Lifetime Reliability • Solutions

Consultant Bruce McLaughlin (USA)
Phone: +1 (864) 430-2695
Email: ReliabilitySolutions@charter.net
Website: www.lifetime-reliability.com

Enterprise Resource Wellness

Lifetime Reliability Solutions (LRS) brings the Australian 6-Step "Enterprise Wellness Way" Methodology for risk abatement to America. It is more that DMAIC and more than ISO. It does not seek acceptable failure rates; its objective is **total failure elimination from your operation**.

In this particular strategy, your enterprise would be viewed through lenses of increasing magnification. The view at the highest level is the overall value stream map. Each high level map comprises your company's key activities, so the second level view is each individual activity. Each activity comprises many resources (tools, instruments, equipment, operators, materials, work products, etc.) so the third level view is each individual resource. Finally, each resource comprises many components so the fourth level view is for each component. An appropriate risk abatement analytical procedure would be applied to a specific level with the requirement that a given procedure must be capable of producing a zero failure rate. Such enterprise risk control procedures would include Lean Optimization, ACE 3T Quality Management System and equipment P-M Analysis.

Your business operating risk assessment starts with the overall Value Stream Map and drills down through successive levels (*maps, individual map activities, resources within each activity and components within each resource*) for a coordinated four level attack on risk. Analytical procedures capable of achieving zero failure rates are required; examples include but are not limited to:

Analytical Procedure	Level
LEAN OPTIMIZATION	Map
ACE 3T QMS	Activity
P-M ANALYSIS	Resource
OPTIMAL RELIABILITY	Component

However, without integrated implementation, analytical procedures may: (1) bottleneck at difficult internal stages, (2) lack coordinated risk abatement between levels, (3) fail to balance accomplishment rate between levels and (4) lack controllability. "Enterprise Resource Wellness" Methodology integrates the implementation of analytical procedures by conducting each one against the backdrop of **IONICS**, a 6-Step matrix management methodology: **I**dentify risks, **O**rder by importance, **N**umerate options, **I**ntroduce solutions, **C**ontrol processes and **S**ynthesize new ideas.

Internal stages of important analytical procedures

1) Multilevel Value Stream Maps

Lean Optimization

- Create Current/Future Value Stream Maps for material, information and personnel flow.
- Synchronize pace of production to match pace of sales (takt time).
- Develop continuous flow where possible.
- Use "supermarkets" to control production if continuous flow does not extend upstream.
- Select a "Pacemaker Process."
- Level production mix.
- Level production volume.
- Minimize changeover times.
- Harmonize progress by 6-Step matrix management.

Consultant Bruce McLaughlin (USA)
Phone: +1 (864) 430-2695
Email: ReliabilitySolutions@charter.net
Website: www.lifetime-reliability.com

2) Value Stream Map Activities (manufacturing processes, medical activities, customer service)

ACE 3T QMS

- Set clear and precise work quality standards for each activity – The Precision Principle.
- Create **A**ccuracy **C**ontrolled **E**nterprise by imposing activity **T**arget, **T**olerance and **T**est.
- Improve each activity until work quality standards are met; Error-Proof when possible.
- Develop and use Standard Operating Procedures (SOP) for each activity.
- Ensure each SOP allows personnel with average skills to achieve high quality results.
- Train and re-train personnel to follow the SOP's for each activity.
- Create parallel paths (e.g. operator, inspector and supervisor) for critical activities.
- Make sure functionality of each parallel path ensures functionality of activity.
- Harmonize progress by 6-Step matrix management.

3) Activity Resources (tools, instruments, equipment, operators, work products)

P-M Analysis

- Clarify phenomenon.
- Conduct physical analysis.
- Identify generative conditions.
- Study 4M's for causal factors (machine, man, material, method).
- Set optimal conditions and standards.
- Survey causal factors for abnormalities.
- Identify abnormalities to be addressed.
- Propose and make improvements.
- Harmonize progress by 6-Step matrix management.

4) Resource Components

Optimal Reliability

- Focus on problem components identified by P-M Analysis.
- Identify actions to abate component Risk = (Consequence)(Opportunity)(1 - Reliability).
- Simplify component arrangement and minimize series configurations.
- Optimize exchangeable component arrangements.
- Increase component reliability and safety factor.
- Use parallel or standby redundancy.
- Employ condition monitoring.
- Utilize Predictive Maintenance with Precision Maintenance Principles.
- Harmonize progress by 6-Step matrix management.

The 6-Step methodology is used to achieve a coordinated four level attack on operational risk. Each step of IONICS produces a variety of business risk strategies and procedures to be implemented at the business, activity, resource and component levels to solve your operational risk, production plant and equipment reliability problems.

Bruce McLaughlin, ScD, MInstP
Lifetime Reliability Solutions
ReliabilitySolutions@charter.net
USA Phone +1 (864) 430-2695