CASE STUDY 1.3

Disney's Expedition Everest

One of the newest thrill rides to open in the Walt Disney World Resort may just be the most impressive. As Disney approached its 50th anniversary, the company wanted to celebrate in a truly special way. What was its idea? Create a park attraction that would, in many ways, serve as the link between Disney's amazing past and its promising future. Disney showed that it was ready to pull out all stops in order to get everything just right.

In 2006, The Walt Disney Company introduced Expedition Everest in Disney's Animal Kingdom Park at Lake Buena Vista, Florida. Expedition Everest is more than just a roller coaster. It is the embodiment of the Disney spirit: a ride that combines Disney's trademark thrills, unexpected twists and turns, incredible attention to detail, and impressive project management skills.

First, let's consider some of the technical details of Expedition Everest:

- With a peak of just under 200 feet, the ride is contained within the tallest of 18 mountains created by Disney's Imagineers at Disney parks worldwide.
- The ride contains nearly a mile of track, with twists, tight turns, and sudden drops.
- The Disney team created a Yeti: an enormous, fur-covered, Audio-Animatronics monster powered by a set of hydraulic cylinders whose combined thrust equals that of a Boeing 747 airliner. Through a series of sketches, computer-animated drawings, sculptures, and tests that took more than two years to perfect, Disney created and programmed its Abominable Snowman to stand over 10 feet tall and serve as the focal point of the ride.
- More than 900 bamboo plants, 10 species of trees, and 110 species of shrubs were planted to re-create the feeling of the Himalayan lowlands surrounding Mount Everest.
- More than 1,800 tons of steel were used to construct the mountain. The covering of the framework was done using more than 3,000 prefabricated "chips" created from 25,000 individual computer-molded pieces of steel.
- To create the proper color schemes, 2,000 gallons of stain and paint were used on rockwork and throughout the village Disney designed to serve as a backdrop for the ride.
- More than 2,000 handcrafted items from Asia are used as props, cabinetry, and architectural ornamentation.

Building an attraction does not come easily or quickly for Disney's Imagineers. Expedition Everest was several years in development as Disney sent teams, including Walt Disney Imagineering's Creative Executive Joe Rohde, on repeated trips to the Himalayas in Nepal to study the lands, architecture, colors, ecology, and culture in order to create the most authentic setting for the new attraction. Disney's efforts reflect a desire to do much more than provide a world-class ride experience; they demonstrate the Imagineers' eagerness to tell a story—a story that combines the mythology of the Yeti figure with the unique history of the Nepalese living in the shadow of the world's tallest mountain. Ultimately, the attraction, with all its background and thematic elements, took nearly five years to complete.

Riders on Expedition Everest gain a real feel for the atmosphere that Disney has worked so hard to create. The guests' adventure starts by entering the building of the "Himalayan Escape" tour company, complete with Norbu and Bob's booking office to obtain permits for their trip. Overhead flutter authentic prayer flags from monasteries in Nepal. Next, guests pass through Tashi's General Store and Bar to stock up on supplies for their journey to the peak of the mountain. Finally, guests pass through an old tea warehouse that contains a remarkable museum of artifacts reflecting Nepal's culture, a history of the Himalayas, and tales of the Yeti, which is said to inhabit the slopes of Mount Everest. It is only now that guests are permitted to board the Anandapur Rail Service for their trip to the peak. Each train is modeled after an aging, steam-engine train, seating 34 guests per train.

Over the next several minutes, guests are transported up the roller coaster track, through a series of winding turns, until their encounter with the Yeti. At this point another unique feature of the attraction emerges: The train begins rushing backward down the track, as though it were out of control. Through the balance of the ride, guests experience a landscape of sights and sounds culminating in a 50 mph final dash down the mountain and back to the safety of the Nepalese village.

Disney's approach to the management of projects such as Expedition Everest is to combine careful planning, including schedule and budget preparation, with the imagination and vision for which the company is so well known. Creativity is a critical element in the development of new projects at Disney. The company's Imagineers include some of the most skilled artists and computer-animation experts in the world. Although it is easy to be impressed by the technical knowledge of Disney's personnel, it is important to remember that each new project is approached with an understanding

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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