BRITAINS AIRCRAFT INDUSTRY pdf

1: Britain acts to protect Â£25bn-a-year aerospace industry - Telegraph

Eurofighter Typhoon, the British aerospace industry has a % share in the production of the Eurofighter Typhoon and a 33% share in the development of the aircraft. The main participants are BAE Systems and Rolls-Royce.

The well-paid jobs, cutting-edge technology and headline-grabbing products are highly prized â€" by Britain, and by other Airbus factories around Europe. High-tech manufacturers such as Dyson have dismissed concerns that extra tariffs and possible delays at borders after Brexit will hinder trade. That may be true for independent businesses but less so for foreign-owned companies that are part of supply chains across the EU, from the car industry to pharmaceuticals, plastics and, crucially, aerospace where politics plays such an important role. Britain has maintained its slice of the Airbus pie as long as it has been a large net contributor to the EU budget. Without that leverage, there must be a question mark over future investment. Paul Everitt, the chief executive of ADS, the trade body for the aerospace, defence, security and space sectors, said: We are currently a big player in the aerospace industry. The group employs 15, people directly in the UK. About 4, of these design the wings for Airbus planes at Filton, Bristol; a further 6, workers build more than 1, wings each year at Broughton. These days, it is responsible for assembling the wings for all Airbus civil aircraft, including the new-generation A XWB extra wide body. The enormous plant receives millions of components each year from other Airbus factories and suppliers around Europe. Once the wings are built, these complex, giant structures are delivered to final assembly lines in various ways, including by road and on the Airbus Beluga super transporter aircraft. Wings for the A are sent by road and sea for final aircraft assembly in Toulouse. At present, there are no restrictions or tariffs on the movement of these parts or on the people who oversee this fiendishly complicated jigsaw. Even before the vote to leave the EU, well-placed sources said there was constant lobbying from the French and Germans to prise wing manufacturing away from Britain. A senior industry source said: They have always argued for that work. The next plane that comes out, I would be very surprised if the UK got much work on it. The numbers will be difficult for the UK [because of Brexit]. I think they will offer what they do in the UK, which is cutting-edge wing design, to other companies for them to manufacture. Worryingly, GKN, an engineering group that supplies the aerospace industry, last month said it would be forced to follow Airbus if it shuffled work from Britain to other sites in Europe. Despite this, insiders reckon the Broughton plant should be secure for another 20 years, because it produces wings for the bestselling short-haul A and the mid-range A aircraft. Another source with knowledge of Airbus said: So the government needs to do what it did for the A and chuck in a big sum of money [to secure work for the next model].

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2: Aerospace industry in the United Kingdom - Wikipedia

The only civil aircraft that remains in production in the UK is the tiny Britten-Norman Islander, which, although technically built in Romania, is the last bastion of a nation that has produced.

The author was captivated by thrilling air displays as a child in the s, and his enthusiastic descriptions made me wish I could have shared this book with my late father, who got his love of fast, airborne metal from roughly contemporary experiences. The British Aviation industry led the world at one stage with some spectacular air craft, but we also had some amazingly bad politicos who would get the most brilliant aircraft up into the skies, only to see it cancelled. The author records all the highs and lows on that Indian summer of British aircraft. All so sadly gone and long forever. Jun 16, Ian Chapman rated it really liked it A book about the post-war decades of the UK aviation industry. The sheer engineering magnificence of some of the aircraft, even a sort of beauty, and the courage of the pilots particularly test pilots, are well portrayed. A management lunch at one of the big companies, and a senior test pilot landing early to fit in with union hours on the shop floor, show the industrial inefficiency of the era also. And I also enjoyed the book simply because I can remember seeing and hearing some of these aircr A book about the post-war decades of the UK aviation industry. And I also enjoyed the book simply because I can remember seeing and hearing some of these aircraft in flight. It may also be an obscure comparison to the Japanese empire of the sun. Perhaps an expanded edition could have some more on civil aircraft, particularly the Vickers Viscount, although the Bristol Britannia is well covered. Our aircraft flew faster, higher and further than those of any other nation: Laced with the laconic reminicences of pilots like the late Bill Waterson, a former RAF Once upon a time, Britain ruled not just the seas but also the skies. It was such a fine program, that I fell victim to the ease of buying books on Amazon with one click, and ordered myself a copy to be sent home t Several weeks ago, while I was in London, on a Sunday night, watching BBC4, I saw this interesting and fascinating program about the British development of the jet engine and its influence from the whole world of aviation and global travel, as well as military applications for defense and offense. It was such a fine program, that I fell victim to the ease of buying books on Amazon with one click, and ordered myself a copy to be sent home to Boise, Idaho. This is a wonderful book, with superb pictures and an excellent text. For the aviation enthusiast, I might consider this a must read book. The pictures alone make the book worthwhile, a highly unusual collection of fascinating airplanes and their evolution into supersonic flight. Having said that, some of the best bits of writing are his recollections of watching these craft at air displays as a kid. I saw Buccaneers and Vulcans at Goodwood in the late 70s, and he brought it all back.

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3: Britain's aerospace sector could be priced out after Brexit | Business | The Guardian

The silhouette of one of the British Army's Apache attack helicopters in the skies over Afghanistan is a reassuring sight for coalition forces on the battlefield. Its ungainly shape projects a.

Send email to admin eh. Yet even beyond its shear size, the aerospace industry was one of the defining industries of the twentieth century. As a socio-political phenomenon, aerospace has inflamed the imaginations of youth around the world, inspired new schools of industrial design, decisively bolstered both the self-image and power of the nation state, and shrunk the effective size of the globe. As an economic phenomenon, aerospace has consumed the major amount of research and development funds across many fields, subsidized innovation in a vast array of component technologies, evoked new forms of production, spurred construction of enormous manufacturing complexes, inspired technology-sensitive managerial techniques, supported dependent regional economies, and justified the deeper incursion of national governments into their economies. No other industry has so persistently and intimately interacted with the bureaucratic apparatus of the nation state. Aerospace technology permeates many other industries â€" travel and tourism, logistics, telecommunications, electronics and computing, advanced materials, civil construction, capital goods manufacture, and defense supply. Here, the aerospace industry is defined by those firms that design and build vehicles that fly through our atmosphere and outer space. In the Wrights secured a contract to make a single aircraft from the U. Army, and also licensed their patents to allow the Astra Company to manufacture aircraft in France. Glenn Curtiss of New York began selling his own aircraft in , prompting many American aircraft hobbyists to turn entrepreneurial. Europeans took a clear early lead in aircraft manufacture. By the outbreak of the Great War in August , French firms had built more than 2, aircraft, German firms had built about 1,, and Britain slightly fewer. American firms had built less than a hundred, most of these one of a kind. Even then aircraft embodied diverse materials at close tolerances, and those who mismanaged the American wartime manufacturing effort failed to realize the need for special facilities and trained workers. American warplanes ultimately arrived too late to have much military impact or to impart much momentum to an industry. When contracts were cancelled with the armistice the industry collapsed, leading to the reconfiguration of every significant aircraft firm. By contrast, seven firms built more than 22, of the horsepower Liberty engines, and their efforts laid the foundation for an efficient and well-concentrated aircraft engine industry â€" led by Wright Aeronautical Company and Curtiss Aeroplane and Motor. Still, the war induced some infrastructure that moved the industry beyond its fragmented roots. National governments funded testing laboratories â€" like the National Advisory Committee for Aeronautics established in May in the United States â€" that also disseminated scientific information of explicit use to industry. Universities began to offer engineering degrees specific to aircraft. American aircraft designers formed a patent pool in July â€" administered by the Aircraft Manufacturers Association â€" whereby all aircraft firms cross-licensed key patents and paid into the pool without fear of infringement suits. The post-war glut of light aircraft, like the Curtiss Jenny trainers in America, allowed anyone who dreamed of flying to become a pilot. Most of the companies that survived the war remained entrepreneurial in spirit, led by designers more interested in advancing the state of the art than in mass production. During the s, aircraft assumed their modern shape. Monoplanes superceded biplanes, stressed-skin cantilevered wings replaced externally braced wings, radial air-cooled engines turned variable pitch propellers, and enclosed fuselages and cowlings gave aircraft their sleek aerodynamic shape. By the mids, metal replaced wood as the material of choice in aircraft construction so new types of component suppliers fed the aircraft manufacturers. Likewise, the customers of aircraft grew more sophisticated in matching designs to their needs. Militaries formed air arms specifically to exploit this new technology, which became dedicated procurers of aircrafts. Air transport companies began flying passengers in the s, though all those airlines were kept afloat by government airmail contracts. European nations developed airmail routes around their colonies â€" served by flag-carriers like the British Overseas Airways Corporation, Lufthansa, and Aeropostale. The United States was the only country with a large indigenous airmail system, and it drove the structure of the industry during the s. The Kelly Air Mail Act of gave airmail business to hundreds of small

pilot-owned firms that hopped from airport and airport. Gradually, these operations were consolidated into larger airlines. These holding companies struggled for profitability following the stock market crash of , and were ultimately undone in through legislation that split manufacturers and airlines â€" a separation that continued thereafter. The United States was also the only country large enough for air travel to challenge rail travel, and in the s airlines competed for passengers by forging alliances with aircraft manufacturers. The Boeing airliner, based on its B-9 bomber design, marked the start of American dominance in transport aircraft. The Douglas DC-3, introduced in , gave airlines their first shot at solvency by carrying people rather than mail. Many advances in aircraft design during the s addressed the comfort, efficiency and safety of air travel â€" cabin pressurization, retractable landing gear, better instrumentation and better navigational devices around airports. Britain and Germany produced the best large bombers at the start of the s, though by the start of the World War II American designs were better. American firms, by contrast though, were producing very few of them. During the s, the European states had begun ramping up production of military aircraft, training pilots to fly them, and building airfields to host them. Once the war began, though, factories were bombed and supply lines cut off. As it became less likely they would overwhelm their enemies with vast fleets of aircraft, German and British aircraft firms instead invested in research and engineering to create better aircraft. Under the exigency of war, Europeans developed the strategic missile, the jet engine, better radar, all-weather navigation aids, and more nimble fighters. The German Messerschmitt fighter aircraft â€" which combined a strong turbine engine with the innovation of swept wings â€" approached the speed of sound. The Europeans also innovated in tactics and logistics to use fewer aircraft more effectively. The discipline of operations research grew out of British needs to use patrol aircraft more efficiently. Though American designers also proved innovative in the crucible of war, American firms clearly triumphed in mass production. In the six-year period through , American firms built , military aircraft, including 95, in alone. In the previous six-year period, American firms built only 19, aircraft, most of those civil. A vast array of firms â€" especially automobile makers â€" fed this rapid escalation of production. Engineers disaggregated aircraft into smaller parts to parcel out to subcontractors, managed distributed manufacturing, and devised the concept of the learning curve to forecast when cost reductions kicked in. By the end of the war, Americans firmly believed in the doctrine of air power. They invested in their belief, and for the next half-century Americans would set the agenda for the aircraft industry around the world. Mass production, though, slipped from that agenda. On VJ Day the American military cancelled all orders for aircraft, and assembly lines ground to a halt. Instead, research ruled the industry. The Cold War The Berlin airlift of marked the start of the Cold War between the United States and the Soviet Union, a symbolic conflict in which perceptions of aerial might played a key role. Once they divested themselves of their surplus plants, American aircraft firms rushed to incorporate into their designs the technological advances of World War II. The preeminent symbol of these efforts, and of the nature of the Cold War, was the massive Boeing B long-range strategic bomber, with six engines and swept wings. Boeing built 2, Bs, following its first flight in December , and emerged as the dominant builder of strategic bombers and large airliners â€" like the B and the Also symbolizing this conflict was the needle-thin rocket-powered Bell X-1 which, in December , became the first aircraft to break the sound barrier. The X-1 was the first in the X-series of experimental aircraft â€" sleek, specially built research aircraft that jousted with Soviet aircraft to set speed and altitude records. More importantly, the aerospace industry made new types of vehicles to join the half-century old propeller-driven airplane in the skies. New technologies prompted a massive restructuring of the industry. Established airframe firms shifted from manufacturing to research, while the military channeled funds to technology-specific startup firms. For example, Sikorsky, Hiller and Bell quickly dominated the market for new type of airframe known as a helicopter. Electronics specialists like Raytheon, Sperry, and Hughes became prime contractors for the new guided missiles, while airframe manufacturers subcontracted to them. Turbojet engines were the most disruptive new technology. Aircraft firms also struggled to modify their airframes for the greater speeds and altitudes possible with jet engines. Those firms that failed were superceded by those that succeeded â€" notably McDonnell Aircraft and Lockheed. Intercontinental ballistic missile programs, started in , fueled the micro-level restructuring of the industry. Because of the complexity of the designs, the reliability required of each part, and the hurry in which the missiles had to be designed and

built, new management models emerged from the military and aerospace firms. The ICBM efforts introduced, to all high-tech industries worldwide, the ideal and techniques of program management and systems engineering. When Europeans fretted over The American Challenge in the s, they meant not so much American technology as management methods like these that generated technical innovation so relentlessly. Young men flocked to aerospace because it was cool and cutting-edge. Also revolutionary were the spacecraft and the rockets that lifted them into orbit. Aircraft Industries Association changed its name to the Aerospace Industries Association of America, so the public might think it natural that the firms that built aircraft should also build vehicles to travel through air-less space. Furthermore, the laboratories of the National Advisory Committee for Aeronautics formed the kernel of the National Aeronautics and Space Administration, then bent the efforts of academic aeronautics toward hypersonics and space travel. NASA built enormous space ports in Florida and Texas, enhanced its arsenal of research laboratories, bolstered its own network of hardware contractors, opened up new areas of material science, and pioneered new methods of reliability testing. Following the success of Apollo, in the s NASA invested ahead of demand to create the space shuttle for regular access to space, then struggled to find ways to industrialize space. Program management and systems engineering were applied to military aircraft in the s, as the Defense Department took a more active role in telling the industry what to make and how to make it. Because of a uniformity in contracting rules, this was one of the few epochs in which the aerospace industry approached monopsony â€" dominated by a single customer. This systems engineering mentality drove greater design costs up-front. Aircraft grew more expensive, so the fewer produced were expected to have longer lives with more frequent remanufacturing. To get more diverse types of engineering talent involved in design, the Defense Department insisted that airframe firms â€" former competitors â€" team to win aircraft contracts. Key members in these teams were avionics firms, as airframes became little more than platforms to take electronic equipment aloft. Fewer contracts meant that Congress, voicing concern over the defense industrial base, made more procurement decisions than experts in the military or NASA. Meanwhile, profits among American aerospace firms remained high compared with almost any other industry. Amidst all the other shocks to the American economy in the s, in the United States would record its last trade surplus of the twentieth century. While other American industries lost ground to European or Japanese competitors, American aircraft have remained in consistent demand. Since the mids, aerospace products have comprised between six and ten percent of all American merchandise exports. Yet increasingly, the aerospace industry was seen as a cause of American economic failure. So much federal research and development funding filtering through the aerospace firms distorted innovation so that American consumer products suffered. Conglomerates formed in the late s around aerospace firms â€" like LTV and Litton â€" suggested that their core competence was not aerospace systems but the ability to read government contracting trends. Aerospace firms that were not consolidated in the mids, after aircraft lost in Vietnam were replaced, pursued diversification strong in the belief that the engineering skill that made American aircraft so dominant could also make world-class busses and microwave ovens. Waste, fraud and abuse dominated discussion of military aerospace. Persistent cost overruns and delays suggested no one in the industry took efficiency seriously. Matters got worse in the s.

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4: Cold War British Aviation Industry

It wasn't long before he founded the A.V. Roe Aircraft Co. in (it later became Avro, maker of the World War II Lancaster bomber). Roe's most popular early model, the , sold more than 8,

See Article History Alternative Title: The term aerospace is derived from the words aeronautics and spaceflight. The aerospace industry is engaged in the research, development, and manufacture of flight vehicles, including unpowered gliders and sailplanes see gliding , lighter-than-air craft see balloon ; airship , heavier-than-air craft both fixed-wing and rotary-wing; see airplane ; military aircraft , missiles see rocket and missile system , space launch vehicles , and spacecraft manned and unmanned. Also included among its concerns are major flight-vehicle subsystems such as propulsion and avionics aviation electronics and key support systems necessary for the testing, operation, and maintenance of flight vehicles. In addition, the industry is engaged in the fabrication of nonaerospace products and systems that make use of aerospace technology. Character of the industry Technological progress is the basis for competitiveness and advancement in the aerospace industry. The industry is, as a result, a world leader in advancing science and technology. Aerospace systems have a very high value per unit weight and are among the most complex, as measured by the number of components in finished products. Consequently, it is economically and politically prestigious for a country to possess an aerospace industry. For the major aerospace countries, their own military establishments and, in some cases, foreign militaries constitute the largest customers. Most general aviation primarily private, business, and nonairline commercial aircraft are sold in the United States , with Europe becoming a growing marketplace and special-use markets developing in the Middle East and Latin America. While some companies are dedicated solely to aerospace, others are more diversified. Although their own government is the major procurer of military systems, American firms are also the dominant supplier of both military and civil aerospace hardware to the rest of the world. Today, non-American companies seek a larger portion of the global market and challenge American dominance. Russia retains the second largest aerospace industry in the world. After the breakup of the Soviet Union in , Russia acquired most of the highly competent Soviet design bureaus. Partnerships with American and European firms were initiated, and Russia entered Western markets for the first time. Through the success of cooperative programs such as the Airbus line of commercial transports and the Ariane family of space launch vehicles, the European industry has gained considerable experience in the development and manufacture of almost the entire range of aerospace systems. In the Asiaâ€"Pacific Rim region, Japan has the leading aerospace industry, butâ€"compared with the United States, western Europe , and Russiaâ€"its capabilities are still limited. Japanese companies also perform as key subcontractors to firms in the United States and Europe. China has built aircraft of Soviet design since the early s, with indigenous design efforts generally confined to adapting Soviet technology. It is in the process of forging partnerships with a number of foreign ventures in both aircraft and spacecraft systems. The country also has developed space launchers, small satellites, and craft intended for manned spaceflight. The interests of the U. The AIA provides a forum for technical and policy issues concerning the industry and serves as a lobbying agent for the common interests of its members. In addition, Europe has several organizations at the national level. The worldwide reduction in acquisitions of aerospace defense systems after the end of the Cold War in the early s has prompted many manufacturers in the United States, Europe, and Russia to shift toward a more balanced mix of military and civil products. Some firms have adapted military aerospace hardware for civilian use or have sought nonaerospace markets for their expertise. To remain profitable, many companies have engaged in an almost continuous process of consolidations, mergers, divestitures, and international joint ventures and partnerships. Nevertheless, they all have been affected to some degree by the following developments: These are the factors determining the size and scope of the aerospace industry today. History The first decade The origin of the aerospace industry dates to when Wilbur and Orville Wright demonstrated an airplane capable of powered, sustained flight see Wright flyer of Their breakthrough innovation was a pilot-operated warping twisting of the wings to provide attitude control and to make turns. Patents with broad claims for their wing-warping technology were granted in Europe in and

in the United States in The French government was the first to negotiate with the Wright brothers for the sale of their patents for 1,, francs, with a deposit of 25, francs for the option, which was later forfeited. The first recorded business transaction of the aerospace industry occurred in May when J. The first sale of a military aircraft was made on February 8, , when the Wright brothers contracted to provide one Model A flyer see Wright military flyer of to the Signal Corps of the U. The following year the aircraft successfully completed qualifying trials for completion of the sale, which included the bonus. Wright and Lieutenant Frank Purdy Lahm are catapulted down a rail and launched into the air. In the same year the American aviation pioneer Glenn Curtiss joined the list of airplane producers and made the first commercial sale of an aircraft in the United States. The company developed extensive financial interests in aviation during those early years but, counter to the recommendations of its financiers, did not establish a tight monopoly. By , pilots were flying in competitive races over long distances between European cities, and this provided enormous incentives for companies to produce faster and more reliable aircraft. French aircraft emerged as the most advanced and for a time were superior to those of competing countries. All planes built in this early period were similar in constructionâ€”wings and fuselage frames were made of wood usually spruce or fir and covered with a coated fabric. World War I France and Germany , both aware of the military potential of aircraft, began relatively large-scale manufacturing around By the outbreak of World War I in , France had built a total of 2, airplanes, of which 1, were military; Germany ranked second with about 1, military aircraft; and Britain a distant third with The United States lost its lead in aeronautics as the combined civil and military market for American airplanes was insufficient to permit the industry to grow significantly; only 49 aircraft were produced in In addition, patent rights remained a major difficulty for the industry. Recognizing a national need to advance aircraft technology independently, the U. French industry, assisted by rapidly expanding facilities in Great Britain , carried the production load of the Allies during the war. When the United States entered the war in , however, the French government requested that it furnish more than 4, planes for active service by early To meet the demand, including that of the U. Because American aircraft manufacturers and suppliers had no experience in large-scale production, the government enlisted automobile manufacturers to mass-produce engines and airplanes. For its own use the U. By the end of the war 4, DH-4s had been built in the United States, 1, of which were shipped to Europe. Although American production was too late to matter militarily, by the Armistice American factories were capable of producing 21, planes per year. Worldwide , aircraft were produced from to In the United States the greatest success of wartime production was the very advanced cylinder, water-cooled, horsepower Liberty engine, developed for the DH Within days most contracts were canceled. The wartime-oriented industry was overcapitalized, overstocked with raw materials, overorganized, and overmanned for peacetime needs. In Europe, national governments realized that maintaining a strong air force in case of war required an aircraft industry and, therefore, subsidized commercial air transportation. Military aircraft were adapted for passengers, and trainers and fighters were used for mail service. With the exception of providing subsidies for air mail , the U. In the s Europeans and Americans competed in racing, which led to many refinements in design and performance. Notable was the general conversion from biplanes to the more streamlined monoplanes and the move to all-metal airframes , which took advantage of the new lightweight aluminum alloy Duralumin. The airframe revolution had actually begun during the war, in , with the all-metal Junkers J-1 monoplane. The most successful postwar transport-aircraft designs were those of the Germans Hugo Junkers and Claudius Dornier and the Dutch Anthony Fokker ; these aircraft featured cantilevered wings, which eliminated external struts or braces. German Junkers J-1 monoplane fighter prototype, Industry sales had more than tripled by the time the stock market crashed in , when scores of aircraft companies, especially smaller new entrants, were forced out of business. This approach eliminated many internal trusses and braces within the wing and fuselage , contributed to a lighter and more efficient airframe design, and changed construction techniques. European manufacturers were responsible for many technical innovations , but, owing to the fierce competition among airlines in the United States , American aircraft producers incorporated them faster and more successfully in their products. The majority of labour was associated with woodworking and sewing of fabric for the fuselage , wings, and empennageâ€”skilled labour using limited tooling. The few machined parts and even components such as seatsâ€”devised by the

airplane designersâ€”were fabricated by specialized groups within factories. In the s, as aircraft became more sophisticated, the demand increased for machined parts, castings, forgings, and extrusions, which all required different machinery and different skills. The result was a major vertical expansion of aircraft businessesâ€”i. This took the form of either expanded internal plant capabilities or the development of a group of suppliers from whom specialized components such as instruments, radios , and passenger equipment were procured. The latter group became an intrinsic part of the industry, much as engine manufacturers had earlier. Although the aircraft was sought by most American carriers, Boeing restricted sales of s until the order for its sister company, United Airlines , had been filled. Passenger service became consistently profitable for airlines for the first time in with the introduction of the DC-3 , which was sold to almost all airlines in the United States and became the standard in the world including the Soviet Union and Japan. Douglas DC-3 passenger aircraft, which first flew in The legal separation of aircraft manufacturing and airline firms in the United States had its derivative effect on the aircraft industry elsewhere. For example, to compete with American manufacturers, particularly in the American market, European plane makers had to convince their customers that they had no reason to favour indigenous airlines with better schedules or contract terms. In addition, as European airlines became competitive in international travel, they began to be subsidized by governments , which would have found the additional obligation of financing affiliated aircraft producers too burdensome. Boeing testifying at a U. Senate hearing in February After the Soviet Union recognized the need for a broadly based air force. Initially planes were imported from Europe and the United States, but the need for aircraft that could operate under extreme weather conditions and from primitive airfields led to development of the indigenous Stormovik fighters about Although rugged, they did not match the German and Italian airplanes that they met during the Spanish Civil War. Planes developed by Boeing, Martin, the Sikorsky division of United Aircraft Corporation, and Short Brothers carried up to 74 passengers across transoceanic routes. In the late ls, however, the development of a new generation of long-range, pressurized-cabin, four-engine, land-based airliners negated the need for seaworthy planes. The aircraft industry expanded to include autogiros and eventually helicopters in the s. With an order from the U. An experimental version of the aircraft first flew in In an electromechanical flight simulator was built by Edwin A. Navy placed the first large order in for the Link Trainer , which, with aircraft-specific changes, became the standard for highly sophisticated simulators. In â€”22 the constraints were eased, and a productive light-aircraft industry began to develop. When restrictions were basically abolished in , a number of new ventures were formed; those which survived included such companies as Arado, Dornier, Focke-Wulf, Junkers, and Heinkel. When Adolf Hitler came to power in , funds were channeled into the development of the German aircraft industry through these companies. Compared with the period â€”31, when a total of 84 million Reichsmarks were spent, funding soared to million marks in alone.

BRITAINS AIRCRAFT INDUSTRY pdf

5: Britainâ€™s Aerospace Sector - Video Dailymotion

Initial attempts made by the Attlee Government to restrict orders to selcted design teams were subsumed by the outbreak of the Korean War. Re-armament meant that by , the number of employees in the industry had risen to , and only two mergers had occured - General Aircraft and Blackburn, and Cierva and Saunders-Roe (into the Saunders-Roe helicopter division).

By the early s, this number had been reduced significantly through takeovers, mergers, and bankruptcies. At the end of , BAe employed about 63, persons in its aircraft group. BAe exports the mqjority of its products, with about 64 percent of its sales achieved overseas. The years after were a time of triumph and and then tragedy for the British aviation industry. Various designs showed promise, but were underdeveloped by cash-strapped companies and a government without the wherewithal to produce them. Britain emerged from the war with a massive aircraft industry, and might have been a propitious time to rationalize the industry. However, in the absence of a long-term strategy, the political pain of doing so and putting many famous names out of business proved too great. When such rationalization became inevitable in , Britain had already lost its leadership in aviation technology, and the program cancellations and corporate mergers served only to demoralize the workforce. A world leader in jet aircraft technology in , Britain needed only a little more than a decade to lose its lead decisively in the development and production of both military and commercial jet aircraft. Why was the DH. Why did the Hawker Hunter take so long to enter operational service, allowing the North American F to dominate world export sales? Why did the de Havilland Comet airliner take so long to develop and deliver, even before the disastrous accidents that forced its withdrawal from commercial service, leaving the field to the Boeing ? The real problem was a lack of systems engineering expertise below top management. As a result, Britain could develop cutting-edge prototypes but could not manufacture large quantities of high-quality aircraft in a timely and economical manner. This problem prevailed not only in the aircraft industry but also in British manufacturing as a whole, contributing to the decline in national competitiveness from the s onward. After World War II, aircraft manufacturers began the development of jet airliners. But the flights were stopped after several Comets exploded in the air. De Havilland engineers then designed an improved Comet. The strongest pressure was brought to bear on the firms, and as a result by there were two big consortia of the Hawker-Siddeley Group and the British Aircraft Corporation, each incorporating many formerly independent firms and a large number of factories. This reflected the growing cost of major civil and military aircraft programs, which were becoming too expensive for the relatively small aviation companies of prior decades. Whatever misgivings some may have had, there was the hope that these groupings would lead to greater efficiency and thus to a greater volume of business, and, of course, employment. Politicians had seen the tragedies of Squires Gate, the Isle of Wight and Broughton, areas whose existence to a large extent had depended on the aircraft industry, and we hoped that further similar misfortunes might be avoided elsewhere. However, the firm of Handley Page elected to remain independent, and it soon felt the consequences. For a time, optimistic statements by the directors of various concerns appeared to justify this hope. By it was the intention of the Government to cut down the aircraft industry. The term refers to cooperative manufacturing programs in which firms from different nations share research, development, and production costs.

BRITAINS AIRCRAFT INDUSTRY pdf

6: British Aircraft Corporation - Wikipedia

Cold War British Aviation Industry. After World War II, the United Kingdom's aeronautics industry comprised about 70 aircraft manufacturers. By the early s, this number had been reduced.

First flight of EH First flight of Airbus A wings designed and built in the UK Beginning of development of BAE Replica First flight of Eurofighter Typhoon First flight of Bombardier CRJ centre fuselage and nacelles manufactured in Belfast to present[edit] First flight of Bombardier Challenger centre fuselage manufactured in Belfast First flight of Nimrod MRA4 Introduction of Bombardier Challenger centre fuselage manufactured in Belfast First flight of US This work employs about people at the plant in North Wales. Bombardier Aerospace facilities in Northern Ireland play an important role in nearly every Bombardier aircraft programme. The most notable are the production of the fuselage for the Learjet 40 and Learjet 45 , the production of the centre fuselage for the Challenger and other programmes. Its first flight is planned for The UK had 40, jobs involved in the construction of the Eurofighter Typhoon, across suppliers. Comparatively, the next largest contributor to the Eurofighter Typhoon, Germany, had 25, jobs involved and suppliers. BAE Systems designed and produces the aft fuselage, fuel system, horizontal and vertical stabilizers among other things. Due to traditional Airbus roles, Airbus UK developed the wings for the AM and outsourced some of the manufacturing; however, the final assembly takes place in Filton. It first flew in and was successfully deployed to Afghanistan on trials in An armed version, named BAE Fury, was revealed in It is expected to enter service by Most of these have been developed in collaboration with Italian companies. It is based on the Hermes France has expressed interest in buying the system and an armed version has also been pitched to Poland. It made its first flight in As of August , the AW has been exported to 11 countries. It is manufactured by AgustaWestland in Yeovil, England. It first flew in and entered operational service in with the British Army. It has been exported to South Korea and the Philippines. AgustaWestland Apache , a licence-built version of the American AHD Apache Longbow featuring several unique modifications, including Rolls-Royce Turbomeca engines, a new electronic defensive aids suite and a folding rotor blade mechanism.

7: Empire of the Clouds: When Britain's Aircraft Ruled the World by James Hamilton-Paterson

As the cost of developing combat aircraft rises, working in partnership with others makes sense to share risks and costs but it raises the prospect of "hollowing out" Britain's defence industry.

8: Britain confirms talks with Boeing over potential $B Wedgetail aircraft buy

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