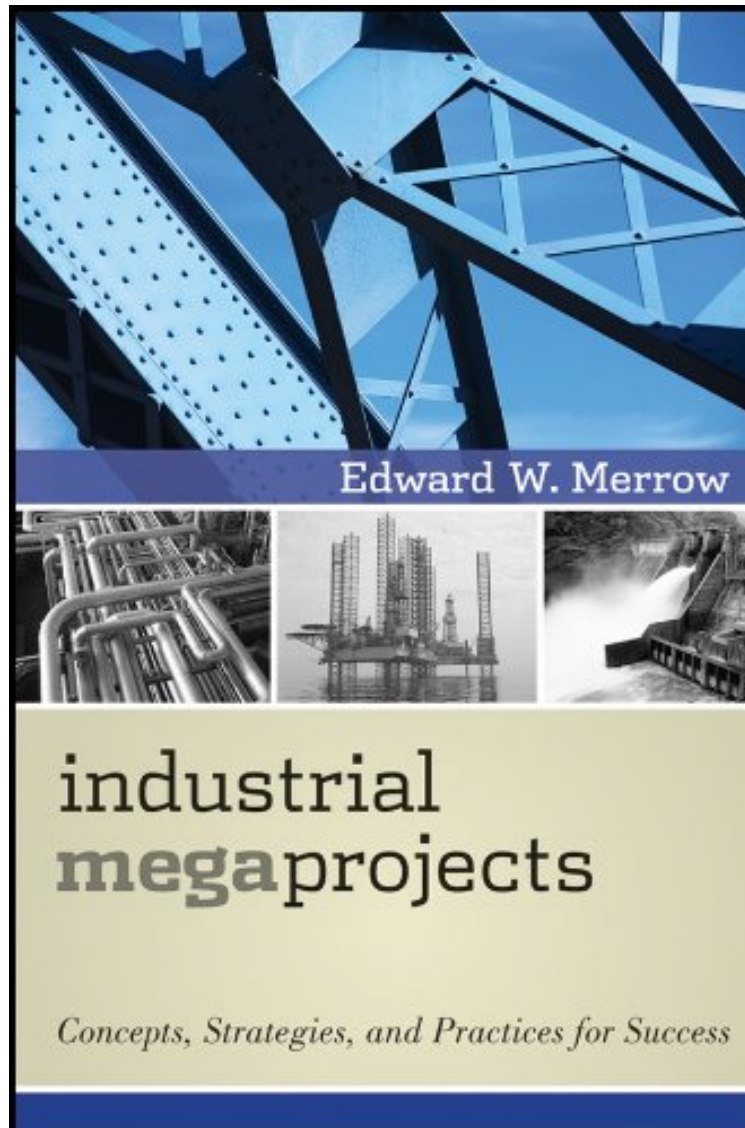


Industrial Megaprojects: Concepts, Strategies, and Practices for Success

Edward W. Merrow

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Edward W. Merrow : Industrial Megaprojects: Concepts, Strategies, and Practices for Success before purchasing it in order to gauge whether or not it would be worth my time, and all praised Industrial Megaprojects: Concepts, Strategies, and Practices for Success:

19 of 19 people found the following review helpful. A must-read on large projects By W. D ONEIL This is a unique and important study of very large projects, quite different from the usual project management text in a variety of ways. It presents a number of striking lessons that ought to be heeded by everyone who is involved in project

decisionmaking, but probably won't. More about that later, but if you are someone who might be willing to make the effort to break free of what comes "naturally" in order to gain success then it is book to read. The author, Edward W. Merrow, heads a consultancy serving (mostly) the oil and gas, chemical, and mining industries. He is clearly very knowledgeable about management and engineering in these industries, but his academic background is in economics, and he makes very effective use of it in his work and this book. His firm has consulted on more than 13,000 projects, benchmarking their planning, execution, and results -- and amassing a huge, detailed, quantitative database. Using classical econometric statistical methods he has determined with high confidence which factors make a difference in actual results, and by how much. Thus his recommendations represent not "nice-to-haves" but things that are truly going to make a real difference. This book, as its title says, is about megaprojects -- one billion dollars and up in today's money. He has 318 of them in his database, enough to draw very firm conclusions. Not only are the stakes bigger in megaprojects but the choices are starker as well. Merrow shows that because of the complexity that goes with such size, the line dividing success and failure is more sharply drawn. Of the megaprojects in his database, about two-thirds experienced more than 25% cost growth over the estimate at project approval, and this generally means that they destroyed shareholder value rather than creating it. Merrow talks about virtually every major aspect of project strategy and structure, but by far the most highly leveraged is the front-end strategizing, planning, and engineering, before anyone puts hand to welding torch or shovel. He has metrics to assess the quality and completeness of the front end, and he shows that if the front end is done well then there is a very high probability of project success. If the front end work is mediocre then the odds turn against success, and if it is poor then the best thing is to do the shareholders a favor and walk away before wasting their money on implementation. The book provides rich specifics on how to do the front end well, as well as most other aspects of structuring and managing projects. So if Merrow is so smart, why aren't his clients richer? Why do they persist in doing things that are almost sure to damage their real interests, when he can show them the consequences? It's a question that clearly troubles him. He points to a variety of structures and practices among his clients that get in their way, but this of course only puts the question at one remove. Why can't people learn? I've been in the megaproject business even longer than Merrow. My experience is in what would seem to be quite different fields: aircraft, shipbuilding, space, and weapons systems. Here too we find many serious and persistent problems. They are usually attributed to factors peculiar to these industries, but in fact the faults most often are remarkably like those Merrow finds in his field. The problem is not "the system" -- it's people and how our minds work. My own research has turned in this direction, drawing on modern discoveries in cognitive neuroscience, behavioral economics, and social psychology to illuminate the underlying mechanisms and formulate approaches that have a better chance of success than continuing to issue exhortations that most of us are constitutionally incapable of heeding. For a preliminary taste look up my article, "Cost Growth in Major Defense Acquisition : Is There a Problem? Is There a Solution?" on the Web. In terms of structure and writing the book is serviceable -- clear enough to meet most needs, given some study. Merrow of course must take care not to reveal his customers' trade secrets, or his own, but it seems to me that he could have been a bit more explicit about his data and their distributional properties. Despite any limitations, however, this is a must-read book for anyone involved in very large projects, whether in government or industry, regardless of the industry involved. Unfortunately, the publishers have done a somewhat sloppy job in making the Kindle edition. Many of the graphics are virtually unreadable and no page numbers are given. Given its expense, this seems hard to justify.

0 of 0 people found the following review helpful. Read it By John K. Hollmann I am a bit prejudiced having worked at IPA under Mr. Merrow a decade ago, but I can say without reservation that this is a book you must read if you work on major engineering and construction projects of any type. If you are like me, you have seen many academic papers on cost overruns based on nothing but lousy statistics and flimsy hypotheses. Put those aside. This is the real thing. IPA holds the keys to the kingdom of what drives project performance (i.e., true predictive models based on real, deep and clean data) and Mr. Merrow is generous to share much of what IPA has learned with everyone without pulling punches (but guarding the client's data). I don't agree with every word (e.g., when it says monte-carlo method it is really about the "line-item ranging" method MCS is applied to) but there is little arguing with the general conclusions and recommendations. If only public infrastructure projects would benchmark like the process industries have--maybe that's the next book.

3 of 3 people found the following review helpful. A Must Read... By J. B. Porter Industrial Megaprojects is a primer on what to do and what not to do as part of end-to-end megaproject management. This book provides the necessary information for you to establish a decision and execution framework that allows you to be in control of your project's outcomes, not "just hope to be lucky". It is structured in a way those who sponsor, direct or work on large projects can gain a functional understanding of how best to achieve the most business effective results. It also enables business executives who are genuinely in charge to make better decisions about how the project should be developed, governed, and executed. Most importantly, it lays out ways to overcome the largest challenge in successful implementation of megaprojects - enabling the business and technical professionals to work together collaboratively as a fully integrated team.

Avoid common pitfalls in large-scale projects using these smart strategies Over half of large-scale engineering and construction projects--off-shore oil platforms, chemical plants, metals processing, dams, and similar

projects—have miserably poor results. These include billions of dollars in overruns, long delays in design and construction, and poor operability once finally completed. *Industrial Megaprojects* gives you a clear, nontechnical understanding of why these major projects get into trouble, and how your company can prevent hazardous and costly errors when undertaking such large technical and management challenges. Clearly explains the underlying causes of over-budget, delayed, and unsafe megaprojects Examines effects of poor project management, destructive team behaviors, weak accountability systems, short-term focus, and lack of investment in technical expertise Author is the CEO of the leading consulting firm for evaluating billion-dollar projects Companies worldwide are rethinking their large-scale projects. *Industrial Megaprojects* is your essential guide for this rethink, offering the tools and principles that are the true foundation of safe, cost-effective, successful megaprojects.

From the Inside Flap As megaprojects sponsored by petroleum, chemical, mineral, power, and other related industries have increased in size and complexity, so has the fallout. Anyone with a managing stake needs to understand how and why things can go so wrong. *Industrial Megaprojects* explains underlying causes of over-budgeted, delayed, and unsafe megaprojects. They destroy shareholder wealth and damage company reputations. Yet, current global economic needs are further complicating projects. Easily accessed resources have been depleted, national resource holders that control more easily developed oil and gas have driven oil companies into deeper water, and chemical companies seeking lower cost feedstocks need to exploit economies of scale. For anyone who leads or finances big projects, for those who are concerned about the management of modern, publicly owned industrial corporations, and for those who teach others about how it should be done, this book delivers the critical information you need to ensure a safe and profitable future for megaprojects. Modern life depends on their success. From the Back Cover More than half of large-scale building projects, such as drilling platforms, chemical plants, or dams, have miserably poor results: billions of dollars in overruns, long delays in design and construction, and poor operability once they are finally completed. Occasionally, these fiascos make the news, but for obvious reasons, companies usually bury the disasters with as little publicity as possible. Yet, management at the companies know full well the complexity and the difficulty faced when mounting megaprojects. *Industrial Megaprojects* explains the underlying causes of over-budgeted, delayed, and unsafe megaprojects: poor project management, destructive team behaviors, weak accountability systems, an almost pathological focus on the short-term, and the unwillingness to invest in deep technical expertise. Modern life as we know it relies on the success of these projects. Leaders and stakeholders of future megaprojects would be wise to heed the warnings and take note of the best practices outlined in this book. About the Author Edward W. Merrow is the founder and CEO of Independent Project Analysis, Inc., the world's leading consulting firm evaluating billion-dollar megaprojects of national and international oil, chemical, pharmaceutical, and major mineral companies, and benchmarking their cost, schedules, safety, startup, and operational performance. Before founding IPA in 1987, Merrow was a research analyst and later the director of the Energy Policy Program at the RAND Corporation.