

Fuel Saving Atr Aircraft

Document from the year 2011 in the subject Business economics - Business Management, Corporate Governance, grade: 72, De Montfort University Leicester (De Montfort University Leicester UK), course: Strategic Management, language: English, abstract: This paper discusses the external economic factors affecting the strategic decision of airline industry and how this decision in turn, affect the market forecast of the aircraft manufacturing industry. Various business issues affect airlines operation either directly and indirectly, and these issues affect the strategic decision of the airline industry. The present economic crisis, instability in aviation fuel price, and environmental factors (such as the recent volcanic ashes and snow) has further shrunk business in the airline industry and thereby increasing competitive rivalry. Although the future projected growth by the airline industry look promising, factors affecting airline businesses can make it daunting. Strategic decisions however, will help the airlines to maximize this positive forecast. To make these decisions, it is vital for the origination to understand the macro-economic environment affecting the airline industry. [...]

Lists citations with abstracts for aerospace related reports obtained from world wide sources and announces documents that have recently been entered into the NASA Scientific and Technical Information Database.

This book offers insights into important trends and future scenarios in the global tourism and travel industry and analyses current challenges in the aviation and hospitality industry, destination management and general travel behaviour. Well-known notabilities share their points of view. For example, Norbert Walter, chief economist of the Deutsche Bank, writes about the financial crisis and its impact on the tourism industry. Top executives of international operating airlines like C. Karlitekin (Turkish Airlines), J. Hunold (Air Berlin) and E. Sims (Air New Zealand) have much to say about the future of airlines and aviation management. Corporate Social Responsibility is one of the top themes to-be and therefore a focus of this book, offering the perspective of the UN Foundation and the social inclusion concept of RUHR.2010, European Capital of Culture. The articles are based on presentations and panel discussions presented at the world ?s largest tourism congress, the ITB Berlin Convention.

Aircraft affect global climate through emissions of greenhouse gases and their precursors and by altering cirrus cloudiness. Changes in operations and design of future aircraft may be necessary to meet goals for limiting climate change. One method for reducing climate impacts involves designing aircraft to fly at altitudes where the impacts of NO_x emissions are less severe and persistent contrail formation is less likely. By considering these altitude effects and additionally applying climate mitigation technologies, impacts can be reduced by 45-70% with simultaneous savings in total operating costs. Uncertainty is assessed, demonstrating that relative climate impact savings can be expected despite large scientific uncertainties. Strategies for improving climate performance of existing aircraft are also explored, revealing potential climate impact savings of 20-40%, traded for a 2% increase in total operating costs and reduced maximum range.

The elaboration of this project has as main objective the improvement of the cost index currently used in the Airbus A319 fleet of Volotea, which was initially and provisionally adopted from the value used in Boeing B717 fleet. Detected the need of updating this

parameter in the new aircraft, it has been analysed its direct influence over three main parameters; fuel consumption, flight time spent and extra costs; by taking intern confidential data provided by the airline, as well as studying simulations done with the Airbus FLIP module of PEP software. Once obtained the required results, they have been presented in form of graphics in order to interpret them in a clear and concise way. Regarding the conclusions, it has been firstly seen that at high cost indices (from 40) the amount of flight hours saved from flying faster does not compensate the high fuel consumption obtained, giving considerable large extra costs. Moreover, reducing the cost index below 15 has not resulted interesting at all neither because costs obtained are really similar to those acquired when adopting cost indices about 20, 25 or 30 but spending large flight times. The optimization of operations allowed by the time saving of settings about 20 and 30, makes this option the most interesting and convenient for Volotea. Secondly, it has been proved the effect of maintenance and fuel prices over the total costs. It was not initially evident, in any case, to intuit that, below cost index 15, extra costs increase when prices also do and at the same time, above 15, costs increase when prices decrease. Another remarkable fact is the influence of the load factor and the horizontal flight distance. Both parameters have been shown to have a significant effect on the results. Finally, this project also suggests, at the end, different steps and considerations to keep in mind if desired to extend the study and reach the corresponding value that optimizes the cost index for the new fleet.

A unique feature of this book is its strong practice-oriented nature: it contains a wide range of papers dealing with the social, economic and political aspects of climate change, exemplifying the diversity of approaches to climate change management taking place all over the world, in a way never seen before. In addition, the book describes a number of projects and other initiatives happening in Africa, Asia, Europe, Latin American and the Australasian region, providing a profile of the diversity of works taking place today.

Aircraft Design explores fixed winged aircraft design at the conceptual phase of a project. Designing an aircraft is a complex multifaceted process embracing many technical challenges in a multidisciplinary environment. By definition, the topic requires intelligent use of aerodynamic knowledge to configure aircraft geometry suited specifically to the customer's demands. It involves estimating aircraft weight and drag and computing the available thrust from the engine. The methodology shown here includes formal sizing of the aircraft, engine matching, and substantiating performance to comply with the customer's demands and government regulatory standards. Associated topics include safety issues, environmental issues, material choice, structural layout, understanding flight deck, avionics, and systems (for both civilian and military aircraft). Cost estimation and manufacturing considerations are also discussed. The chapters are arranged to optimize understanding of industrial approaches to aircraft design methodology. Example exercises from the author's industrial experience dealing with a typical aircraft design are included.

Identifies more than four hundred private, commercial, and military aircraft, and briefly describes the history and characteristics of each.

France Investment and Business Guide - Strategic and Practical Information Environmental Impact of Aviation and Sustainable Solutions is a compilation of review and research articles in the broad field of aviation and the environment. Over three sections and thirteen chapters, this book covers topics such as aircraft design and materials, combustor modeling, atomization, airport pollution, sonic boom and street noise pollution, emission mitigation strategies, and environmentally friendly contributions from a Russian aviation pioneer. This volume is a useful reference for both researchers and students interested in learning about various aspects of aviation and the environment

The World's Most Powerful Civilian Aircraft profiles many types, from cargo transports and freighters, through flying boats, passenger airliners, and business jets. Featured aircraft include the Ford Trimotor "Tin Goose," one of the great workhorses of early aviation history; the supersonic Tupolev Tu-144 "Charger" and Concorde, Cold War competitors in aviation excellence; and the most popular passenger aircraft of the present, including the Boeing 747 and Airbus A380. Each entry includes a brief description of the model's development and history, a profile view, key features, and specifications. Packed with more than 200 artworks and photographs, this is a colorful guide for the aviation enthusiast. Embraer's re-engined E2 aircraft should prove very successful, given the well-established [1] E-Jet customer base, its strong operating economics, and improved performance. We expect Embraer and Mitsubishi to lead the market for regional jets under 100 seats, with the E175-E2 continuing the popularity of the existing E175-E2 in North America and other markets. The E2 program has seen orders grow twice as fast as the E-Jets, and tellingly, twice as fast as its direct competition. The E2 program has 272 firm orders and 670 commitments. [1] The E190/E195 fleet has reached a Schedule Reliability of 99.52% - all flights departed without a delay or cancellation - the highest ever recorded per Embraer This book discusses the multiple systems that make commercial jet travel safe and convenient. The author starts by tracing the evolution of commercial jets from the Boeing 707 to the double decker Airbus A380. The next 7 chapters discuss flight controls, along with the high lift surfaces (flaps and slats) that are essential to allow high speed, low drag aircraft to take-off and land. The other systems include Engines/Nacelles, Cabin Pressurization and Air Conditioning systems, Landing Gear and brakes, Fuel Systems, Instruments/Sensors, and finally Deicing systems for the wings, nacelles and external air speed sensors. Case studies describe a significant accident that arose from a failure in the various systems described. The final chapter summarizes the past 60 years of jet travel and describe how these systems have created a cheaper, safer mode of travel than any other.

The high cost of aviation fuel has resulted in increased attention by Congress and the Air Force on improving military aircraft fuel efficiency. One action considered is modification of the aircraft's wingtip by installing, for example, winglets to reduce drag. While common on commercial aircraft, such

modifications have been less so on military aircraft. In an attempt to encourage greater Air Force use in this area, Congress, in H. Rept. 109-452, directed the Air Force to provide a report examining the feasibility of modifying its aircraft with winglets. To assist in this effort, the Air Force asked the NRC to evaluate its aircraft inventory and identify those aircraft that may be good candidates for winglet modifications. This report—which considers other wingtip modifications in addition to winglets—presents a review of wingtip modifications; an examination of previous analyses and experience with such modifications; and an assessment of wingtip modifications for various Air Force aircraft and potential investment strategies.

ATR is the current world leader in regional aviation. In order to maintain its leading role in the turboprop market and to expand its customers' portfolio in the United States, the granting of the Extended Twin-Engine Operations Performance Standards (ETOPS) certification by the Federal Aviation Administration (FAA) has been set as a mid-term goal. The market forecast done by ATR anticipates that 250 ageing turboprops will need to be replaced in the US in the coming years. Additionally, from the operational point of view the US airlines would benefit from significant fuel savings and low operating costs thanks to the introduction of ATR aircraft. Consequently, the purpose of this internship is to perform a feasibility study to prove compliance with the ETOPS capability according to the American Authority. In this framework, a comparison between the American and the European regulation has been completed. The methodology undertaken consisted of gathering all the requirements applicable to ETOPS on the FAA regulation and the identification of the equivalent condition on the European regulation. Afterwards, a study on the impact of the differences has been conducted and a proposal of means of compliance for each different FAA requirement is presented. The final deliverable presented to ATR contains a matrix comparing the FAA and the EASA regulations with the whole ETOPS requirements. Finally, a conclusion evaluating the feasibility of the ETOPS validation was done, stating the needs and future steps to proceed to get the FAA approval for ATR ETOPS capability.

This book provides a state-of-the-art overview of the changes and development of the civil international aircraft/aviation industry. It offers a fully up-to-date account of the international developments and structure in the aircraft and aviation industries from a number of perspectives, which include economic, geographical, political and technological points of view. The aircraft industry is characterized by very complex, high technology products produced in relatively small quantities. The high-technology requirements necessitate a high level of R&D. In no other industry is it more of inter-dependence and cross-fertilisation of advanced technology. Consequently, most of the world's large aircraft companies and technology leaders have been located in Europe and North America. During the last few decades many developing countries have tried to build up an internationally competitive aircraft industry. The authors study a number of important issues including the political economy of the aircraft industry, globalization in this industry, innovation, newly industrializing economies and the aircraft industry.

This book also explores regional and large aircraft, transformation of the aviation industry in Central and Eastern Europe, including engines, airlines, airports and airline safety. It will be of great value to students and to researchers seeking information on the aircraft industry and its development in different regions.

Popular Science gives our readers the information and tools to improve their technology and their world. The core belief that Popular Science and our readers share: The future is going to be better, and science and technology are the driving forces that will help make it better.

The Boeing 787 is the new Boeing aircraft. It is currently in its development phase. Designers of this plane is made lot of research for this aircraft should be particularly fuel-efficient through the use of composite materials in the construction of the device and use of new reactors. It should enable airlines to reduce by nearly 20% in fuel consumption compared to aircraft of this size. This aircraft are expected to compete in the world of aircraft types and gain the admiration of the public . The Airbus product line started with the A300, the world's first twin-aisle, twin-engined aircraft. A shorter, re-winged, re-engined variant of the A300 is known as the A310. Building on its success, Airbus launched the A320, particularly notable for being the first commercial jet to utilize a fly-by-wire control system. The A320 has been, and continues to be, a great commercial success. The A318 and A319 are shorter derivatives with some of the latter under construction for the corporate business jet market as Airbus Corporate Jets. A stretched version is known as the A321. The A320 family's primary competitor is the Boeing 737 family. Development of a new manned ultralight FanWing is ongoing and presently planned for a first public flight at Oshkosh 2013. Reaction Engines has announced that is has successfully tested the key pre-cooler component of its revolutionary SABRE engine crucial to the development of its SKYLON spaceplane. The company claims that craft equipped with SABRE engines will be able to fly to any destination on Earth in under 4 hours, or travel directly into space. The McDonnell Douglas (now Boeing) F/A-18 Hornet is a twin-engine supersonic, all-weather carrier-capable multirole fighter jet, designed to dogfight and attack ground targets (F/A for Fighter/Attack). The Lockheed F-117 Nighthawk was a single-seat, twin-engine stealth ground-attack aircraft formerly operated by the United States Air Force (USAF). NASA has been exploring a variety of opti

Fuel cells are expected to play a major role in the future power supply that will transform to renewable, decentralized and fluctuating primary energies. At the same time the share of electric power will continually increase at the expense of thermal and mechanical energy not just in transportation, but also in households. Hydrogen as a perfect fuel for fuel cells and an outstanding and efficient means of bulk storage for renewable energy will spearhead this development together with fuel cells. Moreover, small fuel cells hold great potential for portable devices such as gadgets and medical applications such as pacemakers. This handbook will explore specific fuel cells within and beyond the mainstream development and focuses on materials and production processes for both SOFC and lowtemperature fuel cells, analytics and diagnostics for fuel cells, modeling and simulation as well as balance of plant design and components. As fuel cells are getting increasingly sophisticated and industrially developed the issues of quality assurance and methodology of development are included in this handbook. The contributions to this book come from an international panel of experts from

academia, industry, institutions and government. This handbook is oriented toward people looking for detailed information on specific fuel cell types, their materials, production processes, modeling and analytics. Overview information on the contrary on mainstream fuel cells and applications are provided in the book 'Hydrogen and Fuel Cells', published in 2010.

The gripping story of the biggest trade war in aviation history. In October 2007, the colossal Airbus A380, the largest commercial jet in history, will take to the skies. This gigantic double-decker is the first real competitor to Boeing's iconic 747 Jumbo Jet. Meanwhile, Boeing has thrown its weight behind the smaller 787 Dreamliner, an aircraft whose emphasis is on fuel economy and reduced emissions. The future of commercial air travel is in the balance, and the outcome is difficult to predict.

This leading strategy text presents the complexities of strategic management through up-to-date scholarship and hands-on applications. Highly respected authors Charles Hill, Gareth Jones, and Melissa Schilling integrate cutting-edge research on topics including corporate performance, governance, strategic leadership, technology, and business ethics through both theory and case studies. Based on real-world practices and current thinking in the field, the eleventh edition of STRATEGIC MANAGEMENT features an increased emphasis on the changing global economy and its role in strategic management. The high-quality case study program contains 31 cases covering small, medium, and large companies of varying backgrounds. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

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