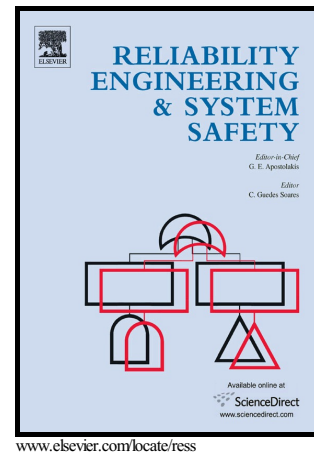


Author's Accepted Manuscript

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PII: S0951-8320(16)30939-5

DOI: <http://dx.doi.org/10.1016/j.ress.2016.12.002>

Reference: RESS5709

To appear in: *Reliability Engineering and System Safety*

Cite this article as: D. Rios Insua, C. Alfaro, J. Gomez, P. Hernandez-Coronado and F. Bernal, A framework for risk management decisions in aviation safety at state level, *Reliability Engineering and System Safety*, <http://dx.doi.org/10.1016/j.ress.2016.12.002>

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A framework for risk management decisions in aviation safety at state level

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Abstract

Aviation is a key industrial sector for global development. Safety is essential for its healthy growth. However its management is pervaded by simplistic methods based on risk matrices. We provide here a framework for risk management decisions in aviation safety at state level. This helps us in identifying the best portfolio that a state agency may implement to improve aviation safety in a country. We illustrate our proposal with a case study.

Keywords: Risk management, Aviation safety, Decision analysis, Bayesian statistics

2010 MSC: 00-01, 99-00

1. Introduction

Organizations involved in aviation have been dealing with the prevention of accidents from the early days of this industry. Since the first aviation accident with casualties in 1908, many efforts have been spent in improving safety in the sector. After its creation in 1945, the International Civil Aviation Organization (ICAO) has focused interests in trying to make aviation the safest transportation mode. Statistics released by ICAO based on fatal accident rates support such

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