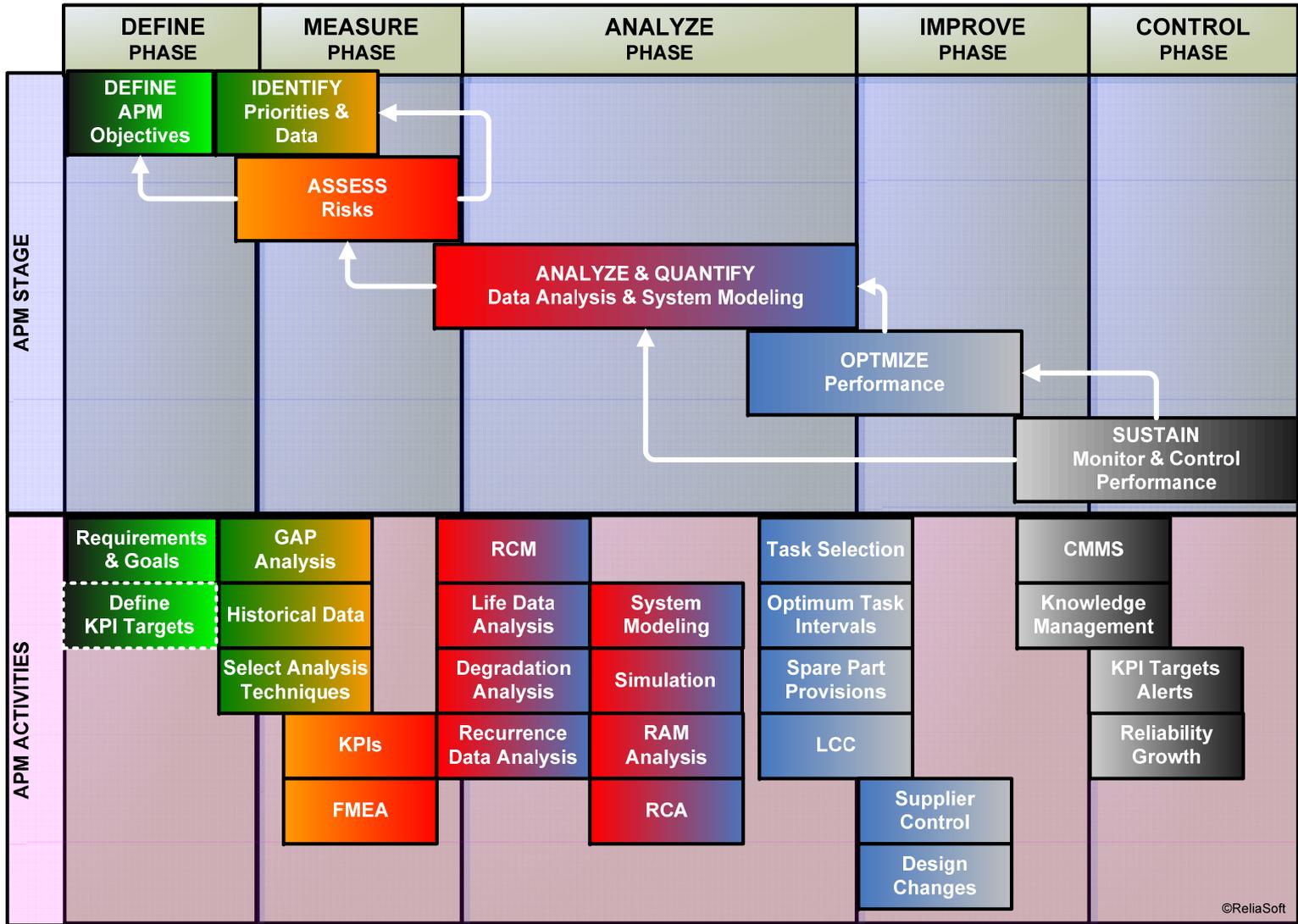


Asset Management Process Phases



“You cannot manage something you cannot control, and you cannot control something you cannot measure.”
— a common management adage

Asset Management Process Activities



Presentations and Symposia

2010 ARS, Europe Track 1 Session 6

The International Applied Reliability Symposium

Home North America South America Asia Pacific Europe India

2010

- Europe 2010
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Track 1 Session 6
 10:30 to 11:30 a.m. Thursday August 12, 2010

Asset Management Supported by Reliability Engineering

When we talk about reducing operation and maintenance costs, many companies need to manage their costs and, at the same time, still achieve the business objectives. Asset management is the key to have effective asset management, the company needs to apply a system of performance indicators (KPIs). Some important activities that are necessary for establishing good data collection and management; 2) allowing access to the data; 3) managing the projects; 4) making quick decisions and 6) storing the data.

Key Words: Cost Management, Asset Management, KPIs

Claudio Spanó
 ReliaSoft Brasil
 Brasil

ARS - Berlin

SMRP
 ANNUAL
 CONFERENCE
 OCTOBER 18-21, 2010
 MILWAUKEE, WISCONSIN

DRIVEN
 BY PERFORMANCE

POWERED
 BY PROFESSIONALS

Dear Adamantios Mettas:

Congratulations your abstract "Asset Management Supported by Reliability Engineering" has been accepted for presentation for Track 1: Business and Management at SMRP's 18th Annual Conference!

The conference will be held in Milwaukee, Wisconsin, from October 18-21, 2010, at The Midwest Airlines Center. Please reply to this email immediately to let us know that you received it and you will speak at the conference!!!

If you have a co-presenter, please contact them to confirm that s/he knows the status of your paper. If you are planning to name a co-presenter, we need that information immediately in order for their name to appear in the conference brochure.

SMRP looks forward to another successful conference and you will be a critical element in making the conference successful.

Each speaker must submit a paper and PowerPoint presentation for inclusion in the printed conference proceedings and conference CD. In order to get complimentary registration, papers and presentations must be submitted by the deadline, exceptions will not be made. Papers, Presentations and Bios are due Friday, August 13, 2010. We will provide you with a PowerPoint template slide for your presentation. The format for papers is attached. Just a reminder....papers must be non-commercial.

You will have 1 hour to do your presentation which includes a question and answer period. Conference attendees will receive an electronic proceedings manual that includes all papers and presentations. Conference attendees have let us know that a prepared paper is very useful to them in evaluating which sessions to attend and for possible follow-up at a later date. So, completion of your paper by the due date is important. If we do not receive a paper from you by the due date you risk being dropped as a conference presenter and will not be allowed to get complimentary registration. PowerPoint slides must be submitted by the due date.



Reliability Business Intelligence®

Enterprise System Focused on
Asset Performance Management

What is it?

What is the *Orion eAPI* system?

- ◆ Enterprise system focused on Asset Performance Management
- ◆ By unifying diverse data currently located in various systems and databases throughout the company, the Orion eAPI system will be a powerful tool for consolidation and analysis, which will transform your data into information that can support strategic decisions for your organization
- ◆ Total mobility
 - Completely Web-based
 - Access by intranet and/or the Internet

Reliability Business Intelligence®

◆ Flexible

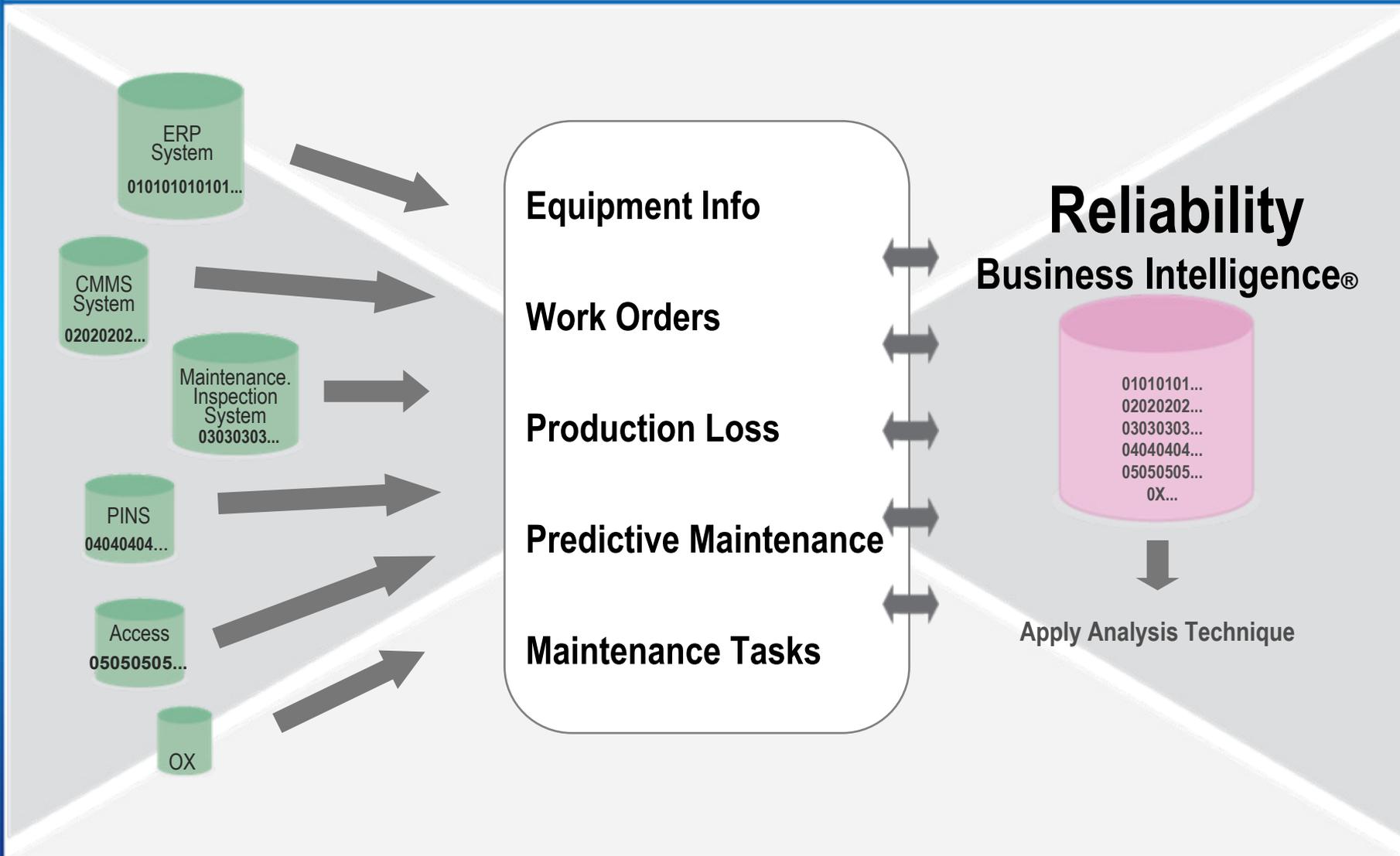
- Many types of analyses and predefined reports
- User-defined queries and reports

● Integration with all of ReliaSoft's software tools

- Store and manage all files you have created in ReliaSoft's tools
- Access ReliaSoft's software tools through the Orion system

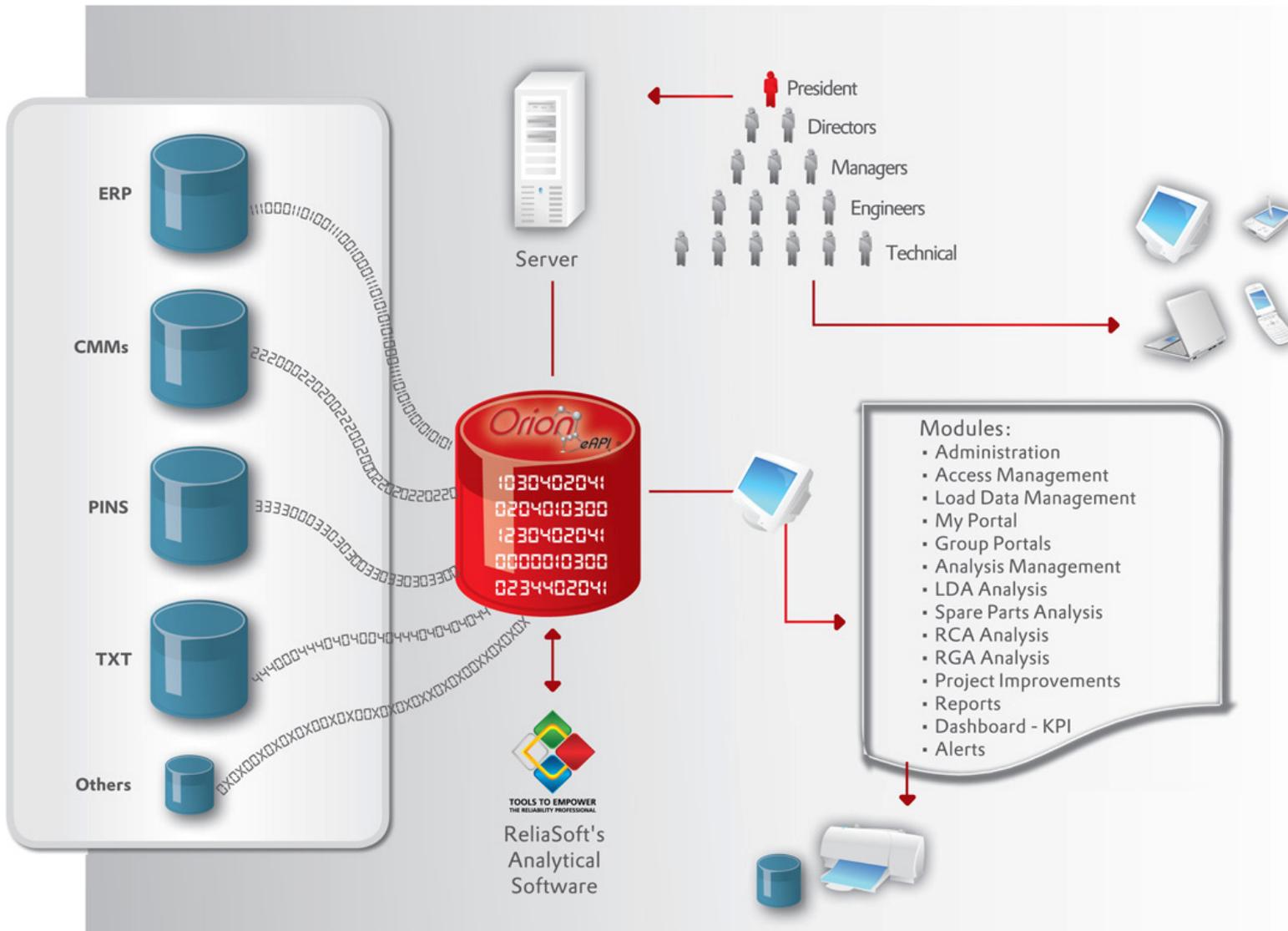


Data Sources



System Overview

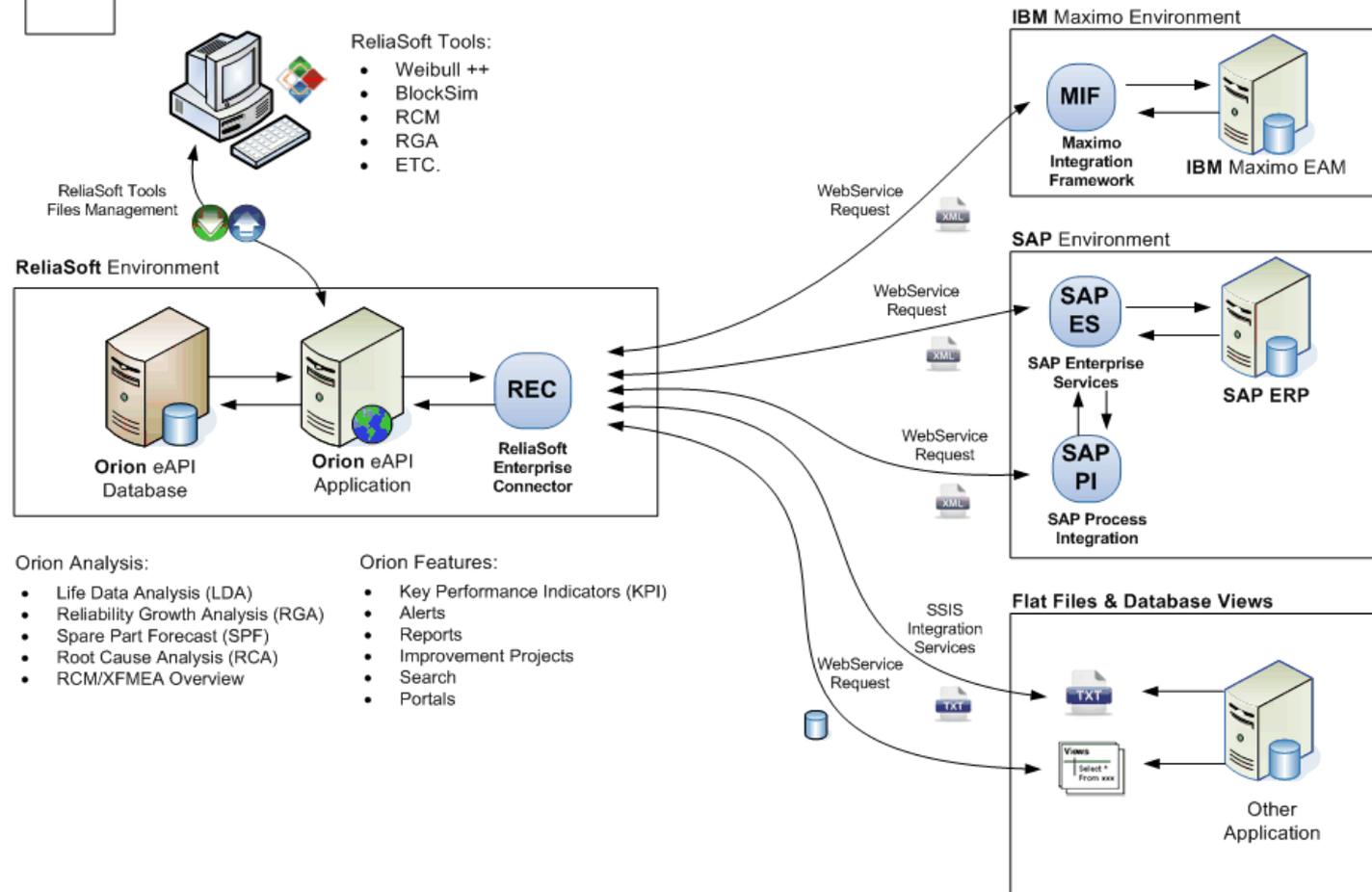
ASSET PERFORMANCE MANAGEMENT



Connection with Customer's Database

Orion eAPI Installation

ReliaSoft®



Orion eAPI Features

Orion eAPI System Features:

○ Analysis Module

- Reliability and Maintainability 
- Automated update of RBDs in BlockSim
- Reliability Growth 
- Spare Parts Forecast 
- Root Cause Analysis – RCA 
- Show RCM and FMEA analyses created in RCM++ and Xfmea software 

○ Total Integration with ReliaSoft's Software

- Store and manage files from ReliaSoft's software
- Attach the analysis to any part of the structure (*i.e.* TAG)

○ Reports

- Number of Failures
- MTBF & MTTR
- Maintenance Costs
- Availability
- Production Loss

Orion eAPI Features

Orion eAPI System Features:

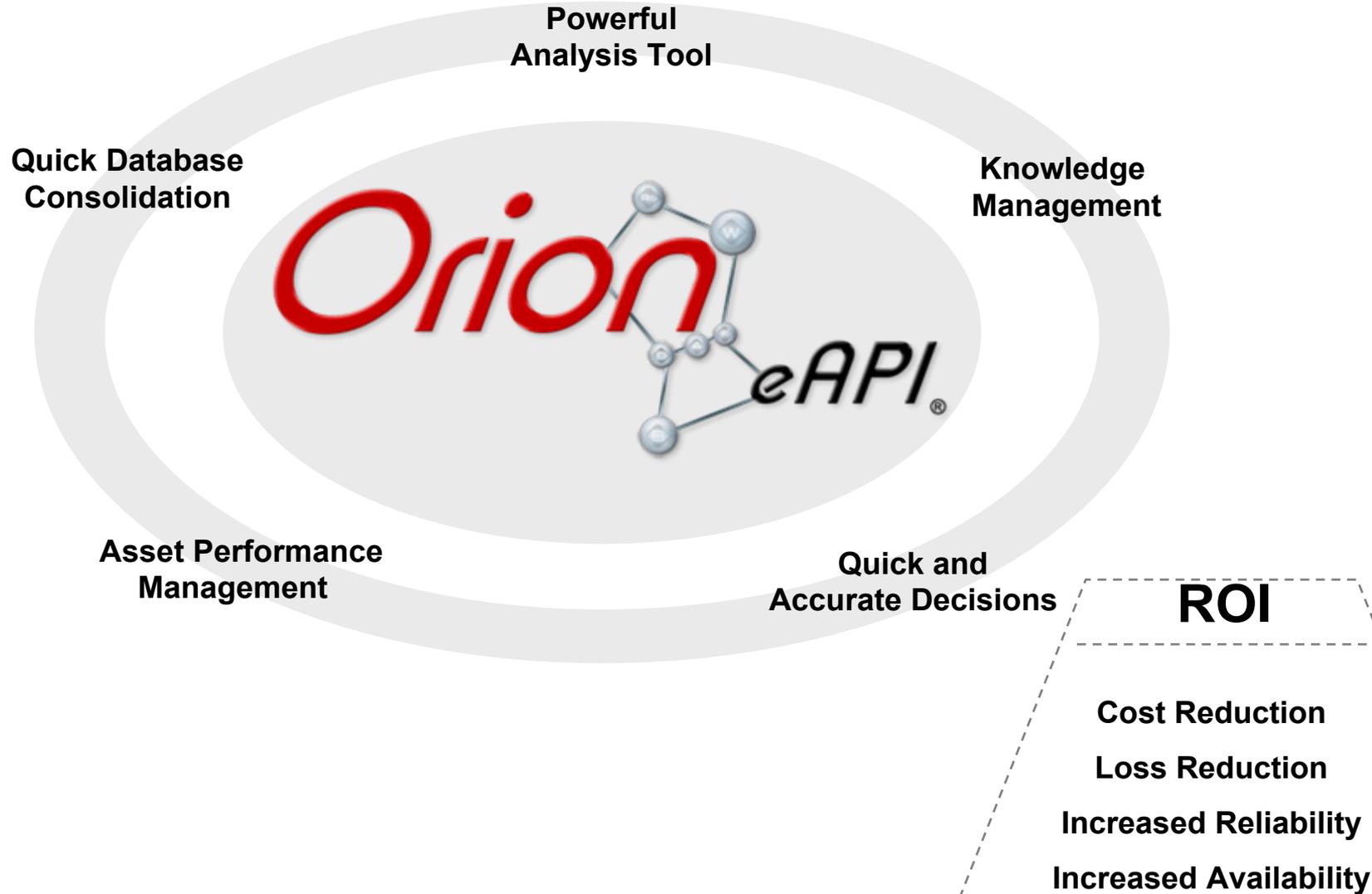
- **Key Performance Indicators** 
 - Many KPIs available to manage your assets:
 - Maintenance
 - Production
 - Financial
 - Etc.
 - KPI Dashboard
 - Users choose their KPIs
 - Alerts Setup 
 - Benchmark
- **Improvement Projects** 
 - Create and manage improvement projects and action plans
 - Calculate ROI (Return on Investment)
 - Prioritize improvements
 - Send automatic e-mails to the professionals involved in the action plan, including those who are:
 - Assigned to complete the task
 - In need of progress reports

Orion eAPI Features

Orion eAPI System Features:

- **Portals**  *view*
 - My Portal
 - Portal Groups
 - Able to create Groups (e.g. Electrical, Mechanical, Instrumentation, etc.)
 - All Portals have:
 - KPI Alerts
 - News
 - Improvement Management
 - Analysis
 - Actions
- **Analysis Management**  *view*
 - LDA / RGA / SPF / RCA
 - Analysis Files (from RS tools)
 - Improvement Projects
- **Search**  *view*
 - Search analyses
 - Search improvement projects
 - Search action plans
 - Search information in the consolidated database
 - Save and reuse your searches

Why choose Orion eAPI?



Questions

ReliaSoft[®]

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Reliability Business Intelligence®

Enterprise System Focused on Asset Performance Management

Analysis Module

Reliability & Maintainability

General Scope

Data Source:

Work Order
 Production Loss

Data Period:

Work Order Op
 Out of Service
 Work Start Dal
 Work Order Ck

Failure Classification:

System:

Subsystem:

Equipment Selection

Functional Structure

- AC - ACME Corporation
 - MN - ACME Mining
 - FE - ACME M Iron Ore
 - P11 - IRON 1 Plant
 - 100 - Primary Crushing
 - 110 - BSM 1
 - 120 - BSM 2

Results

Original Data

Functional Position:

Status	TAG	Start Date	End Date	Work Order Descript
✔	ACMN-FEP11-100-CT02	1/7/2008 9:50 AM	1/7/2008 4:32 PM	Performing Preventiv Maintena...
⚠	ACMN-FEP11-100-CT02	1/7/2008 10:51 AM	1/7/2008 4:36 PM	Performing Preventiv Maintena...

Reliability Interpretation

Maintainability Interpretation

<p>Behavior: High variability and standard deviation > mean.</p> <p>Failure Feature: Early failure</p> <p>Failure Cause: Possible issues, problems with quality control, and/or wrong installation or assembly, and/or excessive load applied, and/or mistake during the collect data process, and/or rupture due high efforts, etc...</p> <p>Recommended Action: Perform study to analyze why some items fail with small operation time operation and others fail with the expected time.</p>	<p>Maintenance Crew Variability: Very high variability deviation >> MTTR</p> <p>Maintenance Feature: The times to repair high variability around</p> <p>Notes: Many failures are leading to higher time to repair times. The maintenance crew is heterogeneous. A certain amount with low time to repair and another amount around the modal value, and also a large amount with high time to repair.</p> <p>Recommended Action: It is needed a strong training for all maintenance crews and respective procedures assigned to fix this failure. It is important also check the tools, test equipments, diagnose procedure, etc... All those action aimed reduce the high variability of time to repair.</p>
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Probability Density Function

Reliability vs Time Plot

Analysis Module

Reliability Growth – Crow AMSAA

General Scope

Data Source:

Work Order
 Production Loss

Data Period:

Work Order Open Date
 Out of Service Date
 Work Start Date
 Work Order Close Date
 Return to Service Date

Start

End

Results

Original Data

Functional Position:

Status	TAG	Start Date	End Date	Work Order Description	Event Number	Intervention Type
✓	ACMN-FEPI1-100-CT02	1/7/2008 9:50 AM	1/7/2008 4:32 PM	Performing Preventive Maintena...	720283	Corrective
⚠	ACMN-FEPI1-100-CT02	1/7/2008 10:51 AM	1/7/2008 4:36 PM	Performing Preventive Maintena...	720282	Corrective
⚠	ACMN-FEPI1-100-CT02	1/7/2008 12:00 PM	1/7/2008 4:43 PM	Performing Preventive Maintena...	717492	Corrective

General Scope | Equipment Selection | Data Selection | Analysis Setup | Analysis Data

Items Selected for Analysis

Item Name	Growth Rate	Beta	Lambda	DMTFR
ACMN-FEPI1-600-AL01	0.2800	0.7200	0.0100	2710.3500
ACMN-FEPI1-600-AL02	0.2200	0.7800	0.0100	1022.3500
ACMN-FEPI1-600-AL03	0.2100	0.7900	0.0200	653.7000
ACMN-FEPI1-600-BC01	0.3000	0.7000	0.0600	424.4300
ACMN-FEPI1-600-BC02	0.3000	0.7000	0.0800	337.6000
ACMN-FEPI1-600-BC03	0.3400	0.6600	0.1900	225.3000
ACMN-FEPI1-600-CT01				
ACMN-FEPI1-600-CT02				

General Scope | Equipment Selection | Data Selection | Analysis Setup | Analysis Data | Plots | Report

Reliability Interpretation

Behavior	MTBF Growing
Feature	The system reliability is growing.
Observation	If changes were applied in the design or in the maintenance policy, they are having positive impact on the reliability.
Recommended Action	If there were not any formal improvement actions, investigate why the system app. be improving. This may be due to different environmental conditions or different sys configurations.

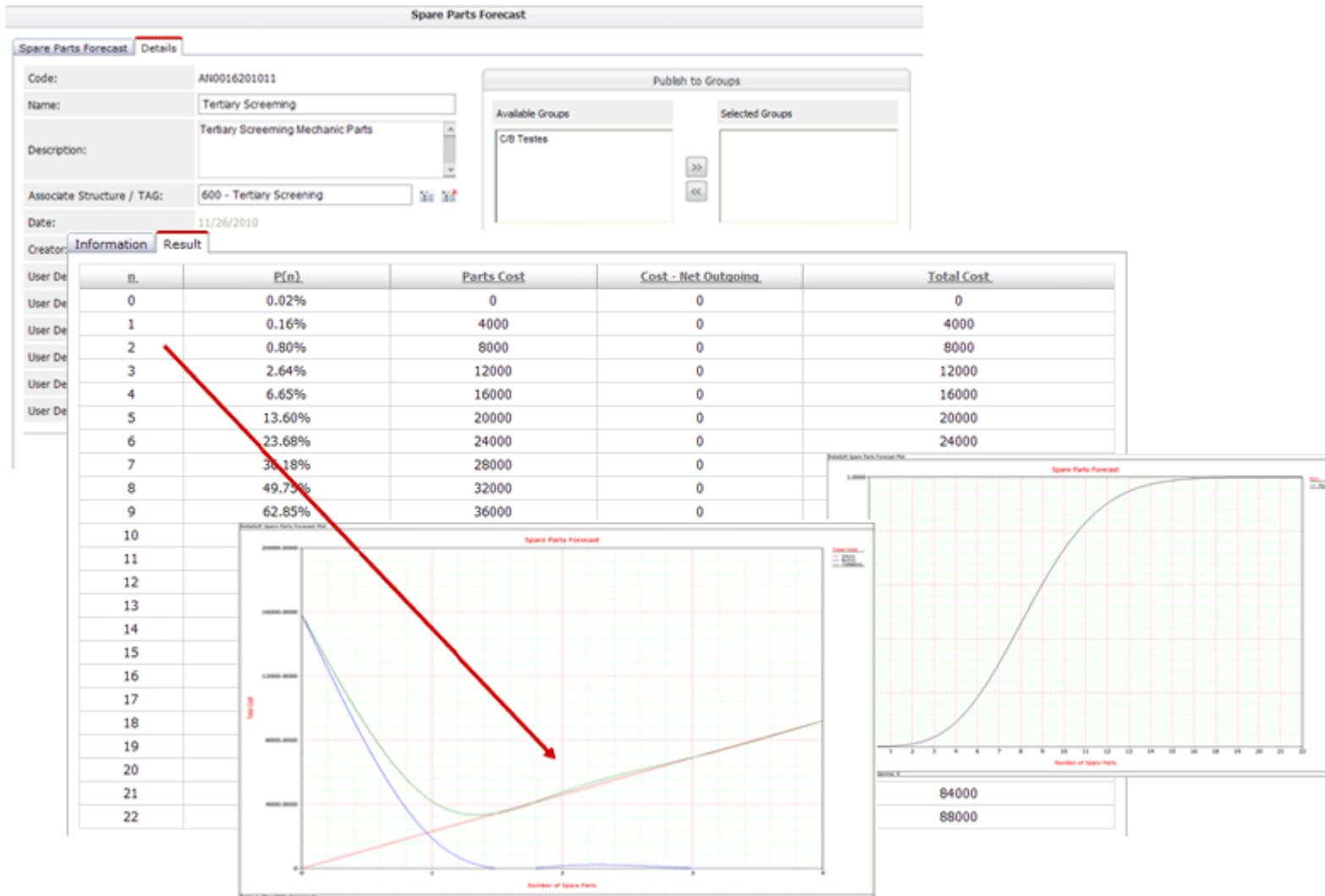
Crow-AMSAA

Functional Position:



Analysis Module

Spare Part Forecast



Analysis Module

Root Cause Analysis – RCA

The screenshot displays the Orion eAPI software interface for Root Cause Analysis (RCA). The interface is divided into several panels:

- Navigation Bar:** Includes 'Administration', 'Analysis', 'Improvements', 'Report', and 'Indicators'.
- Root Cause Analysis (RCA) Details:** Shows analysis data fields such as 'Analysis Codes', 'Analysis Name', and 'Description'. It also includes a 'Publish to Groups' dialog with 'Available Groups' and 'Selected Groups'.
- Functional Structure:** A tree view showing a hierarchy of nodes, including 'AC - ACME Corporation', 'M1 - ACME Mining', 'FE - ACME M Iron Ore', 'P11 - IRON 1 Plant', '300 - Primary Crushing', '110 - BSH 1', '120 - BSH 2', '130 - BSH 3', '200 - TCLD', '300 - Secondary Crushing', '400 - Secondary Screening', '500 - Tertiary Crushing', '600 - Tertiary Screening', '700 - Storage', '800 - Expedition', 'P12 - IRON 2 Plant', 'CU - ACME M Copper Ore', and 'P13 - IRON 3 Plant'.
- Root Cause Tree:** A diagram showing the relationship between events and facts. 'EVENT 01' is the root, branching into 'FACT 02', 'FACT 03', and 'FACT 04'. 'FACT 03' is further broken down into 'HYPOTHESIS' (marked with a question mark) and 'HUMAN CAUSE' (marked with a person icon).
- Form Fields:** Below the tree, there are fields for 'Name', 'Description', 'Example 01', 'Reason', 'Example 01', 'Probability' (set to 'Medium Probability'), 'Type' (set to 'Event'), and buttons for 'Insert', 'OK', and 'Return to Details'.

Analysis Module

RCM++ and Xfmea Overview

Open Analysis

Analysis Information



File Name: Semiconductor Examples.rx4

File Type: RCM++

Analysis Name: Semiconductor Examples.rx4

Description: Semiconductor Examples.rx4

Creator: emelero

Creation Date: 11/9/2009

Blocked by: fluvison

Blockade Date: 11/10/2009

Details Download Copy

View FMEA/RCM

Project

Project Name	Profile	Description
IC Package Component	Standard FMEA	This project has been created based on the sample FMEA on page 359 of Prasad's article in the CHMT '90 IEMT Symposium, 1990.
LPCVD LTO Process	J1739 PFMEA	This project has been created based on the sample FMEA on page 139 of Whitcomb and Rioux's article in the 1994 IEEE/SEMI Advanced Semiconductor Manufacturing Conference.
		This project was prepared based on the sample Process FMEA (PFMEA) on page 15 of the

System Hierarchy

Item	F	M	Cr
AMB Component	F		

FMEA Hierarchy

Description	RPNi	RPNr	To	C	FEC	I
Solder mask for the chip.						
Oxidation.						
Bad solder wettability.						
Storage.	112			2		
Contamination.						
Bad solder wettability.						
Packing.						
Handling by vendor.	112			2		
Dimensions too big or too small.						
Solder mask does not fit in jig.						
Stamping defect.	18			2		
Coplanarity.						

Improvement Projects Module

Create and Manage Action Plans

Improvement Project Register

Code: New

Title:

Description:

Reason:

Responsible Person:

Deadline:

Gravity: 1 Severity 1

Urgency: 1 Urgency 1

Trend: 1 Trend 1

GUT: 1

Status: Open

Associate to the Structure/TAG:

Creator: lorrice

Creation Date: 3/19/2010

Last Change Date: 3/19/2010

Conclusion Date:

Publish to (Users)

Available: Eduardo Mello, Eduardo Seixas, Fabio Christi, Fabio Okita, Fabio Tavares, Felipe Gonçalves_UP

Selected:

Publish to (Groups)

Available Groups:

Selected Groups:

ROI - Return of Investment

Investment (R\$):

Gain (R\$):

ROI:

Save Delete New

ROI - Return of Investment

Investment (R\$): 200000

Gain (R\$): 4000000

ROI: 19

Associate Analysis

Functional Structure

- AC - ACME Corporation
 - MN - ACME Mining
 - PI1 - IRON 1 Plant
 - 100 - Primary Crushing
 - 110 - BSM 1
 - 120 - BSM 2
 - 130 - BSM 3
 - 200 - TQLD
 - 300 - Secondary Crushing
 - 400 - Secondary Screening
 - 500 - Tertiary Crushing
 - 600 - Tertiary Screening
 - 700 - Storage
 - 800 - Expedition
 - PI2 - IRON 2 Plant
 - CU - ACME M Copper Ore
 - PI3 - IRON 3 Plant

Associate Analysis in the Structure

TAG

- ACMIN-FEPI1-110-AL01
- ACMIN-FEPI1-110-ER01
- ACMIN-FEPI1-110-PN01
- ACMIN-FEPI1-110-CT01
- ACMIN-FEPI1-110-DF01
- ACMIN-FEPI1-110-SE01

Associate Analysis to TAG

Action Plan Register

Improvement Code: PH0001201003

Action Code: New

Name:

Description:

Reason:

Responsible Person:

% Concluded: 0 %

Status: Open

Deadline:

Creator: lorrice

Finish User:

Creation Date: 3/19/2010

Last Change Date: 3/19/2010

End:

Number of Deadline Changes:

Attachment Details

Name	Details	Data
No Records		

Aware Action Users

Available: [S]431 41318, Admin, Administrator, Adriana, Adriano, Bradley Myers, C&I, Augusto, Claudio, Spand

Selected:

Configure Send Emails

Send to the Creator:

Send to the Responsible:

Send To Whom Record:

Enviar aos Carries:

Send: days before the deadline, and after days that each

Save Duplicate Delete New



KPI Dashboard



Indicators Settings

General Settings

Filter Structure: IRON 1 Plant
 Period: 01/01/2009 to 03/31/2010

Equipment Performance

Indicator	Order	Plot Type	Frequency
<input checked="" type="checkbox"/> MTBF	1	Column	
<input checked="" type="checkbox"/> MTR	2	Column	
<input type="checkbox"/> Present Availability			
<input type="checkbox"/> Increased Availability			
<input type="checkbox"/> Operational Availability			
<input checked="" type="checkbox"/> Number of Failures	4	Column	
<input type="checkbox"/> Production Downtime			
<input type="checkbox"/> Production Downtime Event			

Costs

Indicator	Order	Plot Type	Frequency
<input type="checkbox"/> Total Maintenance Cost			
<input type="checkbox"/> Predictive Cost			
<input type="checkbox"/> Preventive Cost			
<input type="checkbox"/> Corrective Cost			
<input type="checkbox"/> Labor Cost			
<input checked="" type="checkbox"/> Spare Part Cost	3	Column	

Save



KPI Dashboard

drill-down



KPIs

Alerts & Benchmark

Alert Settings

Alerts Details

Indicator	Item	Responsibility	Warning Value	Critical Value	Active	Details
Achieved Availability	300 - Secondary Crushing	Cesar Calcavara	0.62	0.43	<input checked="" type="checkbox"/>	
Failure Number	110 - BSM 1	Cesar Calcavara	18	32	<input checked="" type="checkbox"/>	
MTBF	ACMN-FEP11-110-SE01	Cesar Calcavara	150	24	<input checked="" type="checkbox"/>	
Total Cost	PI2 - IRON 2 Plant	Cesar Calcavara	3845900	5800000	<input checked="" type="checkbox"/>	
Production Loss Time	300 - Secondary Crushing	Cesar Calcavara	8000	10000	<input checked="" type="checkbox"/>	

Alert Settings

Alerts Details

Code: 7

Name: Second. Crushing Ach. Avail.

Description: Measure the achieved availability indicator

Creator: ccalcavara

Creation Date: 12/14/2010 5:12:11 PM

Last Change Date: 12/14/2010 5:12:11 PM

Alert Item: 300 - Secondary Crushing

Monitoring Period: 15 days

Indicator: Achieved Availability

Warning Value: 0.62

Critical Value: 0.43

Status: Active

Responsible User: Cesar Calcavara

Notification

Available Users: Adamantios Metias, Cesar Calcavara, Cel Cel

Selected Users: Bruno Silva

Alerts

Responsible User Notification History

Indicator	Item	Period	Measurement Date	Measurement	Status	Warning Value	Critical Value
Failure Number	110 - BSM 1	14/11/2010 - 14/12/2010	12/14/2010	24		18	32
Failure Number	110 - BSM 1	14/11/2010 - 14/12/2010	12/14/2010	30		18	32
Failure Number	110 - BSM 1	14/11/2010 - 14/12/2010	12/14/2010	43		18	32
Failure Number	110 - BSM 1	14/11/2010 - 14/12/2010	12/14/2010	61		18	32
Failure Number	110 - BSM 1	14/11/2010 - 14/12/2010	12/14/2010	21		18	32

Alerts

Responsible User Notification History

Indicator	Item	Name	Last Value	Warning Value	Crit
Achieved Availability	300 - Secondary Crushing	Secondary Crushing Ach. Avail.	0.62	0.62	0.43
Failure Number	110 - BSM 1	BSM1 - FN	21	18	32
MTBF	ACMN-FEP11-110-SE01	SE01 - TAG, MTBF	150.00	150.00	24
Total Cost	PI2 - IRON 2 Plant	Iron 2 ; Plant	3845900.00	3845900.00	5800000.00
Production Loss Time	300 - Secondary Crushing	300 - Secondary Crushing	8000.00	8000.00	10000.00

Benchmark Value

Indicator: Achieved Availability

Item: 300 - Secondary Crushing

Benchmark: 0.71% - 12/14/2010

Worst Result: 0.19% - 12/16/2010

Analysis Management

ReliaSoft Tools – Advanced Analysis

Load Analysis

Functional Structure

- [-] AC - ACME Corporation
 - [W] Analise_Conf_Mant_Weibull.rwp
 - [W] AN0000000168.rwp
 - [W] Analise_Conf_Mant_Weibull.rwp
 - [W] Billy.rwp
 - [R] Luvison..rso7
 - [A] teste..rso7
 - [R] teste.rso7
- [-] MN - ACME Mining
 - [W] Analise_Conf_Mant_Weibull.rwp
 - [W] AN0000000174.rwp
- [-] FE - ACME M Iron Ore
 - [R] Semiconductor Examples.rx4
 - [W] Analise_Conf_Mant_Weibull..rso7
 - [W] Analise_Conf_Mant_Weibull.rwp
- [-] PI1 - IRON 1 Plant
 - [R] Exemplo ORION.rx4
 - [W] Projeto1.rso7
 - [-] 100 - Primary Crushing
 - [R] AN0000000140.lp3
 - 110 - BSM 1

Area: 100 - Primary Crushing

- [-] ACMN-FEPI1-100-AL01
 - [R] Semiconductor Examples.rx4
- [-] ACMN-FEPI1-100-AL02
 - [W] Analise_Conf_Mant_Weibull.rwp
- [-] ACMN-FEPI1-100-AL03
 - [R] ATA Systems and Subsystems.rx4
- [-] ACMN-FEPI1-100-BR01
 - [W] Analise_Conf_Mant_Weibull.rwp
- [-] ACMN-FEPI1-100-PN01
 - [R] Exemplo ORION.rx4
- [-] ACMN-FEPI1-100-CT01
 - [W] Teste..rso7
- [-] ACMN-FEPI1-100-CT02
 - [W] Billy.rwp
- [-] ACMN-FEPI1-100-DF01
 - [W] Billy.rwp
- [-] ACMN-FEPI1-100-SE01



Associate Analysis

Analysis Information


WEIBULL++

File Name:

Analysis Type: WEIBULL++

Analysis Name:

Description:

Creator: claudio

Creation Date: 12/17/2009

Blocked by:

Blockade Date:



Analysis Management

Knowledge Management

Analysis Management

Functional Structure

Description	
AC - ACME Corporation	
LDA sdfsdfsdf	
MN - ACME Mining	
FE - ACME M Iron Ore	
PI1 - IRON 1 Plant	
LDA LDA Todas as Peças	
100 - Primary Crushing	
Race Car.rbp	
Chilled Water system.rx4	
Project APM	
110 - BSM 1	
120 - BSM 2	
RCA xc	
RCA dfgdfg	
Hinge (Simulation and Test of Comparison).rwp	

100 - Primary Crushing

Description	
ACMN-FEPI1-100-AL01	
Complex Modes.rwp	
3388 Failure Mode Apportionments.rx4	
LDA LUWIS10	
RCA RCA Exemplo Teorico	
LDA LDA ACMN-FEPI1-110-AL01	
ACMN-FEPI1-100-AL02	
Race Car.rbp	
ACMN-FEPI1-100-AL03	
Complex Fuel System.rmp	
Distributions.rwp	
ACMN-FEPI1-100-BR01	
ACMN-FEPI1-100-PN01	
ACMN-FEPI1-100-CT01	
ACMN-FEPI1-100-CT02	

Reports

Cost Report

Functional Structure

- AC - ACME Corporation
 - MN - ACME Mining
 - FE - ACME M Iron Ore
 - PI1 - IRON 1 Plant
 - 100 - Primary Crushing
 - 110 - BSM 1
 - 120 - BSM 2
 - 130 - BSM 3
 - 200 - TCLD
 - 300 - Secondary Crushing
 - 400 - Secondary Screening
 - 500 - Tertiary Crushing
 - 600 - Tertiary Screening
 - 700 - Storage
 - 800 - Expedition
 - PI2 - IRON 2 Plant
 - CU - ACME M Copper Ore
 - PI3 - IRON 3 Plant

TAG

- ACMN-FEPI1-110-AL01
- ACMN-FEPI1-110-BR01
- ACMN-FEPI1-110-PN01
- ACMN-FEPI1-110-CT01
- ACMN-FEPI1-110-DF01
- ACMN-FEPI1-110-SE01

Equipment unavailability date:

Equipment availability date:

ReliaSoft. Functional Position Number of Failures
1/1/2009 a 4/4/2010

TAG	Equipment	Supplier	Specialty	# Failures
ACMN-FEPI1-110-CT01	Conveyor Belt C03	Dartanhã	Mechanical	62
ACMN-FEPI1-110-BR01	Crusher Jaws BM02	Dartanhã	Mechanical	31
ACMN-FEPI1-110-PN01	Primary Bolter Type Banana PP02	Dartanhã	Mechanical	22
ACMN-FEPI1-110-AL01	Feeder AL04	Dartanhã	Mechanical	12

ReliaSoft. Relatório de Custo por Posição Funcional
1/1/2009 a 4/4/2010

TAG	Equipamento	Fornecedor	Especialidade	Custo Mão de Obra	Custo de Ferramenta	Custo de Sobressalente	Custo de Serviço	Custos Indiretos	Custo Total
ACMN-FEPI1-110-CT01	Conveyor Belt C03	Dartanhã	Mechanical	153,179.85	75,966.84	336,193.81	78,013.06	89,144.58	732,498.12
ACMN-FEPI1-110-BR01	Crusher Jaws BM02	Dartanhã	Mechanical	68,966.84	44,070.67	154,284.41	41,311.55	39,863.21	348,516.70
ACMN-FEPI1-110-DF02	Flow Diffusers DF02	Dartanhã	Mechanical	51,875.60	30,195.71	108,365.14	28,751.28	26,203.52	245,411.20
ACMN-FEPI1-110-DF01	Flow Diffusers DF01	Dartanhã	Mechanical	30,728.14	11,561.94	56,800.73	17,007.11	13,947.82	130,045.78
ACMN-FEPI1-110-AL01	Feeder AL04	Dartanhã	Mechanical	15,964.52	8,278.68	33,828.52	9,520.76	9,501.87	77,094.31
ACMN-FEPI1-110-SE01	Substation S02	Dartanhã	Electrical	15,868.21	8,803.57	36,828.18	8,051.54	4,975.55	74,527.04

ReliaSoft. Functional Position Availability Report
1/1/2009 a 4/4/2010

TAG	Equipment	Supplier	Specialty	Availability
ACMN-FEPI1-110-CT01	Conveyor Belt C03	Dartanhã	Mechanical	16.00 %
ACMN-FEPI1-110-BR01	Crusher Jaws BM02	Dartanhã	Mechanical	68.00 %
ACMN-FEPI1-110-DF02	Flow Diffusers DF02	Dartanhã	Mechanical	93.00 %
ACMN-FEPI1-110-AL01	Feeder AL04	Dartanhã	Mechanical	96.00 %
ACMN-FEPI1-110-PN01	Primary Bolter Type Banana PP02	Dartanhã	Mechanical	98.00 %
ACMN-FEPI1-110-SE01	Substation S02	Dartanhã	Electrical	98.00 %



Portals

My Portal & Group Portals

Orion Onnet

Administration

Alertas | **Cadastro**

Indicador	Item	Responsável	Valor Atenc	Valor Critico	Ativo	Detalhes
MTBF	110 - BSM 1	Felpe Gonçalves_UP	1100,00	900,00	<input checked="" type="checkbox"/>	?
Total Cost	110 - BSM 1	Cid Augusto	200,00	362,68	<input checked="" type="checkbox"/>	?
Failure Number	500 - Tertiary Crushing	Eduardo Melero	600,00	635,00	<input checked="" type="checkbox"/>	?
Production Loss	RF - ACME P Refinery	Fabio Christi	60,00	100,00	<input checked="" type="checkbox"/>	?
Spare Pa						

My Portal
lorrico

Quick Search

Subject:

TAG:

Tools

Global Searches

Group Portals

ROI

Company:

ROI Potential: 0.00
ROI Effective: 1.75
Fill: 24%

Leandro Omico:

ROI Potential: 590.87
ROI Effective: 0.00
Fill: 67%

News

Global News | My News | Register

Indicador:

Data Criaç:

News

- Technical Area News
- Leandro News 5
- Leandro News 4
- RelaSoft Orion News

Period (Creation date): This Wee

My Searches

Name	Creation Date	Description	Details
Estrutura	8/27/2009	Estrutura Hierarquica	?
OS por Area 2007	8/29/2009	Ordens de Servico por Area para o ano de 2007	?

My Analysis

Analysis | RCA | LDA | Weibull++ | BlockSim | XFMEA | RCM++ | RGA | ALTA | DOE | Lambda Predict | MPC | RENO

Type	Total
RCA	15
Weibull++	1
BlockSim	1
Xfmea	3
RCM++	5
RGA	1
ALTA	3
DOE	1
Lambda Predict	1
MPC	1

My Improvement Projects

Improvements | Responsible Person | Awareness

Participation	Total	Open	Late
Responsible	1	1	0
Awareness	1	1	0

My Actions

Actions | Responsible Person | Awareness

Action	Creation Date	Last Change	Status	Details
Ação Leandro	4/20/2010	4/20/2010	In the Deadline	?
Ação Leandro	4/20/2010	4/20/2010	In the Deadline	?
Ação Leandro	4/20/2010	4/20/2010	In the Deadline	?
Ação Leandro	4/20/2010	4/20/2010	In the Deadline	?
Ação Leandro	4/20/2010	4/20/2010	In the Deadline	?
Ação Leandro	4/20/2010	4/20/2010	In the Deadline	?
Ação Leandro	4/20/2010	4/20/2010	In the Deadline	?
Ação Leandro	4/20/2010	4/20/2010	In the Deadline	?

Filter Action (Name): Filter Action (Status):



