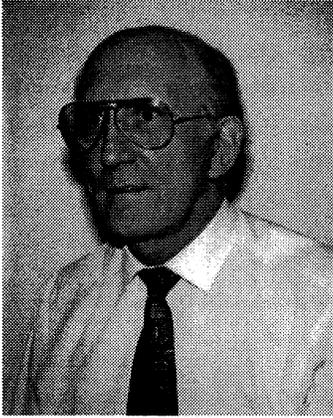


Fast Track Projects

Ray Piper



Over the years, fast track projects have been the result of early project delays due to late funding or problems on the front end. In order to rescue the project from impending disaster, the project manager would apply crisis management and produce havoc for a while. The project would either suffer disaster or be yanked back onto schedule somehow.

There is a better way, says Ray Piper of Union Carbide. He showed PMSEP participants some of the proven, successful techniques to organize and manage a fast track project. "In the highly competitive environment in which we all work, these techniques can be applied to projects such that they can be started later or completed earlier than current practice," he said. "This is not a panacea for troubled projects but a tool which can be applied in the strategic planning stage of projects which need to be compressed due to the derailment of project cost."

Piper begins by asking: "What is the 'Optimum Project Schedule'?" The answer: the ideal schedule or project cycle time for which the project can be installed at the lowest Total Installed Cost (TIC). "Any deviation from the Optimum Schedule adds to the Total Installed Cost of a project," he notes. See Figure 11, Cost of Compressing a Schedule.

"Fastrack Projects" at Union Carbide may start later because more time is needed to define and reduce scope, or to allow for developing technology. More time may be needed to study alternative locations, or because of cyclic market requirements and product priorities. Cash flows that are postponed can allow earlier funding of some commercial products.

Fastrack Projects need to finish early for a variety of reasons. Usually the company wants to be first for market advantage, such as a new product or if the product has a high return or investment (ROI). At times the project faces a regulatory deadline, an environmental issue, product interruption or a plant shutdown. Spending earlier rather than later can improve the net present value and reduce project cycle time.

Optimum Project Schedule and Fastrack Projects call for different options. In contracting, the optimum schedule commonly calls for fixed price, reimbursable with incentive and target price with incentive (for engineering), but Fastracks options include reimbursable with incentive (for engineering and construction), target price with incentive for both, and a unit rate contract for construction. In engineering, the Optimum Schedule may start with "frozen" scope packages, but Fastracks may start at less than 100% scope package, issue piecemeal drawings, increase the work schedule and double-shift the engineering. For equipment purchases, the Optimum Schedule calls for in-house or vendor design based on cost effectiveness, but Fastracks require in-house or vendor design based on schedule, often a single source for critical items, in-shop vendor drawing

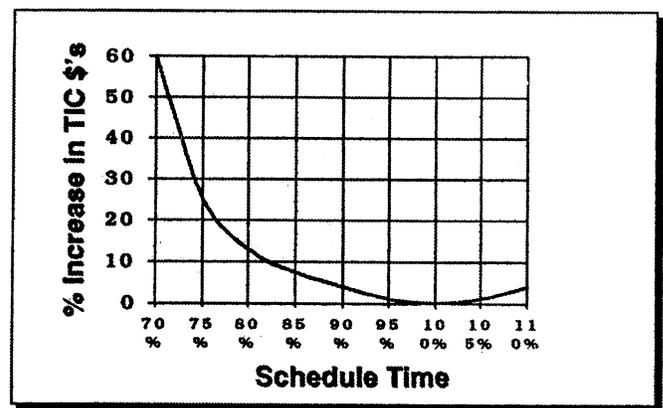


Figure 11. Cost of Compressing a Schedule

reviews, stock equipment and double-shift stock work. Materials purchases on an optimum schedule may call for master price agreements (no bids) or an integrated supplier concept, but Fastracks use standardized and in stock materials, pay for shop time and vendor engineering overtime, use early material requisitions and unchecked drawings, use multiple fabricators and site fabrication, reduce purchase order time and either eliminate or reduce authorization for POs. Finally, in construction, on optimum schedule may start with 50% detailed engineering complete, spot overtime and a density factor of 1.0. Fastrack options include a start with less than 30% detailed engineering complete, scheduled overtime and double shifts, and a density factor above 1.0.

The key to success of Fastracks is customer-driven project scheduling. The owner clearly specifies critical elements and is willing to pay for the fast tracking. With management commitment and full support for shared risk, the project manager assembles a ded-

icated task force in a single location and standardizes designs to the greatest extent possible. Money must be available and no funding delays. Without studies to define "a better way," Fastracks require a single alternative with risks. Keep in mind that the work process will vary with the amount of risk an owner is willing to take, and with the investment premium the owner is willing to pay. Techniques frequently used to compress schedules have been effective for both Union Carbide and others, but there is no rigorous proof of the definition of "optimum project schedule." The project team, steering committee and project owners continue to evaluate benefits carefully.

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