



SUMMIT
RELIABILITY
It's About the People

PERFORMANCE SMART™

PERFORMANCE SMART™

A performance-oriented framework that incorporates best-in-class technical, cultural and organizational practices



BEST-IN-CLASS PRACTICES

How we manage and operate our plants has changed over the years. We introduced planning and scheduling, standard operating practices, and preventive and predictive maintenance, as well as reliability, operational excellence, supply chain management and asset management philosophies. Yet, throughout all of these evolutions a truism remains: **organizations are made up of people**. The efficient and effective use of these resources is essential to achieving the maximum sustainable performance.

PerformanceSmart combines best-in-class technical, cultural and organizational practices to define and generate the organization and tools needed to achieve your company's goals, and position your organization to meet future challenges.

SUMMIT RELIABILITY

Based on more than 30 years of industrial experience, Summit Reliability developed an approach that is scalable, adapted to your specific situation, and simplified so that performance results can be achieved with minimal disruption to your business.

Visual aids help deploy the processes and procedures quickly and easily, while future proofing your organization.

INCREASING PERFORMANCE

Many organizations use improvement initiatives as a means to increase asset performance and eliminate production constraints.

Unfortunately, too often the approach is to apply RCM, Lean, TPM, PdM, RCFA, ... without first understanding what is truly impacting performance. This myopic approach may lead to the wrong solution.



PERFORMANCE LOSSES

Performance losses can be grouped into four major categories:

- **Maintenance related downtime**, including breakdowns and scheduled interventions
- **Operations related downtime**, including setups, adjustments, changeovers, shift changes and planned non production times
- **Equipment related losses**, including machine speed reductions, normal waste
- **Quality related losses**, including rejects, defects and sub quality products.

ONE SIZE DOES NOT FIT ALL

‘You must know what to do and then do your best’

Deming

Before resolving your production shortfalls you must identify and understand the cause of these shortfalls.

For example you may be experiencing a high level of equipment breakages but why? Is it that the preventive maintenance activities are ineffective? Do you have poor feedback from Operations as to the condition of the equipment? Are your corrective tasks poorly executed? Is the use of your people inefficient? Are there material constraints? Are you trying to use the equipment beyond its technical limits?

If the causes are not properly identified we may be treating the symptoms. The results will be unsustainable.



Our President,
J R Paul Lanthier P Eng.
is a recognized world expert in
the fields of Physical Asset
Management, Operational Excellence
and Reliability.

He has pioneered the new science of
Organizational Engineering and has
helped many organizations achieve
and exceed their business objectives
through the application of technical
and cultural best practices.

DEFINING THE RIGHT APPROACH

Your needs and situation are unique. Thus, the approach you adopt should also be unique, while proven to be successful.

PerformanceSmart™ applies proven technical and cultural best practices originally developed for fortune 500 companies. These are grouped into modules, making it easier to adapt them to your specific needs. A maturity model completes the approach, as each module can be tailored to your current and desired state. This makes each application unique, while offering the possibility of future evolution. The one exception to this is safety and the environment. At no time will compromises be made that can jeopardize safety or the environment.

THE FIRST STEP

The first step is to assess your current state. This involves working with you to determine what level of additional performance is required to meet your needs. From there, internal capabilities and resource availability are reviewed to identify how much of the transformation can be managed internally, and how much of the effort needs external resources and guidance.

EASY-USE ASSET CARE PROGRAMS

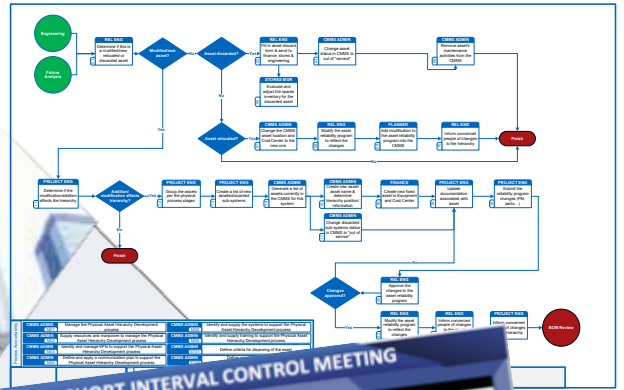


These programs are intended to develop the tools necessary to manage the assets and respond to abnormal conditions (i.e. failures) in an organized, efficient and effective manner. This starts with how the Operator operates the equipment, how the Operator and Tradesman inspects the performance and health of the equipment, and how he/she communicates findings so that appropriate corrective actions can be taken to mitigate the consequences of failure. It continues by ensuring that the Maintenance actions are well defined, critical parts are available and skilled workers complete the work. Photos are used to document and communicate the Asset Care activities. These simplify and clarify tasks and activities.

SAE JA1011/JA1012 compliant RCM-based methodologies are used to develop technically sound Maintenance and Operational programs. Resulting action plans are supported by Job Safety Analyses. A unique depth-versus-breadth approach is employed to focus efforts one asset or group at a time, ensuring results before moving on. This limits the number of resources affected at any one time, provides fast results and develops the tools necessary to ensure that the desired performance is achieved.

- Some of the activities include:
- Develop SOPs (Standard Operating Practices)
 - Conduct RCM or FMEA analyses on the key assets
 - Implement visual PMs/PdMs and routes
 - Develop key corrective action templates
 - Develop and implement visual operational guides
 - Develop Job Safety Analyses for all action plans
 - Introduce new roles and responsibilities
 - Introduce new PM/PdM and Operator programs
 - Train and coach personnel
 - Track results and adjust as needed

PERFORMANCE-BASED ORGANIZATION AND CULTURE



World-class organizations have well defined, applied and controlled processes. They are system-dependent rather than people-dependent, and can easily adapt to changes in personnel.

Applying Organizational Engineering concepts, we introduce world-class physical asset management business processes for the Operations, Maintenance, Engineering, Purchasing and Stores groups. Structured meetings are introduced and include visual aids and self-audits. KPIs (Key Performance Indicators) are added to control the process and include a complete collection of leading and lagging KPIs with their interrelationships mapped.

The processes, meetings and KPIs are graphically represented to provide visual deployment and reinforcement. Additional groups and processes can be included based on the site's needs.

A phased macro/micro deployment approach is used, and specific training programs are incorporated as needed to develop the necessary skills.

PERFORMANCE-CENTRIC DEPLOYMENT

DEPLOYMENT STEPS

Build on
current tools
and findings

Communicate
vision and
mitigate risk

Leverage team
to accelerate
change

Repetition and
reinforcement

Implement
practices and
processes

To successfully apply and deploy the new tools and knowledge, we focus on the human element. The process uses a staged approach, providing people sufficient time and support to gradually adapt to the changes. The final stage considers the reality of the post-project phase (operating mode), and establishes the mechanisms needed to make safety, environmental compliance and asset management a natural part of how you do business.

A train the trainer approach, or more specifically, a train the Manager approach is used to deploy the new communication and culture change tools. This serves two purposes: it helps the direct Manager reinforce/develop communication and leadership skills, and it solicits his/her help in affecting change within the department. This accelerates the rate of change, helps influence a larger audience quickly, and incorporates the new philosophies into daily life.

We identify the desired individual and group behaviours, and define/establish the beliefs and values necessary to achieve and sustain these behaviours in support of the company's values, vision and mission.

The process identifies all activities and tools necessary in the development, deployment and reinforcement of culture change. It incorporates initialization, coarse adjustment, refinement, and sustainability/continuous improvement phases.



LEADERSHIP EMPOWERED

Through training and coaching, we help establish a leadership culture at all levels of the organization to engender effective team dynamics.

This in turn reduces your dependence on individuals and future proofs your organization.

UNLOCKING THE HIDDEN PLANT

Beyond the benefits achieved through the development of Easy-Use Asset Care Programs, Summit Reliability applies organizational excellence principles such as debottlenecking (define and solve key performance constraints) and process optimization to further increase equipment performance.

Until 1.5 years ago I used to be called at home every night with some problem. I have not received a single phone call in 1.5 years. That's what Reliability means to me

Guy Boisé QCM Mobile Fleet Superintendent

I gave you a group of young Engineers and you gave me back a team

Mark Bernadet, Teck Coal

SUSTAINABILITY ASSURANCE

A number of your resources are incorporated in the project team so that, working side-by-side, they will learn what we know and will be able to replicate this knowledge once our part of the initiative is complete. Sustainability is further assured through the development and coaching of an internal Reliability function. This includes training on RCM, FMEA, FRACAS, RCFA, Operational Excellence, Debottlenecking and Organizational Engineering.

Work control management training and coaching is provided for Planners, Schedulers, Shutdown Coordinators and Supervisors to increase workforce efficiency. Well-documented procedures are generated to provide further guidance.

Before leaving site, we help the organization develop a long-range plan so that the benefits achieved continue to generate results and the organization continues to grow and improve.

AFTER SERVICE SUPPORT

Despite our best efforts, things can change. Summit Reliability provides a number of post-project services such as training of new champions, auditing and re-engagement to help the organization adapt to major changes in business requirements.

OUR HISTORY



Mining: Reduced major safety incidents by 75%



Mining Mobile Fleet: Reduced maintenance costs by 8.3%



Mining: Increased maintenance wrench time by 10%



Metal Refining: Reduced operating costs by \$13M/year



Metal Refining: Increased a business unit's throughput by 40%



Power Plant: Reduced overtime in sector by 20%



Pulp and Paper: Reduced maintenance costs by 25%



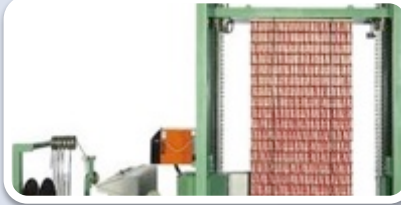
Pulp and Paper: Increase paper machine OEE by 6.7%



Petro Chemical: Helped plant achieve World-Class Reliability



Food Industry:
World-Class
performance on
packaging line



Manufacturing:
Reduced packaging
operating costs by
\$1M/year



Pharmaceutical:
Established control
metrics for 50
plants



Rail: Reduced risks
on aging
passenger train
fleet



Rail: Helped
validate and
adapt high speed
bogie design



Waste Water
Treatment:
Increased
availability to 97%