Appraisal of New Product Development Success Indicators in the Aerospace Industry.

Assessing performance in developing new aerospace products is essential. However, choosing an accurate set of success indicators to measure the performance of complex products is a non-trivial task. Moreover, the most useful success indicators can change over the life of the product; therefore, different metrics need to be used at different phases of the product lifecycle (PLC). This paper describes the research undertaken to determine success measurement metrics for new product development (NPD) processes. The goal of this research was to ascertain an appropriate set of metrics used by aerospace companies for assessing success during different phases of the PLC. Furthermore, an evaluation of the differences and similarities of NPD success measurement was carried out between aerospace companies and the non-aerospace companies practicing in the business-to-business (B2B) market. Practical case studies were carried out for 16 Canadian and Danish companies. Seven companies belong to the aerospace sector, while nine are non-aerospace companies that are in the B2B market. The data was gathered from relevant product managers at participating companies. The outcomes of this research indicate that 1) the measurement of success of aerospace NPD practices depends on the PLC phase being measured, 2) product and process management performance are the more important indicators of success in the early PLC phases with revenue and market share indicators being important during late phases, 3) there are reasonable similarities in success measurement between aerospace and non-aerospace B2B companies. Sets of metrics for measuring success during each PLC phase of aerospace products are proposed, which can guide companies in determining their ideal practices.