

TRF

TOTAL RELIABILITY FRAMEWORK



ARRELIC TRF MANAGEMENT SYSTEM PROVIDES SOLUTIONS TO ACHIEVE OPTIMAL PLANT AND PEOPLE PERFORMANCE


The rapidly evolving business dimensions; including a competitive global economy, pressure to increase revenue & profit and tighter regulations; has considerably changed the way assets are handled and maintained.

But operational inefficiencies, including lack of business relevant insights, still inhibit companies from optimizing production performance. Operators generally lack perception into their assets' data and by not having proper predictive analytics to know in advance when the assets are going to breakdown, it poses a huge risk to the production commitments. Just by abiding to routine maintenance, the situation further aggravates, leading to more inefficiencies and ultimately costs.

Reliability is the driving force behind cost efficient and stable production. Unfortunately, equipment failure, non-optimized maintenance, and human error are constant threats to reliability and hence profitability. These threats need to be managed proactively to ensure that equipment condition, maintenance practices, and personnel work together to improve the operations of an asset, rather than hinder them.

Product reliability is very important in the context of new product development. Building in high reliability is costly and time consuming, but the consequence of unreliability is costlier. This implies that manufacturers need to decide on the optimal reliability performance that achieves a proper trade-off between the two and then derive the reliability specification to ensure the desired performance. A reliability management system is a tool that manufacturers can use to manage this process and achieve desired results.

EMPOWER



TRF management system to optimize operations and maximise productivity of your assets

GUIDE



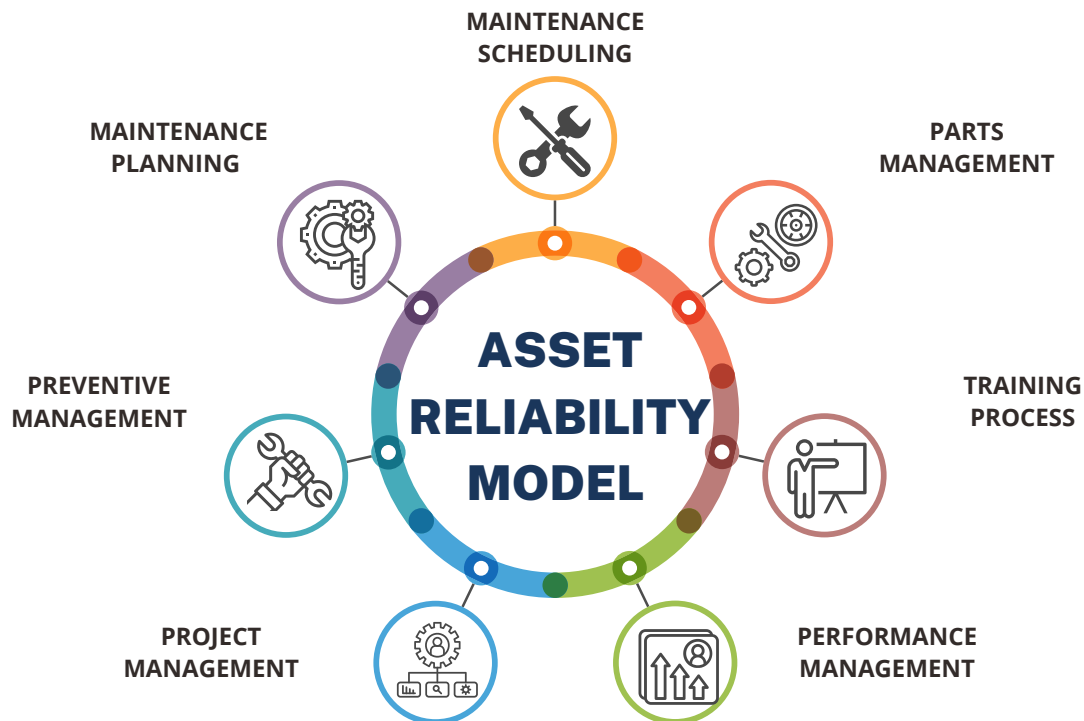
Training your team to incorporate sustainable reliability techniques

ANALYSE

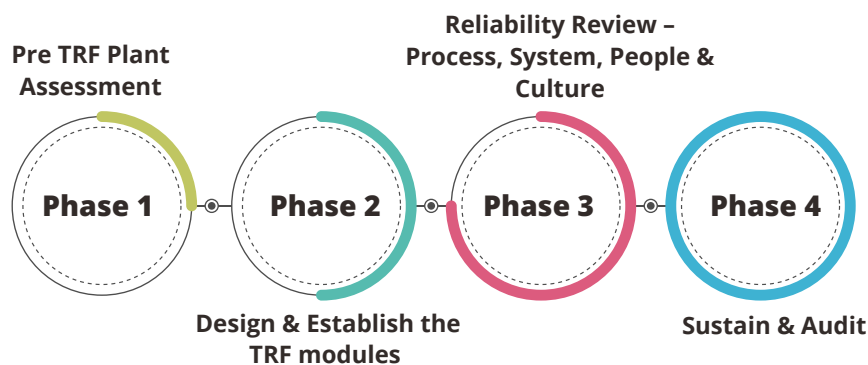


Predictive analytics, along with data mining techniques to predict trends and future behaviours

ARRELIC PROVIDES A FULL RANGE OF PREDICTIVE MAINTENANCE SERVICES FOR MAXIMISING RELIABILITY



TRF: 4 PHASE IMPLEMENTATION PROGRAM



HOW CAN ARRELIC HELP?

Improvement in reliability needs to be a controlled and managed process. The approach and tools to be employed need to be well defined and deployed such that the people involved in the process are prepared and equipped to identify and implement the improvement opportunities that exist within every business.

Arrelic has developed a highly effective Total Reliability Framework for the implementation of reliability methods, tools and services in order to achieve your desired end results.

Total Reliability Framework (TRF) provides a management system for all reliability and maintenance activities; focusing on improving the performance of both the personnel and the plant equipment.

It is designed not only to improve plant reliability but to also optimize operations by making it more cost effective and simultaneously, extending equipment life by improving asset care practices

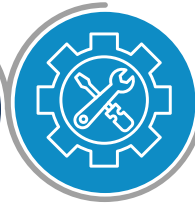
IDENTIFY PERFORMANCE IMPROVEMENT OPPORTUNITIES VIA ARRELIC BENCHMARKING FOR RELIABILITY & MAINTENANCE PROCESS

REDUCE UNSCHEDULED DOWNTIME

INCREASE ASSET UTILIZATION

IDENTIFY UNDER PERFORMING ASSETS

IMPROVE PRODUCTION QUALITY & CAPACITY



PREVENT EQUIPMENT FAILURES

LOWER MAINTENANCE COST

EXTEND EQUIPMENT LIFE

Total Reliability Framework Benefits

- Makes your plant system driven rather person driven
- Evolving from time- based maintenance to more efficient & proactive condition- based maintenance
- Maximize RONA -Return on Net Asset
- Reduce costs by better planning maintenance by reducing overtime & cost of spare parts
- It identifies requirements to eliminate inherent machine issues
- Provide decision analysis methods for ensuring correct improvement strategies
- Continuous improvement to maintenance function
- Reduce breakdown by adopting predictive maintenance
- Standardize & optimizing the work plan
- Reduce unplanned downtime & increase Availability & Reliability
- Lower risk of your workforce & improve safety
- Learn from the past to improve future performance by capturing best practices

ARRELIC TRF IN MANUFACTURING OPERATIONS MINIMIZES WASTE & COST, AND MAXIMISES OUTPUT

TOTAL RELIABILITY FRAMEWORK FEATURES



Criticality Analysis

Arrelic helps you to prioritize maintenance work and to identify the most critical assets - the top 10 or 20% -for further analysis. Criticality analysis can be used for more than just ranking each asset. By identifying the characteristics that make each asset critical, we will also provide valuable information to decide what actions will reduce risk for all plant assets.



Risk Management

It is the identification, assessment & prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and impact of unfortunate events or to maximize the realization of opportunities. Our objective is to assure uncertainty doesn't defect the endeavor from business goals.



RCM (Reliability Centered Maintenance)

RCM is a process to ensure that assets continue to do what their operators require in their present operating context. It is generally used to achieve improvements in fields such as the establishment of safe minimum levels of maintenance. We will ensure RCM is successfully implemented and leads to increase in cost effectiveness, reliability, machine uptime, and a greater understanding of the level of risk that the plant is managing.



RCA (Root Cause Analysis)

RCA is applied to methodically identify and correct the root causes of events, rather than to simply address the symptomatic result. Arrelic will implement RCA with the goal of entirely preventing problem recurrence.

ARRELIC TRF HELPS YOU TO RETAIN CUSTOMERS MORE EFFECTIVELY & BUILDS A BETTER BRAND IMAGE

TOTAL RELIABILITY FRAMEWORK FEATURES



LCCA (Life Cycle Cost Analysis)

Life-cycle cost analysis (LCCA) is a tool to determine the most cost-effective option among different competing alternatives to purchase, own, operate, maintain and, finally, dispose of an asset or process. We will use LCCA to help you maximize your productivity and minimize your costs.



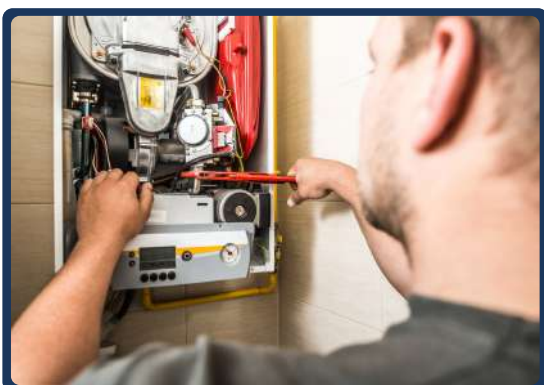
RBI (Risk Based Inspection)

RBI combines principles of risk with operational experience to obtain a safe & cost effective inspection program targeting when and where inspection is needed. It also addresses risks that can be controlled through proper inspections and analysis. We will add value to the mechanical integrity of your plant and increase the level of confidence with the facility's reliability efforts with better inspection strategies.



FMEA (Failure Mode and Effects Analysis)

FMEA involves reviewing as many components, assemblies, and subsystems as possible to identify failure modes of assets and their causes & effects. We will predict early identification and elimination of potential failure modes and reduce the possibility of same kind of failure in future with improvement in production yield.



PMO (Preventive Maintenance Optimization)

The basic theme behind PMO suggests regardless of how a maintenance program has been developed, there is a constant need to review and update the program based on failure history, changing operating circumstances and the advent of new predictive maintenance technologies. We will help you towards preventing failures, enacting maintenance process improvements and more.

INDUSTRY EXPERTISE



Aerospace & Defence



Automobiles



Cement



Chemical



Facility Management



FMCG



Glass Manufacturing



Metal & Mining



Msme & Small Business



Oil & Gas



Pharmaceuticals



Power



Public Sector



Pulp & Paper



Transport & Logistic



GETTING IN TOUCH

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