

Burlington Northern

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Introduction

Burlington Northern Railroad was one of the largest railroads in the United States, formed in 1970 when four railroads merged. Together, they formed the largest railroad in the west. Burlington Northern ran up to 800 trains per day in 1989, generating revenues of \$4.606 million and profits of \$242 million. Capital expenditures totaled \$465 million while total assets were \$6.146 million. **As part of their strategy and mission**, Burlington utilizes a differentiation strategy and transports coal, agricultural commodities, industrial products, intermodal, forest products, food and consumer products, and automotive products.

Their major product was coal transportation. Most of the coal traffic was controlled by fewer than two dozen long-term customers. Among those competing for coal was Union Pacific. By investing in more fuel-efficient engines for coal transportation, Union Pacific overtook Burlington Northern.

Burlington was introduced to the Advanced Railroad Electronics System, or ARES. It will provide Burlington operations with improved asset management and allow them to schedule locomotives and cars more efficiently, as well as get better utilization of trains and tracks through ARES. Despite the \$350 million cost, the system will keep Burlington Northern ahead of the curve and increase efficiencies in areas where they need to improve, such as scheduling and asset utilization

Executives at Burlington Northern are debating whether to invest in ARES. With the new system, railroad operations will be dynamically planned and controlled, vital business processes will be improved, asset turnover rates will go up, and rolling stock will be effectively utilized.

Analysis

Porter's Five Forces

Competition: Competition comes from two different sources: similar railroad companies such as Union Pacific, and transport trucking companies. Union Pacific and other railroad companies remain the biggest competitors for coal and grain, but trucking is providing a viable alternative as well.

Threat of New Entrants: Burlington Northern faced a new competitor in the trucking industry. Customers preferred to ship agricultural commodities by truck, which was BN's second largest revenue source. Since trucking has a substantially lower entry cost and is more lucrative than other businesses, more potential entrants choose to go into trucking instead.

Threat of Substitutes: Cargo trucks, semi-trucks, and air transportation would be the primary alternatives to trains and railroad companies. However, none of these alternatives could match the quantity and price of trains. Mass transit by train remains the most cost-effective option. Burlington Northern is therefore not concerned about the threat of substitutes.

Buyer power: Having so many options to choose from, consumers have a lot of bargaining power. Because trucks can accommodate for unexpected delays on the highway, they can offer a more reliable delivery service.

Supplier Power: The primary suppliers of Burlington Northern come from the number of raw materials they ship. Since railroad companies have long-term contracts with suppliers, they can build strong relationships with the right suppliers

The Problem

Executives at Burlington Northern are debating whether to invest in ARES. With the new system, railroad operations will be dynamically planned and controlled, vital business processes will be improved, asset turnover rates will go up, and rolling stock will be effectively utilized.

Stakeholders

Investors: Apex Investors expect growth and revenue from the company if it is going in the right direction, otherwise they will start to lose money.

Employees: As the face of the organization, employees interact with a great deal of customers, which is why they play a vital role in the success of the company.

Customers: Individuals or business that ships with Burlington Northern have a financial stake in the company's success.

Solutions

Implement ARES

Burlington Northern has already invested 15 million dollars into the project and has developed a functional prototype that is showing promising results. With this technology, the company will be able to improve service, increase revenue potential, and reduce costs.

Impact on Stakeholders:

Employees: A lack of training might cause employees to be unaware of the value that the software can provide.

Implement ATCS

ATCS can provide the same technology without the safety features and GPS tracking as ARES. This is, however, the riskiest solution since the economics of the project are still ambiguous and specifications from the Association of American Railroads are not yet available.

Impact on Stakeholders:

Customers: In an increasingly optimized schedule, customers might see price drops.

Take no action

This solution would mean that their near-outdated technology would easily enable their competitors to outperform them in the market if they don't act.

Impact on Stakeholders:

Customers: Inefficient and low-quality services will lead to dissatisfaction among customers.

Recommendation

As it yields the highest financial and safety benefits in the long and short term, **Burlington should adopt ARES**. This technology will allow the company to deliver better service, increase revenues, and reduce costs. Several technologies are offered by ARES, including train monitoring, which can alert employees of emergency maintenance as well as safety features which can change the railroad route of incoming trains.

References

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