Burlington-Northern

USE CASE

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CIS 410

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Executive Summary:

Burlington Northern Railroad Company faced issues when it had the opportunity to invest in the ARES (Advanced Railroad Electronics System). Implementing a decision would consider many factors, based on my research and analysis, Burlington Northern Railroad should not take an action for their investment in ARES.

Burlington Northern Overview:

Burlington Norther Railroad (BN) is a company that was founded in 1970 when four railroad companies merged. These companies' forte was the transportation of large quantities of segments that include minerals, timber, oil, and gas for affordable rates. Burlington Norther's has a large revenue in coal which was 1/3 of their products they transport, other revenue products include Auto, Consumer, Forest, Intermodal and Industrial Products. BN Railroads had an outdated rail system, until 1980 when they upgraded them, even thought there were still some minor issues which costed them time and money since when a train needs to pass by another, one has to exit on the side rail. These issues have created the through to determine if ARES (Advanced Railroad Electronics System) project would benefit them and overcome the significant cost of the issues. This case analyzes ARES project to help BN make decision if they should continue with the ARES project and how they should go about it.

Problem:

Burlington Northern (BN) has had many complications with the system they were using even after they upgraded their system in 1980. When trains try to pass each other, one has to exit the on the rail side to let the other pass another issue is the communication, dispatchers are not able to track if a train is delayed and if they try to dispatch another it could cause even longer delay problems. The only way they tracked other trains was by frequencies, this was difficult to coordinate since they had small window of time to dispatch trains. Few managers believe that ARES is the solution to the problems mentioned above. The main concern for Burlington

Northern if ARES will help them achieve their goal and if it is worth $350 million of investment in which it will put Burlington Northern in deeper obligation as they are in.

Industry Competitive Analysis:

The mission of Burlington Northern is to serve its customers (mainly industries) by using advanced railroad technology to deliver large amounts of materials or goods while maintaining higher customer service experience. “Strategy is about two things: deciding where you want your business to go, and deciding how to get there.” Improving their customer service would lead to a larger share in the market and utilizing their assets would increase their percentage of the income which would be valued as profit.

After merging, Burlington Northern has a large revenue in coal which was 1/3 of their products they transport, other revenue products include Auto, Consumer, Forest, Intermodal and Industrial Products. BN mainly distributes to Midwest and Western region of the United States.

<u>Porter’s Five Forces:</u>

1. **Competitive Rivalry:**

   Competitive rivalry in shipping goods was very high BN faced many rivalries and their main competitor was Union Pacific in which BN believe that they dominated the coal transportation as they believed that they had better railroad technology systems, other competition that BN faced were, airplanes, boats, and trucks. Trucks believe to be a railroad rivalry as they offered door-to-door services at low costs.

2. **Threat of New Entrants**

   Threats of new entrants in the railroad market is not likely as they are already being dominated by two superior companies such as Burlington Northern and Union Pacific, new entrants would have to consider a lot of money, materials, and resources in order to build a new railroads system, and many other technologies in order to compete with these two large companies. While competition in railroad market is low, we have to consider other methods of transportation such as airplanes, boats, and roads (trucks) which is very likely to be a competition, as those could overtake the railroad industry.

3. **Bargaining Power of Suppliers:**

Since Union Pacific and Burlington Northern are the only two dominating railway organizations, BN have supplier that provides them with fuel and train equipment these suppliers have big impact on BN, if fuel prices or train parts go up BN has no choice but to pay the price as those are needed to provide excellent customer service. BN can also up the prices of the delivery, but they have to stay competitive on their prices with Union Pacific.

4. **Bargaining Power of Customers:**

Customers have a high bargaining powers, there are many alternative delivery services such as trucks if offered a better price in which a customer can refuse the delivery cost of BN. BN must stay competitive by having lower prices within that can also have a better customer service. "Buyers can also demand higher quality of services or products and increase competitiveness by forcing different companies into price wars. All of these factors end up decreasing the attractiveness of the industry by lowering its profitability." (Martin Luenendonk)

5. **Substitute:**

Substitutes have low impact on BN, other transportation methods such as trucks can deliver small quantities of goods and materials in less time, however it can cost the customer to pay a higher prices, trains deliver large amount of goods and material for cheaper cost and the transportation of coals, oil and automotive products which mostly require rail transportation as those are very large and heavy items, which could cost a lot to deliver with trucks, which is why rail transportation can be beneficial for those.

Key Stakeholders:

Stakeholders include **management**, **employees**, **shareholders**, and **customers**. **Management** are the ones who take actions they are affected by this because they want to implement a solution and improve the firm's service. "Internal stakeholders are key management of the company and therefore must be considered seriously." (Compliance Prime Team.) **Employees** jobs will be affected as they are the ones who will have to adapt to the new technologies if accord. **Shareholders** are a major role in this, they are the investors who have big stake, and hoping that the ARES project to be successful as they could gain financial profit if the project succeeds or huge loss if the project fails. **Customers** are also a big role in this as they want to ensure that their products get delivered at cheap rates, safely and in timely manner.

Alternatives

The first alternative is to implement ARES project. Project implementation have brought the concerns to the senior executive as they believe that $350 million estimate is a low number for the actual cost of the implementation and they believe that it could be much higher, their second concern is regarding the benefits of the ARES system which might be overstated. The ARES project will help reduce the operation costs in which it could turn BN in competitive advantage. Technology that is included in the ARES will decrease the cost of labor, fuel, equipment, labor, and most importantly the railways systems as that will improve customer service and delivery time.

The second alternative is the implementation of the project in one region at a time. This will reduce the project cost while at the same time testing how the project will go about. Management will notice slow improvements in the operation cost. Employees will start training on the new system, and adaptation will slowly begin. Customers will start seeing improvements in their shipping delay time.

The third alternative is to continue the operations without ARES, this will keep the normal operations, and will not have any impact to BN shareholders. In the book *The Goal*, "The main function of a successful business is to make money now and continue making money in the future". (Goldratt) by refusing the implementation of ARES project BN may lose profit and or competitive advantage, which can cause the customers to find a different substitution with their products delivery.

Last alternative would be the adaptation to the ATCS (Advanced Train Control System). This would cause the loss in interest of the ARES project. The ATCS project is intended to control trains rather than the whole rail framework, it would also have significant low cost than the ARES. While keeping the current system and waiting for the ATCS implementation may cause the current issues to continue and even put BN at a lower competitive advantage if another rail company decided to pursue the ARES, a positive outcome from the ATCS is less money would be spent on the project compared to the ARES.

Solution

The Implementation of ARES in one region at a time would be the best option for BN, stakeholders do not have to invest out large sums of money to start making the change. as stated “Whenever we think we have final answers progress, science, and better understanding ceases” (Goal). Innovation is a major key in an organization that is seeking improvements. Implementing ARES region at a time will surely reduce the project cost, and surly lowers risks, not only that, but BN will be ahead of its competitors. Management will notice improvements in the operation cost. Employees will start training on the new system. Adaptation will slowly begin. Customers will start seeing improvements in their shipping delay time. BN later can fully develop ARES as a whole when they see huge success in the testing regions. “A lack of familiarity with new processes and equipment can lead to accidents that could impact the environment, lives, and property.” (Dave) It is always important to move ahead with maximum caution as this will minimize the risks.

References

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