

When it comes to planning a project or facility upgrade, the two biggest areas of concern are the budget and the time it will take to complete the project. We turned to our in-house experts and a few of our clients to get tips and ideas about how to help mitigate costly delays and improve project management. Here's what they had to say.



**1. Begin with the end in mind.** One of Stephen Covey's 7 Habits of Highly Effective People, "begin with the end in mind" means to simply start with your goal and work backward to develop a schedule and plan to reach it. We're reading the book at ADF right now, so this was particularly top-of-mind for our staff.

"You have to have a clear goal to work toward," ADF President Alex Fishman said.

**2. Bridge the communication gaps.** Create a team and emphasize teamwork and open communications as early as possible. It will help keep things like construction and material costs in check if you take the opportunity to bring the right parties together before design plans are finalized. Invite all of your stakeholders to the same meetings, including engineers, vendors, contractors, and your own coworkers from plant operations and maintenance.

ADF advisor Bob Foley agrees, saying that "communication helps develop relationships between your engineers, contractors, and vendors."

"As they become familiar with each other, it makes a project easier and makes them more comfortable to share ideas and feedback with each other beyond their own parts of the work," he said. "It can lead to a lot of cost savings as they bounce ideas for improvement off one another."

**3. Capital cost avoidance.** The largest cost for any project is almost always equipment, typically racking up 30-50% of the total project budget. Relying on the expertise of your consultants and vendors to find solutions that suit your long term needs will provide leaner and more functional designs at lower overall costs.

Dick Gadomski, a retired EPC contractor, said that in his experience, "nothing can be more expensive than selecting the lowest price."

"Experience and reputation are more important considerations than low price when it is time to select engineers and contractors," Dick said. "As a contractor, I didn't choose my subcontractors by low price, but by which one would give my client the best value in the finished project. Capacity, character, and commitment were worth more than low price."

**4. What is your measure for success?** Whether you're on a strict timeline or a tight budget, make it clear what your driving factors are at the beginning of your project. For example, if you must have a project completed by a certain date, communicate that to project manager so they can develop a more stringent schedule and monitor progress more thoroughly.

"What you measure is what you get." Alex added. "So, if budget is important, then you can start measuring progress earlier by requesting earned value reports from all of your contractors and vendors."

**5. Minimize change orders.** Change orders are a costly and time-consuming venture. One of the biggest reasons why projects encounter a change order is when there is a lack of proper documentation of existing information or building plans. Using design technology like 3D laser scanning is the easiest way to document or confirm existing conditions. Coupled with photography, laser scanning and modeling provides an accurate base that your designers and construction contractors can use to stay accurate and avoid rework and other mistakes.

Steven Stauffer, Vice President of Operations at Arboris, advises against taking shortcuts on quality engineering at the start of a project.

"Poor planning and scope development on the front end will cost you many times over in schedule, cost, and functionality on the back end," Steven said.

To learn more about how to make your next project a success or to request a free on-site training seminar, visit [www.adfengineering.com/services/training.html](http://www.adfengineering.com/services/training.html).