Abstract

The purpose of this paper is to present the maintenance, repair and overhaul (MRO) and aeronautical industry literature review, providing insights related to strategies of MRO business models. The fundamentals of MRO services and the aeronautical industry have been identified through an extensive literature review. The impact of the MRO outsourcing model was then investigated from the perspective of each stakeholder (aircraft original equipment manufacturers - OEMs, repair shops, system suppliers and airlines) using a SWOT (strengths, weaknesses, opportunities and threats) analysis. First, MRO basic concepts were identified: how FAA (Federal Aviation Administration) classifies repair and how MRO is performed. This study also analyzed a simplified parts and MRO services flow in the aeronautical industry, characterizing two important stakeholders: customers and repair shops. Although the production parts purchasing process is fairly simple, the spare parts process requires more attention due to the many players involved. Finally, the SWOT analysis identified strong competition between stakeholders; however, the investigation indicates that there is a tendency for the market to build partnerships between stakeholders to expand market penetration.
References

29. Rosenberg, B. 2004. “Everybody’s doing it; airline maintenance strategies are diverse, but all include an element of outsourcing”, Aviation Week, 19 April, p. 68.
Index Terms

Computer Science

Artificial Intelligence

Keywords

MRO; aeronautical industry; business model; outsourcing; airlines, repair shops