My fourth article in this series mentioned that in order to apply standards of physical asset custodianship similar to those applied to financial assets, every failure mode must be properly accounted for.

Among other things, this obliges us to try to identify every failure mode that is reasonably likely to affect the functions of all the assets in our care, to understand the consequences of each failure mode, and to select the most cost-effective failure management policies.

In the absence of any comparable asset management strategy formulation processes, the only satisfactory way to do this for modern, complex industrial systems is to apply Reliability Centered Maintenance (RCM). The only truly responsible way to do so is to apply RCM correctly.

However, applying RCM correctly is time-consuming and expensive. My last article in this series (MT 4/98, pg 50) mentioned that this is leading some people to focus too heavily on the cost of strategy formulation processes like RCM rather than on what they achieve.

This search for “silver bullets” is leading to the development of shortcuts that all lead ultimately to dangerously superficial or incomplete maintenance strategies. The following paragraphs list the most common shortcuts, and reviews their main shortcomings in the light of parallels between financial and physical asset management:

• Applying RCM in reverse to existing maintenance schedules: This shortcut asks what failure modes are being prevented by existing maintenance schedules, and applies the RCM consequence assessment and task selection process only to those failure modes, without asking what other failure modes may have been over-looked by the existing schedules. This is like basing this year’s accounts solely on last year’s transactions.

• Using generic failure modes effects analyses (FMEA): this shortcut asks us to take FMEAs developed elsewhere and apply them to our own assets as part of the RCM process, on the premise that if machines are similar, then surely they will suffer from more-or-less the same failure modes. This is akin to borrowing a set of financial ledgers used by a different organization in the same line of business and using them to make our own financial decisions.

• Using generic RCM analyses: this shortcut asks us to acquire entire RCM analyses performed on similar assets used elsewhere, and apply them to our own assets. This is like basing our financial decisions on an entire set of accounts developed by another, similar business.

• Applying RCM to “critical” processes only: this is akin to asking our accountants to track only the 20 percent of our transactions which account for 80 percent of our expenses—an approach which would greatly reduce the costs of bookkeeping but which would also rapidly lead to financial chaos.

• Using computers to drive the RCM process: this shortcut suggests that it is possible to speed up the RCM decision process by computerizing it. This is akin to asking a computer to make all our investment decisions for us—a process that not even Wall Street has mastered yet. (Of course, computers are as helpful in storing and sorting the results of RCM analyses as they are for tracking financial transactions. They cannot, however, be used to make the decisions for us.)

• Using inadequately trained people to apply RCM: this shortcut entails using people with only 2 or 3 days of training—sometimes less—to lead the application of RCM to complex assets. This is usually done in the belief that any reasonably experienced maintenance person would be able to master RCM with minimal guidance. This is like suggesting that anyone with a reasonable grasp of arithmetic should be able to prepare a full set of accounts after attending a 3-day course on finance.

No sane accountant would allow shortcuts like these to be applied to financial assets. To do so would lead to chaos and eventually to ruin.

In the experience of the author, applying such shortcuts to the development of physical asset management strategies is aslo ruinous - suicidally so in some cases, if only because people develop a totally lase sense of security about assets to "a sort of" RCM.

So if we wish to be truly responsible custodians of our physical assets, we need to recognize that shortcuts simply have no place in the application of RCM. **MT**