

## Technical Audits

A systematic analysis of a company's Research & Development activities conducted by an outside expert can be called a technical audit. The audit examines all current R & D activities, to make an honest appraisal of their potential and worthiness. After an audit, priorities on all projects should be clear to all involved.

Who performs a technical audit? First, the person needs to be an expert with knowledge of both the technology and the market. Second, the auditor needs to be completely independent. An outsider asks the tough questions and offers a fresh perspective, without the prejudice of history or politics. The auditor must maintain the strictest confidentiality regarding all proprietary information.

Who is a good candidate for a technical audit? The answer is almost any organization that conducts R & D and is frustrated with the results. It isn't that R & D professionals aren't busy and hard working. The much tougher question is "Are they working on the right projects?" The technical audit addresses this question fully, suggesting which projects to emphasize, which ones to drop and which ones to start. It focuses your attention on the projects that will help your organization. And just as importantly, it eliminates work that wastes precious resources.

Technical audits are particularly helpful in resolving two common situations.

### Example One

Management had committed to developing a new material for its biggest customer. The requirements were very demanding and the engineer in charge was unable to reach the

targets. Review of the situation revealed two major problems that had been completely overlooked. First, the compositions studied had no hope of reaching the target properties, regardless of the processing. Second, a low cost conversion process was used exclusively to produce all the samples studied, which resulted in lower properties. The higher cost conversion was never once tried, even though better results were assured. In short, they were trying to make it cheap *before* they made it work. Our suggestions were to analyze only compositions that had the potential for the desired properties and to drop the low cost conversion in favor of the higher cost conversion until the target could be reached. A simple mathematical model was developed to quickly evaluate the potential of a given composition. The suggestions were accepted and worked well.

### Example Two

Management was frustrated with the progress on all their R & D projects. Even with weekly progress meetings, the pace was agonizingly slow. Deadlines were routinely missed. Review of the situation revealed that ten R & D personnel were responsible for well over 75 projects of varying complexity. Frequently more projects were added, but rarely were any removed. It was simply impossible for this small staff to handle so many projects effectively. Our suggestion was to weed out low priority and low payoff projects, with a target of removing at least one third of them. This suggestion was not accepted and the frustration continued.

Will a technical audit help your business? Most likely it can. Please contact us to discuss your specific situation.

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