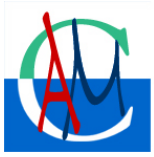


Reliability Programs

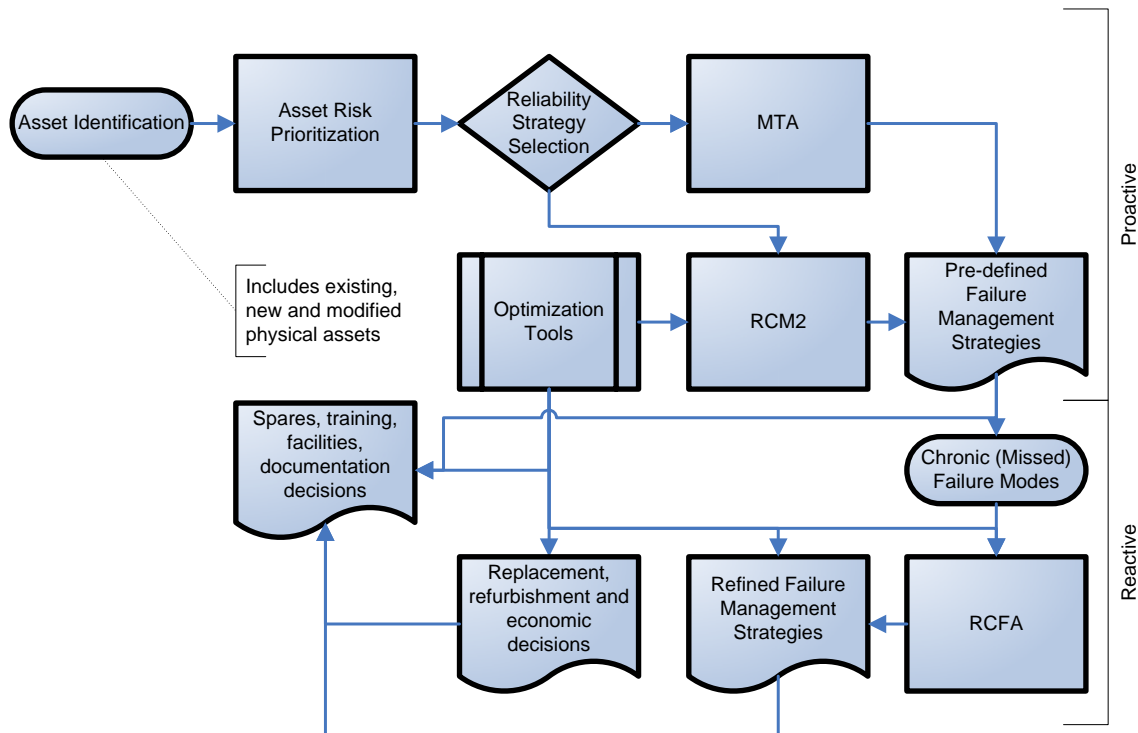
Many of today's management practices are missing opportunities and holding back operational performance. Our Uptime Operational Excellence programs help you see those opportunities and unleash that bottled up performance. Uptime is a broad management strategy for excellence covering everything from basic improvement planning through managing change to deployment of highly technical evidence based decision making and optimization techniques. Our Reliability Program is part of Uptime Operational Excellence focused on those elements of Uptime that reside at the apex of our strategy pyramid under the heading "Choosing Excellence". It focuses on the "Assets" component exclusively:



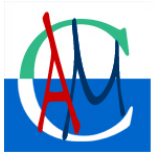


Asset Reliability

Asset reliability entails excellence in several methods that, when integrated, optimize your asset's performance. We see a variety of methods and tools working together in specific sets of circumstances:



- **Reliability Centered Maintenance** – to proactively identify failure management and consequence mitigating strategies for all assets, particularly those with significant business, safety or environmental consequences. We are licensed practitioners of Aladon's RCM2 methodology and supporting tools.
- **Root Cause Failure Analysis** – to identify solutions to persistent reliability problems that RCM has not dealt with. We have developed our own method of RCFA based on what we see as the most effective elements of other methods.
- **Maintenance Task Analysis** – to proactively identify maintenance tasks dealing with likely failure modes in equipment and systems where consequences of failure are unlikely to be significant to the business, safety or environmental performance. We are licensed practitioners of Ivara's MTA methodology and supporting tools.
- **Reliability Strategy Selection** – the correct approach to use, either MTA or RCM is an important decision based on the consequences and probabilities of failures that are likely for systems being analyzed.



- Decision Optimization – to use data in making accurate decisions about maintenance, reliability, replacement and support decisions. This is actually a cluster of technologies based on statistical analysis and reliability modelling, each designed to handle specific situations. We utilize tools and methods originally developed by the University of Toronto and Professor Andrew Jardine, PdD for this aspect of our work. Our training covers reliability and statistical mathematics and how to use them with introductions to the various software tools that are available.
- Supporting Software
 - Ivara's EXP Professional (RCM2, MTA, Asset Prioritization and Strategy Selection)
 - Ivara's EXP Enterprise (for overall program management and execution)
 - iSC's Aladon RCM2 Toolkit
 - Banak's AGE/CON, PERDEC and OREST
 - AGE/CON – for fleet replacement decisions
 - PERDEC – for equipment replacement decisions
 - OREST – for optimal replacement of equipment in the short term
 - OMDEC's Exakt™ for predicting reliability and optimizing condition based maintenance decisions

We are proud supporters of C-MORE, the University of Toronto's Centre for Maintenance Optimization and Reliability Engineering which was founded in 2007.

In addition to selling or supporting the sale of the above software tools, we provide training in these reliability methods. In the case of RCM there is a specific training program that we follow. In the case of MTA there is a pre-requisite – RCM and again it follows a specific program.

These inter-related programs and courses are described on separate sheets for:

- Reliability Centered Maintenance (RCM2)
- Maintenance Task Analysis (MTA)
- Reliability Selection Strategy (RSS)
- Root Cause Failure Analysis (RCFA)