

Successfully navigating the turbulent skies of a large-scale erp

[Psychology](#), [Success](#)



Bombardier is the world's only manufacturer of both planes and trains, it is present in more than 60 countries and is headquartered in Montreal, Canada. Both Bombardier Aerospace & Bombardier transportation employ over 70 000 and posted a revenue of over 18.3 billion in the fiscal year ended December 31, 2011. The case presents the implementation of an ERP system in Bombardier, along with all the major changes the corporation undertook for a successful transition. In the analysis I will address the challenges faced by Bombardier, the challenges associated with the integration of the large system & its benefits.

I will also address how the project team managed and communicated its vision amongst the firm and how the new roles were defined, communicated & understood. The analysis will focus up to and including the implementation of the system. As the company grew over the years, Bombardier's strategy of growth by acquisition turned the firm into a "textbook silo organization". This created problems as systems did not communicate with each other effectively. This inefficiency generated additional costs because the firm had to maintain all the different systems.

Another problem, related to the operation of the aerospace division, was the low visibility of inventory and lack of integration between the old computer systems. This caused process delays, low inventory turns & price inconsistency from suppliers. The Bombardier Manufacturing System (BMS), the group of information technology applications that had been supporting Bombardier Aerospace's manufacturing activities, had not evolved to cope with the fast changes. The BMS capabilities had become limited. We can

assume that Bombardier was not a fully integrated company at that time because there was a clear lack of coordination and unity.

An example would be how employees would create numerous stand-alone databases throughout the company on operations specific to their function without realizing the negative effect it causes to the rest of the organization such as data errors or omissions. But Bombardier Aerospace was working on becoming an integrated Company, as the Vice-President of Operations and Project Sponsor was aware of the challenges and created a Vision: "One Company": To align the operations of its acquired companies by implementing common roles and responsibilities.

To meet this enormous challenge, an Enterprise Resource planning (ERP) system was first implemented at Bombardier Aerospace. The first attempt in 2000 was a costly failure. The implementation of this technology without the corresponding organizational changes was the main reason of its failure. The factors that contributed to its breakdown are identified as : Focusing the implementation on inappropriate business processes, an outdated company vision, a weak sponsorship model, insufficient involvement of internal employees and having too many third-party consultants employed on the project.

In October 2001, Bombardier Manufacturing Information System (BMIS) was created by the Senior Project Manager to establish a new integrated manufacturing system. BMIS was the first project launched with a vision of an integrated organization. Once completed it would support 9, 500 users over seven sites and the main benefit of the system's integration is the cost

savings of over \$1. 171 billion and a one time reduction in material inventory of \$219 million. To Create & implement such a system, a blue print of the operation was created.

An integration team was formed; Their role was to identify integration points where a process crossed functional boundaries, and independently resolve integration points that could potentially cause disagreement. The functional council took high -level decisions regarding the design of the projects. The BMIS team requested that the plants provide them with experienced employees for the design phase. Some problems that the BMIS project manager was concerned about is that there was a lack of strong business employees, although empowered to make decisions and complete the design had to constantly go back to the business in order to validate.

Another problem was the documentation that was requested by the BMIS team were not provided. As a result, the Design phase ran over schedule by several months. Bombardier Aerospace decided to go with a progressive implementation of the system. BMIS would be implemented one plant at a time starting with their newest facility, the Mirabel Plant. The Critical success factor for the project was the “ Vanilla” approach to system design: It was important that the first roll-out or implementation of the system at the Mirabel plant to be a controlled one.

Bombardier limited the scope of the first roll-out one section at a time and trained the rest of the shop accordingly. This approach would siege the system to one part of the plant and identify lessons for subsequent roll-outs. The Restructuring of the procurement function plays an important role in

realizing the vision of the BMIS. As was stated earlier, one of the problems the firm faced was the low visibility of inventory. By improving the visibility, you can reduce inventory levels that would improve liquidity and reduce cycle time.

It was decided mid-project to restructure the procurement function, it was undertaken in parallel with the implementation of the BMIS and was called the Material Resource Planning Technology. The main idea for procurement was to minimize the total acquisition cost and overall procurement costs by concentrating on a centralized and strategic sourcing of inventory. This big change would require the training of new employees and have them ready to use the new system.

Data Management was also a parallel project, it can be divided in 2 activities: 1. Data Cleansing: identified as a major risk of the project. 2. Data Preparation: Extraction, mapping, staging and consolidation of data. Before going live it was important to prepare the users in utilizing the new system. Due to the pressure of staying on schedule, training were delivered to users in a short period of time which wasn't effective because transmitting such a large amount of information in a sort period resulted in a negative effect.