Burlington Northern Case Analysis

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Currently Burlington Northern is facing a decision whether or not to continue pursuing development of an advanced railroad monitoring system codenamed ARES (Advanced Railroad Electronics System). This system is able to schedule trains so that fewer collisions happened and monitor the health of a train. If this project is pursued further, it will cause immense short term costs for the company, but the benefits gained through this system could result in fewer men on payroll, smoother operations, and an integrated view of data.

The Porter’s five forces analysis of Burlington Northern will begin with the competitive rivalry section. The most direct competition they have is Union Pacific, another railroad transportation company. Union Pacific has been affected by the same deregulations that Burlington Northern has been positively affected by. The primary difference between the two is that Union Pacific has made substantial investments in “heavy-duty double track and in new-technology, fuel-efficient engines for carrying coal” where Burlington Northern believes that would be unnecessary due to them already being close to capacity (Barker, 4).

Additional competitors for Burlington Northern include the trucking industry and UPS because they pose the most imminent threat of being a new entrant for Burlington Northern. Extreme government deregulation on trucking has allowed trucks to deliver with the same responsiveness they always have, except now at a much lower cost. Since their inception, trucks have always maintained serious pressure on the railroad industry, with several goods in contest, however there are several goods which have been agreed that one or the other transports the best.

The threat of substitution for Burlington Northern is very real. For starters, most of their operations could be taken by the trucking industry, to the point where they have had to create an initiative to deliver grain to the customer within a 3 day period 6 months in the future to increase their hold on agriculture. Additionally, other existing railroad companies could be in a position to take some of Burlington Northern’s market share if they are investing lots of money into ARES and the restructuring required for it.

The bargaining power of suppliers for Burlington Northern is either fairly weak or incredible strong. Burlington Northern has a lot of land filled with plentiful natural resources so in a sense they own their own supply, however the other things they transport like grain and industrial products are commodities their customers demand, so Burlington Northern must buy them however they can. The coal, which is presumably primarily on their land, and the agriculture - which is mostly grain - and the industrial products make up a significantly larger percent of their financial portfolio than the rest of their shipped goods combined.

The bargaining power of their customers is very high in the case of Burlington Northern. According to Porter, “In markets where the products have little to differentiate them, brand loyalty is low or non-existent…” (Porter, 27). This is basically the definition of a commodity, which as I said in the last paragraph makes up a significant percentage of Burlington Northern’s financial portfolio. On top of this, Union Pacific operates in a similar geographic area and can offer the exact same services as Burlington Northern, just a good price drop or faster, more consistent delivery times could make a company use one or the other.

The stakeholders in Burlington Northern are their stockholders, Burlington Northern itself, and its customers. I chose just these three because there seemed to not be any other players in this case which would be affected by the decision whether to adopt ARES.

The corporate strategy for Burlington Northern seems to be a cost focus strategy due to their primary operating revenue source being from train logistics services. Later down the road, Burlington Northern decided split their land grants and resource holdings into a separate spin-off division called Burlington Resources Inc. which drastically affected the stock price of Burlington Northern Railroad. This restructure allowed Burlington Northern to more effectively manage their capital and resources between the completely different divisions.

There are several courses of action for Burlington Northern with regards to the ARES decision. The first alternative is to do nothing and leave ARES in its current state. A second solution, similar to the ‘do nothing’ scenario is to drop the ARES project and spend that money towards other process improvements. A third alternative is to pursue the fully imagined version of ARES which the R&D team proposed. A fourth course of action would be to analyze ARES and axe features that weren’t immediately necessary, and perhaps implement them later.

The first alternative of doing nothing affects Burlington Northern by demonstrating that they are unwilling to commit to projects and take risks that could put them at the forefront of the industry. This demonstration projects onto the stockholders a sense of unconfidence in Burlington Northern’s future. This alternative does not significantly affect Burlington Northern’s customers.

The second alternative best demonstrates Goldratt’s famous epiphany from *The Goal*, “The goal of a manufacturing organization is to make money.” (Goldratt, 44). ARES does not directly create any money by itself. In fact it costs a lot of money for Burlington Northern without many *fully* tangible benefits. A reallocation of their resources affects Burlington Northern by allowing them to more deeply analyze their current business processes and improve them, leaning into their generic strategy of cost focus (Porter, 14). This willingness to improve affects Burlington Northern’s customers by faster, more consistent arrival estimates and potentially a larger market share if they can outperform Union Pacific. This larger market share and more confident customers leads to more investors and more confident investors.

The third alternative of fully fleshing out ARES and distributing it affects Burlington Northern by inducing that incredibly long and taxing period of development, which will result in requesting loans. Depending on the accuracy of the consultants estimates, and the potential it could promise, these payable accounts could be payed off rather quickly due to the decreased delivery times, fewer employees required to maintain the actual trains and regions. This would result in increased customer satisfaction from their customers, and perhaps the ability to truly and unequivocally beat out Union Pacific after its completion. The shareholders wouldn’t be as enthusiastic, since there is an estimated 9 years of additional funding to support the development of this project, worsening their already shaky investment indicators.

The fourth alternative of producing the minimum viable product and expanding on it in future years is much more reasonable than doing the whole project in one fell swoop. The case already states that the electronic monitoring system and LARS are features that could be added on later in the software lifecycle. This decision to stagger the release of ARES results in less up front spending and time commitment to release and test the effects of ARES, however it still requires a massive investment in reorganization. This affects Burlington Northern’s customers by decreasing the amount of time they have to wait for the more consistent and faster deliveries. Shareholders also get off a little easier since there will be less than 9 years of debt accumulation.

Out of these alternatives I believe that the fourth alternative of producing a minimum viable product is the best solution to the current problem. Not developing ARES seems unwise, especially when you are estimated to be five years ahead of the next company developing a similar situation; it’s leaving money on the table. This rules out the first two recommendations, however I would like to elaborate on the second recommendation a little. As it is described, ARES is the ultimate business process optimization for Burlington Northern, so spending money elsewhere seems silly. As for the third option, the shareholders faith in the company’s success is already uncertain, a P/E value less than ten after the capital management decisions and an unfavorable debt-to-capital ratio, excessive lending would lower shareholder confidence in the company.

Barker, Robert (2012), Management of Information Systems, Jan 2018.

Tanwar, Ritika (2013). Porter’s Generic Competitive Strategies. *IOSR Journal of Business and Management*

Goldratt, Eli (), The Goal - The Process of Continuous Improvement, Jan 2018