1. The role of the plant EAM/CMMS and why a RIMS is needed
   * 1. **EAM/CMMS is Built for accounting, lacking for reliability**

Plant or enterprise asset management systems like SAP, Oracle, and Maximo are often developed for accounting and lack the definition of components like motors and gearboxes in the functional location structure. While this may work for accounting, it is impossible to track the condition and reliability of components. Reliability happens at component level.

EAM’s like CMMS start with a framework must be customized during implementation. Focus is highest on business management maintenance and work order management are down the line, reliability even lower on the totem pole. More than a few reliability professionals have told stories of how much complexity they have to wade through in their EAM.

* + 1. **System ownership and responsibility**

The plant CMMS is first and foremost set up for accounting and usually tightly controlled by the IT and accounts departments. The usual attitude of IT toward changes requested by maintenance is to put up roadblocks until the request dies. A plant RIMS can be owned and controlled by plant reliability and rapidly customized by the plant users to meet their needs.

* + 1. **High visibility to perishable condition based work orders**

The CMMS usually contains several thousand work orders covering corrective, preventive, shutdown, safely, environmental condition based work orders are only a small percentage of all open work orders and PdM.

The condition based or PdM work orders are perishable, meaning that if they are not initiated and completed in a short time frame, the machine will fail in service causing significantly higher maintenance and production cost.

The RIMS provides much better visibility, communication, tracking and validation of condition based work orders

* + 1. **Report finds earlier than a work order is needed**

Often a condition monitoring technology will identify a problem in its early stages. This problem can be watched and tracked before it is serious enough to create a work order. Having plant visibility to these early problems allows better shutdown planning and improved operation by production.

* + 1. **Making sure that work orders get written**

The RIM contains all problems identified by multiple inspection teams. Without an RIM it is easy to miss reported problems that should have a work order written.

When problems are reported by emails and phone calls its difficult to assure that all needed who’s are generated. A RIM keeps the problem information in a dashboard and allows tracking of wo creation and progress.

* + 1. **Avoid Excel Hell**

When we set up reliability databases, we try to mirror the CMMS location structure. Often plant structures lack the component level, so the plant has to define the mechanical and electrical components. This situation leaves the plant reliability team using excel spreadsheets to track reliability information. This usually creates an Excel Hell situation with hundreds of spreadsheets that must be maintained.

CMMS systems usually lack many of the functions that must occur before and after a work order is created.

* + 1. **Avoided cost tracking and reporting**

When a condition based maintenance program is operating effectively it is difficult to see the results of the program. Capturing avoided cost information allows the program to put a value on their contribution to reduced maintenance and production cost. Also, the avoided cost reporting can be used to justify increased program resources and expanded reliability technologies.

* + 1. **Integration between the CMMS and RIMS**

An objection often heard to the use of a RIMS is that there would be double work in creating a work order. Some RIMS users create an interface between the two systems to seamlessly create a work order in the CMMS from the RIMS. Many RIMS users that have not developed the work order interface report that the value of the RIMS is so great that it is worth the added time to do double entry.

* + 1. **Gatekeeping maintenance records**

Often the backlog of condition work orders is far greater than the maintenance manhours available to perform the work. The RIMS allows the prioritization of work based on risk and severity.

* + 1. **CMMS systems usually lack the following reliability functions:**
* management of component condition assessment results and compliance to plan
* integration of condition findings from multiple technologies
* Dashboard of equipment condition findings that must be tracked through work order completion and validation
* tracking of serialized equipment
* Tracking of RCFA cases and corrective action items
* Asset health reports
* Reliability metrics
* maintenance manpower gatekeeping based on risk
* Bad actors list
* Lifecycle condition history
* Gatekeeping maintenance resources