

William Blevins

Gregory Reinhart

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Case Study Analysis: BAE Systems at Denver International Airport

BAE Systems faces the decision of how to proceed with the unfinished integrated baggage handling system at Denver International Airport. The airport has delayed opening indefinitely and project officials wish to levy a fine against BAE for the incomplete system. BAE maintains that the DIA project lacked sufficient controls and as a result was mismanaged. This mismanagement contributed directly to BAE's inability to complete the system on time and maintain their own management controls. It is recommended that BAE scale back the systems' original specification to a less complex one and negotiate to complete the system. This action has the best chance of keeping good relations with the project and city of Denver, retaining good reputation in the market, and avoiding litigation and fines.

BAE Automated Systems, Inc. develops and installs innovative systems for material handling and transportation for airlines, airports, and other firms both domestic and international. BAE Systems pursues a differentiation strategy in the market. A differentiation strategy "is aimed at the broad market that involves the creation of a product or service that is perceived throughout its industry as unique" (Tanwar 13). Each system BAE develops is unique and tailored to the needs of the client and space it will exist in. BAE leverages existing technology, proprietary technology already developed, and currently developing technology to create systems that are unique and stand above the competition.

To this end, BAE is likely to have more loose management controls. Loose controls “are more flexible; that is, a broader range of acceptable actions or outcomes are accommodated than in a tight control setting” (Cash 97). Tight controls tend to reduce innovation and creativity, more suited to commodities and cost leadership strategies. Loose controls allow BAE the freedom to react more quickly to market needs.

Competitive rivalry is low for BAE Systems. There are other players in the market, but BAE has an overwhelming market share for airline baggage handling systems at 90% of total market sales in the United States. If you want a fast and efficient system for your airline, BAE is your best bet especially for domestic firms. The power of suppliers on BAE is likewise low. BAE has an entire manufacturing division that produces the proprietary parts BAE needs for its systems. The number of outsourced parts is low, and relegated to bearings, gearboxes, and motors. BAE is close to being vertically integrated.

BAE enjoys a low threat of new entrants into the market. There is a high barrier to entry due to the capital investments required for high-tech systems development. This could only be done by a larger organization willing to branch out and invest in a new division of business. In addition, competing with BAE necessitates development of innovative technology. One barrier to entry for new entrants is “proprietary knowledge or patents, which provide their organizations with a significant competitive advantage for a period of time” (Free 19). BAE owns the proprietary Telecar system, as well as other technology that is engineered in-house. By leveraging this unique technology not available to other firms, they hamper the ability of new entrants to compete with BAE’s offerings.

Unfortunately, the advanced systems created by BAE can be substituted easily. These are highly advanced systems, and as such have costs in the millions of dollars. If airlines are willing

to sacrifice efficiency and speed, they can go with a much more elementary system. The traditional baggage carts with tug vehicles can be had for much less cost, plus reduced maintenance and a lower chance of outright failure. To counteract this, BAE must hammer on prospective clients how their systems increase efficiency and speed. If BAE can show how their more expensive system will save airlines money in the future, they are more likely to be chosen over a substitute.

BAE Systems negotiates and signs contracts with its clients, therefore the bargaining power of customers over BAE is high. In this situation “where the customer’s purchase represents a substantial proportion of their total costs they will be more price sensitive and the buying process will be more protracted” (Free 26). Although BAE has the freedom to pick and choose who it bids with, the pool of potential customers for expensive automated systems is low. In contract negotiations, customers have the ability to request specific features that BAE might not want to invest in. If the customer thinks the cost is too high, they may choose a substitute and BAE will lose out on a multimillion-dollar opportunity.

The DIA project is eleven months overdue from the airport’s original opening date of October 1993 in part due to the unfinished baggage system. City officials and DIA project executives are unhappy with BAE’s failure to finish the custom, high-tech baggage system meant to serve the entire airport as opposed to just one airline. Not only is the system incomplete, but the currently installed system infrastructure has major software bugs resulting in none of it being usable until more work is done. As a result, the project is trying to levy a \$12,000 dollar per day fine for each day the baggage system is incomplete, in addition to forcing BAE to pay for a substitute, low-tech system to be quickly installed instead.

BAE feels the wild mismanagement and poor control of the DIA project was directly responsible for BAE's failure to have the system done on time. The new Denver International Airport "was a build-design project", meaning that planning and design for the airport overlapped with the physical construction. Many problems resulted, such as multiple teams making different decisions that contradicted each other, a years-long absence of an information system to share data between teams, and construction teams trying and unable to work in the same space at the same time. DIA did not have proper management controls to take account of what was happening.

DIA contracted BAE to develop and install the airport-wide integrated baggage handling system. This is unusual since airlines usually build their own to suit their own needs. BAE originally became involved with the project through a contract to do just that for United Airlines. BAE accepted the contract from DIA under a strict set of conditions to ensure their work could be completed by the tight deadline of one- and one-half years. These conditions are criteria BAE will use in its controls. Criteria are important in a controls system because "A measure in and of itself has little meaning until it is compared to a standard or expectation" (Cash 98). BAE set controls of multiple dates for scope freeze and promises of unrestricted access to work sites. These controls were not respected by either DIA or the individual airlines who asked for frequent changes after freeze dates and were unhelpful during blockages to BAE work sites.

The major stakeholders in BAE's decision are the DIA project officials, the administration of the city of Denver, the two airline carriers under contract for the airport (United and Continental), and BAE Systems themselves. BAE does not want to pay fees for a situation they believe they are not at fault for. They would like to complete their system as is, but cannot do so unless they have more time and resources. BAE also is concerned about possible legal

action from the City. The City of Denver and project officials are desperate to open the airport after much delay, and are willing to downgrade the baggage system to make that happen. They have shown a willingness to pursue legal action towards BAE. The airlines require a baggage system of a certain efficiency standard to make their investment into the new airport worthwhile.

Canceling the contract altogether and pulling out from the DIA project would cause a large amount of financial and reputational harm to BAE Systems and is not recommended. BAE is concerned about possible legal action, and this would guarantee it. The city would most likely enforce the proposed fee as well as sue for breach of contract. The airlines would sue as well, being promised a grand integrated baggage system that will not exist. Since BAE's differentiation strategy depends on a reputation for quality innovative work, they will certainly lose future contracts from firms worried about BAE's performance at DIA.

It is also not recommended for BAE to commit even more of their own resources to advance the system's specification and solve the software bugs that prevented the current installation from working during the live test. Increasing the specification opens more opportunity for DIA to become more unhappy with BAE's work on the project. BAE already has experienced problems due to conflicting management controls with how DIA has handled their project. A larger workload would only cause more clashes between BAE's controls and DIA's.

BAE could negotiate with DIA to complete the system as currently specified under the original contract. This alternative cannot be recommended due to the conditions that caused the current unhappiness between the two organizations. We should expect some difference between management control schemes between two firms "since each firm is unique in terms of its competitive opportunities and risks, resource constraints, and capabilities" (Cash 100). The underlying issue, however, of each organization's management controls not being valued the

same is still not resolved. Working towards the current specification resulted in 11 months of delayed openings and DIA wanting to levy a fine. Choosing this alternative only digs BAE deeper into not having true control over their work.

The best option for BAE Systems is to scale the project back to a more controllable level and convince DIA to let BAE finish it. DIA's intention to have such a complicated system installed in such a short time was a mistake. By scaling back complexity, BAE has hope to complete the system and fix the current software issues in a reasonable timeframe so DIA can once again set a concrete opening date. BAE can maintain controls, but this was severely hampered by the chaos of the DIA project. With extra time and concessions from project officials, BAE can more successfully keep and use controls on their work. Finally, a resolution that results in a working system as soon as possible is BAE's best change to repair relations with Denver and dodge possible legal action from the city as well as United and Continental.

Works Cited

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