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CIS 410-01 Case 1

9/6/2018

**The Problem**

Burlington Northern (BN) is faced with growing competition from railroads and trucking. They have developed a project plan known as ARES (Advanced Railroad Electronics System). This project would revolutionize the way their railroad operates. The project is offering: better service to customers, improved asset utilization, and reduced costs. ARES would cost an estimated $350 million.

Some factors to consider:

* BN has more debt than desirable
* BN would be the first to market with this type of system
* There are a lot of unknowns on the development side of the project
* The $350 million cost estimate is likely low
* To get the maximum benefit from ARES BN would have to change their core business processes.

The company must decide how to proceed, and I will give my recommendation.

**Industry Competitive Analysis**

## Mission

Burlington Northern’s mission is to provide dependable rail cargo service to its customers across the Midwest using their rail infrastructure. Their core competency is coal. Their coal trains ran constantly and were immune to time sensitive issues because coal was just hauled and dumped. BN was running close to capacity on their coal lines. Union Pacific Railroad (UP) is their main rail competitor. UP has invested heavily in double tracks and fuel-efficient engines.

## Market

Burlington Northern services the Powder River Basin of Montana and Wyoming. They also are strategically located to serve the “Midwest and Great Plains grain-producing regions”. Coal and agricultural commodities are their biggest segments. BN had most of its coal business under long term contracts with less than 24 customers. On the contrary, grain traders dealt in short term deals for the best prices. BN created the Certificates of Transportation (COT) program that contracted themselves 6 months in the future to transport grain within a three-day period. This helped remove some of the uncertainty from the grain trade.

## Strategy

Burlington Northern’s strategy is focus differentiation. They do one thing and one thing only – rail freight shipping. BN doesn’t try to outprice their competitors. They focus on service. One of the purposes of the ARES project is to improve their service and therefore differentiate themselves to a point where consumers are price indifferent.

## Porter’s Five Forces

Inter Industry Competition is a huge factor for BN. UP directly competes for the same customers. UP invested more in technology specifically in their coal lines airing double tracks and fuel-efficient engines.

Substitutes are another large concern for BN. Trucking has continued to grow and is competing directly with railroads in some categories. Trucks charge more but offer a more convenient service. Trucks offer a much higher on-time delivery ratio. Railroads need to improve and adapt to the changing environment or they will be relegated in most sectors by trucking.

New Entrants are not a major concern for BN. The cost of developing railroad infrastructure is immense. This serves as an entry barrier to the market.

Suppliers Bargaining Power – BN’s suppliers don’t appear to offer anything unique. Fuel and material are two of their main costs and they could likely get both from many different vendors.

Customer Bargaining Power – BN’s coal customers are few and locked into long term contracts. BN has successfully raised the switching cost by establishing these contracts. BN looked to use a similar technique in the grain industry when they created the COT program. This locked in customers six months out and created the switching cost that reduces their customers bargaining power.

BN is in a solid position in the industry. They are the leader in coal and leading some agricultural categories. Competition does exist, and the threat of substitutes exists as well. New entrants and supplier bargaining power are not large concerns for BN. Customer bargaining power is a concern for BN and they have taken steps to limit it by locking customers into long term contracts in both coal and grain. In the long term it appears BN will have to adapt some new strategies to stay competitive and retain their top spot.

**Identifying Stakeholders**

BN Management – These are the executives of the organization. They make decisions like this and have a responsibility to shareholders and to keep the company moving in a positive direction for the future. Management is ultimately responsible for the decision to authorize the ARES project.

BN Employees – These are employees who work day to day at BN. They can give feedback to management but ultimately, it’s management who makes the decision to authorize the project. Their roles will be directly impacted by the ARES project. If ARES is approved and works as intended some employees will lose their jobs.

BN Customers – These are customers who will be impacted by BN’s choice to authorize the ARES project. Customers want to receive the best service and best prices. A successful or unsuccessful implementation of the ARES project could affect that.

**Generating Alternatives**

Do nothing – Don’t implement the ARES project and continue with the current course of action. BN has a strong position in the market and competing railroads are years away from a technological advancement that could cause that to change.

Implement ARES – Management authorize the ARES project and work begins on it.

Partial Implementation of ARES – Spend more time researching and focus on the pieces of ARES that BN could section off from the project. This means they will just be implementing pieces of ARES which will be cheaper but potentially less effective.

Wait for competitors to implement a project like ARES – BN will wait and see what its competitors come up with in terms of technology. They will let their competitors be first to market and then learn from their mistakes when they implement their own version. Learn from the mistakes of your competitors when they implement a system like this and do it better. The advantage they gain from this shouldn’t put BN out of business and they will be able to replicate it.

**Analyzing Impact on Stakeholders**

## Do-nothing

BN Management – BN is already trending in the right direction. The do-nothing approach in this case would not have a negative impact on management. They are avoiding a risky and expensive project.

BN Employees – Like management the do-nothing approach wouldn’t have a negative impact on employees. It will be business as usual, everyone will keep their jobs and continue doing them the same way they have for years.

BN Customers – Customers may be dissatisfied with BN’s lack of innovation. If they become unhappy with BN’s service, they have other options they can consider.

## Implement ARES

BN Management – Management takes on a risky and expensive project. If successfully implemented BN would make a great return on investment and executives and shareholders will rejoice. If the implementation isn’t a success, for example, it’s over budget, it never gets completed, or it only partially gets completed then management will suffer. Shareholders will not be happy that the company failed on one of its most expensive projects in its history. A failure of this magnitude could dramatically harm the company.

BN Employees – If implementation is successful some employees will be laid off due to them being unnecessary. The remaining employees will likely have an easier and safer job. If implementation is unsuccessful it will likely be business as usual for employees.

BN Customers – If implementation is successful customers will receive better service and ideally become cost indifferent. If implementation is unsuccessful customers will notice because BN has been very public in its display of ARES testing. Customers will continue receiving the same service they’ve been receiving.

## Partial Implementation of ARES

BN Management – Management has saved money and improved service. Shareholders will be happy the company is innovating and improving.

BN Employees – Employees will ideally enjoy the benefits of ARES namely safer and easier working conditions.

BN Customers – Customers will receive better service and be happier with the company,

## Wait for Competitors

BN Management – Avoids risky and expensive project while maintaining current market control. They can continue the debt repayment plan and be in an excellent financial position by the time BN is ready to develop their own version of the competitor’s technology.

BN Employees – Just like the do-nothing solution employees will see no change in the short term. Some employees may lose their jobs if they become unnecessary once the technology is finally adapted.

BN Customers – Customers will receive the same service with the guarantee of better service in the future. Customers may be tempted to switch to a competitor during the period where BN doesn’t have the technology, but the technology ideally won’t give the competition that much of a competitive advantage.

**Solution**

My proposal is that BN waits for competitors to implement a similar technology to ARES. The do-nothing approach is very similar but doesn’t offer the guarantee to customers that BN will be adapting and improving in the future. Doing nothing could result in BN stagnating and being replaced by its competitors.

ARES is one of the most expensive projects in the company’s history. There are too many variables to guarantee a positive outcome. The company is working on repaying debt and adding on another $350 million would be counterproductive. There is also the chance that the $350 million estimate is wrong and because of all the unknowns associated with the project specifically in software, this project could be a lot more expensive than advertised.

A partial implementation of ARES would be very difficult. The project was designed to be very connected and as a result it would be difficult to segment out portions of the project and have them be effective. The impact of a successful partial implementation is great, but it doesn’t seem feasible to accomplish.

Waiting for competitors to develop a similar project first is the safest option. This technology is not so revolutionary that it will allow BN’s competitors to put them out of business. What it will do is allow a competitor to take all the risk in an expensive project like this. Afterwards BN can analyze what they’ve done and avoid their mistakes while implementing their own version. In the end BN will have the same or similar technology as its competitors while avoiding the risk of a cutting-edge technology. BN Management will have avoided risk and eventually implement a successful project. BM employees will maintain the status quo for some time and eventually get safer and easier jobs. This will still likely result in some employees losing their jobs due to becoming unnecessary. BM customers will receive improved service. Since BN has learned from the mistakes of its competitors it will ideally improve the technology and be able to differentiate itself to the customers. The end result will be BN providing better service, improving asset utilization, and reducing costs while avoiding risk.