



The problem and the solution

America's first steam locomotive made its debut in 1830, and over the next two decades railroad tracks linked many cities on the East Coast.

By 1850, some 9,000 miles of track had been laid east of the Missouri River.

During that same period, the first settlers began to move westward across the United States; this trend increased dramatically after the discovery of gold in California in 1849.

The overland journey—across mountains, plains, rivers and deserts—was risky and difficult, and many westward migrants instead chose to travel by sea, taking the six-month route around Cape Horn at the tip of South America, or risking yellow fever and other diseases by crossing the Isthmus of Panama and traveling via ship to San Francisco.

Project takes birth due to stakeholder demand

The year was 1845. A 48 yr old New York entrepreneur Asa Whitney presents a resolution in Congress proposing the federal funding for building a transcontinental railroad that would link the United States from east to west.

Two decades later, in 1862, the Pacific Railroad Act would charter the Central Pacific and the Union Pacific Railroad Companies to build this project. Over the next seven years, two companies would race toward each other from Sacramento, California on the one side and Omaha, Nebraska on the other, struggling against great risks before they meet at Promontory, Utah, on May 10, 1869.

Okay, back to Mr. Whitney's proposal.

This was back in 1845.

Lobbying efforts over the next several years fail due to growing sectionalism in Congress, but the idea remains a potent one.

In 1860, a young engineer named Theodore Judah identifies the infamous Donner Pass in northern California (where a group of westward emigrants had become trapped in 1846) as an ideal location for constructing a railroad through the formidable Sierra Nevada mountains.

By 1861, Judah enlists a group of investors in Sacramento to form the Central Pacific Railroad Company. He then heads to Washington, where he is able to convince congressional leaders as well as President Abraham Lincoln, who signs the Pacific Railroad Act into law the following year.

1862.

About 160 years ago.

The Transcontinental Railroad is considered to be the first, large-scale project management undertaking. It was a key factor in the industrial development of the United States but people often forget the true scope of this project. It included traversing treacherous terrain and braving dangerous weather conditions to construct a railway and telegraph line.

Compensation

By the terms of the bill, the Central Pacific Railroad Company would start building in Sacramento and continue east across the Sierra Nevada, while a second company, the Union Pacific Railroad, would build westward from the Missouri River, near the Iowa-Nebraska border.

The two lines of track would meet in the middle (the bill did not designate an exact location though) and each company would receive 6,400 acres of land (later doubled to 12,800 acres) and \$48,000 in government bonds (remember, we are talking about 1860s) for **every mile** of track built.

Negative stakeholders?

In the West, the Central Pacific would be dominated by the “Big Four”—Charles Crocker, Leland Stanford, Collis Huntington, and Mark Hopkins. All were ambitious businessmen with no prior experience with railroads, engineering, or construction.

They borrowed heavily to finance the project, and exploited legal loopholes to get the most possible funds from the government for their planned track construction.

Dangers and difficulties

After General Grenville Dodge, a hero of the Union Army, took control as chief engineer, the Union Pacific finally began to move westward in May 1866.

The company suffered bloody attacks on its workers by Native Americans—including members of the Sioux, Arapaho and Cheyenne tribes—who were understandably threatened by the progress of the white man and his “iron horse” across their native lands.

Still, the Union Pacific moved relatively quickly across the plains, compared to the slow progress of their rival company through the Sierra.

Ramshackle settlements popped up wherever the railroad went, turning into hotbeds of drinking, gambling, prostitution and violence and producing the enduring mythology of the “Wild West.”

In 1865, after struggling with retaining workers due to the difficulty of the labor, Charles Crocker (who was in charge of construction for the Central Pacific) began hiring Chinese laborers.

By that time, some 50,000 Chinese immigrants were living on the West Coast, many having arrived during the Gold Rush. The Chinese laborers proved to be tireless workers, and Crocker hired more of

them; some 14,000 were toiling under brutal working conditions in the Sierra Nevada by early 1867. By contrast, the work force of the Union Pacific was mainly Irish immigrants and Civil War veterans.

To blast through the mountains, the Central Pacific built huge wooden trestles on the western slopes and used gunpowder and nitroglycerine to blast tunnels through the granite.

The homestretch

By the summer of 1867, the Union Pacific was in Wyoming, having covered nearly four times as much ground as the Central Pacific.

The Central Pacific broke through the mountains in late June, however, and the hard part was finally behind them.

Both companies then headed towards Salt Lake City, cutting many corners (including building shoddy bridges or sections of track that would have to be rebuilt later) in their race to get ahead.

By early 1869, the companies were working only miles from each other, and in March the newly inaugurated President Ulysses S. Grant announced he would withhold federal funds until the two railroad companies agreed on a meeting point.

They decided on Promontory Summit, north of the Great Salt Lake - some 690 track-miles from Sacramento and 1,086 from Omaha.

On May 10, 1869, after several delays, a crowd of workers and dignitaries watched as the final spike was driven linking the Central Pacific and Union Pacific.

Telegraph cables immediately went out to President Grant and around the country with the news that the transcontinental railroad had been completed.

The benefit

Before the building of the Transcontinental Railroad, it cost nearly \$1,000 dollars to travel across the country. After the railroad was completed – a total of 1776 miles – the price dropped to \$150 dollars. Travel time reduced from 6 months to one week!

Information source:

- Article titled *Transcontinental Railroad*, written by History.com editors, on website name HISTORY, accessed by url: <https://www.history.com/topics/inventions/transcontinental-railroad>
- <https://www.tcrr.com/>

