Case 1: Burlington Northern

Sara Attarzadeh

CIS 410-02

Dr. Robert Barker

Problem Statement

Facing several choices and in the face of limited resources, Burlington Northern must determine which actions will best lead to short-term and long-term profitability and value. Currently, the primary issue concerns the Advanced Railroad Electronics System (ARES) project, and whether it should be prioritized over other potential actions. It is believed that ARES may “give Operations better control over its assets” through better scheduling, service, safety, and efficiency/utilization of its locomotives and railways. With equipment and property being Burlington’s largest asset, the future of the ARES project could have major implications for the company (Hertenstein 3).

Industry Competitive Analysis

Mission

Burlington Northern seeks to provide a reliable railway transportation service of goods to customers, and to remain profitable and safe in the process through cost leadership. Burlington’s main customers are other businesses in various industries, with its biggest focus on commodities which are “heavy, low-cost, and time-insensitive,” such as coal and grain.

Generic Strategy

For some time, Burlington Northern maintained a generic cost leadership strategy. As Ritika Tanwar states, an organization with this strategy strives for efficiency (Tanwar 12). Burlington always looked for ways to cut costs and perfectly meet capacity, and it still does to an extent. It is still looking for ways to best utilize its assets, and executives question whether the ARES project could be implemented at a much lower cost. However, it is very apparent that Burlington Northern is heavily considering shifting its generic strategy to differentiation. In other words, it wants to be unique, and potentially increase the prices of its railway transportation (Tanwar 13). The most compelling proof of Burlington’s desire to take on this strategy comes from the company’s strategic review, in which it states it wants to bring about radical change in its service (Hertenstein 10). CEO Gerald Grinstein questions whether better and more reliable service would result in increased profits (Hertenstein 28). The company would plan to differentiate itself from other transportation companies through excellence in service, which is one of the big goals of the ARES project.

Porter’s Five Forces

Porter’s Five Forces, developed by Michael Porter, “considers five forces that determine the ‘attractiveness’ of your market by analyzing the competitive intensity.” The five forces include: competitive rivalry, buyer power, supplier power, threat of substitution, and threat of new entry. It is recommended that one use this method to form a competitive strategy (Porter’s Five Forces 7-9).

Competitive Rivalry

Burlington Northern faces moderate industry rivalry. While BN is a fairly large organization, it faces competition from railway companies even in its biggest commodity— coal. BN’s major competitor in coal is Union Pacific (Hertenstein 4). Additionally, since World War II, the use of railway transportation has declined, especially in the 70s. The FME framework states that competitive rivalry increases when there is slow market growth. The framework also claims that competitive rivalry becomes more of a threat when there are “low levels of product differentiation” (Porter’s Five Forces 14). In terms of railroad transportation of mass goods, this is very likely the case.

Buyer Power

Burlington Northern’s customers generally have a moderate bargaining power. Given that the customer’s product development sales are reliant on BN making deliveries, that there is little difference between one railway and another, and that most businesses are somewhat price sensitive, customers certainly have a fair amount of bargaining power. However, it is mentioned that BN has begun signing contracts with its customers, meaning the switching costs have increased (Hertenstein 4). Therefore, buyer power is reduced somewhat (Porter’s Five Forces 27).

Supplier Power

Though not much information is available on BN’s suppliers, it is likely they have a fair amount of power. Burlington Northern needs to make deliveries on time, and it cannot afford to routinely have problems with its equipment. Therefore, it would be extremely dependent on its suppliers. This, however, may not be the case if they build their own products and perform maintenance in-house.

Threat of substitution

Burlington Northern faces a very large threat of substitution. Namely, from the trucking industry. Although the costs of truck delivery tend to be higher, customers often still choose it as their preferred method simply for convenience. Additionally, there are several commodities which are hard for trains to transport, and locomotives often do not deliver small amounts of a good. Finally, with the decreased regulation in the trucking industry, costs have gone down, making it a more attractive choice for customers (Porter’s Five Forces 22).

Threat of new entrants

There is a weak threat of new entrants. Established railways often already own much of the land and resources available, thus new entrants have inadequate assets with which they could build a business. Additionally, it takes an enormous amount knowledge, skill, and money to build an entire railway system (Porter’s Five Forces 19).

Stakeholders

* ARES Team- Worked on the ARES project for several years, after having the project passed down from R&D. Certainly could be affected by actions related to the project.
* Executive Officers and Senior Management – These individuals approve plans and are charged with ensuring that all actions bring the company closer to its goal via the business strategy.
* Employees – Employees have a high stake in project plans, as they affect their work productivity, job security, and safety.
* Customers- Are impacted by the future of ARES, as it directly relates to how and when their goods will be delivered. Any improvement or diminishment in service is important to note.
* Competitors- As they want to maintain an edge over Burlington Northern, they have a large stack in BN’s actions. Additionally, if BN should come out with technology that greatly changes the industry, the competitor may have to play follower and adopt.

Alternative Actions

* Do nothing- Burlington Northern does not move forward with the ARES project. Therefore, no control system is put into place. Operations generally stay the same, with no increases in service or utilization of assets.
* Fully implement ARES - Burlington moves forward with ARES, with locomotives being impacted across all geographic areas and all features being delivered. BN will be investing at least $350 million into this project. Not all aspects of project implementation are clear.
* Partially implement ARES- Burlington implements ARES, but only in certain geographic areas or with some features being left off (e.g. LARS). Only equipping some locomotives would most certainly result in the overall system being “less effective since ARES could no longer confirm the location of… all trains” (Hertenstein 15).
* Specifically forgo ARES to invest in other plans- Use the resources that could have funded ARES to fulfill other plans. These plans could include investing further in concrete ties, MIS investments, acquiring new railways, or labor buyouts. Thus, while BN might not have an automatic railroad control system, its other plans could still potentially lead to short-term and long-term profitability and value.

Impact

* Do nothing
  + ARES Team- Effectively wasted several years on a failed project. Reputation within the company may be hurt, and at worst they could lose their jobs. Confidence in abilities may be diminished. However, this may give them time to work out the kinks and deliver an even better product in the future. May quit.
  + Executives- Must figure out what to do to improve service and utilization. May also face a diminished reputation if they supported the project. Money is saved, however revenues will stay the same.
  + Employees- Conductors will be happy to not lose job. However, engineers will not get the productivity gains that hoped for with ARES. Additionally, the safety of workers will not increase.
  + Customers- Realize no benefit in their service. May choose to switch if the technology is developed elsewhere.
  + Competitors- Will be satisfied. They don’t have to worry about BN having the upper hand in the industry. Additionally, they don’t have to begin adopting this new technology. However, there could be a subtle loss, as they may have truly benefitted from the realization of a technology like ARES, even if they had to pay for it.
* Fully Implement ARES
  + ARES TEAM- Will likely gain much happiness. Time spent was well worth it. They will receive recognition and praise. If the system brings a great amount of benefit to BN, they may be promoted. Could continue to improve the system. However, problems could occur if they run into several problems and unexpected costs during implementation.
  + Executives- This will cost them a boat load, and they will likely be scrambling in the short run to cover the costs. However, if everything goes as planned, they should see the company improving and making more money. The goal is to make more money. Must put into place control policies. If project fails to make money, they may lose their jobs.
  + Employees- Engineers may benefit from increased productivity, while conductors may lose their jobs. Anyone on the train will benefit from increased safety.
  + Customers- Stand to benefit greatly. Will get better service in terms of reliable delivery and increased communication about shipment.
  + Competitors- Most likely will not be very happy. Their customers may leave for BN. They may have to play catch up and adopt this technology. However, it may help them in fixing their own problems.
* Partially Implement ARES-
  + ARES TEAM- Could be unhappy that not all plans are approved, but will most likely accept as a success. May experience lower morale, believing that senior management doesn’t respect their input, or is not listening to their opinions. Could be asked to continue working on the parts that were not implemented.
  + Executives- May see this as a way to get the best of both worlds in utility. They are spending less while getting most of the benefits of the system, and can use the money saved for other projects or debt repayment. Will experience the most backlash if the system doesn’t work as intended because it is only the partial product.
  + Employees- Will realize some benefits, but not all. If they are on a train that is not equipped with the system, they will gain nothing. Dispatchers may still have a tough time obtaining and relaying information if not all locomotives are using ARES.
  + Customers- Will realize some benefits, also. If in time, the ATCS system is developed fully, they may decide to switch from BN.
  + Competitors- Unlikely to be very happy, but might find an opportunity to develop an even better system and includes the features BN left off.
* Specifically forgo ARES to invest in other plans
  + ARES Team- Will likely be unhappy that their project was sacrificed for another. Again, they may think they essentially wasted years of their lives. May become resentful of other teams/employees. Could quit.
  + Executives- Unless they had a strong opinion, they may feel indifferent. Could allow them to save if other project costs less. Could be under fire if the project chosen over ARES brings about fewer benefits.
  + Employees- The effect is heavily dependent on what the project will be doing, and what they are doing in the company. Could lose their jobs if the labor buyout is the project chosen.
  + Customers- Will not benefit from more reliable service. However, they could benefit in other ways and new customers may join (e.g. if new railways are bought out).
  + Competitors- As long as the chosen plan does not bring any more benefit to BN as ARES would have, they will likely be satisfied. However, whereas they could have somewhat benefitted from ARES if adopted, they will likely not benefit from the implementation of any other project.

Recommendation

Fully implementing the ARES project seems to be the most worthwhile alternative for Burlington Northern. As the CEO stated, for the industry to succeed, it needs to continuously improve. For the past few decades, the railroad industry has essentially been at a standstill. This could be the sustaining innovation the industry requires.

Though the costs are high, and the benefits are not wholly guaranteed, there is quite a bit to be gained. Only doing a partial implementation would be meaningless, as the LARS and energy management system are the biggest opportunity points. Additionally, not having all locomotives on ARES would leave many blind spots open, essentially leaving the company in the same place it had begun. If Burlington Northern could fully implement ARES, it would gain better utilization of its assets, greater loyalty from customers, and any payments from competitive rivals who wish to adopt ARES.

Works Cited

Hertenstein, Julie. "Faculty & Research." Burlington Northern: The ARES Decision (A) - Case - Harvard Business School. Harvard Business School, n.d. Web. 25 Jan. 2017.

"Porter's Five Forces: Strategy Skills." Free Management Ebooks. Http://www.free-management-ebooks.com/, 2013. Web. 25 Jan. 2017.

Tanwar, Ritika . "Porter’s Generic Competitive Strategies - IOSR." IOSRjournals. IOSR Journal of Business and Management , Dec. 2013. Web. 26 Jan. 2017.