

of the company's underlying business and attention to market projections, cost control, and careful project management discipline. New attraction proposals are carefully screened and researched. The result is the creation of some of the most innovative and enjoyable rides in the world. Disney does not add new attractions to its theme parks frequently, but when it does so, it does so with style!

Questions

1. Suppose you were a project manager for Disney. Based on the information in this case, what

critical success metrics do you think the company uses when designing a new ride; that is, how would you prioritize the needs for addressing project cost, schedule, quality, and client acceptance? What evidence supports your answer?

2. Why is Disney's attention to detail in its rides unique? How does the company use the "atmosphere" discussed in the case to maximize the experience while minimizing complaints about length of wait for the ride?

CASE STUDY 1.4

Rescue of Chilean Miners

On October 13, 2010, Foreman Luiz Urzua stepped out of the rescue capsule to thunderous applause and cries of "Viva, Chile!"; he was the last of 33 miners rescued after spending 70 days trapped beneath 2,000 feet of earth and rock. Following a catastrophic collapse, the miners were trapped in the lower shafts of the mine, initially without contact with the surface, leaving the world in suspense as to their fate. Their discovery and ultimate rescue are a story of courage, resourcefulness, and ultimately, one of the most successful projects in recent times.

The work crew of the San Jose copper and gold mine near Copiapo, in northern Chile, were in the middle of their shift when suddenly, on August 5, 2010, the earth shook and large portions of the mine tunnels collapsed, trapping 33 miners in a "workshop" in a lower gallery of the mine. Though they were temporarily safe, they were nearly a half mile below the surface, with no power and food for two days. Worse, they had no means of communicating with the surface, so their fate remained a mystery to the company and their families. Under these conditions, their main goal was simple survival, conserving and stretching out meager food supplies for 17 days, until the first drilling probe arrived, punching a hole in the ceiling of the shaft where they were trapped. Once they had established contact with the surface and provided details of their condition, a massive rescue operation was conceived and undertaken.

The first challenge was simply keeping the miners alive. The earliest supply deliveries down the narrow communication shaft included quantities of food and water, oxygen, medicine, clothing, and necessities for survival as well as materials to help the miners pass their time. While groups worked to keep up the miners' spirits, communicating daily and passing along messages from families, other project teams were formed to begin developing a plan to rescue the men.

The challenges were severe. Among the significant questions that demanded practical and immediate answers were:

1. How do we locate the miners?
2. How quickly can we drill relief shafts to their location?
3. How do we bring them up safely?

The mine tunnels had experienced such damage in the collapse that simply digging the miners out would have taken several months. A full-scale rescue operation was conceived to extract the miners as quickly as possible. The U.S.-Chilean company Geotec Boyles Brothers, a subsidiary of Layne Christensen Company, assembled the critical resources from around the world. In western Pennsylvania, two companies that were experienced in mine collapses in the South American region were brought into the project. They had UPS ship a specialty drill, capable of creating wide-diameter shafts, large enough to fit men without collapsing. The drill arrived within 48 hours, free of charge. In all, UPS shipped more than 50,000 pounds of specialty equipment to the drilling and rescue site. The design of the rescue pod was the work of a NASA engineer, Clinton Cragg, who drew on his experience as a former submarine captain in the Navy and directed a team of 20 to conceive of and develop a means to carry the miners one at a time to the surface.

Doctors from NASA and U.S. submarine experts arrived at the mine site in mid-August, to assess the psychological state of the miners. Using their expertise in the physical and mental pressures of dealing with extended isolation, they worked with local officials to develop an exercise regimen and a set of chores for the workers in order to give them a sense of structure and responsibilities. The miners knew that help was being