

CASE STUDY

How to Build a Railway in Afghanistan in 10 Months



A train on the track of the Hairatan to Mazar-e-Sharif Railway connecting Afghanistan to Uzbekistan. Photo credit: ADB.
Savvy project management accelerates construction of a 75 km railway in war-torn Afghanistan.

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Overview

In 2009, Afghanistan's infrastructure was in ruins as a result of decades of war and instability. It was in this context that ADB proposed construction of a 75 kilometer (km) rail line connecting the northern city of Mazar-e-Sharif with Hairatan, a trade hub on the border with Uzbekistan. When first conceived, the security and logistical challenges were daunting. Yet in less than 2 years, Afghanistan's first-ever commercial rail link was up-and-running, transporting more than 6,000 tons of freight a day.

Financed through a \$165 million Asian Development Bank (ADB) grant to the Government of Afghanistan, the Mazar-to-Hairatan link has increased the reliability and efficiency of Afghanistan's trade routes, lowered the cost of goods, and connected the landlocked country with new business opportunities in Asia and Europe.

[View map](#)

Project snapshot

Dates	<ul style="list-style-type: none">• 30 September 2009: Grant approved• 3 November 2009: Start of Project• 31 December 2011: End of Project - Original• 31 December 2012: End of Project - Revised• 5 April 2013: End of Project - Actual (financial closure)• January 2010: Contractor started work• 4 November 2010: Contractor substantially completed civil and railway works, 4 months ahead of schedule
Cost	<ul style="list-style-type: none">• AF11.36 billion (\$165 million): At current exchange rates
Institutions and Stakeholders	Financing <ul style="list-style-type: none">• Asian Development Bank Executing agency <ul style="list-style-type: none">• Ministry of Public Works, Afghanistan

Challenge



Knowledge Showcase interview with Balabhaskara Reddy Bathula

Afghanistan is ideally located to play a key role as a transit route in Central Asia for goods going to ports in Pakistan and the Caspian and onward to South Asia and East Asia, the Middle East, and Europe. But decades of war and instability had prevented the country from realizing its trade potential.

As a result of decades of conflict, Afghanistan had few established processes or references to serve as a guide for managing such a huge project. There was no system to develop, manage, and operate a railway network.

This meant that the project team had to start from scratch, devising innovative strategies to speed up implementation while still meeting ADB's stringent safeguard requirements, policies, and guidelines.

Solutions

The project involved the construction of a new single-line railway between Hairatan and Mazar-e-Sharif along with supporting ancillary infrastructure and facilities. The project also involved the construction of transshipment yards and stations, all of which connect to access roads that lead to the major northern Kabul-Mazar-e-Sharif-Herat-Kandahar-Kabul ring road. The tracks were designed to handle speeds of 80 to 100 kilometers per hour.

The fact that the project was undertaken in such a difficult context is remarkable. And the fact that the line was built in a mere 10 months--and completed 4 months ahead of schedule--is testament to an innovative planning and management system that offers valuable lessons for policymakers and planners under taking similar projects in other complex environments.



Workers building a culvert as part of the construction of the Hairatan Mazar-e-Sharif Railway.
Photo credit: ADB.

ADB received an award from the United States Department of Treasury for excellence in carrying out a key development project in Afghanistan.

Numbers and facts

\$165 million The amount of money ADB extended for the project

75 km The stretch of railway built under the project

7 million The number of people expected to benefit from the project

6,000 tons The volume of goods transported daily via the railway, from 4,500 tons previously

1 hour The amount of travel time saved if traveling by train from end to end, versus 2 hours by road

600,000 tons The drop in the volume of carbon dioxide emissions from heavy vehicles as more goods were shipped by train instead of by road

Results

The railway, the first commercial rail network in the country's history, increased the reliability and efficiency of Afghanistan's trade routes, lowered cost of goods, and linked the country to new business opportunities in Asia and Europe.

When the railway line was opened, freight transported via train in the region rose from 4,500 tons per day to 6,000 tons per day; freight travel time from Hairatan to Mazar-e-Sharif was cut short from 2 hours by road to 1 hour by rail; freight transport costs decreased by about \$0.08 per ton per kilometer; and

carbon dioxide emissions from heavy vehicles dropped from 2.3 million tons to 1.7 million tons.

The rail service also helped create new jobs and the setup of local businesses.

Trade between Afghanistan and Uzbekistan also increased significantly, from \$170 million in 2008 to \$732 million in 2011-2012.



Freshly laid tracks on the Hairatan Mazar-e-Sharif Railway. Photo credit: ADB.

Here's a [video](#) of how the railway has helped Afghanistan.

Lessons

The best practices that made the project a success--and which can potentially be replicated elsewhere--can be summarized as follows:

Building on existing information

Key to the project's early finish was the project team's decision to build on the progress made by local officials on a planned railway project and tapping a railway company that already had on-ground knowledge about the project site and the parameters.

Use of turnkey model

To save time, the project team decided to go for a consolidated design-and-build contract instead of having a consultant design the railway line then procuring a works contractor to build it, saving 6 to 12 months. The team knew that the turnkey model would make a big difference in speeding up the project as it allowed the contractor to design the railway, procure the materials, and then build it in one complete cycle.

Adopt a "carrot and stick" system

The team also adopted a rewards and penalties system that entailed rewarding the contractor with a bonus for early and satisfactory completion, or meting out penalties for late and unsatisfactory work.

This system was also applied relating to the operation and maintenance contract, where revenue targets and performance benchmarks were set and linked to payments to the operator.

Speedy processing and approvals

The speedy approvals at both the processing and implementation stages and prompt release of payments also hastened the project implementation. It helped that one ADB project officer facilitated the efficient and effective handling of all matters concerning project processing and implementation. The move to mobilize a full-time railway implementation specialist in the field, in turn, ensured sound coordination, which sped up implementation.

Proactive handling of security risks

Due to the decades-long civil war, security was a major concern as it could easily delay the project. Realizing this, a committee, chaired by a minister-level official, with representatives from the Ministry of Commerce and Industry, Ministry of Finance, Ministry of Interior Affairs, Ministry of Mines, and Ministry of Public Works, ensured comprehensive security arrangements on site, with advance administrative approvals, resulting in an uninterrupted project implementation. About 463 police personnel were deployed along the railway line and at about 62 check posts.

Resources

Additional reading

ADB. 2014. *Unstoppable: The Hairatan To Mazar-e-Sharif Railway Project.* Manila.

ADB. 2013. *Completion Report: Afghanistan: Hairatan to Mazar-e-Sharif Railway Project.* Manila.

ADB. 2014. *US Treasury Awards ADB for Landmark Afghan Railway Project.* News release.



Balabhaskara Reddy Bathula

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Balabhaskara was the project officer involved in the entire process--from technical assistance processing to construction and operationalizing the Hairatan to Mazar-e-Sharif Railway Project.

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