

# Enterprise Asset Management (*Providing Plant Wellness*)

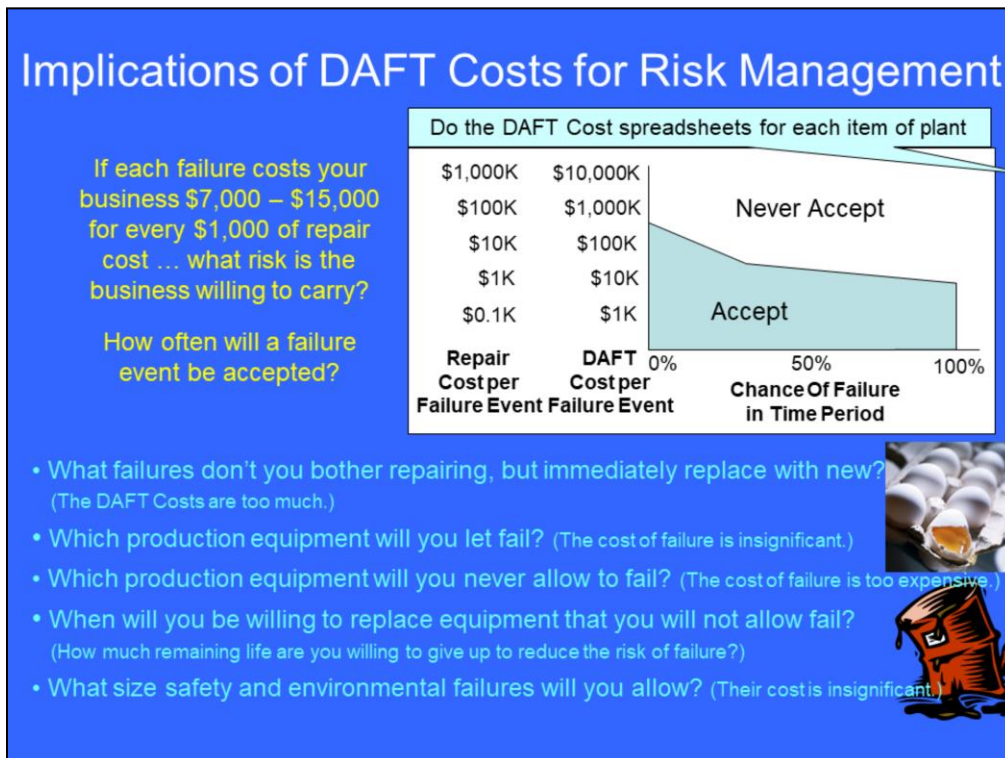
Welcome to Section 3 – **Putting it Together**

Sam and Bill make a plan for getting plant wellness and maximum life cycle profits



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Because a long, healthy equipment life requires integration of humans, machines, systems and technology, the field of Enterprise Asset Risk Management is a massive topic. There are many subject issues to understand and do well. But of all that needs to be done, which are the most important? Which deliver the greatest returns for your efforts?



Each operation can identify its risk boundaries for its production plant once it knows the DAFT Costs of its equipment failures. The chance of a equipment failure is determined from the equipment history in the CMMS, or from industry expectations and experience.

In the slide we have set a DAFT Costs limit of \$10,000 per time period (usually a year). That means we will not accept any failures that cause us to spend more than \$10,000 a year on that piece of equipment. To prevent spending more than that much money we must introduce risk prevention strategies to limit our risk to \$10,000 per period. This approach forces us to look seriously at what is causing the risk and to develop solution to limit and control it.

The 'bent' line at the top of the 'Accept' area is there because we have limited risk to \$10,000 for the whole time period, regardless of what causes the failure and how expensive it ends up becoming. Since 'Risk = Chance x Consequence', it means that for the Consequence to stay at \$10,000 we have to change the Chance of a failure event happening. An example is when the DAFT Cost is say \$100,000 (i.e. anytime the repair cost is \$10,000 – which is easy to spend these days) we must reduce the Chance of the event happening to 0.1 (i.e. 10%) of a \$10,000 event happening. In that case 'Risk = \$100,000 x 0.1 = \$10,000' and we are still at our acceptance boundary.

You can also look at the risk boundary in another way. A more complete version of the risk equation is:

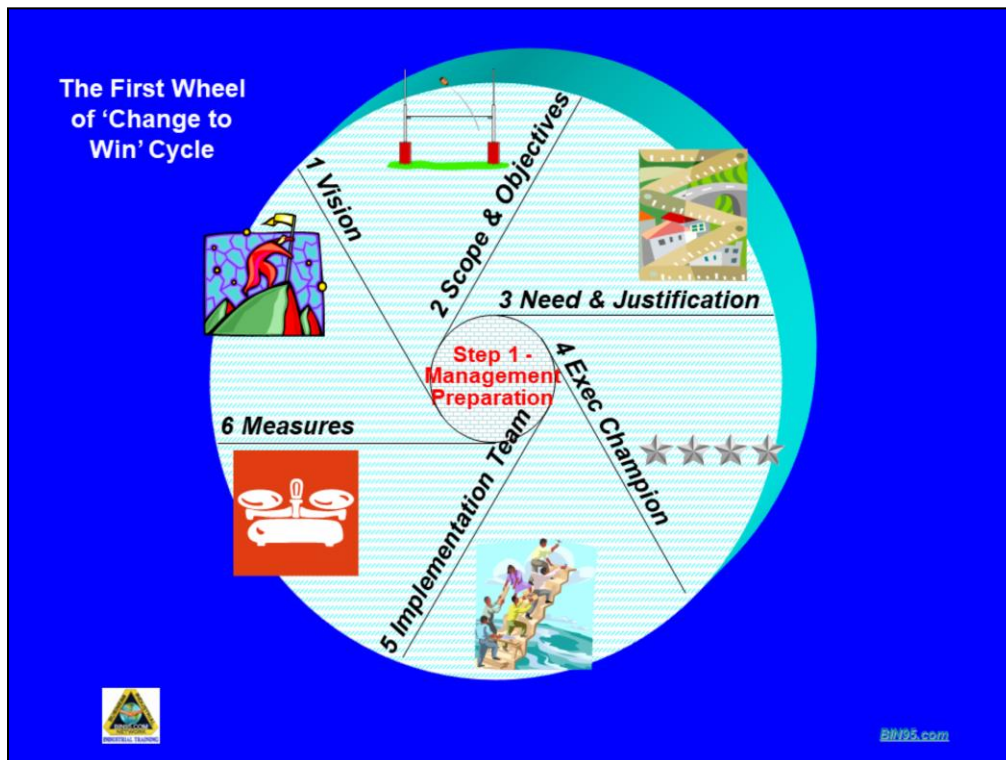
'Risk = Consequence x Number of Events x Chance of Event'

With risk in this form you can see that to keep to \$10,000 a year total, you cannot have a \$100,000 failure more than once in every 10 years (Risk = \$100,000 x 0.1 x 1 = \$10,000).



'Change To Win' is a structured change management program used to introduce needed changes, best practices and innovative improvements into an organization. A 'Change To Win' team consisting of managers, supervisors and people from the workplace is assembled to implement the changes and is responsible to plan how the organization will adopt the changes, to trial them and then implement them into standard practice.

The 'Change To Win' process is not used for problem solving, though it can be adapted to do so. It is a behavior change process that improves business performance by introducing and integrating higher standards of performance into business processes. It is used to change the way things are done in an organization by introducing better practices into the workplace. You would use the 'Change To Win' program to bring your industry's, or other industry's, best practices into your organization. Examples are introducing TPM (Total Productive Maintenance) into Operations; introducing Lean Manufacturing into a manufacturer; introducing a new software system into a business; introducing an ISO9001 quality system into a company and introducing a 5S good workplace habits program into a factory or office.



### **Step 1: Management Preparation and Project Scope Definition**

#### **Background**

In order to start a project it is necessary to define the extent of the work to be done and to provide sound justification for it. It is the role of the management to identify the problem(s) to be addressed by the project and to provide evidence that they are real and have caused serious issues to the business

#### **Vision, Goals, Objectives**

Management is aware that change is needed and they know what outcomes they want from making a change. These outcomes become the goals for the project. To begin the 'Change To Win' process, the organization's management must provide a written mission statement along with the goals that when achieved will deliver the mission. The implementation team uses the goals to select appropriate strategy and tactics to achieve the objectives

#### **Justification**

Evidence to justify the project can be provided in terms of costs, loss of performance, or lost opportunities. The necessary data is collected by an appointed manager and is provided to the 'Change To Win' Team as a baseline against which the future improvements will be measured. The preferred means of displaying the data is in a table with accompanying histogram, Pareto or other suitable visual management charts.

#### **Executive Support**

To change the way an organization works requires the visible, consistent commitment and support of Executive Management from the beginning to the end of the change. The organization requires leadership, and that is the function of Executive Management. The 'Change To Win' program needs a champion from the Top Management ranks who will become the visible presence of Executive Management leadership. Their role is to provide support for the change and to keep the Executive up-to-date with progress and major issues. At times they may need to intercede to ensure the project gets the necessary resources to be completed successfully.

#### **Preparation**

To ensure the 'Change To Win' program will be successful it is necessary for the Executive Managers and affected Department Managers to plan the change process carefully. An activity

## DAY 3 Samples of the Enterprise Asset Management Systems Training PowerPoint (56 slides)

table of the entire program is developed showing the various people involved in the program, when they will be required and the activities they will be doing. This overview of the whole process facilitates discussion and assists in identifying project risks and resource constraints.