

Project success hinges on FEED completion

With billions of dollars in shareholder value at stake, operating companies know they need to do everything they can to ensure successful projects. One of the most important phases in a project is a complete and adequate front-end engineering design (FEED). This is fairly well known in the industry but often not done well. To ensure a complete and adequate FEED, many operating companies use a stage-gate process that provides a degree of assurance for upper management that shortcuts are not taken and important steps are not missed as a project progresses. Failure to do so can result in a project business failure or disappointment. Executive management in the investing companies wants the team to do what it says it is going to do, with no surprises. Still, many times the FEED work is not done adequately. In a recent newsletter, IPA (Independent Project Analysis) reported that only 40% of projects completely finish Front End Loading II decision gate before moving forward.

Sometimes post project “lessons learned” are conducted with key project personnel, including contractors, and reasons for disappointing results are documented. In the past, these reasons have included things like: the engineering was delayed; we did not have the information needed; the vendors delivered late; the fabricator could not find adequate personnel; the market changed and equipment and materials were more expensive than we thought; or the derrick barge was late in completing the previous job and could not mobilize when we needed it. These are not satisfactory excuses when shareholders are losing value.

Most of the issues can be traced to inadequate front-end engineering and planning. What can be done to improve this situation?

Some companies have learned the hard way and rigorously follow a stage-gate process that clearly spells out what must be completed at the end of each stage, and the risks going forward. The only way this can work is if top management buys into the importance of completing the front-end design. Management should be willing to slow down the project if the information required for each stage is not complete. The results after each stage must be of such quality that they will stand the test of time, without changing the business outcome. Otherwise, one might as well throw dice to predict the outcome.

The reasons why a company might overlook or not complete the FEED are complex. Sometimes this has to do with inexperience. It could be that incentives are an issue. Often times there is disincentive inherent in the system, preventing people from doing things right and encouraging otherwise well-meaning people to rush the details.

The roots of the problem take hold early on. An oil discovery is made. It hits the press and the company declares it commercial. A first oil date is set and future earnings are forecasted based on future production. The stock price goes up and all is well. So, we have a deadline: the first oil date. We have a set of uncertainties and chal-

lenges that need to be addressed, since it is still very, very early in project development. We have a powerful incentive to ensure that everything is progressing on schedule. If it is publicized that the project is behind schedule, the stock price can be negatively affected. No one wants that to happen. If many unforeseen issues arise after the initial announcement, it can be very tempting to become undisciplined when it comes to following the company’s stage-gate roadmap.

This pressure, coupled with the loss of discipline in the stage-gate process, often leads to poor results. As the responsibilities for the project execution get distributed down through the hierarchy of the company, the pressure to prioritize the schedule over the execution gets distributed down the line and magnified. For the individual on the technical staff, there is often more career risk than reward in pushing back on management. Often, top management does not understand the consequences of moving ahead before each phase of the work is complete. Often, there is a powerful incentive for middle managers never to raise these concerns with top management. He might get told, “If you cannot do it, we will get someone who can.” As a result, everything will seem hunky-dory until the chickens come home to roost and everyone starts looking for a scapegoat. Then, everyone scrambles for cover and sometimes even management cannot figure out what went wrong.

Companies need to train their top managers (though ideally they learned these lessons on their way up the ladder), train middle managers, and train personnel assigned to project work that the stage-gate process gets thoroughly completed at each stage. The stage-gate process is a requirement, not an option. Individuals need to feel free to blow the whistle when things are not right and be rewarded, not punished, for their actions. When an issue arises, managers need to accept the truth and take it up the ladder. And presidents need to address the issues with the analysts. If this is strict company policy, I would guess that front-end engineering work would be respected, planned for, and funded, thus preventing potential project business failures and embarrassing corrections to the market paid for by the shareholders.

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