

laboratories. The problem was that the pro- and anti-SSC camps tended to split between proponents of pure research and those who argued, increasingly swaying political support their way, that multibillion-dollar research which had no immediately discernible impact on society was a luxury we could not afford, particularly in an era of federal budget cuts and hard choices. The SSC position was further weakened by the activities of the research consortium supervising the project, URA. Its behavior was considered increasingly arrogant by congressional oversight groups that began asking legitimate questions about expenditures and skyrocketing budget requests. In place of evidence of definable progress, the project offered only a sense of out-of-control costs and poor oversight—clearly not the message to send when American taxpayers were questioning their decision to foot a multibillion-dollar bill.¹⁸

Questions

1. Suppose you were a consultant called into the project by the federal government in 1990, when it still seemed viable. Given the start to the project, what steps would you have taken to reintroduce some positive “spin” on the Superconducting Supercollider?
2. What were the warning signs of impending failure as the project progressed? Could these signs have been recognized so that problems could have been foreseen and addressed or, in your opinion, was the project simply impossible to achieve? Take a position and argue its merits.
3. Search for “superconducting supercollider” on the Internet. How do the majority of stories about the project present it? Given the negative perspective, what are the top three lessons to be learned from this project?

CASE STUDY 13.3

“Dear Mr. President—Please cancel our project!”: The Honolulu Elevated Rail Project

Speaking on the status of Honolulu’s Elevated Rail public transport system, former Hawaii Governor Benjamin Cayetano had an interesting message for President Trump: “As a lifelong Democrat and former governor of Hawaii, I opposed your candidacy. I must admit, however, that you are on the right track scrutinizing wasteful spending on pork barrel projects.” The admission by former governor Cayetano was prompted by the latest details emerging from a project that the *New York Times* has written is in danger of becoming a financial boondoggle. The Honolulu Authority for Rapid Transportation’s (HART) 20-mile elevated heavy steel rail system that has been under construction for six years is now slated to cost nearly \$10 billion, or \$500 million per mile. If these costs are realized, Honolulu’s rail project would have the distinction of being the most expensive transit project in the country’s history.

Honolulu is a beautiful but increasingly congested city on the south coast of Oahu. Residents and visitors have long complained that transportation options, highways, and other infrastructure have not kept pace with the growth of the city. In 2008 and following a close referendum vote, the city approved the beginning of the elevated rail system. To partially offset costs of the system, the mayor and city council instituted a temporary excise tax increase for residents and visitors. They also received \$1.5 billion in Federal funding to support the project. Initially budgeted for \$4.6 billion, the rail project is intended to start in the western edge of Honolulu,

run through the middle of the city, and terminate at the Waikiki beaches. Included in the huge project are 21 stations, of which seven will be elevated and set 60 feet high above the city’s streets, and a 35-foot high elevated rail line that will run four miles through the middle of the city.

The project has drawn fire from residents who are increasingly sick of blocked streets, traffic jams, and dirt and noise from multiple construction sites. In fact, a poll conducted in late 2016 showed that only 15% of the city’s residents favor completion of the rail project. Meanwhile, costs continue to rise. The original \$4.6 billion budget was readjusted to \$6.7 billion, and with the newly-announced delays in construction, being at least two years behind schedule and counting, the city has announced a five-year extension in the “temporary” excise tax to cover what critics are arguing will actually end up being over \$10 billion in costs. Critics of the project such as Mr. Cayetano, who argues that the elevated rail “will change the beauty and ambience of the city forever,” also charge that in addition to its aesthetic shortcomings the final environmental impact study revealed that the rail project would, at best, reduce traffic congestion by under two percent and noted, “traffic congestion will be worse in the future with rail than what it is today without rail.”

Opponents of the project note, among other problems, that the Honolulu rail project will employ light rail-sized cars limited to about 650 passengers in two-car combinations. Moreover, it can run only up to four

(continued)



FIGURE 13.18 Honolulu's Elevated Rail project

Source: Drpnncptak/Shutterstock

cars for peak period service. Thus, they contend that this rail project is the worst design possible because it combines an intrusive and expensive infrastructure including 21 stations, along with a low passenger carrying capacity where over 60% of passengers will be forced to stand and hold handrails. Advocates of the project also appear to have minimized the power needs for adding this rail system to the city's electrical grid. In fact, the rail project's power draw is estimated at nearly 50 MW, which is a major requirement. The city's utility company is requiring the HART to renegotiate a price for the combined cost of substations, power generation, and possible airport utility relocation tasks that are likely to add an extra \$500 million to the price tag.

Why has the project budget ballooned to its present state? Some of it is due to issues of timing. When cost estimates were first given to voters, the region was suffering from the effects of the Great Recession and construction work was at a stand-still, leading to expectations of low costs. However, after delays from lawsuits took over a year to resolve, Honolulu's construction industry had dramatically changed for the better and preliminary cost estimates were no longer even close to accurate. "We gagged on the number. It was something over 60 percent higher than the estimates we had in 2011 and 2010," said Daniel Grabauskas, the executive director of the Honolulu Authority for Rapid Transportation. Other reasons for the cost escalation are more insidious; critics have long charged the project's advocates and public officials with deliberately low-balling their initial estimates to win public approval, reasoning that once the project was started and "on the books," it would be nearly impossible to cancel it.

At this stage in the rail project, projected future cost estimates are nearly meaningless. Both advocates and opponents of the rail system understand that the summer of 2017 will be a watershed year for the project, as the next round of bids for construction along the critical four-mile corridor through downtown Honolulu is set to be held. Opponents like former governor Cayetano and Dr. Panos Prevedouros, a civil engineering professor at the University of Hawaii, are adamant that the project's budget is not supportable. "They cannot complete the four in-town miles because those are very expensive and we don't have an actual budget for them," noted Prevedouros, who has run for mayor as an opponent of the project.

"Honolulu's rail project does not deserve a single dollar more from the federal government," stated Cayetano. "It has become a poster boy for how politics, incompetence, disinformation and outright lies are at the root of wasteful rail projects which do little for the public except raise taxes."¹⁹

Questions

1. Why are public works projects like the Honolulu Rail project nearly impossible to stop once they have been approved, even if later cost estimates skyrocket?
2. Project management researchers have charged that many large infrastructure projects, like this one, suffer from "delusion" and "deception" on the parts of their advocates. Explain how "delusion" might be a cause of ballooning budgets in this project. How does "deception" affect the final project budget overruns?

Internet Exercises

- 13.27** Go to www.brighthubpm.com/monitoring-projects/51982-understanding-the-s-curve-theory-for-project-management-monitoring/ and read the article on the multiple uses of project S-curves. What does the article suggest about the use of different S-curves and analysis methods?
- 13.28** Go to www.nu-solutions.com/downloads/earned_value_lite.pdf and access the article by Q. W. Fleming and J. M. Koppelman, "Earned Value Lite: Earned Value for the Masses." From your reading, summarize the 10 key steps in EVM and the advantages the authors argue earned value offers for project control and evaluation.
- 13.29** Go to www.acq.osd.mil/evm and explore the various links and screens. What does the size and diversity of this site tell you about the acceptance and use of earned value in organizations today?
- 13.30** Go to www.erpgenie.com/general/project.htm and access the reading on "Six Steps to Successful Sponsorship." Consider the critical success factors it identifies for managing an IT project implementation. How do these factors map onto the 10-factor model of Pinto and Slevin? How do you account for differences?
- 13.31** Type in the address www.massdot.state.ma.us/highway/TheBigDig.aspx and navigate through the Web site supporting the Boston Tunnel project. Evaluate the performance of this project using the model of 10 critical project success factors discussed in this chapter. How does the project rate, in your opinion? Present specific examples and evidence to support your ratings.

MS Project Exercises

Exercise 13.32

Using the following data, enter the various tasks and create a Gantt chart using MS Project. Assign the individuals responsi-

ble for each activity and once you have completed the network, update it with the percentage complete tool. What does the MS Project output file look like?

Activity	Duration	Predecessors	Resource	% Complete
A. Research product	6	—	Tom Allen	100
B. Interview customers	4	A	Liz Watts	75
C. Design survey	5	A	Rich Watkins	50
D. Collect data	4	B, C	Gary Sims	0

Exercise 13.33

Now, suppose we assign costs to each of the resources in the following amounts:

Resource	Cost
Tom Allen	\$50/hour
Liz Watts	\$55/hour
Rich Watkins	\$18/hour
Gary Sims	\$12.50/hour

Create the resource usage statement for the project as of the most recent update. What are project expenses per task to date?

Exercise 13.34

Use MS Project to create a Project Summary Report of the most recent project status.

Exercise 13.35

Using the data shown in the network precedence table below, enter the various tasks in MS Project. Then select a date approximately halfway through the overall project duration, and update all tasks in the network to show current status. You may as-

sume that Activities A through I are now 100% completed. What does the tracking Gantt look like?

Project—Remodeling an Appliance

Activity	Duration	Predecessors
A. Conduct competitive analysis	3	—
B. Review field sales reports	2	—
C. Conduct tech capabilities assessment	5	—
D. Develop focus group data	2	A, B, C
E. Conduct telephone surveys	3	D
F. Identify relevant specification improvements	3	E
G. Interface with marketing staff	1	F
H. Develop engineering specifications	5	G
I. Check and debug designs	4	H
J. Develop testing protocol	3	G
K. Identify critical performance levels	2	J

(continued)