

CASE REPORT 1

Name: Jenet Baribeau

Case Study: Burlington Northern: The ARES Decision

Course: CIS410-02

Date: 9/8/2016

Executive Summary

After transportation deregulated in 1980, Burlington Northern (BN) had a vision to implement avionic equipment into trains to differentiate themselves on what is now an open market. Since, this product didn't exist, BN partnered with Rockwell Automation to create a whole new communication and central data system, Advanced Railroad Electronics System (ARES), to expedite decision for smoother transitions and potential future analysis. Through several executive leadership change overs, critical analysis of the potential ROI after they were already heavily invested the ARES system dies and BN sold. Had BN followed through with the implementation of ARES, would it have saved their visionary project and potentially their company allowing them to be competitive within the railroad industry?

How to compete within an open market to include new modes of transportation threatening to impinge on an already existing proven low cost mode of transportation? The solution was to differentiate themselves in the market place by creating a whole new system to revolutionize the railroad industry. Did their lack of commitment to be the innovators cause their demise? Would a full implementation of the ARES system recover the ROI and turn a profit large enough to recoup costs in such a capital intensive industry? Or was their tactic flipped after a sell off to a holding company leaving nothing but a huge debt change their vision from a case of differentiation to cost leadership?

Business Analysis

Current Environment:

Controlling 800 trains per day travelling 200,000 miles with 5,000 junctions, BN has a patchwork solution of various antiquated communication equipment to solve understaffed and decentralized information. Maintenance of Way (MOW) wasted hours of man time as well as time if not scheduled properly. Train engineers missing critical information for maintenance to avoid potential failure.

Business Problem:

ARES was the solution for many of these problems but like any technology, Research and Development (R&D) is costly in both labor and capital. The vision of centralizing the data for analysis, giving global information to dispatchers and effectively utilizing switches to maneuver loads across the United States by effectively creating a GPS tracking system on microwave frequencies was ahead of its time. The railroad industry lacked an infrastructure to execute the vision ARES had cost effectively.

Stakeholder(s)

Critical Stakeholders of the Burlington Northern include:

1. BN Board Members looking for the execution of the vision promised by Chairman Bressler and CEO.
2. BN Investors looking for a return on their investment.
3. BN Employees who are executive leadership, the engineers, dispatchers and the people of BN. The safety features ARES would have brought in addition to potential new training to ride an incoming economic slump.
4. BN Customers who are bidding on BN services and have reasonable expectations to receive a competitive modal rate and on time service.
5. Rockwell Automation who loses out on the R&D, man power and potential profits ARES could have garnered if completed.

Alternative Actions and Outcomes

1. Do Nothing: BN did nothing. The capital investment required to execute the ARES project. With projections presented in Exhibit 11, BN was looking at net loss over the next 10 years (Hertenstein and Kaplan). After the restructuring of the BN railroad, they were still left with a debt to capital ratio of 76% thereby refocusing their energy to manage their debt instead of investing in the future. They chose not to complete the ARES project and were soon sold for \$15 billion to Berkshire Hathaway.
2. Full Implementation: BN was two-thirds of the way to completing the ARES project revolutionizing the railroad industry. They were really steps away from full implementation but were left holding their hat. The refocus left behind a differentiation strategy for a cost leadership strategy which for an industry like railroad which operates similar to utilities in that there is a constant need for reinvestment of funds in the equipment and/or technology. A potential third partner, like another railroad, coupled with Rockwell Automation perhaps could have finished the investment for ARES. The potential of ROI wasn't going to be from improving the scheduled times and making for the fluctuation in coal and grain commodities, but rather from the investment in the technology with the potential to resell it.

Look at Transcore which started as a toll management company in the 1930s but developed an RFID in the 1980s that now monitors traffic patterns, takes tolls, and holds hundreds of patents by adapting with the vision (Transcore.com). Maybe BN picked the wrong partner to develop the vision of the chairman by going into avionics instead of Los Alamos Labs? Now Transcore is the benchmark for tolling but that technology wouldn't be unlike what Rockwell Automation had.

3. *Partial Implementation:* Partial implementation may have seen some improvements on their scheduling as well as perhaps more management of the equipment prior to failure. Any improvement on the differentiation theory by keeping low cost and on time would have shown some improvement. The potential of the partial implementation was allocation of cash resources. If the ARES project was rolled out in phases after their test phase of the Iron Range by creating the infrastructure first, then the on-board equipment and allowing Rockwell Automation to finish the bugs within the control center and potentially maximize the product development to finance the infrastructure. This potentially would have opened the opportunity for new entrants into the technological market of ARES – think ATCS, Advanced Train Control Systems.

Recommendation

While BN isn't in the field of technology, but the technology would have complemented their industry well providing a more diversified company allowing for income for the fluctuations from the commodities shipped and the emerging market. My recommendation would have been a full implementation. This was a missed opportunity for BN to reap the benefits of their own creation. The Board of Directors was jumping over the dollar to get to the dime missing the potential. A constant capital investment of an infrastructure is daunting but the changes to the industry would be life changing. While Rockwell Automation was inventing the technology, BN was the guinea pig providing the capital without collecting the spoils at the end. Warren Buffet stated that the railroad industry is capital intensive, one can only expect a reasonable return and that reinvestment was essential (Buffet).

References

Buffet, Warren. *An Hour with Warren Buffet* Charlie Rose. 1 April 2011. Web.

Hertenstein, Julie H and Robert S Kaplan. "Burlington Northern: The ARES Decision (A)." *Harvard Business School* (1991): 191-122.

Kaplan, Robert S and Julie H Hertenstein. "Burlington Northern: The ARES Decision (B)." *Harvard Business School Teaching Note* (1992): 192-034. Book.

Tanwar, Ritika. "Porter's Generic Competitive Strategies." *IOSR Journal of Business and Management* (2013): 11-17.

Transcore.com. n.d. Web. 8 September 2016.