The New York Times | https://www.nytimes.com/2023/02/06/opinion/boeing-747-project-management-planning.html

SUBSCRIBER-ONLY NEWSLETTER

Peter Coy

If You Plan Well, Execution Should Be Swift

Feb. 6, 2023

By Peter Coy
Opinion Writer

In the late 1960s, the Boeing 747 was regarded as a huge risk that had the potential to bring down Boeing itself. "The airplane was so different that each component had to be designed from scratch," according to a National Air and Space Museum video. It needed its own factory, which had to be built while design was still underway. It had to accommodate either passengers or freight, which would be loaded through a nose that swung upward on hinges. And time was of the essence.

"If ever a program seemed set up for failure, it was mine," Joseph Sutter, who led a design team of 4,500 engineers, wrote (with Jay Spenser) in his 2006 autobiography, "747: Creating the World's First Jumbo Jet and Other Adventures From a Life in Aviation."

Of course, the 747 became a huge success. Boeing made 1,574 of the jumbo jets and delivered the last one on Tuesday. The plane served presidents as Air Force One and carried the space shuttle on its back. I'm proud that my father, Arthur H. Coy, played a small part in its success as one of the designers of turbine blades for the Pratt & Whitney JT9D engines that powered the original 747.

Sutter, the jumbo jet's chief designer who grew up in Seattle near Boeing's factories, was a skilled aerodynamicist who had come up with clever design solutions for the 727 and 737. When it came to designing the 747, he persuaded Pan Am to make the plane extra-wide rather than a double decker. "He wasn't afraid to say what he thought," Ray Conner, then president and chief executive of Boeing Commercial Airplanes, said in the museum video in 2013. "I am not sure, had we had anyone else leading that program from a design standpoint, would we have gotten it done."

Fortunately, success with a megaproject doesn't depend on a genius to lead it. There are principles that lead to success if followed and to failure if ignored. So argue Bent Flyvbjerg and Dan Gardner, authors of a book that's being published on Tuesday, "How Big Things Get Done: The Surprising Factors That Determine the Fate of Every Project From Home Renovations to Space Exploration and Everything in Between." A native of Denmark, Flyvbjerg is an emeritus professor at the University of Oxford's Saïd Business School and a sought-after expert on project management and planning. Gardner, his co-author, is a journalist.

Naming big projects that aren't executed as smoothly as the 747 — I'll call them 474s — is almost too easy. Flyvbjerg and Gardner mentioned Boston's Big Dig, the Obama administration's healthcare.gov website, the Montreal Olympics site, Scotland's Parliament building, Berlin Brandenburg Airport and many more projects that went over budget, over time or both. (Please write to *coy-newsletter@nytimes.com* and tell me your favorite horror story.)

Flyvbjerg told me his first major press appearance was in The Times in 2002: "Study Finds Steady Overruns in Public Projects." The study he performed was based on 258 case studies. Flyvbjerg and his team eventually assembled a database of approximately 16,000 projects in 136 countries. They included all projects for which they could find data, not just ones that fit their preconceptions. They found that only 0.5 percent of them came in on time or early and at or below cost and delivered all of the promised benefits. "Doing what you said you would do should be routine or at least common. But it almost never happens," the authors wrote.

Psychology and politics are the main problems, Flyvbjerg concludes in the book. The psychological part is the human tendency to be overly optimistic. The political part takes many forms, including deception. For example, a project manager might lie about the cost to get funded, then come back for more money when it's too late to stop the project. Chad Syverson, an economist at the University of Chicago's Booth School of Business who was interviewed by Ezra Klein for his Times column on Sunday, cited another obstacle: "There are a million veto points," he said. "There are a lot of mouths at the trough that need to be fed to get anything started or done. So many people can gum up the works."

One of Flyvbjerg's precepts is "Think slow, act fast." If you plan well, that is, the execution will be swift. The phrase is a deliberate echo of "Thinking, Fast and Slow," the title of a book by Daniel Kahneman, the psychologist who won a Nobel in economics. The two scholars are full of praise for each other; Kahneman cited Flyvbjerg in his book.

I told Flyvbjerg that "Think slow, act fast" reminded me of a piece of advice I have on a piece of paper taped to my computer monitor at work: "Slow is smooth, smooth is fast." It's a phrase that's popular in the U.S. armed forces and may have originated there but is useful in civilian life as well. "I never heard that before. It's very good," Flyvbjerg said. "I'm going to write that down."

The book concludes with 11 mental shortcuts: 1. Hire a master builder. 2. Get your team right. 3. Ask "Why?" 4. Build with Lego (in other words, a piece at a time). 5. Think slow, act fast. 6. Take the outside view (in other words, learn from others who have undertaken similar projects). 7. Watch your downside. 8. Say no and walk away. ("I'm actually as proud of the things we haven't done as the things we have done," Steve Jobs once said.) 9. Make friends and keep them friendly. 10. Build climate mitigation into your project. 11. Know that your biggest risk is you.

I asked Flyvbjerg if he followed his own precepts in writing the new book. Of course, he said. "Again and again I heard from the publishers, 'Bent, this never happens! You're meeting every deadline,'" he said.

While Flyvbjerg made his name investigating projects costing millions or billions of dollars, he claims most of it — less so the political part — applies to ordinary household stuff like renovating a kitchen or bathroom. You won't require any of his advice if your project is in the good hands of the next Joseph Sutter. Otherwise, ignore it at your peril.

Outlook: Thomas Simons and Aneta Markowska

Friday's blowout jobs number — seasonally adjusted payroll employment increased by 517,000 in January, according to the Bureau of Labor Statistics — is "extremely impressive," but January data "always has to be taken with a grain of salt," the economists Thomas Simons and Aneta Markowska of Jefferies & Company wrote in a client note last week. That's because employers clean up their payrolls at the end of the year to purge people who haven't actually been employed, and seasonally adjusting the data for that annual removal of former employees is tricky. One clear sign of strength in the labor market was a decline in the unemployment rate to 3.4 percent, the lowest since May 1969. "On the whole, the data should motivate the Fed to continue with gradual rate hikes in the coming months," the economists wrote.

Quote of the Day

"Blindly, intellectuals have always seen democracy as a mediocre system that lacked the beauty, perfection and coherence of the big ideologies."

— Mario Vargas Llosa, interview with El País, March 2, 2018

Have feedback? Send a note to coy-newsletter@nytimes.com.

Peter Coy has covered business for nearly 40 years. Follow him on Twitter @petercoy

FOR TIMES SUBSCRIBERS

THREE TIMES A WEEK

Peter Coy

A veteran business and economics columnist unpacks the biggest headlines.

See the latest