Innovative Project Management and Coordination Speed Up Afghanistan Railway Project

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BACKGROUND

Much-Needed Transport. On 30 September 2009, the Asian Development Bank (ADB) approved $165 million to build a 75-kilometer railway connecting Hairatan and Mazar-e-Sharif in Afghanistan.¹ A few months later, the project works contract was awarded to a party that finished construction in 10 months, by November 2010, as against the 12 months scheduled—a remarkable feat of both engineering and project management.

On 3 February 2012, nine railcars containing flour from Kazakhstan and three cars of timber from Siberia traveled from Hairatan at the Uzbekistan border to the Naibabad freight terminal in Afghanistan.² That inaugural operation became the first commercial transport on the Hairatan–Mazar-e-Sharif railway.

Since then, freight transported via train in the region increased from 4,500 tons per day to 6,000 tons per day; freight travel time from Hairatan to Mazar-e-Sharif dropped from 2 hours by road to 1 hour by rail; carbon dioxide emissions from heavy vehicles dropped from 2.3 million tons to 1.7 million tons; and new jobs and local businesses were created by the rail service.

The New Silk Road. Afghanistan is a landlocked country and more than half of its external trade takes place at the northern border town of Hairatan. Goods had to be unloaded at Hairatan, then transported via Afghanistan’s road network. However, the roads were in poor condition and could not meet the country’s growing needs. Transport needed to be efficient and reliable to lower the cost of goods.

Compounding the country’s woes was the civil war, which started in 2001. The war and military roadblocks rendered post-conflict transport infrastructure unable to cope with the expanding volume of trade and humanitarian relief.

A new railway was envisioned to raise Afghanistan’s profile as a transit route and to make the transport of goods more reliable, efficient, and affordable. Moreover, Central Asian states and Xinjiang Province, People’s Republic of China, would be able to access world markets easily and more economically via Afghanistan and seaports on the Gulf, thus improving their competitiveness in world markets.

APPROACH

Starting from Scratch. Shaken by years of conflict, Afghanistan had no established processes or references to serve as a guide for managing such a huge undertaking. There was no system to develop, manage, and operate a railway network. This meant that the project team had to start from scratch and plan everything comprehensively. The project management approaches and methods used were unconventional and creative yet still adhered to ADB’s policies, guidelines, and standards.

Highlights

- A new railway in a major trade route from Uzbekistan to Afghanistan was needed to make Afghanistan’s trade routes more reliable and efficient, lower the cost of goods, and create business opportunities.
- The project team came up with a comprehensive and well-coordinated plan to speed up document processing, contractor and consultant selection, procurement, funds disbursement, and security mobilization—resulting in effective project management.
- The project cycle was shortened from over 5 years to 3 years, with construction of the railway taking less than a year, and operations starting just after 1 year.

For Afghanistan, the railway is a link to new markets and opportunities. It connects to Uzbekistan’s rail network, which leads to bustling markets in Europe and Asia through the “New Silk Road.”

The mission was clear: Enable a faster, more reliable method of transporting goods to and from Afghanistan. A new rail line was necessary to remove major trade bottlenecks, and Afghanistan needed it desperately and quickly. However, such a project typically took over 3 years to finish and prepare for operation. How, then, did the project team achieve it in 24 months, with about 10 of those months spent on actual construction?

Defining Urgency. The project team determined how urgently the railway was needed, having gone through the country, regional, and thematic strategies, assessment, and business plans. The team then discovered that Afghanistan and Uzbekistan government officials were already in talks to build a railway from Hairatan to Mazar-e-Sharif, and that Uzbekistan Temir Yullari (UTY, Uzbekistan’s national railway company) had expressed its willingness to take on the project, already having on-ground knowledge about the project site and parameters. The team took advantage of this opportunity—that a possible contractor’s early involvement (and direct selection after independent evaluation) might speed up the process.

Turnkey Model. Next, based on standard bidding documents amended by additional clauses, the 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 6–12 months.

The team knew that the turnkey model would make a big difference in speeding up the project as it allows the contractor to design the railway, procure the materials, and then build it in one complete cycle. With this model in place, UTY, then the candidate contractor, became confident that it would be able to finish construction in a year.

Rewards and Penalties. The project team included contractual clauses that would reward the contractor with a bonus for early and satisfactory completion. On the other hand, penalties were set in place for late and unsatisfactory completion on a monthly basis for a maximum of 6 months from the established deadline. A similar method was employed for the railway’s operation and maintenance contract, where revenue targets and performance indicators were set and linked to payments to the operator. Within a month of processing and parallel procurement, the project works contract was awarded, and the employer, the consultant, and the contractor were brought together for closer coordination and implementation as a team—an unconventional process for ADB.

Independent evaluators checked the contracts before negotiations and awarding. The actual cost of the contract awarded turned out to be within the engineer’s estimate. In the end, the contractor received the bonus by finishing the contract in less than a year while adhering to the required standards.

Security and Funds. Yet it was not only the bonuses that spurred the contractor to finish earlier than scheduled. UTY laid down a condition that without a thorough security plan and speedy disbursement of funds, it would not be possible to meet the 1-year deadline.

The Afghanistan Ministry of Finance said it did not have the resources to handle procurement of such scale, so the contractor and consultant were selected by ADB, on behalf of the Ministry of Finance and the Ministry of Public Works, which served as the executing agency. The Ministry of Interior helped provide over 450 police officers to ensure the safety of railway workers and equipment, while ADB paid the police officers allowances through a grant. In addition, international and local security coordinators were hired for the security assessment and management. Through all this, the Government of Afghanistan signed the contracts while the ADB project team facilitated the entire process.

Since almost 50% of the project cost went to the advance purchase of railway materials, disbursement of funds needed to be quick, just in case the contractor ran into cash-flow problems. In lieu of cash, a letter of credit arrangement facilitated the contractor’s timely purchase of materials to avoid construction delays due to late delivery of materials.

RESULTS

Instead of conventionally planning for individual portions of a project, the team devised an integrated, comprehensive plan to complete the railway. From the planning of technical assistance, the project team identified minor and major risks they might encounter to timely avert those risks during execution.

Yet without coordination on the intercountry, interministerial, interdepartmental, and interagency levels, the comprehensive plan might not have been carried out properly. There was coordination among Uzbekistan, Afghanistan, and the Central Asia Regional Economic Cooperation Program, the secretariat of which is based in ADB’s Manila headquarters. Afghanistan’s finance, interior, and public works ministries collaborated, alongside ADB’s Afghanistan and Uzbekistan resident missions and various other departments. This resulted in the speedy construction of the railway and the immediate delivery of benefits to Afghanistan by way of faster, reliable, and cheaper goods and services as well as jobs and businesses to the people of Afghanistan.

Related Links


KNOWLEDGE CONTRIBUTOR

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