



Mid-South Engineering Company

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Lineal Scanning

Lineal log scanning can be difficult to accomplish as a retrofit because of space constraints. However, there is a way it can be done by using more than one scanner strategically placed downstream of each other. Each scanner collects data on a segment of the log and the computer combines the images. The advantage of a good lineal scanning system is its ability to capture more complete and accurate information from all sides of the stem while its full length passes steadily through the devices. Coupled with lineal cut-up of the stem, the logs can be dissected in any location allowing a knot segment to be cut out, or various length markets to be targeted easily. As advances are made and scanning systems are able to look inside the stem (a strong possibility in the future), this could become even more important to your profitability.

The Civil Side

Use That BIG Dozer

Have you ever been on site during major earthwork? At some point during compaction you might have heard someone say, "Use that BIG Dozer to compact that dirt." Maybe it didn't even phase you, but it should have. Bulldozers are **not**, I repeat, **not**, to be used for compacting dirt. Why not, a Caterpillar D11 tractor weighs almost 207,000 pounds? Because they are not made to compact dirt—they are made to tread lightly on dirt. That same dozer has a surface contact area of 68 square feet, meaning that its compactive effort is about 3040 pounds per square foot. Let's compare that to the averages of some pieces of machinery that are designed for compaction:

Smooth-wheel roller
7,200 pounds per square foot
Pneumatic roller
13,320 pounds per square foot
Sheepsfoot roller
93,600 pounds per square foot

As you can see, the dozer will not do a good job compacting soil. The dozer is designed not to get stuck. Therefore, it has to tread as lightly as it can on soft earth.

Do you think your contractor bid your job pricing a dozer to compact the soils? I doubt it. If he did, you really don't want him as your contractor. So, are you paying for good compaction from the proper machinery? After all, everything you build is supported from the ground up.



"The Barn" built in the 1930's to house Welsh ponies, serves as Mid-South's offices. →

Ten Ways to Kill a Project

Adapted from Samuel Collins, *Tappi Journal*

This is a “tongue-in-cheek” look at common methods which result in a disastrous project. Amazingly history tends to repeat itself, and the following list of ten common errors seems to manifest themselves over and over.

1. Have no strategy or overall plan.
 - Incorrect, ill-conceived basic project objectives are the foundations for memorable mistakes.
 - Don't use people skilled in the field with knowledge of how others succeed. Keep other stakeholders such as maintenance, mill operators, marketing, etc. in the dark.
 - At a project's conception, avoid boundaries, goals, and objectives.
2. Have a poorly defined scope.
 - Maintain maximum flexibility by leaving major components undefined.
 - Hiding the scope limits from engineering, operations and maintenance people will hold the estimate down.
 - Raw material availability, competition, and sales markets can be reviewed after the scope is set.
3. Don't manage your scope.
 - Equipment purchased under the budget means you can ignore the need for good engineering and the cost of installation.
 - No formal scope change procedure is good since the process takes time and management finding out will require an explanation.
 - Cut the scope whenever costs rise too high. Who cares if the project meets its objectives.
4. Ignore project organizational development
 - Who says people need to understand their goals?
 - Instill an air of frustration and chaos to your project, meetings and decisions can wait until the last minute without key input.
5. Assemble a poor estimate.
 - Be over optimistic. “Low ball” numbers throughout an estimate to upper management at the feasibility stage. This leads to poor project decisions. Rather than admitting an error, make matters worse by deleting scope items' costs. Small details don't matter anyway.
 - Make future cost projections and cost tracking during construction confusing, laborious, and frustrating, that way you can overrun the budget without knowing it in time to make changes.
6. Develop an unrealistic and confusing schedule.
 - Organize the schedule so that it doesn't fit your contracting strategy. People will then have absolutely no clear idea what they should be working on and which has the highest priority.
 - Don't worry about interlocking tasks so that events follow logically progressions. Also, don't get agreement on logic and task durations from the various groups like construction, operations, engineering, training, and the like.
 - Ignore the environmental permitting impact, even though this one item has been the most expanded time consumer in recent years.
7. Don't manage the schedule.
 - Delay decisions and paralyze groups with endless investigation of alternatives.
 - Don't bother with periodic reviews by key members of engineering, production, and construction. Management loves it when the schedule is drawn out from poor communication.
 - When falling behind on an unrealistic, poorly conceived schedule, turn the world upside down to make up for lost time. Enter into spending excessive overtime money to contractors to wear them out, and add more people with poor supervision. After all it's effort, not results we want.
8. Give operator and maintenance training a low priority.
 - Don't even think about the training effort and the cost until it's too late. Besides, training is the last item before start-up, and doesn't deserve attention until after design.
 - If you're worried what to do with all the time you've saved by not planning the project, you can consider conducting training too early. The time bomb of starting up new equipment with poorly trained people is sure to explode and you can have a front row seat.
9. Don't manage commissioning and start-up.
 - A second class project deserves a third class check-out and commissioning. Like inferior training, this can lead to equipment installed wrong and equipment failures to extend start-up.
 - Don't bother transferring ownership to maintenance and operations personnel, they can blame construction and engineering for their lack of participation and understanding for years.
 - Misunderstandings about punch lists and design parameters can allow contracts to paid without performance.
10. Make the same mistakes on the next project.
 - If you weren't fired for your catastrophic project results, don't learn from your mistakes.
 - Don't bother with any formal, written critique. Why learn from the good and bad points. Let the next team muddle through themselves.
 - In the end, were the production, quality, operating costs, recovery, and marketing objectives met? Omitting audits contributes to future tragic projects.
 - You can always tell others it went great and deceive yourself and if your company stays in business you can look forward to achieving similar poor results next time.

Poor project quality simply means a project fell short of meeting measurable objectives or expectations. It's quite easy to achieve. If, however, your company's management and your own sense of pride demand a quality outcome, merely reverse the directions given above. Learn from the past, both the good and the bad, to secure the achievements and objectives of a well planned project.



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