

Improving Plant Reliability Through

PRRA

PLANT

- RELIABILITY
- READINESS
- ASSESSMENT



OUR SERVICES



Asset Performance Management



IIoT Products and AI/ML Platform



Reliability Engineering



Industry 4.0 Digital Transformation



Predictive Maintenance



Remote Monitoring For Industrial Assets



ABOUT COMPANY

We help manufacturing companies reduce their operation and maintenance costs through technological innovation in Asset Performance Management, Reliability Engineering, Predictive Maintenance, Industry 4.0, Al & ML and Skill Development.



Availability

Breakdown

Interference

80%

70%

Reduction in Machine

Reduction in Human

CLIENTS































































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FOCUS ON 5 PILLARS



Business & Management

- Create/Administer Strategic
 Plan
- Comminicate with stakeholders
- Measure Performance
- Manage Environmental Healthsafety risk
- Manage organizational plant

Manufacturing Process Reliability

- Apply process improvement techniques
- Manage effects of change to processes and equipment
- Maintain processes in accordance with applicable standards and specifications

Equipment Reliability

- Determine equipment reliability expectations
- Identify improvement opportunities
- Establish strategic plan to assure reliability of existing and new equipment
- Cost-justify selected plans and implement

Organisation & Leadership

- Determine organizational requirements and analyze capability
- Develop organizational structure
- Develop personnel
- Lead and manage people

Work Management

- Develop work plans and schedule work
- Document procedure and maintain historical records
- Plan capital projects
- Use information technology

PRRA



PLANT RELIABILITY READINESS ASSESSMENT

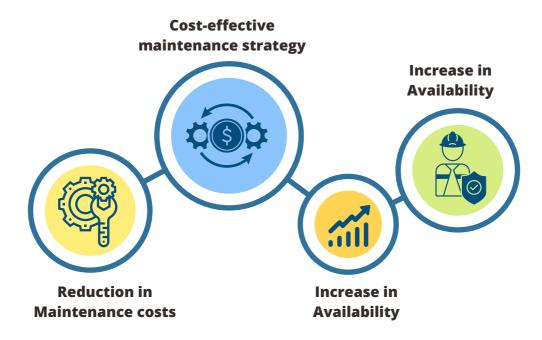
Plant Reliability Readiness Assessment (PRRA) can be a powerful way of provide a comprehensive assessment of your plant functions, Process, Operations, reliability program and maintenance activities, including a gap and barrier analysis. The intent of the plant audit is to identify inherent deficiencies that may adversely affect plant performance.

PRRA: APPROACH

4 Phase RRA Approach:

- Audit Checklist Development
- Audit Execution
- Development of the Audit Report
- Delivery of the Audit Report and Findings

We designed our Plant Reliability Readiness Assessment (RRA) Model with a step-by-step robust demonstration and training(D&T) as well as Best-in-class Assessment Review Mechanism(ARM) balancing availability, cost, time to value and risk associated with the equipment. With Reliability Readiness Assessment (RRA) approach, we at Arrelic assures our clients;



PRRA: BASIC MODULES





01. STRATEGY & PLANNING

- Asset Management Policy
- Strategy & Objectives
- Demand Analysis
- Strategic Planning
- Asset Management Plan

02. DECISION-MAKING

- Whole-life Cost & Value Optimization
- Operations & Maintenance
- Capital Investment
- Resourcing Strategy & Optimization
- Shutdowns & Outage Strategy & Optimisation
- Ageing Assets Strategy

03. ORGANIZATION & PEOPLE

- Contract & Supplier Management
- Asset Management Leadership
- Organizational Structure & Culture
- Competence & Behaviour

04. ASSET INFORMATION

- Asset Information Strategy
- Asset Knowledge Standards
- Asset Information Systems
- Asset Data and Knowledge

05. LIFECYCLE DELIVERY

- Technical Standards & Legislation
- Asset Acquisition & Commissioning
- Systems Engineering
- Configuration Management
- Maintenance Delivery
- · Reliability Engineering
- Asset Operations
- Resource Management
- Shutdown & Outage Management
- Fault & Incident Response
- Asset Rationalization and Disposal

06. RISK & REVIEW

- Criticality, Risk Assessment
- Contingency Planning & Resilience Analysis
- Sustainable Development
- Weather and Climate Change
- Asset & Systems Change Management
- Assets & Systems Performance & Health Monitoring
- Management Review, Audit & Assurance
- Accounting Practices
- Stakeholder Relations

PRRA BENEFIT'S





Improve profits, Return on net assets, efficiency, service factor



Manage and optimize risk



Improve plant assets productivity, availability, reliability and quality



Less forced deterioration impact on machine life



Process stabilization and benchmarking



Enhance reputation and brand image



Improve organizational sustainability



Employees Job Satisfaction

ABOUT PRRA



During Reliability Readiness Assessment following points will help to assess the client manufacturing capabilities in order to improve the productivity and reduce manufacturing cost.

- Analyzing the capacity of the plant in terms of true OEE, Reliability, MTBF, MTTR and Net savings potentials.
- Calculating Plant asset value through RAV or Estimated Replacement Value.
- Study of organizational structure, role efficiencies, grade structure, manning levels.
- Analysis of work time allocation, KMI, KPI, KAI for all stakeholders
- In depth study of existing maintenance strategies
- Assessment of past maintenance related downtime and finding the root cause of their occurrence
- Existing condition based monitoring, Occupational health and safety assessment
- Finding skill development requirements for providing necessary training to employees

BENCHMARKING & BASELINE FINALISATION

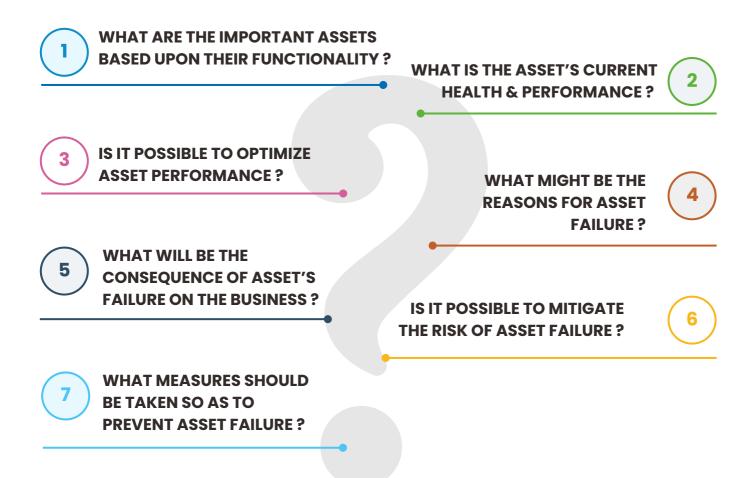
During Reliability Readiness Assessment Arrelic will do benchmarking and baseline finalization for Asset performance, Reliability and Maintenance, Operation, Turnaround, Process benchmarking. Our consultants will help in benchmarking client's financial data, personnel cost, materials and spare part cost, contracted services, productivity data which includes OEE analysis, MPR and other losses and maintenance and supply data which includes number of maintenance employees, number of work orders, spare part stock, consumables and waste treatment expenses.



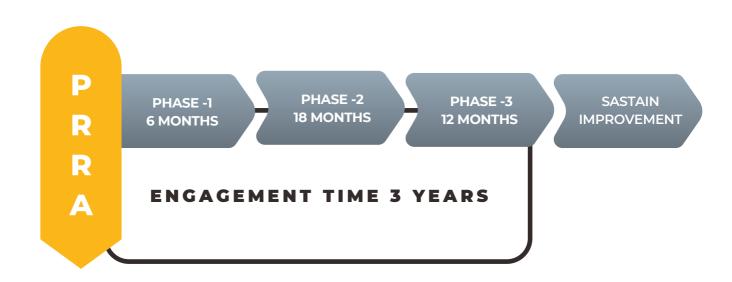
KEY QUESTIONS







3 - PHASE I-APM IMPLEMENTATION PLAN



INDUSTRY EXPERTISE



































INDUSTRIAL IOT SENSORS





MACHINE ANALYTICS



PREDICTIVE MAINTENANCE



RELIABILITY CONSULTING



EDUCATION & TRAINING



TALENT ACQUISITION



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