RNI REGD.: DELENG/2015/66174

₹ 150

Aviation World

VOLUME 06 ISSUE 03 ; MARCH-APRIL 2021

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NEW INDIA POLICY

AERO INDIA 2021
EXCLUSIVE FEATURE

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HOLDING AT 36000 FEET

MOCA: ROLES &
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IN THIS ISSUE

Aviation World

MARCH-APRIL 2021
VOLUME 06 ISSUE 03

NO. OF PAGES: 48 (INCLUDING COVER)

Aviation World
VOLUME 06 ISSUE 03
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PRINTED AT
Galaxy Offset (India) Pvt. Ltd.
B-83, Naraina Industrial Area,
Phase-II, New Delhi-110028

EDITORIAL OFFICE
WZ-43D/5, 2nd Floor,
Possangipur, Janakpuri,
New Delhi-110058, India
Tel. : +91-11-43724384
E: editor@aviationworld.in
www.aviationworld.in

REGISTERED ADDRESS
Q-23, Jangpura Extn.
New Delhi-110014, India

Aviation World is owned, printed and published by Girish Chandra Pandey from Q-23, Jangpura Extn., New Delhi-110014 and printed at Galaxy offset (India) Pvt. Ltd. B-83, Naraina industrial Area, Phase-II, New Delhi-110028.

FOREWORD

Dear Reader's

I am pleased to present you another edition of Aviation World Magazine which is full of informative and interesting content.

To begin with, we have featured cover story on the legendry King Air 260 and 360 turboprops in a very elaborative way to brief and communicate its customers, passengers and pilots in India details about the latest upgrades and the end benefits of the aircraft features.

We have also dwelled upon on the airport privatization issue in details written by Gr. Capt. (Retd.) AK Sachdev, which highlights some important facts about the entire process. Revenue generation at the airport is also one of the biggest challenges worldwide. Looking into this aspect a very elaborative piece is written by Prof (Dr.) Dewakar Goel highlighting "maximizing non-aeronautical revenue" which most of the airports are now looking upon to enhance their commercial earning.

There has been mixed reaction on the Union Budget especially for the aviation and defence sector. We have featured two articles on this topic. The first one highlights the government press release and our team has incorporated views of senior industry leaders who more or less support the offerings made by the government. The other one, written by a senior aviation consultant talks about the missing links in the current announcement made by the FM. Well, we live it to our readers to understand and see the benefits ahead.

In this edition, we have featured another interesting content of role of Aluminium alloys in the aerospace sector. The article is written by Mr. Deepak Mathur, who is Vice President - Sales and Marketing at Jindal Aluminium Ltd. This article briefs about the past, present and future scenario of aluminium in the aerospace sector.

Year 2020 has been challenging for the entire sector worldwide and aviation is one of its biggest sufferers. Ministry of Civil Aviation, GoI issued an elaborative note on how this sector played a key role in revival of the social and economic situation. The revitalising role of MoCA helped in facilitating medical support to people even in the remotest part of the country has been applauded worldwide.

There are many more interesting contents as airport development, Aero India feature, latest news from India and international, travel trade, etc being published in this edition, which certainly makes it a interesting edition.

We hope you all will appreciate the same.

Do share your feedback at: editor@aviationworld.in

Happy Reading!

Vishal Kashyap
Managing Editor

INNOVATIVE SOLUTIONS FOR AIRPORT PROFESSIONALS

Transoft Solutions offers products and services for the aviation industry, tailored for airport planners, engineers, architects and operators.

"Transoft Solutions range of Aviation software is used to plan, simulate and optimize airports around the world. Our software solutions stretch from terminal to airspace, from CAD-based design and planning solutions to modeling and fast-time simulation tools", Ben Van Leest, Senior Vice President of Transoft Solutions Aviation begins.

PASSENGER TERMINAL SIMULATION

Transoft Solutions comprehensive and powerful terminal simulation tool, ArcPORT, offers advanced features for modeling, simulating and evaluating operations, efficiencies and capacity of entire terminals or isolated processes. "ArcPORT simulates the flow of passengers through the airport terminal and allows an accurate assessment of the level of service and other key performance indicators at the various facilities, with nice graphics and animations to present results to stakeholders", Van Leest explains.

AIRSIDE PLANNING, DESIGN AND OPERATIONS

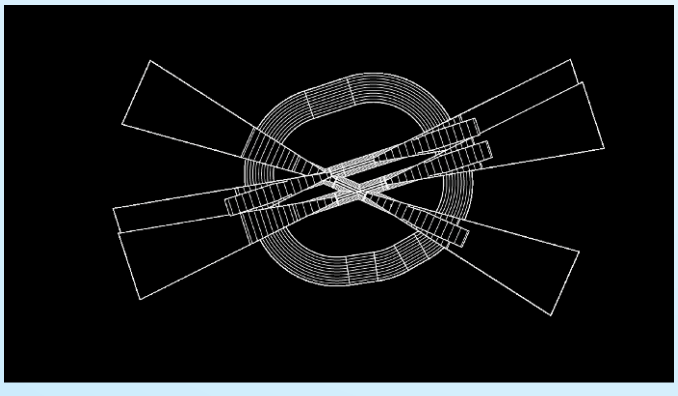
Analyzing aircraft and support vehicle movements, planning aircraft stands and undertaking safety clearance studies are all important tasks faced by airport planners. AviPLAN is empowering aviation planners worldwide to perform these tasks and more, with its unique feature-set and extensive 2D and 3D object library with 550+ aircraft. "AviPLAN enables airport planners to plan complex parking stands in an unrivalled level of detail, undertake safety clearance studies, analyze jet blast impact, simulate aircraft and pushback maneuvers – and visualize it all in 2D or 3D."

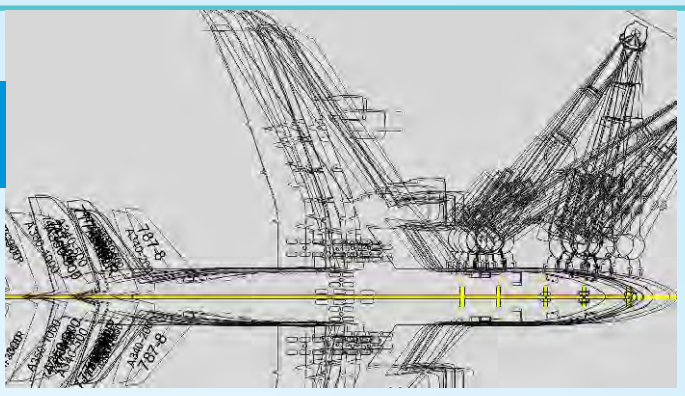
"A recent addition to our airside solutions is AeroSTRIPE", Van Leest continues. "AeroSTRIPE is a tool which assists planners with the marking design for runways, taxiways and aprons with its intelligent CAD based functionality and extensive library of pre-drawn markings and symbols that are easy to edit."

Aviation professionals looking for aircraft specifications can access the electronic database Aircraft Data Viewer as a single reliable source with data relevant for airport planning and operations.

OBSTACLE CLEARANCE COMPLIANCE

Protecting the departure and approach paths of an airport is a high priority task, something that obstacle limitation compliance tool SkySAFE assists planners and operators with. "SkySAFE





allows the creation of obstacle limitation surfaces, analysis of obstacle and terrain impact and display the result in 2D and 3D, while using built-in regulatory standards from ICAO, FAA, EASA and a number of other country specific regulations."

AIRPORT AND AIRSPACE MODELING, SIMULATION AND DECISION SUPPORT

Unique rule-based gate-to-gate fast time air traffic complexity modeling, simulation and assessment software, AirTOP, is used by major ANSPs, airport authorities, airlines, research labs and consultancies globally. It features a powerful GUI, with integrated maps and full GIS capabilities. "With AirTOP, users can assess air traffic and airport complexity using advanced modeling and fast-

time simulation and study alternatives to improve the capacity of the airspace and airport. AirTOPWIZer provides operational decision support by producing detailed, up-to-the-minute forecasts of air traffic demand, traffic complexity and controller workload with the option to evaluate "what-if" scenarios to optimize operations in the coming hours."

SOLUTIONS FROM TERMINAL TO AIRSPACE

Whether a project involves improving departure check-in processes, optimizing aircraft parking stands or operations, designing new ground markings, analyzing runway capacity, preparing obstacle limitation reports, refining terminal and airside procedures, modeling en-route traffic or evaluating air traffic complexity in real time, Transoft Solutions has a solution to successfully complete the task.

"Our mission is to provide software that helps creating and maintaining a safe and efficient airport and airspace environment. We continuously work on improvements and additions for our product portfolio and this year will bring some exciting news. Let's hope it will be received by an industry that is recovering and moving ahead with renewed confidence", Van Leest concludes. ■ ■ ■

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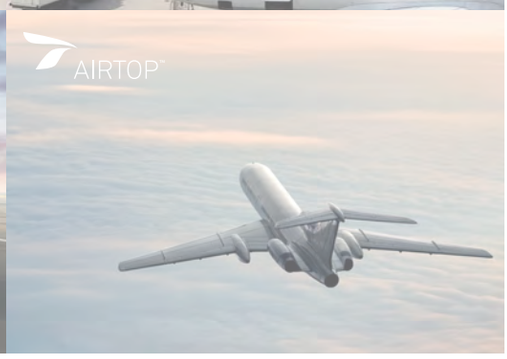

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- Optimizing aircraft parking stands
- Designing new ground markings
- Analyzing runway capacity
- Preparing obstacle limitation reports
- Modeling en-route traffic
- Refining terminal airspace procedures
- Evaluating air traffic complexity in real time

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FIRST FLIGHT TO BAREILLY FLAGGED OFF BY ALLIANCE AIR

In order to enhance the regional connectivity, Ministry of Civil Aviation and Airports Authority of India has been adding new airports on regular basis. This time, it was turn for the newly upgraded Trishul Military Airbase, Bareilly Airport in Uttar Pradesh. Taking a leap ahead, Alliance Air started new flight under UDAN from Delhi to Bareilly on 8th March on the occasion of International Women's Day with all women crew on board. At the inauguration, Minister of Civil Aviation, Hardeep Singh Puri, Santosh Gangwar, MoS, I/C, Labour & Employment and Member of Parliament, Bareilly were present at the Delhi Airport.

The Bareilly airport has been upgraded for commercial flight operations under the RCS and it marked the commencement of the 56th airport under the UDAN scheme and operationalization of the 8th airport of Uttar Pradesh after Lucknow, Varanasi, Gorakhpur, Kanpur, Hindon, Agra and Prayagraj.

Trishul Military Airbase, Bareilly belongs to the Indian Air Force and the land was handed over to the Airport Authority of India for construction of the interim civil aviation operations. The Government of India sanctioned Rs. 88 crores under the UDAN scheme for the development of the interim civil aviation operations. The

upgradation was undertaken by the AAI with a cost of Rs. 65 crores.Alliance Air was awarded the Delhi - Bareilly route under the UDAN-4 bidding process last year. The airline will be deploying its ATR 72 600 aircraft having a seating capacity of 70 seats on this route.

INDIAN AVIATION ACADEMY TO IMPART QUALITY EDUCATION TO BUDDING PILOTS

To impart quality education to budding pilots and prepare them for regulatory examination, Indian Aviation Academy, New Delhi –a joint training academy of Airports Authority of India (AAI), Directorate General of Civil Aviation (DGCA) and Bureau of Civil Aviation Security (BCAS),signed a Memorandum of Understanding with Indira Gandhi Rastriya Udaan Academy, Fursatganj, Amethi (U.P.)

Amber Dubey, Joint Secretary, MoCA was the chief guest of MoU signing ceremony.

The MoU was signed by Hareendranathan E P, Executive Director, IAA and Krishnendu Gupta, Director, IGRUA in presence of Shri Manoj Chansoria, GM (Training), IAA and other senior officials of both the institutions.

The MoU will facilitate offering innovative, quality courses jointly by both institutions. It will also contribute in fostering a robust, sustained aviation ecosystem.

CSMIA'S T1 TO COMMENCE DOMESTIC OPERATIONS ON MARCH 10 WITH 102 FLIGHTS

Chhatrapati Shivaji Maharaj International Airport (CSMIA) is all set to resume its Terminal 1 (T1) for domestic flight operations with effect from midnight, March 10. Catering to 5 domestic carriers, the terminal will witness 102 flight movements across 27 destinations on day 1 of its revival. The resumption of services via T1 will help maintain social distancing measures, uphold passenger safety, and ensure a seamless transit.

After closing operations of Terminal 1 in March 2020 due to the pandemic, CSMIA's T1 will resume operations after almost a year with a total of 51 flights at departure and 51 at arrivals. The terminal will cater to all domestic flight operations of Go Air, Star Air, Air Asia and Trujet. Furthermore, select flights of IndiGo, with subset series 6E 5500 – 6E 5900,will operate to and from T1 whilethe rest will continue to operate from Terminal 2.

The airport will have 38 check-in counters operational across the 5 domestic carriers to avoid crowding. CSMIA has also placed 8 Common Use Self Service (CUSS) kiosks on the curbside of the terminal to enable passengers to complete their check-in process without direct interaction with airport personnel; passengers can use the kiosks to print their boarding pass and generate their baggage tag before proceeding for security check. The airport will also be resuming its outlet and lounge services while adhering to all necessary safety and hygiene measures in order to offer its unique retail and F&B experience for the convenience of the passengers.

CSMIA's T1 will host 8 registration desks and 6 testing booths where passengers can opt to undergo the RT-PCR test at the airport for a minimal cost of INR 850.Adhering to the protocols laid down by governmental and regulatory bodies, a dedicated room has also been identified for the isolation of any suspected symptomatic passenger before transferring them to the designated facility.

24 ROUTES IDENTIFIED IN ASSAM UNDER THE 1ST PHASE OF UDAN 4.0

Airports Authority of India has identified 24 routes in Assam under the 1st phase of UDAN 4.0. The Selected Airline Operators (SAOs) under UDAN are obligated to commence RCS flight operations on a RCS-route within a period of six months from the issuance of Letter of Award or within two months from the readiness of airport, whichever is later, unless any extension is granted by the Implementing Agency.Broad salient features of the UDAN scheme are mentioned below:

i) Demand driven

ii) Affordability of airfare

iii) Viability Gap Funding (VGF) to Selected Airline Operators (SAOs)

iv) Minimum performance level of UDAN flights by the SAOs

v) Exclusivity of operation on UDAN routes.

vi) Focus on priority areas i.e NER, Hilly Sates and Islands.

Viability Gap Funding is provided to the Selected Airline Operators (SAOs) for operating UDAN flights under the scheme. Airports Authority of India, the implementing agency has disbursed Rs. 79,60,680/- to SAO for operating UDAN flights in Assam so far. AAI has identified following UDAN airports/heliports/water aerodromes for operation of UDAN flights in Assam:

AIRPORTS:

i. Jorhat ii. Lilabari iii. Tezpur iv. Rupsi

HELIPORTS:

i. Nagaon ii. Misa iii.Geleki

WATER AERODROME:

i. Guwahati River Front ii. Umrangso Reservoir

UNIVERSITY OF BIRMINGHAM TEAMS UP WITH ARAI ON TRANSPORT RESEARCH

University of Birmingham and The Automotive Research Association of India (ARAI) based in Pune, India, have signed a Memorandum of Understanding (MoU) agreeing to identify joint research interests in the fields of air quality management, alternative fuels, power train and electric vehicle technology.

University of Birmingham's engineering experts will work with ARAI to develop and deliver hi-tech and environment-friendly vehicle systems that will improve transport for people across in India.The partnership will also see British and Indian air pollution experts working together to create a blueprint to tackle the challenge of particulate emissions in India – looking to develop and deliver solutions identified in the plan.The partners also plan to support the development of education programmes that will help produce future transport leaders and world-leading research.

Dr. Reji Mathai, Director – ARAI, commented, "ARAI is happy to be associated with University of Birmingham for promoting joint research in upcoming areas such as alternative fuels, e-mobility and air quality."Mr N. B. Dhande, Senior Deputy Director for Business Development & Corporate Planning at ARAI and Professor Tim Jones, Provost at the University of Birmingham, signed the agreement.

Professor Tim Jones commented, "Signing this MoU further strengthens our commitment to India and, through this partnership, we are pleased to contribute to the development of impactful transport and environmental research.

The Vehicle and Engine Technology Research Centre in the University's School of Mechanical Engineering has a research profile in combustion engines and low carbon vehicle technology. The University works closely with UK industry in engine architecture and advanced engine technologies, helping to design the engines and fuels for the future; including hybrid powertrains.

ARAI is an autonomous body affiliated to the Ministry of Heavy Industries and Public Enterprises, Government of India and is recognized by the Department of Scientific and Industrial Research, Government of India.

BLUE DART INAUGURATES ITS FIRST ALL WOMEN-RUN SERVICE CENTRE IN NAVI MUMBAI

In first of its kind initiative, Blue Dart has launched the first all women service centre in Mumbai. Located in Kharghar, Navi Mumbai, the All Women Service Centre comprises a team of sixteen enthusiastic women who don the role of managers, customer service representatives, security personnel as well as sales and counter staff. This dynamic team will provide customers with the exceptional service quality that is synonymous with Blue Dart.

Apart from this, the organization is taking

its Diversity and Inclusivity initiative one step further. The 'Employer of Choice' plans on initiating more women into the Blue Dart family and will launch another service centre in Andheri, reminiscent of its Kharghar All Women Service Centre. The Andheri Service Centre will operate at a 70% women team capacity and will work shoulder to shoulder setting the pace of gender diversity.

Inaugurating the All Women Service Centre, Balfour Manuel, Managing Director, Blue Dart said, "With our 'People First Philosophy' at the forefront of our business, ALL our people – gender, age, race, caste no bar – continue to be a priority within the organization.

ISHA GOYAL APPOINTED AS CEO AND EXECUTIVE DIRECTOR OF STIC TRAVEL GROUP

STIC Travel Group has appointed Isha Goyal, as their CEO and Executive Director effective 1st April 2021. Serving as a Director and key management committee member since 2004, Isha takes over the new role after having worked in STIC for over 15 years.

With this appointment the group confirms their renewed focus on aggressively growing the GSA side of the

business, while continuing to prioritize its related divisions in cargo, private charters, leisure and youth travel. Subhash Goyal, Chairman of the Board, said, "Isha has been leading the team at STIC for past few years and has effectively navigated the organisation throughout the pandemic and build a dynamic leadership team in her new role. We are confident in her ability to continue developing the existing portfolio, while bringing new opportunities and innovation to the STIC brand as we countdown to our Golden Jubilee in 2023."

JUAN CARLOS SALAZAR OF COLOMBIA APPOINTED AS NEW SECRETARY GENERAL OF ICAO

The 36-State governing body of the International Civil Aviation Organization (ICAO), the ICAO Council, has appointed Juan Carlos Salazar of Colombia as the new Secretary General of the Organization for a three-year term, beginning 1 August 2021.He succeeds Dr. Fang Liu of China, who has held the position for two consecutive terms since 2015.

Juan Salazar was appointed based on his extensive professional experience in the administration of complex organizations at the national, regional and international levels. He is also an expert in aviation law and standards with more than 26 years of

experience in international negotiations in the fields of aviation, management, and public policy.

Since January 2018, Juan Salazar has been serving as Director General of Civil Aviation of Colombia at Aerocivil, a complex civil aviation organization with more than 3,100 employees and 12 trade unions. He is in charge of a network of 72 public airports and of the sole air navigation service provider in a country that serves as a key hub for air routes in Latin America. He has also served as Chief Executive Officer of the Colombian Civil Aviation Organisation and as Senior Advisor to the Civil Aviation Authority of the United Arab Emirates.

Juan Salazar holds master's degrees in public administration and air and space law, and speaks fluent Spanish, English, French and Arabic.

ROLLS-ROYCE'S ALL-ELECTRIC 'SPIRIT OF INNOVATION'

Rolls-Royce has successfully completed the taxiing of its 'Spirit of Innovation' aircraft, the latest milestone on its journey to becoming the world's fastest all-electric plane. For the first time, the plane powered along a runway propelled by its powerful 500hp [400kw] electric powertrain and the latest energy storage technology developed to set world speed records and enable a new generation of urban air mobility concepts.

The taxiing of the plane is a critical test of the integration of the aircraft's propulsion system, ahead of actual flight-testing. The first flight is planned for the Spring and when at full power the combination of electrical powertrain and advanced battery system will power the aircraft to more than 300mph, setting a new world speed record for electric flight.

Minister for Business Paul Scully said, "The taxiing of Rolls-Royce's 'Spirit of Innovation' forms part of an exciting new chapter in aviation as we move towards its first flight in the spring. Set to be the world's fastest electric plane, this pioneering aircraft highlights the value of close collaboration between industry and government.

"The UK is committed to achieving net-zero carbon emissions by 2050. Through government grants for research and development, we're championing innovation in the aerospace sector to meet this ambitious target as we build back greener from the pandemic."

The ACCEL programme, short for 'Accelerating the Electrification of Flight,' includes key partners YASA, the electric motor and controller manufacturer, and aviation start-up Electroflight. The ACCEL team have continued to innovate while adhering to the UK Government's social distancing and other health guidelines.Half of the project's funding is provided by the Aerospace Technology Institute (ATI), in partnership with the Department for Business, Energy & Industrial Strategy and Innovate UK.

SAAB DELIVERS THIRD GLOBALEYE AIRCRAFT TO UAE

Saab delivered the third GlobalEye aircraft to the UAE on 20th Feb, following previous deliveries of GlobalEye in April and September 2020. The United Arab Emirates has ordered a total of five GlobalEye aircraft.

"Completing three deliveries of a solution as advanced as GlobalEye in less than a year proves Saab's solid expertise as a provider of high-technology solutions and our focus on meeting our commitments, especially given the current circumstances. By handling the entire

process, including sensor development and integration, we are uniquely in control of every critical part of this complex programme", says Micael Johansson, President and CEO of Saab.

GlobalEye is Saab's latest airborne early warning and control solution. It provides exceptional air, maritime and ground surveillance in a single platform. GlobalEye combines Saab's Erieye Extended Range Radar and a range of additional advanced sensors with the ultra-long range Global 6000 aircraft from Bombardier.

DR. HASEEB A. DRABU FORMALLY JOINS AIR WORKS BOARD

Air Works India announced that Dr. Haseeb A. Drabu has formally joined the Company's Board as an Independent Director, after the receipt of all requisite approvals, including security clearance.Dr. Haseeb A. Drabu - noted economist and policy maker, was appointed to the Board of Directors of the MRO major in August 2020.He said, "Notwithstanding the adverse impact of Covid on Indian aviation and MROs, it is an exciting time to step into the sector given its long-term potential, fast paced growth, and fundamental role in economic development. I look forward to collaborating with members of the Air Works Board and the management team to realize the brand's ambitions for the

MRO sector in the world's third largest domestic market, given the growing focus towards self-reliance (or Atmanirbhar) as well as the imperative need for India to become an MRO hub." With this, the current Board of the Company comprises five members including, the two independent directors.

Welcoming the development, Mr. D Anand Bhaskar, MD & CEO Air Works said, "Dr. Drabu's deep understanding and experience across several areas has an invaluable bearing on Air Works' overall business strategy given that proven business models and strategies have become obsolete in COVID times. We are increasingly thinking and operating out-of-the-box given the dynamism and accelerating developments in the MRO sector".

TURKEY REGISTERED 15.9 MILLION TOURIST ARRIVALS IN 2020

The Turkish Tourism Board in India shared that a total of 16 million International visitors arrived in Turkey in the year 2020 and the revenue that emerged from international tourism & visitors arrivals stood at $12.1 billion. In 2021, Turkey is targeting to host 30 million international visitors.

Turkey was amongst the first few countries to open its borders for tourism after implementing stringent measures like Safe Tourism Certification to safeguard health of tourists and those involved with touristic activities. Tourists travelling to Turkey from many different countries return to their countries healthy and safe

having spent their holidays in certified facilities in Turkey.

In regard to Indian tourist arrivals, Turkey registered a number of 45 thousand arrivals. Out of these, 30,000 travelled to Turkey between January & March 2020. Turkey is open to all foreign visitors including Indians since June this year. Once the restriction on international flight is lifted in India, the flights between both the countries will resume immediately.

Turkey opened its borders for tourism in June 2020 with well-planned Covid regulations in place due to which the country has emerged as a major tourist destination. The pickup in Turkey's tourism continue as the country that welcomes millions of tourists from all over the world every year launched Safe Tourism Certification program which is implemented in various areas including transportation and accommodation to ensure a safe vacation for tourists this season.

INTER-TEC GROUP OPENS A NEW EUROPEAN BUSINESS IN SLIGO, IRELAND

Inter-Tec Group, which offers specialist engineering, design and analysis solutions across the broad aviation sector has opened a new European base in Sligo, The Republic of Ireland, complementing its established Prestwick, Scotland home.

The new business, Inter-Tec Aero Limited becomes the principal site of business for EASA approvals. It secured EASA Part 21J Design Organisation Approval (DOA) in February, replicating the capabilities and certification benefits provided up until now by Inter-Tec Services.

"The prime objective in creating this new company is to provide continuity of EASA-approved design services to our overseas customers located in Asia, Middle East, and Africa, as well as the UK and Europe, in the new post-Brexit environment," commented Fred Gorrie, Inter-Tec Group

Managing Director.

"In exploring all our options, we settled on Sligo as the best-fit EU home. The investment cost us around £70,000, but thankfully we had some cushion, having had an exceptional financial year through to September 2019, before the pandemic struck," he acknowledged.

"This strategically important new European base will be a catalyst to drive the next phase of Inter-Tec's development," Fred added. "Customers around the world expect and ask for approvals under EASA, one of the pre-eminent aviation regulatory bodies globally."

Inter-Tec Aero has moved in alongside the Causeway Aero Group, a complementary EASA Part 21G Production and EASA Part 145 maintenance business which has served as partner supplier to Inter-Tec for several years on a number of design and build projects, mainly focused on interiors and aircraft seating.

EBAA, NBAA UNVEIL 'EBACE CONNECT'

The European Business Aviation Association (EBAA) and National Business Aviation Association (NBAA) announced the launch of "EBACE Connect" – a new, virtual programming series that will gather business aviation's most compelling and authoritative voices to engage the industry in a vital conversation around the issues and trends shaping the future of Business aviation.

"EBACE has been bringing our industry together for more than a decade, and this year will not be an exception," said EBAA Secretary-General Athar Husain Khan. "With EBACE Connect, we will showcase the innovative and flexible spirit of our industry to learn and discover all that is coming our way in Business aviation."

"Now more than ever, it's critical that the business aviation community has an opportunity to come together in a conversation about innovations and opportunities that will propel the industry forward," said NBAA President and CEO Ed Bolen. "EBACE Connect will serve as that definitive dialogue, with insights and information to help participants think through their plans for the second half of the year."

EBACE Connect will take place May 18–19, 2021, the dates originally planned for the in-person show, which NBAA and EBAA recently cancelled because of the COVID-19 crisis. The two-day lineup will feature an opening keynote and several sessions focusing on trends driving the business aviation market, continuing innovations in advanced air mobility, perspectives from OEM CEOs, the latest in the technologies in aviation sustainability, and predictions about business aviation's future in a COVID-19 context.

STRATASYS RETAINS AIRBUS CONTRACT FOR PRODUCTION OF 3D PRINTED POLYMER CABIN INTERIOR COMPONENTS

Stratasys announced it has been awarded a contract extension for production of 3D printed polymer cabin interior components. While the initial contract with Stratasys was focused on production parts for the A350, this contract extension expands the range of parts printed for Airbus to include replacement and spare parts for maintenance, repair, and overhaul (MRO) as well as parts for aircraft platforms (such as A300, A330, A340 and A320) in addition to the A350. Stratasys continues to build long term relationship with Airbus as a technology, material, and part supplier. It has business presence in aerospace, including 3D printing solutions for flight parts, tooling and prototyping. The company's industrial FDM systems and materials provide the performance and manufacturing repeatability valued by space, commercial aviation and military customers.

LEONARDO AND FALCON AVIATION SERVICES TO BUILD INNOVATIVE ROTORCRAFT TERMINAL FOR DUBAI EXPO

Leonardo and Falcon Aviation Services have announced that they have started building the new rotorcraft terminal that will facilitate the mobility to and from the Expo 2020 site in Dubai.

The terminal design is based on brand new concept, combining a helipad, exhibition and lounge areas in a single city-based heliport. The terminal will be supporting the development of a network of point-to-point connections for both urban transfers and connections between cities, meeting the growing demands for sustainable and modern vertical lift mobility as well as greater access to urban areas.VIP and charter services users and passengers will be provided with levels of service typically available only in larger private airport facilities far from downtown and urban areas. The rotorcraft terminal features strong environmentally friendly design and modularity using recyclable materials and, if required, it can be transported.

Falcon Aviation Services will use the terminal to deliver helicopter transport services. Joining forces in this initiative, Leonardo and Falcon Aviation Services will leverage their longstanding successful partnership in helicopter transportation across the region, offering customers an exclusive flight experience on the Leonardo AW139, AW189 and AW169 helicopter models. At Expo 2020 Dubai, Leonardo will be also illustrating the capabilities offered by its AW609 TiltRotor, the edge of the aerospace technology which will revolutionize the human mobility in the near future: this vehicle – set to receive civil certification –combines vertical take-off and landing – like a helicopter – with the performances of an airplane, allowing it to fly above adverse weather conditions hosting comfortably up to nine people in a pressurised cabin.

ORIENS AVIATION BECOMES THE AUTHORISED PILATUS PC-24 SERVICE CENTRE IN UK

Oriens Aviation, the Authorised Pilatus Centre for the British Isles, can now add the Williams FJ44 service station status to its expertise, as it celebrates becoming a fully authorised PC-24 Service Centre. Oriens completed its first annual check on a PC-24 Super Versatile Jet for a private UK customer at its London Biggin Hill Airport facility last week, adding to its capability on the PC-12 family.

In addition, the independently owned company has obtained its EASA Part 145 accreditation, alongside its national UK CAA certificate, enabling it to continue working on European-registered PC-12 and PC-24 aircraft, post Brexit. This is an important move as a number of Oriens' customers, especially on the PC-12, come to the UK from overseas.

"We are delighted to broaden our expertise on the Pilatus Aircraft family - and become the Williams approved service station for the FJ44 engine serving the Pilatus PC-24 in the UK," said Edwin Brenninkmeyer, Oriens Aviation CEO, applauding his team in securing these important milestones, in the midst of the pandemic. "It is timely too, as we mark our third anniversary at our newest Biggin Hill home," he added. Since the launch of its maintenance facilities in 2018, Oriens has doubled its workforce and made significant investment in training and tooling.

DAHER'S KODIAK AND TBM TURBOPROP-POWERED AIRCRAFT ARE BOLSTERED BY RESILIENT SALES AND DELIVERIES IN 2020

Daher's Aircraft Division announced its 2020 business activity, with the deliveries of 53 aircraft from the Kodiak and TBM single-engine turboprop product lines, as well as orders for another 50 of these aircraft to be delivered in 2021.

Last year's deliveries were led by the TBM 940 and TBM 910, with 42 provided primarily to pilot owners. The majority of TBMs were for North American customers (34 airplanes), followed by Europe (with two in Germany, two in the U.K., and two in France), along with one aircraft in Brazil and the first TBM to be based in the United Arab Emirates at Dubai.

The other 11 deliveries in 2020 were Kodiak 100 Series II airplanes – nine of which were in the Americas, along with two provided in Europe for Germany. Customers were primarily fleet operators, such as Costa Rican charter carrier Green Airways; Meta Special Aerospace, an ISR (Intelligence, Surveillance and Reconnaissance) mission provider based in Oklahoma; Bridger Aerospace, which performs firefighting and aerial survey duties from its Montana headquarters. In addition, there were 20 sales of the pre-owned Kodiak 100 aircraft remaining in the inventory of the sales network after the company acquisition by Daher.

The Kodiak 100 Series II is an unpressurized 10-seat airplane capable of operating on uneven and ultra-short runways, as well as on water in the amphibious version. Daher acquired the Kodiak aircraft's production in 2019, joining the company's very fast pressurized TBM family, produced today in the TBM 910 and TBM 940 versions.

"The teams at Daher's Aircraft Division are to be congratulated on their tremendous job in producing and delivering the Kodiak and TBM aircraft despite the COVID-19 pandemic's significant impact last year," commented Didier Kayat, CEO of the Daher parent company. "In addition to maintaining a solid volume of deliveries, the orders already registered for 2021 provide a positive outlook for the coming year."

AIR BP IMPLEMENTS CARBON EMISSIONS REDUCING START-STOP TECHNOLOGY

Air BP,the international aviation fuel products and service supplier, announces that all its fuel hydrant dispenser vehicles in Portugal now have stop-start technology. This is the first country in Air bp's operated network to achieve the milestone and forms one element of the business's carbon management plan.

Effective immediately, Air bp will have start-stop technology installed on all its newly procured hydrant dispensers. The aim is that all existing hydrant dispensers across its global operated network, that are less than ten years old,will be retrofitted with the technology by the end of the year.

Start-stop technology automatically shuts down and restarts the vehicle engine to reduce the amount of time the engine spends idling, thereby reducing fuel consumption and emissions. Air bp's hydrant refuelling vehicles equipped with start-stop technology have seen, on average, a 25% reduction in carbon emissions. This saving is estimated to be3.5 tonnes of CO2eper vehicle per year.

To achieve this milestone, Air bp first identified that hydrant dispensers were the vehicles most suited to this technology. Air bp then worked with a selected supplier to design a system specific to Air bp's hydrant fleet. Testing was completed to ensure the expected emissions savings were achieved and Air bp'sstringent technical safety requirements were met.

Since 2016 all Air bp's global operated airport into-plane fuel facilities have been carbon neutral. An important part of maintaining carbon neutral status is having an effective carbon management plan.

BBGA HONOURS PATRICK MARGETSON-RUSHMORE WITH MICHAEL WHEATLEY AWARD

Patrick Margetson-Rushmore, co-founder of Luxaviation UK (predecessor LEA) and inspirational business aviation ambassador, was named as the 2021 recipient of the British Business Aviation Association's prestigious Michael Wheatley Award for Outstanding Services to the general aviation industry. BBGA Chair Aoife O'Sullivan shared the news during the Association's annual conference and AGM on 4 March.

"One name stood out as we determined a worthy recipient this year and that was Patrick. Together with his co-founders he has steered a highly successful private jet charter operation and for over 25 years has been a pro-active, authoritative and eloquent spokesperson championing our sector," she said.

Following an illustrious career, Patrick retired from his full-time CEO position in May 2020. He continues to speak on behalf of Luxaviation Group at conferences and events.

AIR CHARTER SCOTLAND EXPANDS LONDON PRESENCE

Air Charter Scotland, UK based private jet operator and aircraft management company, is adding a Cessna Citation M525 (G-KSOH) on to its UK AOC, positioned out of London Biggin Hill Airport. The six-passenger light jet is under the management of Jet Agent, the Biggin-based aircraft sales, management and acquisitions specialist.

"The intention is to place more aircraft with Air Charter Scotland under charter this year," said Anatoly Parkhomchuk, Managing Director, Jet Agent. He set up the business in 2019, drawing on years of experience in charter, management and aircraft sales. "Thanks to this strategic new

partnership, we are pleased to add a second London home at Biggin Hill Airport and base aircraft, complementing our established London Luton (Signature Aviation)base," said Derek Thomson, COO of Air Charter Scotland. "London Biggin Hill is well located for London. Itboasts attractive opening hours and is increasingly popular as a dedicated business aviation airport," he added. "Air Charter Scotland's choice of London Biggin Hill to strengthen its connection to the capital reflects the calibre of our service and the importance of our location to growing businesses," said Robert Walters, Commercial Director at London Biggin Hill Airport. "We look forward to welcoming Air Charter Scotland's passengers and crew over the coming months and witnessing the company's growing success."

SAMI'S FIRST SAUDI-US PARTNERSHIP BEGINS OPERATIONS

Underlining its commitment to building a robust indigenous defense industry ecosystem through global partnerships, Saudi Arabian Military Industries (SAMI), a wholly owned subsidiary of the Public Investment Fund (PIF),has successfully launched a new joint venture (JV) with L3Harris Technologies, a aerospace and defense systems manufacturers. SAMI L3Harris Technologies has been created with the goal of accelerating SAMI's growth by developing advanced communication, sensor, and integrated mission systems capabilities in support of Saudi Arabia's armed and security forces.

The launch of the JV, which encompasses the entire L3Harris Technologies portfolio

of capabilities, was initiated through signing a Joint Venture Agreement (JVA) by His Excellency Ahmed Al-Khateeb, Chairman of SAMI, and Christopher E. Kubasik, Vice Chairman, President,and COO, of L3Harris Technologies, at the Paris Air Show in June 2019. The JV achieved its commercial registration in August 2020 and is now fully operational.

Initially focusing on localization ofL3Harris' advanced communication and sensor products, the JV scope will expand to include prime contractor responsibilities for integrated mission systems and platforms, leveraging robust local industry partnerships. Together, the two parties aim to collaborate in areas, such as technical/specialized operator and maintenance training; Transfer of Production (ToP); and Transfer of Technology (ToT) through research and development programs in approved technologies.

AERO INDIA 21 WRAPS UP WITH 201 MOUS, PRODUCT LAUNCHES AND TECHNOLOGY TRANSFERS

The Aero India 2021 has been organised in hybrid mode with a concurrent virtual exhibition to encourage maximum participation from 3rd-5th Feb at Yelehanka Air Force Station, Bengaluru. At the event, the Raksha Mantri said they would give impetus to 'Make In India' and 'Atmanirbhar Bharat' and assured that his Ministry would do everything possible to ensure the MoUs done at Aero India 21 gets implemented.

RAKSHA MANTRI ADDRESSING THE GATHERING AT 'BANDHAN' CEREMONY DURING AERO INDIA 2021

It was a challenging affair for Ministry of Defence to go ahead and organize a physical event of such a big magnitude like Aero India after post COVID opening of the sector. It was surprise for many but the global defence industry was well informed much before to actively participate at the Asia's premier air show which has exhibitions, static displays and adrenaline pumping aerobatic display showing Indian's defence prowess as super power nation.

The Aero India 2021 has been organised in hybrid mode with a concurrent virtual exhibition to encourage maximum participation taking a leap in organising a completely COVID compliant Aero and Defence exhibition. The three day mega event had presence of ambassadors and delegates from more than 55 nations which reflected the positive temperament of people across the world and renewed global interest in the capabilities of India. This edition of Aero India provided platform for exchange of ideas and forge partnerships in the aerospace and Defence sectors.

The 2021 edition of Aero India was much different in many ways. First, as per the standard operating procedures and health ministry guidelines, focus was more on the digital access, mandatory RT-PCR test, limited access to the delegates, no entry for general audience, maintaining social distancing at all areas, both virtual and physical.

This year at the Aero India, a total of 201 MoUs, product launches and technology transfers were concluded at the Bandhan ceremony held on the last day on 5th Feb. These included the formal handing over of the Advanced Light Helicopters MK-III to the Indian Navy and Indian Coast Guard (ICG), commencement of Performance based logistics of ICG fleet, initial operational clearance of Army version of Light Utility Helicopter etc.

The Raksha Mantri Shri Rajnath Singh expressed that the existing supply chains developed over the years by aerospace and engineering firms and an investor friendly government with simplified procedures and single window clearance mechanism makes Karnataka an attractive destination for industry.

Aero India 2021 had the participation of over 540 exhibitors including 80 foreign companies and defence ministers, delegates, service chiefs and officials from more than 55 nations. India's growth towards offering the unique opportunity in defence and aerospace manufacturing is a “Sangam” of rising demand, greater innovation, conducive policies and maturing ecosystem in the sector.

Raksha Mantri Shri Rajnath said,”Bandhan exemplifies the spirit of public-private partnership in defence and aerospace sectors and have forged strategic ties that are poised to transform defence and aerospace manufacturing.” He also mentioned that this year, 128 MoUs, 19 ToTs, 4 Handing Overs, 18 Product Launches and 32 major announcements were made and the clarion call for Atmanirbhar Bharat by the Prime Minister

Shri Narendra Modi ignited the country's spirit of innovation and collaboration.

Raksha Mantri said the foundation of India's vision rests on three pillars - Research and Development, Public and Private Defence Production and Defence Exports. Referring to the field of research and development, he said there was an attempt to broaden the research base of the nation by supporting and encouraging the private sector. In this context, he mentioned that some patents of DRDO have been shared with the private sector to assist in defence production ventures.

Rajnath Singh mentioned initiatives to encourage and facilitate private sector R&D initiatives such as iDEX and Defence India Start-up Challenge (DISC). He recalled innovations such as the combat drone display, a part of the swarm technology initiative, exhibited during the Army Day function on 15 January 2021 at New Delhi.

Raksha Mantri reiterated India's intention to bring down defence imports by at least $2 billion by 2022 to encourage local defence manufacturing. He informed that 138 proposals worth over $37 billion for domestic manufacturing were approved between 2016 and 2019. Highlighting the importance of the requisite eco-system for the growth of the defence industry, Shri Rajnath Singh said Rs 6,800 crore investments were pledged by both public and private industries in the defence corridors of Uttar Pradesh and Tamil Nadu.

ENHANCE DEFENCE BASE BY 2025

To fulfill the upcoming defence requirement, India needs a robust domestic manufacturing base for defence export potential of the country. The target is of increasing the country's defence base from $11 billion to $25 billion by 2025 including an export component of $5 billion. Defence exports grew from Rs 2000 crores to Rs 9000 crores from 2015-2020 with a vast majority spearheaded by the private sector. The aero components sector is set to grow from Rs. 30,000 crores today to Rs. 60,000 crores by 2024. The cost competitiveness of India's manpower resources, availability of abundant, specialist capabilities and geographical advantages as reasons for its emergence as a global and regional Maintenance and Repair Operations hub.

The government plans to spend 130 billion dollars on military modernisation over the next seven years and steps had been taken to strengthen the nation's security apparatus with domestic manufacturing and complex Defence platforms becoming the focus of the Aatmanirbhar Policy. The government had enhanced Foreign Direct Investment in the Defence Sector up to 74 per cent through the automatic route and 100 per cent through the government route. The reforms would create a conducive system for exports, foreign direct investment and offset discharge. The Newly introduced (Buy Global-Manufacture in India) category of capital procurement in Defence Acquisition Policy 2020 allows outright purchase of equipment from foreign vendors and indigenous manufacture through an Indian subsidiary, a joint venture or an Indian agency. He said a large number of indigenous Defence equipment had been developed by Defence Research and Development Organisation to cater to the needs of the nation's defence forces.

EASE OF DOING BUSINESS

The reforms aimed at bringing ease in doing business, have shown good results. India has jumped from 77th rank in 2019 to the 63rd rank in the World Bank's Ease of Doing Business Rankings. The industrial licensing requirements have been eliminated for a number of items in the defence sector. More than 500 companies have now taken defence licences, doubling the number in the last 6 years and govt is open towards inviting business leaders from across the globe to take advantage of the various initiatives and set up manufacturing units.

HAL got the orders for 83 new indigenous LCA - Tejas MK1A for Indian Air Force valued at more than Rs 48,000 crore, the biggest "Make in India" defence contract till date.

With the strong and diversified Micro, Small, Medium Enterprise sector composed of more than active 5000 units, India has the potential to become a reliable supplier of defence equipment to many of its friendly nations.

> ***"HAL got the orders for 83 new indigenous LCA - Tejas MK1A for Indian Air Force valued at more than Rs 48,000 crore, the biggest "Make in India" defence contract till date."***

Raksha Mantri said that to achieve the twin goals of self-reliance and exports, we have set a target to achieve Rs 1,75,000 crore turnover, including export of Rs 35,000 crore in aerospace and defence goods and services by 2024. It is India's duty to remain capable and willing to assist them in times of natural calamities and security challenges.

The new addition of the event was first Indian Ocean Region's Defence Ministers' Conclave with the theme "Enhanced peace, Security and cooperation in the Indian Ocean Region" which was an implementation of the concept of the Indian Ocean built around Security and Growth for All (SAGAR), visualised during Prime Minister Narendra Modi's visit to Indian Ocean Island states in 2015.

Apart from the top ministerial gathering, Aero India also has presence of the President of India, Ramnath Kovind. Along with present were Secretary (Defence Production) Raj Kumar,Chief of Defence Staff General Bipin Rawat, Chief of Naval Staff Admiral Karambir Singh, Chief of Army Staff General MM Naravane, Secretary, Department of Defence R&D and Chairman DRDO Dr Satheesh Reddy, DG Coast Guard Shri K Natarajan and Air Officer (Maintenance) Air Marshal Vibhas Pandey.

Image Courtesy: PIB

HAL CRACKS MEGA DEAL OF TEJAS WORTH 48000 CRORE

The manufacturing of Light Combat Aircraft by HAL will give a further push to Aatmanirbhar Bharat initiative and boost indigenization of defence production and the defence industry in the country.

Hindustan Aeronautical Limited can be said the real star of the recently held Aero India 21 as it bagged contract worth Rs 48000 Crore for 83 Light Combat Aircraft (LCA) Tejas. The Cabinet Committee on Security under the Chairmanship of PM Modi had approved procurement of 73 LCA Tejas Mk-1A fighter aircrafts and 10 LCA Tejas Mk-1 Trainer aircrafts at a cost of Rs. 45,696 Cr along with Design & Development and Infrastructure sanctions worth Rs. 1,202 Cr on 13th January, 2021. The contract is valued at close to Rs. 48,000 crores.

This is the largest ever Defence contract for indigenous manufacture till date. This significant step provides great impetus to indigenous fighter aircraft capability of the nation.The deliveries of all 83 aircraft shall be completed in 8 years from now. HAL will be delivering the first 3 aircraft in the 3rd year and 16 aircrafts per year for subsequent 5 years. On 2nd February Raksha Mantri Rajnath Singh inaugurated the second production facility (Plant II) to augment the production capacity and ensure timely supply of aircraft to IAF. The induction of Light Combat Aircraft Tejas Mk-1A in Indian Air Force will enhance operational capabilities and improve the aircraft strength.

DETAILS ABOUT LCA TEJAS

Light Combat Aircraft Mk-1A variant is an indigenously designed, developed and manufactured state of the art modern 4+ generation fighter aircraft. This aircraft is equipped with critical operational capabilities of Active Electronically Scanned Array (AESA) Radar, Beyond Visual Range (BVR) Missile, Electronic Warfare (EW) Suite and Air to Air Refuelling (AAR) would be a potent platform to meet the operational requirements of Indian Air Force. It is the first "Buy (Indian-Indigenously Designed Developed and Manufactured)" category procurement of combat aircrafts with an indigenous content of 50% which will progressively reach 60% by the end of the programme and about 250 out of 344 systems fitted in the aircraft will be indigenous.

Responding to PM Modi's clarion call for Aatmanirbhar Bharat Abhiyaan, India is continuously growing in its power to indigenously design, develop and manufacture advanced cutting edge technologies and systems in the Defence Sector. The manufacturing of Light Combat Aircraft by HAL will give a further push to Aatmanirbhar Bharat initiative and boost indigenization of defence production and the defence industry in the country. About 500 Indian companies including MSMEs in the design and manufacturing sectors will be working with HAL in this procurement. Some of these companies have displayed their systems at Aero India 2021. Today, the nation is self-reliant in most of the Military Fighter Aircraft Contemporary technologies and this has been possible largely due to Tejas Programme. The programme would act as a catalyst for transforming the Indian aerospace manufacturing ecosystem into a vibrant Aatmanirbhar-self-sustaining ecosystem. AW

KING AIR 260 AND KING AIR 360

THE NEXT KING RISES

KING AIR 260 TURBOPROP

The most popular business turboprop in the world just got even better. Textron Aviation's latest upgrades in the King Air family provide greater passenger comfort, reduced pilot workload and high-caliber performance even from short airfields.

India is the third-largest market in the Asia-Pacific region when it comes to number of business jets operational in the country. A market survey suggested that by size, large size business jets are the key category in India, accounting for 31 per cent of the country's total fleet, followed by light jets (28 per cent) and medium-sized jets (22 per cent).

In the recent past, due to the restrictions of international travels and suspension of scheduled international flights, commercial aviation is now greatly constrained. With non-scheduled operations giving flexibility to plan travel at own comfort has certainly increased the number of private travellers in India.

In this edition of Aviation World, we are introducing the 2 latest upgrades in one of the most iconic turboprop aircraft from Textron Aviation - the BEECHCRAFT KING AIR family. The King Air

THE KING AIR 360 TURBOPROP FEATURES CONTEMPORARY DESIGN CUES FOUND IN LUXURY SUVS. OVERALL PASSENGER COMFORT IS ENHANCED WITH A LOWER CABIN ALTITUDE AND NEW SEAT DESIGN

turboprops holds around 70 per cent of the market share of business aircraft in India according to data from Jet Net Controller. Amidst the uncertainty of the pandemic and border restrictions remaining in flux, King Air twin-turbine turboprops provide attractive and viable options for business travelers. The aircraft's versatile and rugged reliability make them attractive for a variety of missions in India and the region. This ranges from a VIP transport and regional commuter to mission-critical roles such as an air ambulance, airport calibration, flight inspection and aerial survey platform.

The King Air B200 series is particularly popular in India due to its ability to access short airfields in tier II and III cities where runway lengths are short. It requires runway length of less than 2,200 feet of runway to take off and land smoothly which most of the Indian customers are concerned about. Till date, more than 7,600 King Airs have been built amassing over 60 million flight hours worldwide, which reaffirms that these aircraft are engineered to meet the missions of today's Indian operators.


KING AIR 360 TURBOPROP

ADVANCED FROM THE INSIDE OUT

In August 2020, Textron Aviation announced the latest upgrade to the iconic aircraft with the 11-seat King Air 360 tubroprop. It then followed up with the 9-seat King Air 260 tubroprop in December 2020. Passengers like it for the pressurized, air-conditioned cabin which seats 9 (or 11 for the larger King Air 360) occupants comfortably in plush club-style leather seats normally found in larger business aircraft. The newly customised seats are designed with pressure mapping to give passengers the enhanced comfort.


KING AIR HAS INSTALLED IS&S THRUSTSENSE AUTO THROTTLE SYSTEM INSIDE THE COCKPIT THAT TRANSFORMS FLYING FOR PILOTS

The King Air 360 tubroprop has interior improvements which are a result of customer input and following the feedback received from the numerous customer advisory boards. Driven by modern automotive inspiration, the overall cabin impression is one of the openess. Additionally, there is more leg room, higher table heights, thinner side ledges, lighted cup holders, USB power ports, optional Wi-Fi and other amenities which enhance passenger comfort. Further, cabin's clean lines also include cabinets made of veneer and “pinhole” lighting on the lower side panels.

Due to the digital pressure mapping technology now passengers on both the King Air 260 and 360 tubroprops have the privilege of


INSIDE VIEW OF KING AIR 360 TURBOPROP COCKPIT

KING AIR 360 TURBOPROP OPERATING OUT OF SHORT AIRFIELD

having more comfortable seats. The cabins are also equipped with acoustic technologies to create the quietest turboprop experience available in the industry. The square-oval fuselage is retained to offer ample head and shoulder room throughout the passenger cabin.

Besides the comfortable and quiet cabin, King Air has generous carrying capacity to take 249 kg of baggage in the cabin. Passengers may easily retrieve personal items during the flight via the fully accessible, heated and pressurized baggage area at the end of the cabin. The King Air 360 turboprop even has wing lockers that allow an additional 272 kg of baggage.

As both aircraft are derivatives of the King Air B200 and B300 series, they are rated using the supplemental type certificates of the existing aircraft. This makes it easy and seamless for existing King Air pilots to be trained to fly the newly upgraded aircraft models.

COCKPIT TECHNOLOGY ADVANCEMENT

The latest technology advancements to the cockpit brings greater ease of operation for pilots aligning a whole new era of flying for the King Air turboprop. Now, the pilots will benefit from new standard features such as the IS&S ThrustSense auto throttle system inside the cockpit. This technology transforms flying for pilots by enhancing the aircraft capabilities and providing greater ease of operation for pilots. It provides a full-regime system that computes and controls the appropriate power levels throughout the entire flight including take-off, approach and go-around. The autothrottle system results in a reduction in pilot workload and contributes towards better operating efficiency and enhanced overall safety. For example, the autothrottle provides envelope protection that adjusts the power of the operating engine during engine-out scenarios. This helps pilots have better control and allows the aircraft to accelerate and climb on a single engine. It also protects the engine by preventing over-torque and over-temperature exceedances.

Integrated with Collins Aerospace Pro Line Fusion avionics suite is the multi-scan weather radar which is regarded as one of the premier weather radar systems available in the market.

KING AIR 260 & KING AIR 360 TURBOPROP CABIN INTERIOR DETAILS

- Maximum occupants: 11 (King Air 360) / 9 (King Air 260)
- Cabin length: 5.94m (King Air 360) / 5.08m (King Air 260)
- Internal baggage capacity: 249kg/1.57cu m, fully accessible in-flight
- The King Air 360 cabin's clean lines also include cabinets made of veneer and pinhole lighting on the lower side panels
- Plush club-style leather seats designed with pressure mapping to enhance comfortable seating
- More leg room, higher table heights, thinner side ledges, lighted cup holders, USB power ports, optional Wi-Fi, private aft-lavatory and other amenities to enhance passenger comfort
- Cabins are equipped with acoustic technologies to create the quietest turboprop experience
- The square-oval fuselage is retained to offer ample head and shoulder room throughout the passenger cabin
- The aircraft's digital pressurization control automatically schedules cabin pressurization during both climb and descent

DIGITAL PRESSURIZATION CONTROL SYSTEM

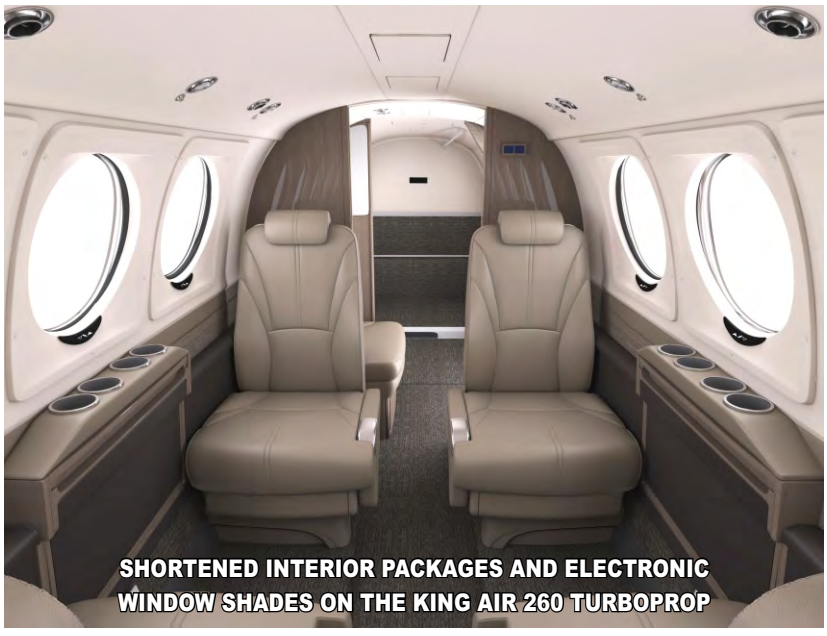
Digital pressurization control is also a new standard feature in the King Air 260 and 360 turboprops which automatically schedules cabin pressurization, during both climb and descent. It also eliminates pressurization bumps and optimizes cabin altitude rate of change to ensure a comfortable flight for passengers. In fact, the King Air 360 also offers a 10 per cent lower cabin altitude at the aircraft's service ceiling of 35,000 feet compared to the King Air 350i.

PEACE OF MIND FOR HIGH NET WORTH INDIVIDUALS

With the number of number of high net worth individuals (HNWIs) significantly increasing and the mental pressure to travel safely has always increased the numbers of private jet travelers. Unlike larger business jets known for their long intercontinental range, Textron Aviation's Beechcraft King Air turboprops are great choices offering best-in-class value for HNWIs seeking to enter private aircraft ownership for efficient travel within India and the region, while prioritizing their health.

With concerns about catching pathogens and viruses from fellow passengers in a full aircraft cabin, there has been much discourse about recycling air in some aircraft cabins and the usage of HEPA (high efficiency particulate air) filters. The cabin air in the King Air 260 and 360 turboprops is not recirculated, alleviating concerns about recycling air in aircraft during the COVID-19 pandemic.The system used in both aircraft continuously draws fresh air from the outside and is exchanged in the entire cabin in less than two minutes.

FLYING PRIVATE PROMISES MANY BENEFITS IN A POST-PANDEMIC WORLD



SHORTENED INTERIOR PACKAGES AND ELECTRONIC WINDOW SHADES ON THE KING AIR 260 TURBOPROP

EFFICIENT FLYING RANGE AND PAYLOAD

The King Air 360 turboprop has a range of 1,806nm which makes a convenient flight convenient flight between Mumbai and the Maldives, Delhi and Doha or Bengaluru to Bangkok. The King Air 260 has a range of 1,720nm, which makes it ideal to fly between city pairs in India. The enhanced payload option in the King Air 260 turboprop allows customers to operate routes with higher payloads. The time factor, cost and ticket prices of a multi-city itinerary with flying private with a maximum cruise speed of up to 312 ktas may get a group of travelers to their destination in less time.

GREEN AIRCRAFT

Both aircrafts are able to use "green" biofuels or Sustainable Alternative Fuel (SAF). This makes it easier for operators to incorporate environmentally sound resources into their travel plans. SAF can reduce CO2 emissions by up to 80 per cent over the fuel's life cycle and provides an active way for travelers to lower their carbon footprint.

Turning to private aviation and aircraft ownership allow travelers to experience end-benefits such as :

- Higher level of health-related safety and security
- Greater time savings
- Increased productivity
- Multi-city visits in a day
- Access to an aircraft at any time of your need

THE KING AIR LEGACY CONTINUES

The two upgraded aircraft models are poised to be a success in the region with its twin turbine engines, spacious and comfortable cabin and ability to operate in and out of short airfields. The newly-upgraded Beechcraft King Air 260 and 360 turboprops will continue the legacy of the predecessors of being a cost-effective, versatile and capable platform for charter operators, private owners and governmental organisations for many years to come.

Take a virtual tour of the King Air 360 turboprop at: **https://beechcraft.txtav.com/en/king-air-360**

Images and Content Courtesy: Textron Aviation Inc.

2020: THE YEAR OF ENSURING RIGHT PLANNING FOR THE UNPRECEDENTED TIMES

The year 2020 created unprecedented times along with a global health crisis. Amid this challenging period the Ministry of Civil Aviation (MoCA) played a key role in revival of the social and economic situation. The revitalising role of MoCA helped in facilitating medical support to people even in the remotest part of the country and on the other hand supported in resuming people and necessary cargo movement across the country. A well calibrated effort by MoCA with the support of other government agencies ensured that there was no shortage of medical as well as food essentials in the country during this COVID-19 pandemic induced crisis.

During this pandemic when the world struggled to plan their way out of this deadly situation, the Government of India used the COVID-19 calamity as an opportunity to continue the growth path and bring in systemic reforms. Below is a summary of the initiatives and activities carried out by the Ministry of Civil Aviation (MoCA) during 2020.

MOCA INITIATIVES AGAINST COVID-19

MISSION - LIFELINE UDAN

- 'Lifeline Udan' flights were started by MoCA to transport essential medical cargo to different parts of the country to support India's fight against COVID-19. The essential cargo included accessories required by Corona Warriors across the country. Helicopter services including Pawan Hans Ltd have been operating in J&K, Ladakh, Islands and North East region transporting critical medical cargo and patients. Domestic Lifeline Udan flights operated in a hub and spoke model. Cargo hubs were established at Delhi, Mumbai, Chennai, Kolkata, Hyderabad, Bangalore, and Guwahati further connecting these hubs to Lifeline Udan flights to major airports. Special focus was given on the North East Region, island territories and the hill states. Air India and IAF collaborated primarily for J&K, Ladakh, North-East and other island regions.

- A portal for coordinating Lifeline UDAN flights was developed by National Informatics Centre (NIC) and MoCA in a record span of three days to enable seamless coordination between various stakeholders. Public information related to Lifeline Udan flights was updated daily on the portal at https://esahaj.gov.in/lifeline udan/publicinfo.

VANDE BHARAT MISSION

- MoCA vide letter No. 13029/1/2020 -A- MOCA dated 26.05.2020 issued Standard Operating Protocol (SOP) for private aircraft and charter operations on international sectors in order to facilitate the movement of stranded Indian nationals and certain OCI card holders to bring back to India. MoCA in association with MEA and MHA took a major decision to evacuate distressed Indian citizens due to COVID -19 pandemic from foreign shores. The mission called 'Vande Bharat Mission' started on 7 May 2020. Around 31 Jakh Indians have been repatriated under the Vande Bharat Mission till 31.12.2020. The VBM has so far involved 6373 Air India flights and 474 flights by the private Indian carriers. Till date a total of 1,035,471 Indian nationals have been repatriated by Air India whereas 74,675 Indian nationals have been brought back by private carriers. The mission is still going on.

- **Air Bubbles: "Transport Bubbles" or "Air Travel Arrangements"** are temporary arrangements between two countries aimed at restarting commercial passenger services as international flights are suspended because of the COVID-19 pandemic. They are reciprocal in nature, meaning airlines from both countries enjoy similar benefits. India has established transport bubbles with twenty-four countries across the world.

- Few new initiatives during COVID to improve the cargo movements:
- Permission to utilise the passenger cabin of aircraft for carriage of cargo subject to safety requirements.
- Waiver of demurrage upto 50% on import cargo at airports
- Extension of validity of certificates of dangerous goods (e.g. chemicals used for medicines).

GARUD PORTAL

- A portal called Government Authorization for Relief Using Drones (GARUD) was launched on 2 May 2020 to provide fast track exemptions to government agencies for COVID-19 related drone operations. The portal was designed, developed, beta-tested and launched by MoCA, DGCA and NIC in a record period of eight days.

- **Reopening of Domestic Air Transport in a stage wise manner:** On 25th May 2020, the commercial civil aviation operations were reopened with robust

SOPs. The SOPs were updated time to time & aviation has emerged as the safest mode of transport.

➢ **RT-PCR Testing at the entry airport for the arriving international passengers:** MoCA on 29.09.2020 allowed all the arriving international passengers, if they so desire, to avail the facility of RT-PCR testing at the entry airport, wherever available. The guidelines were applicable for all arriving international passengers, who arrive at an entry airport in India without RT-PCR Negative certificate and wish to avail exemption from institutional quarantine or need to take a connecting flight to domestic destinations in India.

➢ Risk Management Approach for the application of Exemptions/Extensions in view of COVID 19" In view of the extension of training and checks all Operators, Scheduled and Non-Scheduled were required to adopt a Safety Risk Management approach for applying the exemptions/extensions to their operation. This circular provided guidance of recording and reporting of the risk mitigation actions taken by all operators, along with General Aviation operators who have an SMS approval.

➢ **Establishment of ICC:** Investment Clearance Cell (ICC) has been established in MoCA with the key objective of prompt clearance of investment proposals.

 # KRISHI UDAN:

➢ In the context of "Krishi Udaan" announced through the Union Budget 2020-21 on 01 February 2020, the first marine sector pilot project was launched on 26 February 2020 during the harvesting season of mid-February through till May. The pilot entailed 06 freighter operations per week (03 between Chennai Vizag-Surat and 03 between Chennai-Vizag, Kolkata) for air transporting shrimp seeds for harvesting at Surat and Kolkata and then further exports of high value fresh and chilled shrimps out of India. Each freighter load is about 20-22 tonnes. As a measure of the significant improvement in value realization, this pilot represents weekly upscaling by a multiple of about 20. Moreover, the commercial viability of transactions is implicit in the fact that an additional freighter has been deployed on 06 March 2020.

➢ Planning in advance, daily coordination was taken up with agri-exporters, APEDA, MPEDA, horticulture boards, brokers/agents, airports and airlines. Resultantly, about 2,800 tonnes of agri-produce, particularly mangoes, fruit and vegetables, was exported to Europe, Middle East, South-East Asia, Hongkong etc.

➢ Operation Greens Scheme has been implemented in co-ordination with Ministry of Food Processing Industries extending 50% rebate in airlines freight charges & Cargo Terminal Operators Terminal, Storage & Processing charges for 41 Fruits &Vegetables at airports in North Eastern & Himalayan States / UTs.

➢ Airlifting agri-produce for better value realisation for farmers Convergence between "Operation Greens" Scheme and Krishi Udaan was achieved with subsidy @50% on air freight and @50% on Terminal, Storage and Processing (TSP) at airports announced by M/o Food Processing Industries on 02/11/2020 on 41 eligible fruits and vegetables when airlifted from 12 NER and Himalayan States/UTs. The online filing of subsidy claims by Indian airlines was finalised with GoLive on 01/12/2020.

➢ Domestic and international aviation cargo/supply chains were strengthened by announcing measures for ease of doing business during unprecedented lockdown conditions across the entire supply chains extending from shipper, airline carriers, ground-handlers, airports, customs brokers/agents, and surface logistics. These included 50% waiver of demurrage to incentivise the removal of non-essential air cargo from airports, extensions of permits/approvals beyond 31 March 2020 (year-closing} , deferral of IATA payments for cargo agents, etc.

MoCA on 29.09.2020 allowed all the arriving international passengers, if they so desire, to avail the facility of RT-PCR testing at the entry airport, wherever available. The guidelines were applicable for all arriving international passengers, who arrive at an entry airport in India without RT-PCR Negative certificate and wish to avail exemption from institutional quarantine or need to take a connecting flight to domestic destinations in India.

 # SOME OTHER NOTABLE ACTIONS INITIATIVES AGAINST COVID19:

➢ **Taking up regulatory measures through DGCA, BCAS, AAI, AAICLAS, etc.** to encourage domestic airline carriers to take up all-cargo flights by converting some of their grounded passenger aircraft.

➢ Setting up door-to-door deliveries through air cargo mode with monitoring.

➢ **No permission - No Take off flight facilitation:** MoCA had issued Order dated 03.04.2020 for facilitating the flights by 'No Permission - No Take-off' (NPNT) compliant drones in six designated zones, one each in the States of Andhra Pradesh, Karnataka, Maharashtra, Rajasthan, Tamil Nadu and West Bengal.

➢ **Impact of Locust on Aviation–** This circular was released to provide guidance to operators, pilots, engineers and ATCOs for safeguarding aviation assets and activities, from the abnormally large presence of locusts in the country.

➢ **Air-Suvidha:** A web portal- Air Suvidha has been started for filling of Self Reporting Form by all International Arriving Passengers to India and also for processing exemption requests from institutional quarantine requirement from passengers fulfilling prescribed conditions.

 # OTHER ACHIEVEMENTS:

➢ **Inauguration of Water Aerodromes at Staute of Unity, Kevadia & Sabarmati River:** The Prime Minister inaugurated two water aerodromes i.e. Statue of Unity, Kevadia & Sabarmati River Front on 31st October 2020 and sea plane operations under RCS-UDAN between these two water aerodromes.

➢ **Commencement of UDAN 4 Bidding Process:** 78 new routes have been identified and approved under 1st phase of UDAN 4.0, focusing on North Eastern

States, Hilly areas and Islands. RCS cell, AAI is in the process of awarding these identified routes to Selected Airline Operators (SAOs). Once the identified routes of RCS"-UDAN version 4.0 are awarded, the total valid RCS routes awarded would be 766. Till 15th Jan 2021, 311 UDAN routes & 54 airports (including 5 heliports and 2 water aerodromes) have been operationalised.

- **Successful implementation of PPP Model:** With regards to Operation, Management and Development of six AAI Airports under Public Private Partnership (PPP) have been finalised, 12 are under process.

- **The Aircraft (Amendment) Bill, 2020:** The bill was passed by LoK Sabha on 17.03.2020 and Rajya Sabha on 15.09.2020. President's assent was accorded to the Bill on 19.09.2020. Subsequently, the Aircraft (Amendment) Act, 2020 was published in the Gazette of India on 20.09.2020.The Aircraft Act, 1934 has been amended to interalia, give proper recognition to the civil aviation regulators under the Act, to enhance the maximum quantum of fines, empower the departmental officers to impose financial penalties on individuals or organisations involved in violations of the legal provisions, compounding of offences, include certain areas of air navigation services for rule making purpose under section 5 of the Act and to keep the aircraft belonging to armed forces of the union outside the purview of the Act.

- **Draft National Unmanned Aircraft Systems (UAS)** Traffic Management Policy finalised and published for public consultation.

- **Rajiv Gandhi National Aviation University:** The University has launched its first Undergraduate programme i.e. Bachelor of Management Studies in Aviation Services and Air Cargo, during November, 2020. Also the second batch of Post Graduate Diploma in Airport Operations has commenced from November, 2020.

- **Convergence between Defence MRO and Civil Sector MRO for economies of scale:** A Joint MoCA-DPP Working Group has been formed to undertake facility mapping and draw up areas and resources that can be shared for achieving convergence. The civil MRO activities include :IAF has committed sending 10 MI-17 helicopters to Pawan Hans Ltd's MRO facility, MI-17 weapons modification and interior refurbishment/upgrade (19 nos. has been bid for);on 20 Avro aircraft, fuel tank-related MRO carried out; Dornier aircraft (145 nos.) structural refurbishment has been taken up; and Heavy maintenance on 02 defence VVIP aircraft, and modification of seats of 06 VVIP helicopters is also underway.

Investment in a 2-hangar base/heavy maintenance facility for narrow-bodied aircraft tied up at Kochi Airport by a private MRO,operations to be commenced by November 2020. Indian airframe MRO capability now utilized by Indian and foreign carriers as well as foreign lessors for difficult and high-value end-of-lease checks.

New business of aircraft parts harvesting has been taken up, and the parting of a grounded aircraft B-777-ER is being carried out by an Indian MRO. New business of long-term aircraft storage-cum-maintenance contracted by an Indian MRO with a foreign airline, where under 02 aircraft have arrived in October 2020, and balance 06 aircraft would arrive by end-December 2020

- **Aircraft Leasing and Financing:** Two concrete proposals to set up operations in IFSC, Gift City, one from an Indian aviation company, and another from an Ireland-registered company which has experience of providing aircraft asset management services from India, have now been taken up with handholding and facilitation. Along with participation of DGCA, IFSCA, and GIFT-City, the rules and procedures for setting up a financing and leasing company at IFSC are being drafted. The issues and deliverables have been identified for the two regulators (DGCA and IFSCA) in discussion with stakeholders, while others identified are being taken up with Customs, RBI and other Government Departments concerned.

In order to facilitate the identification of civil drones and drone operators, another opportunity for voluntary disclosure of such drones and drone operators has been provided to persons in possession of drones vide Public Notice dated 08.06.2020 through the DigiSky platform, wherein a Drone Acknowledgement Number (DAN) and Ownership Acknowledgement Number (OAN) are generated instantly on successful uploading of the required information.

- **Bids invited by Airports Authority of India for operating Flying Training Organisations** at the first batch of 6 airports, Belagavi, Jalgaon, Kalaburgi, Khajuraho, Lilabari and Salem on 29 Nov 2020 under the liberalised Flying Training Organisation (FTO) policy issued by Government of India.

- **In-flight Wi-fi services:** Rule 298 of the Aircraft Rules 1937 has been amended through notification dated 28.02.2020 which inter-alia provides an enabling provision for usage of internet services in-flight through Wi-Fi on board in all domestic and international aircraft in Indian airspace when the aircraft is flying above 3000 meters.

- **DigiSky Platform:** In order to facilitate the identification of civil drones and drone operators, another opportunity for voluntary disclosure of such drones and drone operators has been provided to persons in possession of drones vide Public Notice dated 08.06.2020 through the DigiSky platform, wherein a Drone Acknowledgement Number (DAN) and Ownership Acknowledgement Number (OAN) are generated instantly on successful uploading of the required information.

- **Survey of India has been granted exemption vide** Order dated 11.06.2020 for large scale mapping of inhabited areas of villages using drones under Central Sector Scheme **"SVAMITVA"**.This Ministry has given relaxation to Ministry of Agriculture and Farmers' Welfare on 27.06.2020 for use of engine powered Remotely Piloted Aircraft System and night operations for anti-locust operations.

- **E-GCA & E-BCAS:** The two portals were launched for ease of doing business.

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UNION BUDGET 2021 MAJOR HIGHLIGHTS FOR THE AVIATION INDUSTRY

The Union Budget announced for the FY Year 2021-22 comes with several measures for the growth of aviation industry in India. These measures range from tax incentives and custom duty reduction for promoting Aatmanirbharta, to asset monetisation and disinvestment to mobilise resources for new infrastructure development. Overall, the budget proposals are aimed at creating opportunities for strengthening the aviation eco-system in the country and developing India as an aviation sector manufacturing hub.

MAJOR HIGHLIGHTS

Tax Incentives For Aircraft Leasing And Financing

The Government is committed to make the International Financial Services Centre (IFSC) in GIFT City a global financial hub. In addition to the tax incentives already provided, the current budget proposed more tax incentives which includes (i) tax holiday for capital gains incomes of aircraft leasing and financing company, (ii) tax exemptions for aircraft lease rentals or royalty paid to foreign lessor, (iii) tax incentive for re-location of foreign funds in IFSC and (iv) tax exemptions to investment division of the foreign banks located in IFSC.

These tax exemptions are a major boon to lessors operating from IFSC. These would help in establishing a vibrant aircraft leasing and financing environment in India, besides offering better terms to Indian and foreign carriers. These measures comes on the back of a series of initiatives undertaken by Ministry of Civil Aviation since 2019 to create an aircraft leasing and financing ecosystem in GIFT (Gujarat International Financial Tech) city of India.

Custom Duty Benefit

In the budget proposal, Customs duty has been reduced from 2.5% to 0% on aviation sector components or parts, including engines, for manufacturing of aircraft by Public Sector Units of Ministry of Defence. This measure will help grow the aviation industry in the country by reducing cost of inputs for domestic manufacturing and thus promote aatmanirbharta.

Asset Monetisation Through PPP Model

The budget proposed monetisation of the next lot of airports for operations and management concession. Other core infrastructure assets that will be rolled out under the Asset Monetization Programme are AAI Airports in Tier II and III cities. The Airport Authority of India is working on the next round of privatization in which 06-10 airports will be included. Six airports have already been awarded to the successful bidder and the concession agreements have been signed. Proceeds from this step will help the Ministry of Civil Aviation to complete the goal of building 100 new airport by 2024.

Development of Health System Capacities At Airports Under The Atma Nirbhar Swasth Bharat Yojana

Under a new centrally sponsored scheme, PM Atma Nirbhar Swasth Bharat Yojana,

Union budget 2021-22 proposes development of health systems capacities in the country which also includes the aviation entry points. Under this program Public Health Units will be strengthened at 32 airports. This program will facilitate smooth movement of pharmaceuticals through air across India as well in other parts of the world.

Disinvestment and Strategic Sale

Through budget 2021, the government has reiterated its commitment of disinvestment of Air India and PawanHans in 2021-22. The process of strategic sale of Air India is underway.

The Ëxpression of Interest" EOI have been received. The Transaction Adviser is scrutinizing the EOIs. The PIM for the sale of Pawan Hans has also been issued. Besides, the PIM for Air India Airports Services (Ground handling) is under preparation.

Expansion Of Scope For Krishi Udaan In Convergence With Operation Greens

To boost value addition in agriculture and allied products and their exports, the scope of 'Operation Greens Scheme' that is presently applicable to tomatoes, onions, and potatoes, will be enlarged to include 22 perishable products.

Krishi Udaan Scheme stands converged with Operation Greens through air freight subsidy of 50% for the agri-perishables of NER States and 4 Himalayan States/UTs. The expansion of product-coverage will boost the Krishi Udaan Scheme and improve air cargo transportation from these States.

INDUSTRY VIEWS ON BUDGET 2021

ALOKE BAJPAI, CO-FOUNDER & CEO, TRAVEL APP IXIGO

Tier 2 & 3 cities have seen a significant growth in demand for air travel and first time flyers post relaxation of lockdown norms. Monetisation of airports in these areas will help capitalise this growing demand by accelerating infrastructure development in underserved areas and strengthening regional air connectivity. While these infrastructure measures will boost tourism in the long run, it's sad to see that no extra spends or tax incentives were announced to provide immediate relief to the severely affected travel and tourism sector.

ANEEL GAMBHIR, CFO, BLUE DART

We are pleased to know that the Budget is in line with our expectations. The industry is eagerly waiting to see the results of these measures in our field of work. The proposed solutions include a succinct focus on improving road and railway infrastructure; investments in National highway corridors and economic corridors will aid in the speedy movement of goods and improve turnaround time which, in the long run, will bring down logistics costs significantly.

The National Highway work planned in Tamil Nadu, Kerala, West Bengal, Assam will further assist in the final goal of last-mile delivery and we are eager to see its results on our business. In the long term, all the expenditures could be assisted with the proposed introduction of the DFI which will speed up the infrastructure development in India.

Apart from this, the focus on the manufacturing sector in the budget would also help the logistics sector grow further.

While the budget carries good news for the logistics sector, we are also happy to see the Government's efforts in propelling areas such as healthcare, infrastructure, and employment, all of which require a special focus going into 2021. With COVID-19 continuing to be a significant threat to the world, India is providing the vaccine against COVID-19 to over 100 countries across the world which is a commendable effort.

With the Government also providing 35,000 crores towards the Covid-19 vaccine in 2021-22, we are sure to bid adieu to the virus sooner rather than later.

JAGANNARAYAN PADMANABHAN, DIRECTOR - TRANSPORT, CRISIL INFRASTRUCTURE ADVISORY

Higher Capex allocation for Roads and Highways, continued thrust for capital expenditure in Railways, Asset monetization across all transport sector viz. Invits in Roads, Airport privatization in tier 2 and 3 cities, Seven projects in Ports and a significant revenue augmentation through PPP in railways are some of the highlights. Central government has directionally given the much needed guidance for heavy lifting the infra spends, which could act as a cue for some of the state governments to follow.

Policy announcements in the area of Infra financing and Aircraft leasing augurs well for the development of Institutional support in realizing the projects as set out by NIP. AW

MAXIMIZING NON-AERONAUTICAL REVENUE

With growing number of airports being acquired by the private operators, focus will be more on increasing the non-aeronautical revenues as this gives a fixed source of income on long run.

By Dr. (Prof.) Dewakar Goel

"It's not about revenues: the fundamental economics in digital business is scale and margins. The topline has become the bottom line."

~Yuri Milner

Traditionally Decades ago, Airports were dependent on Aeronautical revenue that came from landing and parking charges from the Airlines, Root navigation facilitation charges (RNFC) and terminal navigation facilitation charges (TNFC) for the services provided by Air traffic control. These areas were primarily dependent on the number of flight movements both landing and takeoff. Non-Aeronautical revenue was not in focus because Airports, being in the hands of Government and passenger facilitation at their cost was the main aim, it was more as social responsibility towards public like roadways and railways. The commercial aspect of revenue generation was realized when the corporate sector started managing airports in various countries. The government owned airports too realized the importance of generating revenue from non-traffic sources so as to spend money to facilitate passengers better. The area of revenue generation was broadly from parking facility, food and beverage outlets inside and outside Airports, book and gift shops, traveler requisite (TR) shops etc. However, cleanliness, garbage removal and grass cutting activities were expenditure.

The major aspect of revenue generation was covered by aeronautical sources, whilst non-Aeronautical revenue was barely 30 per cent. Later, over a period of time, things changed on the model of Changi Airport, Singapore. It was then realized that airports must be modernized with commercial touch. The luxury services to massive shopping center scenario could be made to earn revenue as it also serves as a great help to passengers.

Commercial Revenue – Richness in Offerings

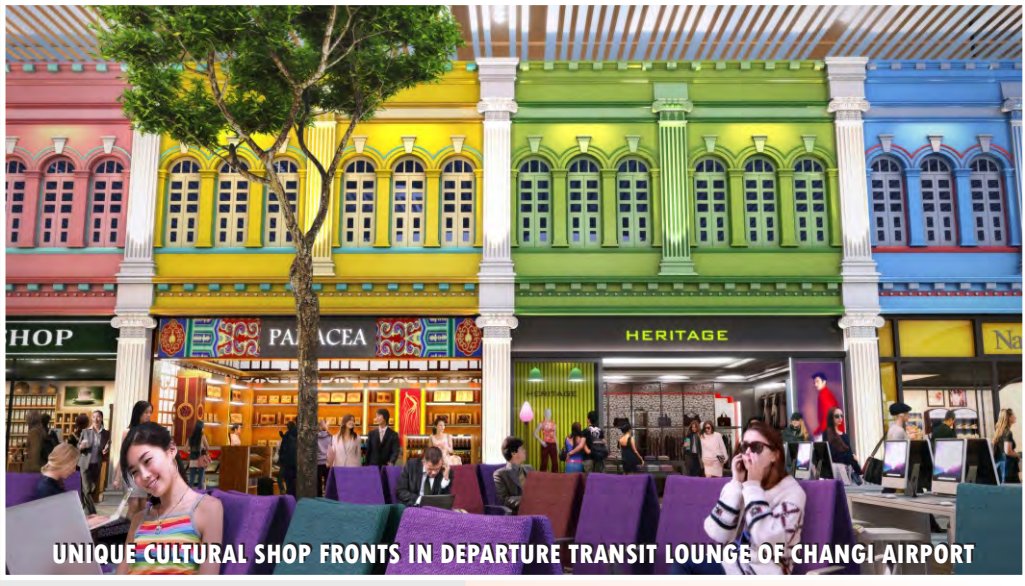
Let us discuss about approach for commercial revenue for retail density. The retail foot- print has a maturity level and saturates around 1200 sqm/mn resulting in sales per departing passengers of 26 USD. Another approach for commercial revenue was category optimization in the form of richness in offerings, focusing on luxury brands and higher margin products. The marketing and communication drive aimed at optimizing footfalls.

When we look at maximizing non-Aeronautical revenue, the biggest strength can become the biggest weakness since it is chiefly dependent on the number of passengers, a slight decline can pose a big loss. Apart from this, there are space constrains and structural issues limiting categorizing maximization in totality. We think in terms of Compound Annual Growth Rate (CAGR) that speaks about business and investing specific term for a geometric progression ratio that provides constant rate of return over a period of time.

If we talk in terms of existing source pattern to generate non-Aeronautical revenue, percent wise it comes 33% duty free, 23% space rental, 17% car parking, 8% car rental, 5% specialty retail, 3% advertising, 8% hospitality and 3% from currency. These percentages don't look encouraging enough; this concern needs to be probed.

Challenges Come With Long-Term Solutions

First and foremost, the key challenge comes in the form of dependence of concessionaire and passenger volume. If looked upon as an opportunity, we can go ahead with innovating structuring option and diversification through nontraditional revenue. There is a need to differentiate by creating a sense through retail brand. The up skilling and employee engagement is also a great opportunity to go for developing internal capabilities.



UNIQUE CULTURAL SHOP FRONTS IN DEPARTURE TRANSIT LOUNGE OF CHANGI AIRPORT

Entertainment is yet another virgin area where the possibility of maximizing revenue can be explored by way of converting 'dwell time' into 'passenger spending capacity' especially in transit. Significant contributions can be seen for Airport Service Quality (ASQ) and passenger alignment. The entertainment should be positioned as a seamless experience rather than mere filler. ere, the location is very important collaboratively leading to revenue generation. We need to go beyond the routine by way of

practicing "Do it yourself zone" with a culture of unique selling preposition (USP) such as food, retail and theme-based engagements. There is lot of scope in innovation for generating revenue through entertainment. Some areas are sponsored aircraft simulators, Aviation museum and Airport Library. Keeping in mind the younger crowd as passengers, we can create motion sensor gaming and 7 D Theaters, Art gallery, thereby making exhibition and show casing culture yet another area of interest.

Pouring - Exercising Choices

You must be surprising why I am using this word as one of the strategies for revenue generation. The pouring leverages unique position to Airport operators holding retained rights on selection of exclusive brands. We must ensure availability of soft

beverages, juices, water, coffee, energy drink, hard liquor and beer. The time has come to create exclusive supply arrangement with select brand for premier value such as audio and video playing rights, Airport radio channel with favorite RJ playing songs of choice. We should not ignore exercising choice to select premier partners. For that matter the rights to visibility in smoking zones with availability of outlet to sell tobacco at selected location should not be forgotten.

Branding – Associating Sponsorship

We are talking about various strategies to be adapted for maximizing revenue from the point of view, as to how it works and why it is going beyond routine. The branding creates newer formats beyond traditional advertising and promotions for security channel, horticulture, toilets, and dustbins because plantation and greenery in these areas is a value addition to the fragrance we try to provide. Modernization of theme-based environment can be created by branding fragrances and vanity zones, mainly in women's boulevard and kid's arena. The unique brand engagement platforms with brand lounges, experience zones and floor walkers can be created. The sponsorship by stake holders can't be overlooked for branding, which can come in the form of sponsorship for cost maintenance, play areas and baby strollers etc.

Non-Passenger – Reducing Risk from Passenger Volatility

The non-traffic revenue is also generated from large community of people falling under the category of non-passengers. There is a huge opportunity to cater the needs of different segments suchas facilities for Airport staff, Airlines, ground handlers, cargo, custom, police, CISF, Immigrations and other regulatory agencies. These facilities for non-passenger crowd must be created by going beyond routine in the meters and greeters' areas, information centers, messaging zone, photo play cards, food and beverage, gifting, floral grab, welcome desk etc. Some of the other areas where revenue can be maximized are canteen, laundry, locker room, discount store, end of season sale and shuttle services for staff community. The empanelment of Airport citizen for goodwill, NGOs, Doctors, Media and entrepreneurs give rise to de-risking option to reduce risk passenger's volatility.

Designing Revenue Streams – Creating own identity

In order to maximize non-Aeronautical revenue, it is pivotal to intersperse the concepts illustrated above with other core concepts rather than deploy them silos. This is the key for various mode of revenue to sustain. It is important for Airport to plan certain stream especially those around convenience across various touch points for passengers as well as non-passengers. There is need to communicate some of the bespoke services effectively through prominent signages and other medium. The dedicated team is required to conceive, execute and manage these new revenue streams at an ongoing

There is worldwide competition amongst Airports and Airport council international (ACI) conducts surveys for Airport service quality (ASQ) on 5-pointscale. There are Aviation hubs where the Airlines find more space & convenient stopovers like Frankfurt Amsterdam, Dubai where more number of flights not only give Aeronautical revenue but open new doors for non-Aeronautical revenue. There is a need for every Airport to create its own identity and charm. The people travel through Airport more out of necessity than choice. However, they would like to spend money at the Airport only out of choice therefore public perception is a great influencer. The communication of unified Airport values removes clutter in consumer mind which translate expectation into brand values.

The brand value helps in guiding physical manifestation in the form of designs, layout, offering, pricing, quality etc. The multiple retailers across Airport are bound by Airport brand mentors from the prospective of enhancing non-aeronautical revenue.

The author is:
Chairman, Aero Academy of Aviation Science & Management
Executive Director (HR); Airports Authority of India (Former)
Director, Indian Aviation Academy (Former)
HR Consultant, ICAO, Montreal, Canada
Human Performance Technologist, IATA, Geneva, Switzerland
ICAO and IATA Certified Training Instructor
ACI Standing Committee
Member Asia Pacific Hong Kong;
Advocate, Supreme Court of India

AIRPORT PRIVATISATION INEVITABLE !
LET US MAKE MOST OF IT...

Airport infrastructure is the essential skeletal framework of aviation but generally tends to be taken for granted, possibly because addition of new airports and transformation of old ones happen at a slow pace and away from public glare. Nonetheless, airports play a vital role in sustaining aviation, supporting the transport network, promoting trade and tourism, and contributing to economic development of the nation. Covid-19 has been exceptionally unkind to civil aviation with airports possibly being the worst affected sector.

- Gp. Capt. AK Sachdev (Retd.)

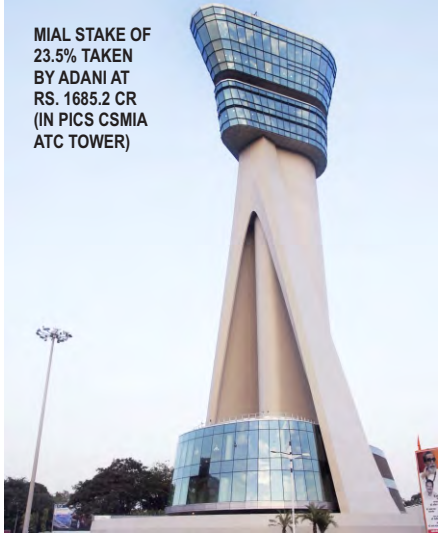
In India, airports, being capital and real estate intensive, were in public sector domain during our initial years but that has changed in the last two decades with change of policies and the government's fiscal compulsions to disinvest in them. There are close to 500 airports strewn over the extent of the country with 139 of them being under the public domain and owned by Airports Authority of India (AAI) according to AAI's official site (https://www.aai.aero/en/business-opportunities/indian-airports accessed on 08 February 2021). According to AAI, the total number of functional airports in India is 153 of which 29 are international, 114 are domestic and 10 customs airports (at which unloading of imported goods and the loading of export goods is permitted). To put this figure into perspective, US, which has a billion less people than India, has over 5000 functional airports. This article critically appraises the push for privatising airport infrastructure.

BUDGETARY IMPETUS

The central government budget presented in 2018 had introduced NextGen Airports for BHarat (NABH)Nirman initiative. It proposed to increase the existing capacity of airports by more than five times through construction of 100 new airports in the next 10 years. An impressive sounding figure for investment in that direction was also mentioned but the onslaught of Covid-19 rendered all that planning superfluous. Indeed, aviation went into survival mode globally and it is only now that optimism is beginning to manifest itself in actions and thoughts of aviation stake holders, including the government.

The budget presented last month reflected some of that buoyancy; the Finance Minister's budget presentation speech mentioned the word 'infrastructure' more than 40 times and included a proposal to set up a Development Finance Institution (DFI) with a capital of Rs 20,000 crore and an ability to lend up to Rs 5 lakh crore. The issuance of Zero Coupon Bonds for infrastructure funding also has the possibility of providing an avenue for aviation financing.Disappointingly but unsurprisingly, the long standing demand of civil aviation to be given infrastructure status remained unaddressed. The total budgetary allocation for aviation was Rs 3,224 crores, a figure representing 22% reduction as compared to the ongoing fiscal year. Of this, airports have been allocated Rs 600 crores mainly for the revival of 50 airports that fall under the Regional Connectivity Scheme (RCS). Airports Economic Regulatory Authority of India(AERA) has been allocated Rs 10 crores. Besides, the Airports Authority of India (AAI) saw a provision of Rs 5,139 crores marked under Internal and Extra budgetary resources; the implication is that AAI will have to put up collateral to raise funds. The aviation portion of the budget has endeavoured to convey that the financial problems of airports are being addressed. However, the actual availability of funding is a bit nebulous, given the fiscal pressure this budget will be consummated under. There is thus a momentum building up for finding other means of funding airport infrastructure.

In December 2019, the National Infrastructure Pipeline (NIP) had been launched; it now has a pipeline of 7,400 projects, which require major funding expansion from both government and private sector. The government's plan is to realise this goal through three concrete measures: creating the necessary institutional structure, monetising assets, and expanding capital investment through budgets. Monetising functioning public infrastructure is a way to generate more funds by drawing in private sector participation and that is the route airport infrastructure development is embarked upon.



MIAL STAKE OF 23.5% TAKEN BY ADANI AT RS. 1685.2 CR (IN PICS CSMIA ATC TOWER)

PRIVATISATION

In her budget speech the Finance Minister said the government would be monetising assets of the AAI-operated airports in Tier-2 and Tier-3 cities to raise money for building new infrastructure; this is a significant departure from the past where the government has maintained that big airports were being privatised so that the cash thus generated could be invested in airports in smaller cities.

In a semantic quirk, the disinvestment in AAI's airports has been always referred to, rather euphemistically, as privatisation --- a term that encompasses the whole spectrum of private participation from a wholly private ownership to a Public Private


THE BIGGEST BENEFICIARY OF AIRPORT PRIVITISATION IN INDIA IS ADANI GROUP

Participation (PPP) model with multiple participants. As can be expected, each model has a unique texture with diverse partners getting into bed but with disparate dreams. The result is that all the PPP ventures have not had the same degree of success. Perhaps the only thing common to airports moving away from the AAI fold has been the incremental addition to the air passengers' burden.

The first Indian airport to be privatised in India was Cochin as far back as 1999, followed by Hyderabad in 2002 and Bengaluru in 2004; Delhi and Mumbai --- the two largest airports in the country --- were privatised in 2006. At that time there was no airport regulator (the Airport Economic Regulatory Authority (AERA) came up only in 2008 as a result of a Parliamentary act. It is not clear whether this fact contributed to the additional burden of privatisation on airlines (which in turn passed it on to the passengers). Privatisation was resisted stoutly by airlines but the government was unrelenting. Meanwhile, the project costs of airports overshot the original estimates (Delhi by 3.8 times and Mumbai by 1.7 times) with the incremental costs being passed on to the passengers through development fees to the tune of Rs 3400 crores. These figures are mentioned here to show the passenger pain related to airport privatisation.

After 2006, there was a lull in the interest from potential investors in airports until 2015 when disparate entities again started looking at airports as lucrative ventures. In a process that commenced in 2018, Ministry of Civil Aviation (MoCA) awarded the airports at Lucknow, Ahmedabad, Thiruvananthapuram, Guwahati, Jaipur and Mangalore to Adani Group.
In a third wave of airport privatisation, after the budget last month, Secretary MoCA announced after the budget thatit plans to invite bids to privatise six to 10 state-run airports in the first quarter of FY 2021-22, with plans for a “package” offer that clubs profitable and non-profitable airports to realise optimum value. He added that the airports would be given to private sector for 50 years and that the bidding terms for the operation of the airports, their management as well as the development of infrastructure will be structured to encourage long-term leases of the facilities.Reportedly, the six airports identified for privatisation in the third round are Varanasi, Bhubaneswar, Raipur, Indore, Amritsar and Trichy. Once these airports are also privatised, the PPP proportion of airport capacity will be around two thirds of the entire country's.

DUAL AIRPORT OPTIONS

Privatisation of airports is all set to spread its paws over airports that, despite increase of their capacities with addition of runways/ terminal building, are still falling behind the growth of passenger demand due to the distension of the cities they serve. Although the private operators have differing of contracts with AAI, all have clauses that effectively shut down or ban use of the older airports in their cities. The same state is likely to accrue in Goa when the proposed airport at Mopa comes up.However, as the passenger was the loser in such arrangements (and the airport operator the gainer), gradually that monopolistic situation is being mended and second airports are coming up at Jewar and Navi Mumbai to complement the ones at Delhi and Mumbai. However, whether the ugly head of monopolism is eradicated is yet to be seen as a share agreement has been approved transferring 74% stake in Mumbai airport to Adani Group which also has 50.5% share in the Navi Mumbai airport under development.

REGIONAL AIRPORTS

Despite a lot of hype about UdeDesh ka AamNagrik (UDAN) and a Regional Connectivity Scheme (RCS) launched in April 2017, regional airports have not come up as envisaged under the scheme, the single major reason being their low profitability. Even before the RCS came about, MoCA had proposed (in 2015) in to build up to 100 no-frills airports. However, not a single airport got built as there was a mandated requirement for them to earn a Return On Investments (ROI) of 12 percent. In the aftermath of the Budget 2021, the Aviation Minister, reportedly declared that, under the RCS, MoCA has set a target of operationalizing as many as 100 unserved and underserved airports and starting at least 1,000 air routes. Significantly, he averred that it was not the government's specialization to run airports and that privatization was required in civil aviation. Clearly, the government is banking on privatisation of existing airports as well as private participation in green field airport projects. In the long run, this initiative will enhance connectivity to existing as also to remote and regional Tier 2/Tier 3 towns and cities but at a cost to the passenger.

CONCLUSION

One way to provide succour to the passenger is to keep monopolistic dispensations out of airport infrastructure but, at the moment, that does not appear to be a priority for the government which is looking at the laudable target of increasing the number of operational airports and ignoring the ugly implications of monopolies. All the six airports allotted under the second round have been bagged by Adani as also both the airports serving Mumbai. In any case the total number of players in India that have shown interest is only about a dozen while foreign players have not exactly had delightful experiences in airport ventures they partnered in and have largely exited (albeit after having garnered impressive returns on their investment). While the government cannot be faulted for having the 'ends' of more operational airports in mind whatever be the 'means' that get employed, introducing policies that inject competition into the airport market may reduce the cost to the passenger who, all said and done, must remain the ultimate intended beneficiary of airport proliferation.

(The author has more than four decades of aviation experience in the IAF and in civil aviation and was Chief Operations Officer of an airline) AW

Aluminium Alloys in the Aerospace Industry

Past, Present and Future

Being lighter, yet stronger and offering high resistance to corrosion are the properties that make aluminium - metal of the past, present and future. In this feature the usage of aluminium in the Aviation & Aerospace sector is being highlighted which signifies its importance despite of the sophistication in the modern day avionics.

- **BY DEEPAK MATHUR**

In a world that is changing rapidly and turning many a leaf by using technology and working for a cleaner world of tomorrow. As far as relationships go, aluminium and its usage in the aerospace industry is a bond that has aged. It dates back in time to the 19th century and is well-documented that the first use of aluminium in aerospace was in making frames by the famed Count Ferdinand Zeppelin in his 'airships.'

AN OLD HISTORIC RELATIONSHIP

The historic relationship between aluminium and aerospace also finds a place in the Wright Brothers story. The cylinder block and some other parts of the Wright Flyer in 1903 are known to have been made with aluminium making it lighter yet stronger to achieve a successful take-off. Aluminium against a wooden frame that was in vogue during that time ensured that the aircraft design despite of the low wind-speed availability and limited aerodynamics lifted off with the intended weight. And it did.

MEETING THE DEMAND

For another decade, the absorption of aluminium in aerospace was slow. It gathered pace between the two World Wars. Aluminium alloys became an ideal option as racing aircraft became a rage in Europe and America in 1920's. In the absence of maintenance and care, they wouldn't rot and cause splinters like wood. And just like that wood lost its charm and aluminium alloy began its journey by meeting the demand.

Replacing wood was easy. There was a significant and healthy weight loss in an aircraft on account of using aluminium alloys. Being one-third lighter metal than steel gave manufacturers the capability to carry more weight or improve fuel efficiency. Given aluminium's strength, the reliability and manufacturing costs involved in an aircraft also increased.

NEW MATERIALS: ALUMINIUM ALLOYS

The Boeing 737, popular narrow-body aircraft in use across the globe and in India, comprises of 80 per cent aluminium alloys in its making. It's lighter, but strong and has high corrosion resistance. This remains the foundation of aluminium's popularity despite the sophistication in modern-day aviation.

There are new materials of aluminium alloys that have contributed to changing the landscape over time. Aluminium alloys are being used in making the aircraft fuselage or body, wingspans, doors, flooring, and even the seats that we as passengers are seated on.

Having also made it to space through various exploration programmes, there is no doubt that the confidence in aluminium alloys will continue into the next generation of aircraft since performance characteristics have been established, costs of fabrication have been set along with modern production facilities capable of meeting the demand.

ALUMINIUM ALLOYS V/S COMPOSITE MATERIAL

Today, aluminium's usage in aerospace comes with its combination of various alloy elements. For instance, when the need calls for a high strength to weight ratio and the alloy has to be tough and yet offer workability it is combined with copper or zinc, which is the most common alloy used in aerospace today. These alloys are generally found in the wingspans and fuselage given the tension that these parts have to withstand.

Aluminium alloys form part of traditional while composite materials are a fairly new entrant so to speak. Both have their strengths but aluminium being the big brother is much more established in its advantages. The aluminium alloys offer a cheaper deal given the established manufacturing and pricing process, while composite material is prone to degradation from ultraviolet rays, unlike aluminium alloys which are not.

AEROSPACE: THE FUTURE & USE OF ALUMINIUM ALLOYS

Innovation holds the key to the future and the development of new generation aluminium alloys are not lagging. If zinc is the present for aluminium alloys, the future is also in the making using aluminium-lithium alloy. Some research reports indicate that aluminium-lithium alloy or Al-Li alloys offer a 10% weight reduction in comparison to using composites in aircraft.

With the industry continuing to gain from using aluminium alloys in providing for a safer, reliable flight and keeping aircraft manufacturing low, the future and use of this versatile metal are poised for a long flight into the future.

(The author is Sr. Vice President - Sales and Marketing at Jindal Aluminium Limited)

BUDGET 2021 FOR AVIATION STILL HOLDING AT 36000 FEET !

ROHIT SINGH TOMAR

The much anticipated Budget 2021 was recently announced by the Finance Minister of India Nirmala Sitharaman. Pre-budget months had seen a significant push from the Prime Minister for the Aatma Nirbhar Bharat Abhiyaan. It is expected that under this prerogative, manufacturing and in-country capabilities to perform aircraft maintenance would see a significant boost in the arm. With these expectations among the many aviation players, it was disappointing that the aviation sector did not find a mention in the budget. The incentives and policy to support India's aircraft leasing industry were the silver lining in the budget speech. The aviation leasing market controls more than 65 per cent of the global fleet as of today. More than 35 per cent of the international deliveries in the next ten (10) years will be absorbed in Asia. While Singapore and Hong Kong continue their push in the aviation leasing sector, it seems an apt time to move into the aircraft leasing business.

Recently, IFSCA (International Financial Services Centres Authority) published the draft regulations for aircraft leasing and opened it for public comments. Further, the Union Budget of 2021 explains Indian government's interest in this sector. However, we still have a long mile to walk in meeting the global standards required to make aircraft leasing attractive in India. Among the many things, an independent aircraft registry managed under Gift City with records of aircraft asset owners and parties with a financial interest in the asset is an important starting point. The Gift city's ability to succeed in setting up its own securities and trading company will be critical for the aircraft leasing company's access. Lessors deploy a significant amount of debt and for India to be seen attractive, will have to offer competitive cost of debt. For comparative numbers, Air lease raised debt in November 2020 via an issue of 10 years bond with a coupon of 3.13 per cent which is 200 basis points lower than the Indian Government G-Sec bonds with a yield of above 5 percent.

STRONG COMPETITION AMONG LESSORS

An aircraft like A320 Neo with a typical purchase price of about 54 Million USD is leased at a monthly lease rental factor (LRF) of 0.65 per cent ~ 0.7 per cent. Even at these LRFs, there is strong competition among lessors. At such low LRF's, the average return per year on the value of an asset is estimated to be about 8 per cent. This return is inclusive of the various risks, including country risk, operators risk, and other risk adjustments. Of this 8 per cent, the Lessors have to provide for the expenses of running the leasing organization plus returns to the equity holders (which is typically upwards of 20 per cent). The net available return to apportion towards cost of debt has a small margin of 0.5 to 1 per cent. For banks and investment firms in India, a 10-year G-sec bond issued by the Government of India provide yields above 5 per cent, compared to the Hong Kong government's 10-year bond yield of 0.8 per cent.

At this juncture, we have not even factored in the currency fluctuation risks between the freely tradable currency as proposed (in USD or EUR) Vs INR. While the policy's objective and the incentives are to bring foreign lessors to India, the government must learn from the past mistakes in aviation and realize that such movement will only be possible if and only if domestic banks are incentivized to lend capital at lower preferred rates. Incentivisation on lending is crucial for domestic capital being deployed and made available to leasing companies at par with international standards.

Moving away from leasing, the budget fell short of implementing much-needed reforms and policy changes for developing the MRO infrastructure in India. With more than 90 per cent of the aircraft component MRO business being outsourced to companies outside India, it is high time that developing in-house capabilities becomes a strategic objective of the Aatma Nirbhar Abhiyaan. The UDAAN scheme also provided the strategic objective for the government to develop far-flung regional airport alternatives to existing defence airports, which adds the flexibility of movement of defence forces at the shortest time across these airports.

VALUE INCENTIVISATION APPROACH

Global OEMs have realised that success in this space is because of the strategy of playing one OEM against the other. To ward off future challenges, OEMs across the aviation value chain have started acquiring & consolidating the competition. Such consolidated entity wins a monopolist position placing it at a strategically stronger position to negotiate with both the customers and the governments alike. China with its competitive wage rates will be the only new entrant in this space in the forthcoming years leaving India behind with significant opportunity to encapsulate in this space. The government needs to get its think tank together on how and what policies need to be implemented to create a value incentivisation approach for these OEMs and build a strong, robust, resilient and self-reliant MRO ecosystem in India.

While the government has reduced GST on MRO Services to make them competitive, it misses building long-term objectives. As time passes by for India, the only lever it has are the endusers of these OEM's, that is, the airlines. The need of the hour that a comprehensive policy is developed which works on incentivizing the airlines for the work they carry out in India. For airlines, the opportunity for cost reduction should not only be limited to the labor cost arbitrage but also towards developing and supporting the transfer of work from their supplier to Indian players.

For the last many years, government policies have been aimed at improving different parts of aviation sectors one step at a time. However, the government needs to develop a comprehensive Strategic aviation eco-system policy, which is a united policy that is economically viable in the short term for all the players involved.

The writer is Managing Director of Caladrius Aero Consulting LLP, an aviation data and consulting firm to provide research and consulting services to airlines and airports. Views expressed are personal. AW

NSCBI Airport at Kolkata

TO GET NEW ATC TOWER WITH UPGRADED TECHNOLOGY AND ENHANCED CAPACITY

With an objective to enhance the capacity and ease the traffic flow, AAI's Kolkata Airport has undertaken the work of construction of New ATC Tower and Technical Block at an estimated cost of Rs. 458 cr.

The new ATC Tower complex spread in an area of 2040 sqm will accommodate all ANS units for efficient air traffic management. With more than 50 meters of height, the new building will be equipped with advanced digital technology in the field of communication and air traffic system. Automation & VCS equipment will be of higher capability with provisioning of more number of Controller Work Positions (CWP) to meet the requirement of upper & lower area harmonisation in Kolkata Area Control Centre (ACC).New Advanced Surface Movement Guidance & Control System (ASMGCS) will enhance the surveillance and provide bird`s eye view of the entire operational runway which will enable the ATC Personnel to ensure safety & efficiency in augmented capacity.

The ATC Complex will have centralized redundant UPS system with 100% back-up (1200 kva for Technical Block & 100 kva in ATC Tower) which will provide regulated, reliable & uninterrupted power supply for all equipment. New SCCTV (Surveillance CCTV) & access control for CNS/ATM installation along with Biometric Access System will be installed in new ATS building considering 100 per cent safety, security for man& machine.

The state-of-the art new ATS complex will provide enhanced capacity and safety in terms of airport operations.

ADAMPUR AIRPORT IN JALANDHAR GETTING READY WITH NEW TERMINAL BUILDING AND ENHANCED CAPACITY

In order to develop and upgrade civil aviation infrastructure in Punjab, AAI has taken up enhancement work at Adampur Airport in Jalandhar. This is done with the prospective consideration of surge in the passenger traffic at this airport once flight starts under the Regional Connectivity Scheme. The development work includes construction of new terminal building with enhanced capacity and apron &taxi-track to make it suitable for two Airbus-320 type of aircraft.

With total built up area of 6000 sqm and canopy area of 1920m2, the new terminal building has been designed to process 300 passengers during peak hours. The new passenger terminal building will have two-levels comprising of ground and first floor.

The ground floor will be used as remote arrival, departure and service area, and the first floor as AAI staff and Airline offices. City side area of the airport will also be developed with adequate parking facilities for car, taxi and buses along with the landscaping and Rain water harvesting system.

Equipped with eight check-in counters and two conveyor belts, the new terminal will be 4-Star GRIHA rated energy efficient building with Sewage treatment plant and Solid Waste Management System.

40 per cent of the project work is completed and the new terminal building of Adampur Airport is scheduled to be ready by the middle of this year i.e. 2021. Adampur Airport that is located in Jalandhar district of Punjab's Doaba region caters to major cities of the state like Jalandhar, Hoshiarpur, Kapurthala, Nawanshahr, Sultanpur, Phagwara among others. Development of Civil Enclave will serve the demand of enhanced connectivity of the region.

SPACE-BASED ADS-B AIR TRAFFIC SURVEILLANCE SYSTEM DEPLOYED BY AAI

As the third largest airspace in the world and in order to make significant strides towards enhancing safety and efficiency across the ever-growing, highly trafficked area, Airports Authority of India has successfully deployed Aireon's space-based ADS-B air traffic surveillance system across Mumbai, Chennai and Kolkata's oceanic airspaces. The system has been executed within18 months of the signing of the contract to implement the service.

AAI's deployment of space-based ADS-B now provides an additional layer of surveillance, backing up the existing ground-based network. With a vast airspace of over nine million square kilometers, multiple crossing airways and dense, continuously growing traffic, multi-layer surveillance covering the entirety of the airspace provides more efficient solutions, safer processes and greater visibility. Improved communications and data sharing between Asia, the Middle East and Europe is also a main objective aimed at reducing delays and improving the flying experience for all users.

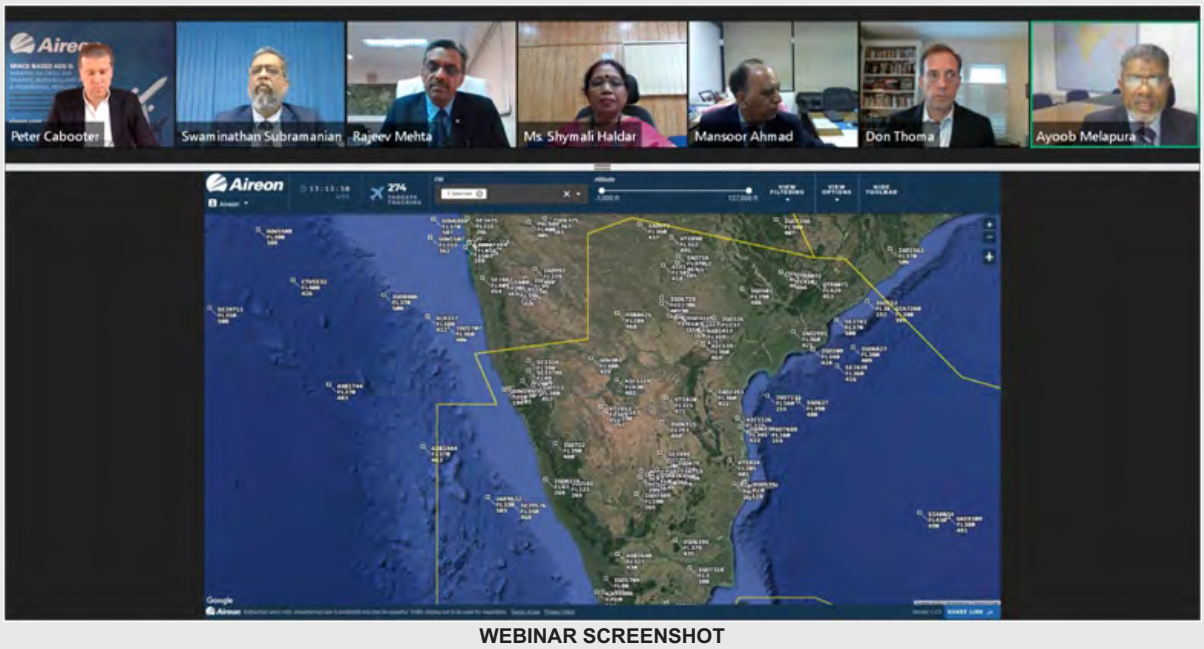
"The collaboration and determination to complete implementation testing remotely by both the AAI and Aireon teams have set the region up for a successful 2021," said Vineet Gulati, Board Member, Air Navigation Services, AAI. "Despite the challenges that came because of the ongoing global pandemic, AAI was able to continue testing to prepare our airspace to go live with Aireon's safety-of-life service. When travel picks up again, AAI will be ready to support the rapid increase of aircraft in a cohesive and efficient manner."

With a vast airspace of over nine million square kilometers, multiple crossing airways and dense, continuously growing traffic, multi-layer surveillance covering the entirety of the airspace provides more efficient solutions, safer processes and greater visibility

"It's been a pleasure working alongside the AAI team. Their determination to prepare for future air travel and improve safety to match their robust traffic growth is the innovative thinking that is propelling the aviation industry forward," said Don Thoma, Aireon CEO. "Deploying real-time air traffic surveillance is an initiative that has driven AAI to be a leader not only in the region, but throughout the world."

Prior to the deployment of the Aireon system, aircraft were compelled to fly at uneconomical levels due to the high-traffic and many conflict points at crossing paths, burning extra fuel and resulting in extra expenses for airlines. Now, with more accurate position reporting available throughout the entire region, aircraft are more likely to get preferred flight levels and route changes, alleviating the prior issues.

Aireon operates the first ever, space-based air traffic surveillance system for Automatic Dependent Surveillance-Broadcast (ADS-B) equipped aircraft throughout the entire globe. AW



WEBINAR SCREENSHOT

eVTOL MODELS NEED SAFETY RECORDS EQUAL TO COMMERCIAL AVIATION

Horizon Aircraft, that has developed the Cavorite X5, the world's first eVTOL (electric vertical take-off and landing) aircraft that can fly the majority of its mission exactly like a normal aircraft, says the early eVTOL passenger models that are used in commercial operations should have safety records equal to those in the commercial aviation sector in order to prevent accidents and fatalities.

It says the global spotlight on the first air taxis will be sufficiently intense that any accidents and safety risks would set the industry back years in terms of passenger confidence and regulatory approval.

Brandon Robinson, CEO and Co-Founder of Horizon Aircraft said, "There is much debate around the safety requirements of eVTOL aircraft, with some commentators for example, saying they should be twice as safe as driving a car,or have safety records on a par with helicopters. The safety bar must be set much higher so that potential passengers, regulators, and other stakeholders have the highest possible levels of confidence in the first eVTOL aircraft. This is essential to the sector reaching its full potential."

The Horizon Aircraft Cavorite X5 is fundamentally a normal aircraft with an additional eVTOL capability that adds safety and operational capability. Flying 98 per cent of its mission in a configuration exactly like a normal aircraft, means discussions surrounding certification can start from a well-understood baseline. This greatly reduces risk during the process.

ICAO MAKES PROGRESS ON NEW RPAS STANDARDS

During its ongoing 222nd Session, the ICAO Council adopted new and amended Standards and Recommended Practices (SARPs) driving important progress on the international safety and interoperability of remotely piloted aircraft systems (RPAS).

The new provisions will become effective on 12 July 2021, and applicable as of 26 November 2026. The most important pertain to Annex 8 — Airworthiness of Aircraft to the Chicago Convention, and cover certification requirements for remotely piloted aeroplanes and helicopters, in addition to the remote pilot stations (RPS) they are operated from.

"These Annex 8 provisions will now importantly serve as the foundational international SARPs for issuing Type Certificates and Certificates of Airworthiness for remotely piloted aircraft and all of their required components," commented ICAO Council President Salvatore Sciacchitano.

"This provides a baseline of requirements which countries can employ in the near term to certify RPAS for international cargo operations or aerial work. Future work will address passenger-carrying RPA, as well as more advanced capabilities being anticipated for future urban air mobility."

The new Annex 8 SARPs were complemented by new provisions adopted by the Council on C2 Links, the data links that connect the RPA and RPS, in Annex 10 to the Convention, on Aeronautical Telecommunications. They include Amendment 90 to Volume V, which addresses spectrum allocations that may be used for RPAS C2 Links, and the adoption of an entirely new Volume VI, on RPAS C2 Link communications systems and procedures.

A second package of C2 Link SARPs, which is currently being developed by ICAO's RPAS Panel, will address details for interoperability, spectrum utilization, and compatibility with existing communications and navigation systems, including the sharing of the proposed frequency bands.

"As the applicability dates of RPAS-related provisions are being aligned to November 2026, bringing forward Annex 8 ahead of amendments to other Annexes permits governments and industry to account for the longer lead time required for airworthiness provisions, as provided for in Article 41 of the Convention," Mr. Sciacchitano emphasized. "In the meantime, work through ICAO will continue on flight operations, detect and avoid, air traffic management, further C2 Link requirements, and the remainder of the regulatory framework."

The latest RPAS progress required minor modifications to Annexes 1 (Personnel Licensing) and 2 (Rules of the Air) of the Convention, and will eventually be supported by more substantial Annex 2 changes already in development. Previous Annex 1 Standards adopted by the Council in 2018 introduced a regulatory structure for the issuance of remote pilot licences for applicability as of November 2022.

As this extensive work continues through ICAO, it is presumed that all of the 19 Annexes to the Chicago Convention will eventually require either significant or minor modification to achieve the safe, secure and efficient integration of RPAS into current global aviation frameworks.

G280 EARNS FAA AFFIRMATION OF SUPERIOR SOUND PERFORMANCE

Gulfstream Aerospace Corp. announced that the Federal Aviation Administration (FAA) has confirmed that the super-midsize Gulfstream G280 meets the certifying organization's recently intensified noise standards. Known as Stage 5, the standard lowers the noise limit for subsonic aircraft. The G280's noise emissions have always fallen below the levels now classified as Stage 5.

"The Gulfstream team continues its commitment to the future of the G280 program, ensuring adherence to the most stringent standards, whether for safety, performance or noise emissions," said Mark Burns, president, Gulfstream. "Aircraft noise abatement goals are vital to ensuring the livelihood of the aviation and aerospace industries and demonstrating our efforts to be good neighbors to those who live or work near airfields, airports or flight paths."

Official approval to the Stage 5 noise standard ensures continued operational flexibility at noise-sensitive airports and those with time-of-day entry restrictions. This update is reflected in the G280's aircraft flight manual, with new noise data sheets being issued to operators.

GULFSTREAM ENHANCES ITS AIRCRAFT REDESIGN PROGRAM

Gulfstream Aerospace Corp. has enhanced its aircraft redesign program to offer multiple options intended to suit a wide range of owner needs and timelines. In as little as 30 business days, any Gulfstream aircraft can be redesigned with the assistance of a dedicated designer.

"No one knows a Gulfstream aircraft like we do," said Derek Zimmerman, president, Gulfstream Customer Support. "Our award-winning expertise, quality craftsmanship and superior materials make Gulfstream the top choice for a redesign. From a refresh to a floor plan reconfiguration, our team can bring any vision to reality. An updated aircraft not only improves the customer's overall comfort, it can increase the aircraft's marketability."

The new Gulfstream program empowers customers to choose a refurbishment package that best suits their situation:

- The Refresh: In as few as 30 working days, aircraft receive recovered seats as well as upper and lower sidewalls, fresh carpeting and exterior paint.
- The Premium: In addition to the offerings of the Refresh, aircraft are outfitted with new veneers and countertops.
- The Custom: Aircraft are reimagined with all the perks of the Premium as well as a new floor plan.

Redesign customers are assigned a dedicated member of Gulfstream's internationally recognized interior design team, who works with them from planning to completion and provides Gulfstream's world-class service from start to finish. Aircraft can benefit from a redesign at various stages of their lifespan, depending on usage as well as owner needs and preferences.

"To further reflect the convenience and benefit of choosing Gulfstream, aircraft redesigns can be accomplished when the aircraft is already undergoing other maintenance services," Zimmerman said.

AIRPORT AWARDS

The Airport Service Quality programme is the airport customer experience measurement and benchmarking programme. The ASQ Departures programme measures passenger's satisfaction across 34 key performance indicators. More than half of the world's travellers pass through an ASQ airport.ACI adopted the rigorous quality control process for the ASQ awards programme to ensure the benchmarking and findings from the ASQ survey remained of the highest quality during the COVID-19 pandemic.

DELHI AIRPORT AS THE BEST AIRPORT

Delhi's Indira Gandhi International Airport (IGIA) has once again emerged as the 'Best Airport by Size and Region' in Asia-Pacific for 2020 at the Airports Council International (ACI) for Airport Service Quality (ASQ) awards in the category of over 40 Million Passengers Per Annum (MPPA).

Commenting on the achievement, Mr. Videh Kumar Jaipuriar, CEO-DIAL mentioned, "We are proud to see the continued recognition received by Delhi Airport in Airport Service Quality over the past several years. Delhi Airport has consistently raised the bar in terms of service and operational excellence. DIAL has once again consolidated its position on the world aviation map. I commend the efforts made by the employees of DIAL and that of all stakeholders in the IGIA community.This award is a testimony of continued improvements in passenger-service that Delhi Airport has witnessed since DIAL took over its operations in 2006. The award demonstrates DIAL's strong focus on operational efficiencies and resilient approach towards service delivery. As we faced several challenges due to COVID-19, we adopted the best in-house technology and other precautionary measures to make flying safer and provide a superior customer experience. We take this opportunity to once again affirm that DIAL is committed to a safe and seamless passenger experience while they travel through Delhi Airport."

CSMIA RATED AS 'BEST AIRPORT BY SIZE AND REGION'

Chhatrapati Shivaji Maharaj International Airports (CSMIA) has been awarded the Best Airport by Size and Region in the over 40 million passenger category by the Airport Council International (ACI), for the fourth consecutive year.

This achievement represents the passenger recognition and appreciation towards CSMIA's initiatives in promoting service excellence and building strides in providing excellent customer experience to its passengers through the adoption of unique practices and digital innovation.

CSMIA's advancement in the areas of technology and customer engagement activities to cater to the demand of the passengers has resulted in the airport bagging the award for Best Airport by

FIVE AAI AIRPORTS ADJUDGED AMONG THE BEST IN THE WORLD

At the ACI –ASQ Awards, five of the airports of Airports Authority of India have been adjudged as among the best airports in the world. Five AAI Airports includes, Amritsar, Chandigarh, Kolkata, Pune and Varanasi. These airports won six awards in two different categories. Despite the challenges posed by the pandemic, airports managed to collect ASQ surveys from their customers throughout the year and 108 awards have been won by 89 individual airports around the world for the year 2020.Based on new hygiene related questions added to the survey questionnaire, ACI introduced a new award - 'Best Hygiene Measures by Region' – of which there have been 33inaugural winners. This award provided airports with a reliable method of gauging customer response to new health measures and recognizes airports' success in responding to the intense focus on hygiene in the wake of highly contagious Covid-19 infection. Based on the results of ASQ survey, awards won by AAI airports are detailed below:

1. Best Airport by Size and Region:

S. No.	Airport	Category
i.	Amritsar Airport	2 to 5 million passengers per year in Asia-Pacific
ii.	Chandigarh Airport	
iii.	Varanasi Airport	

2. Best Hygiene Measures by Region (Asia-Pacific)

S. No.	Airport	Category
i.	Chandigarh Airport	Best Hygiene Measures by Region (Asia-Pacific)
ii.	Kolkata Airport	
iii.	Pune Airport	

INDIA GETS FIRST INFLATABLE HANGAR

An inflatable Hangar, first of its kind in India, was commissioned at GMR Aero Technik's MRO facility at Rajiv Gandhi International Airport, Hyderabad on February 12, 2021. The Hangar H-45 is suitable to store two narrow body aircraft such as one A320 NEO and one B737-900. The hangar has been manufactured by Buildair Inflatable Structural Solution of Spain. Buildair hangars come in five sizes - H-20 measuring 20 mts, H-35 measuring 35 mts, H-45 measuring 45 mts, H-54 measuring 54 mts and the largest H-75 measuring 75 mts. Some of the Buildair inflated hangars in service since 2013 are located around the globe at Getafe, Lérida and Leon in Spain, Budapest in Hungary, Jeddah, Red Sea project, Amaala and Neon in Saudi Arabia, Leznica and Sidwin in Poland, Santiago in Chile, and Singapore. The hangars range from 75 mtrs to 15 mtrs in size.

DESIGN & FABRIC

The inflatable hangar is formed by low pressure tubes (around 20 mbar), aligned parallel to each other forming a "rib-cage" structure. Structural stability of the inflatable structure is guaranteed both lengthwise by the support of the lateral air tubes, and crosswise through the internal pressure in the tubes. The hangar is designed with considering wind velocity and direction of the airport / place it will be installed. The body of the structure is electrically transparent to navigation aids such as ILS, DME, VOR frequencies. The fabric of the tubes is a technical low-weight high-tensity textile with a wide range of customization to the users specification, including colour, camouflage, UV and infrared protection, temperature resistance or even infrared camouflage. Apart from the standard sizes offered by Buildair, the hangars can be designed ad-hoc, based on customer's specific requirement. The Membrane is of woven polyester base cloth with PVC coating. they are fire-retardant (classified: M2 NFP 92 507) and with temperature stability between –30ºC and +70ºC. The technology is developed in collaboration with the University of Polytechnic of Catalonia through extensive research.

The hangars come with external waterproof layer isolation. It avoids water leaks in the hangar as well as air or dust infiltrations coming from outside, because it covers the hangar from ground to ground and it is sealed to the ground on both sides. The portable hangars including design, manufacture and testing takes between 1 months to 6 months depending on the size and for setting up of the hangar at customer's location will take between 2 days to 18 days depending on the size and 15-30 minutes of inflation time. No foundation is required for these hangars and they can be moored with high resistance straps, specifically designed to properly distribute existing loads. The hangar is equipped with lighting, exhausts, air conditioning (optional), fire system, etc. The hangars have real time tracking of all parameters which can be monitored through any computer or smart phones. The low maintenance inflatable hangar comes with 3 years guarantee, periodical inspections, training and recurring training.

FLEXIBLE ACMI CAN HELP THE AIRLINES THIS SUMMER: ACC AVIATION

Airlines holding worldwide AOCs with 'go now' capacity have the opportunity to diversify into flexible, short-term Aircraft, Crew, Maintenance and Insurance (ACMI) wet leasing contracts.

The flight ready solution can enable airlines to start revenue flying again at short notice and be an ideal solution for carriers wanting to take-off again this summer, while navigating the uncertainty around demand, ACC Aviation highlighted this week. Typical ACMI market lease contract terms will be relaxed in a united effort to get an industry grounded by the pandemic, back flying again.

"ACMI rates within Europe have stabilised off the back of the pandemic," Dave Williams, Director of Leasing at ACC Aviation noted. "ACMI solutions are cost-effective substitutes for an airline's own fleet and resources as they start to rebuild after a year on pause."

Separately, smaller airlines that have down-sized and cut capacity will want to take advantage of a shortened European peak summer in 2021, he suggested. "Turning to an ACMI solution in the peak season will provide these airlines with an immediate opportunity to retain or gain market share on popular routes. It will also add much-needed additional income, offering temporary peak season lift without the need to invest in longer-term resources.

"Airlines and tour operators face a difficult period forecasting when demand will pick up and ensuring they are ready to scale up services in line with that demand. It's about being flexible so they can bring back that capacity - in terms of flight crew, operations and dispatch personnel - as and when it's needed," Dave Williams said.

Since the UK Prime Minister announced the Government's roadmap to ease travel restrictions from 17 May, buoyed by its successful and speedy vaccination programme, TUI UK and easyJet reported immediate surges in demand for summer flights and inclusive bookings.

The fact is that airlines have spent the last 12 months in recovery mode – downsizing and cutting back fleet and resources, including returning aircraft to lessors. Personnel in operations, dispatch and planning roles have been made redundant or furloughed. Flight crews have been in hibernation mode through most of the winter. To get operations back up and running crews will need to refresh licences, book simulator time and ensure maintenance is current. This will inevitably result in bottlenecks and airlines will find themselves without the capacity (supplemental lift) to satisfy the demand. Ultimately they could lose out on much-needed revenue and income.

INDIA AIRCRAFT LEASING SUMMIT 2021- RUPEE RAFTAAR

The event was held on 26th February on both hybrid and virtual platform at Vigyan Bhawan, New Delhi. Nirmala Sitharaman, Union Finance Minister was the Chief Guest and graced the event with virtual presence, Hardeep S Puri, was the Guest of Honour at the summit, Pradeep Singh Kharola, Secretary, Ministry of Civil Aviation, Injeti Srinivas, Chairperson, International Financial Services Centre Authority, Vandana Aggarwal, Senior Economic Advisor, M/o Civil Aviation, Uday Shankar, President, FICCI, Remi Maillard, Head of Airbus India, and stakeholders from the Indian civil aviation sector and industry members attended the event.

Addressing at the Aircraft Leasing Summit, Hardeep S Puri, MoS, I/C, Civil Aviation stated that India must leverage its growing air traffic to establish a robust aircraft leasing industry, which would finance new aircraft deliveries through its own policies and products. He added that it is vital to develop this new line of business in India for financial services and add India on the map of global financial centers for international financial services. Nirmala Sitharaman, Union Finance Minister was the Chief Guest and graced the event with virtual presence. Hardeep S Puri, was the Guest of Honour at the summit. Pradeep Singh Kharola, Secretary, Ministry of Civil Aviation, Injeti Srinivas, Chairperson, International Financial Services Centre Authority, Vandana Aggarwal, Senior Economic Advisor, M/o Civil Aviation, Uday Shankar, President, FICCI, Remi Maillard, Head of Airbus India, and stakeholders from the Indian civil aviation sector and industry members attended the event.

The minister said that the COVID-19 pandemic has stagnated the economic activities globally, but Indian aviation sector, has shown resilience, recalibration and resurgence despite the cascading impact of various aspects of world trade. He added that the Indian Aviation sector is on a path to recovery and has exhibited significant recovery to pre-Covid levels in terms of passenger movement and cargo operation. Concerted efforts are being made to attract new business into India, such as through aircraft leasing, financing, and MRO operations.

To commensurate with the growth potential of Indian aviation sector, in the next 20 years, India will need 1,750-2,100 aircraft valued at over Rs 20,40,000 crore (USD 290 billion), with an estimated 100 deliveries each year, i.e. about Rs 35,000 crore or USD 5 billion of financing each year as per predictions of Airbus and Boeing. He added that the share of aircraft on lease globally has increased dramatically over the last few decades. It has escalated from 2 per cent in 1980 to over 41 per cent in 2018, and is estimated to have reached 50% in 2020.

Civil Aviation Minister highlighted that aircraft financing is the most profitable segment of the aviation value chain and currently, foreign financiers and lessors are the biggest beneficiaries of India's growing opportunity. He informed that several initiatives have been taken by the Government to develop Aviation leasing and Financing Hub in India which included Financing, MRO, manufacturing etc. to rapidly expand this business in India.

He said that as dynamic nature of business in IFSCs requires high inter-regulatory coordination, IFSCA (International Financial Services Centre Authority) has been established as unified regulator to promote ease of doing business in IFSC and to provide world class regulatory environment.

He shared that the Rupee Raftaar working group on aircraft leasing and financing therefore has holistically taken the 360 degree review of existing and foreseeable barriers to Aircraft Financing by local Indian financiers in India after extensive consultations with RBI, Banks, NBFCs – Asset financing / leasing companies, Airlines, Airports public and Private corporations and other stakeholders. He added that in anticipation of the long-term requirements of the country's aviation industry, the government envisages to create an eco-system through Gujarat International Finance Tec-City (GIFT) city which is an IFSC in India, wherein the flexibility of regulations needed in the industry will not affect the mainland regulations.

India has created a highly effective system for aircraft leasing and financing which is comparable to that of Ireland, China, HongKong, Singapore and elsewhere. The purpose is to grow India's financing market which is critical to the development of aviation industry, creating high aspirational jobs in the sector and in turn propelling India's growth. The initiative has the potential to deliver following key benefits: -

- Develop new line of business in India for International Financial Services
- Create additional high-end jobs opportunity in India
- Retain International Financial Services business in India and general additional business for Banks, NBFCs, Credit Guarantors, Insurance companies, other ancillary business etc.
- Add India on the map of global financial centres for International financial services
- Generate additional revenues through collection of taxes from ancillary industries and eventually through aircraft financing
- Bring various Foreign lessors in India
- Reduce foreign exchange outgo
- Foster an aviation financing system that supports financing of airport development as well as the Make-in India initiative for manufacturing of aircraft, helicopters, drones, air taxis etc, beside component and parts suppliers for manufacturing of carriers as also global OEMs. **(Source: PIB)**

Release of the publication at the India Aircraft Leasing Summit on the theme 'Rupee Raftaar', in New Delhi on February 26, 2021

SAVVYGO AEROTECH LLP organizes a webinar on "Role of Aviation Technical Consultants in Aviation Leasing Industry"

The webinar highlighted the core competence of an aviation consultant and how their service benefits in terms of decision making, cost-saving ranging up to final execution of the particular project in place

ASHWANI ACHARYA
BUSINESS HEAD, CSTPL

U.S. HARSHA
CEO, SAVVYGO AEROTECH LLP

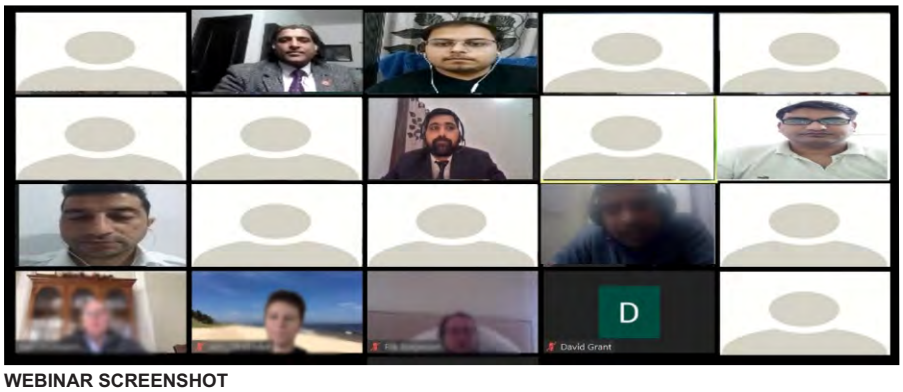
A consultant plays a key role in any sector due to their expertise in the particular domain and ability to give a solution to the small as well as pertinent issues of the organization. If we specifically look into the aviation sector than it would be ideal to mention that consultants act as a bridge to establish connections between all the verticals due to their visionary ideas in a very cost-competitive method of working.

Looking into the ongoing industry trend, India based SAVVYGO AEROTECH LLP organized a webinar on "Role of Aviation Consultants in Aviation Leasing Industry" which was participated by a large number of aviation industry professionals. The webinar was moderated by Mr. U.S.Harsha, CEO of SAVVYGO AEROTECH LLP and mentored by Mr. Ashwani Acharya, Business Head, CAE Simulation Training Pvt. Ltd.

Mr. Acharya highlighted the core component of becoming the consultant in the aviation sector and mentioned the parameter required to become the same. He said, "a consultant is driven by the quality of the objective. They must be a problem solver, creative thinker, lean and take larger pictures, have sharp analytical skills, take decision making of the organization, narrow down key areas faster using its own resources and have defined domain knowledge."

As the Indian aviation was significantly growing before COVID Lockdown and even now after gradual opening up of the sector, things are tremendously improving. At present more than 650 aircraft are operational in Indian sky and its projected that in the next 5-10 years the number will double up or even get more. This will be challenging for airlines to maintain their assets. So this brings the opportunity for consultant or professionals to share their knowledge and extend their services wherever required. Even in the case of such operators having less than 10 aircraft in their fleet, one can have less number of employees and more number of consultants to manage their assets and fulfill all regulatory works on as and when required basis. The technical consultants can undertake a lot of innovative measure for the organization. That comes at premium quality, cost-effective solutions and value additions in the whole chain, serviceability, bridges gap to the owner at a reasonable cost. Highlighting why airlines look for experts, Mr. Acharya mentioned, "in order to improve certain key functions consultants can bring focus and efficiency, identify and isolate challenges to resolve, forecast milestones, technologically support, out of box thinking and preventive measures." He added, "apart from all good work, the challenge of getting work is always there. In terms of delivery which is a gradual process sometime consultant are available at a higher cost due to their name and expertise in the sector."

The webinar was attended by key industry leaders as Marcial Casiano, CEO M3 Aviation Group LLC, Niraj Panchal from Aerofield Services LLC, Manish Sharma, Manager Maintenance, IndiGo Airlines, Surendra Nath, Shift Incharge, Airworks India Engg. Ltd, Abinav, Aircraft Maintenance Engineer, Flybig Airlines, Shyam Sunder from Deloitte, Ravinder Sharma, Aviation Technical Consultant and others.



WEBINAR SCREENSHOT

SAVVYGO AEROTECH LLP is a fastest growing young company with in-hand of rich practical experience in the field of Aircraft maintenance technical services and asset management as well arena born to render rich intricate technical services throughout the globe. A team of young but passionate consultants, as a company they are new but hold 20+ years of industry experience in aircraft consultation. Vision to provide 100% transparent and premium service to their client makes them reliable in the industry.

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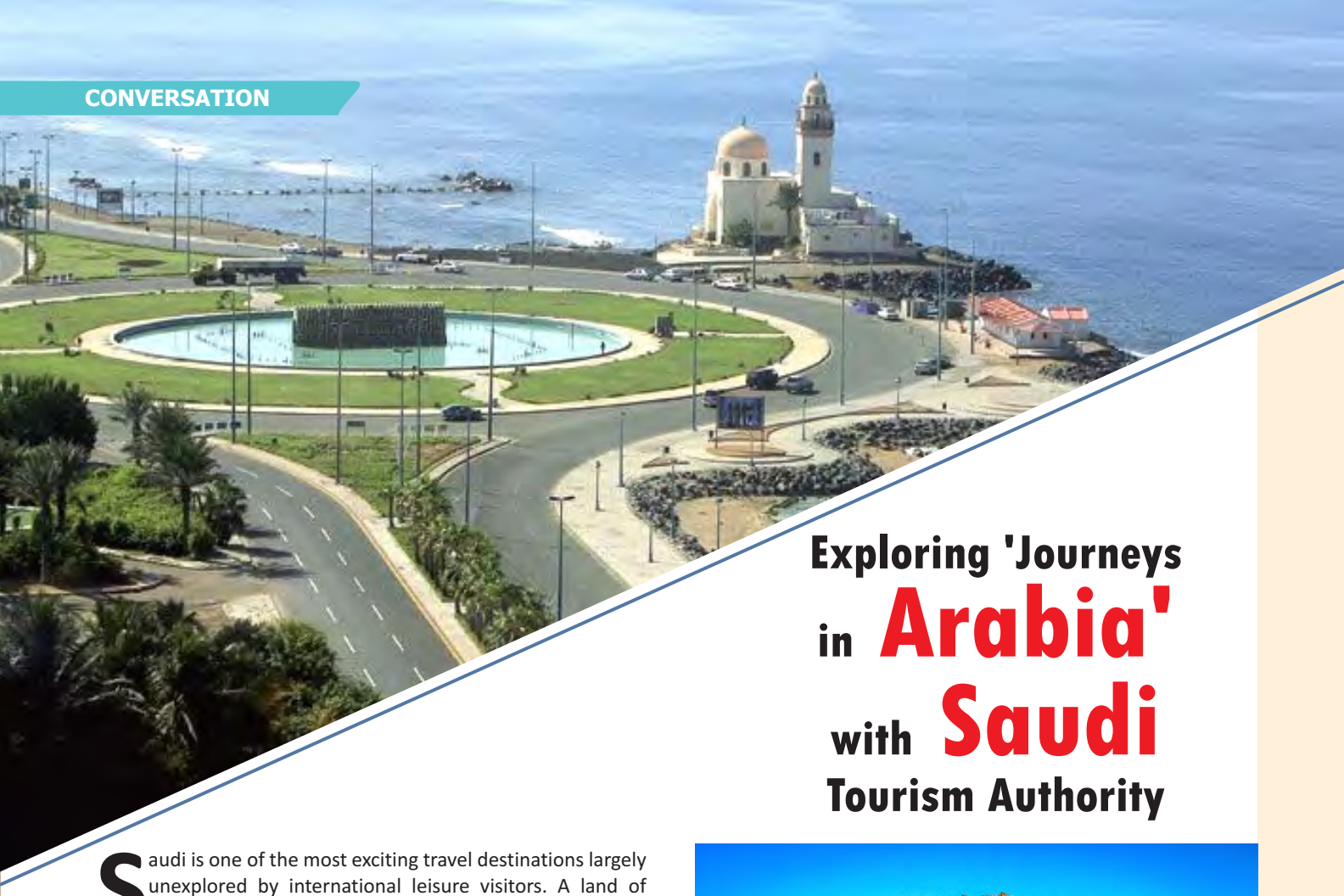


Exploring 'Journeys in Arabia' with Saudi Tourism Authority

Saudi is one of the most exciting travel destinations largely unexplored by international leisure visitors. A land of adventure and unparalleled hospitality, Saudi is a study in contrasts. From Al Jouf in the north to Jazan in the south, you'll find arid deserts and lush valleys, clear seas and rugged mountains, ancient archaeological sites and modern architecture, haute cuisine and street food. Saudi's tourism offering focuses on delivering authentically Arabian adventure, culture and heritage underpinned by remarkable hospitality. In this edition, **Aviation World** is pleased to publish exclusive conversation with **Saudi Tourism Authority (STA)** inviting travellers to come and explore the unexplored destinations.

AW: Kindly brief about the "Vision 2030' and the concept of comprehensive development?

STA: Vision 2030 is a blueprint for the socio-economic future of Saudi Arabia as a diverse and sustainable economy.

The Vision strategy identifies tourism as a key strategic industry that creates jobs, drives growth and contributes to quality of life for Saudis and visitors alike. We aim to achieve 100 million annual visits to the Kingdom by 2030, made up of both domestic and international travelers.

To achieve this goal, we have developed a comprehensive

strategy to drive the number of visits, increase spend and to build a leading tourism brand for Saudi. We have identified 15 priority leisure source markets spanning the GCC region, Asia, North America and Europe. This is broken down further into three target segments, leisure, MICE and spiritual travel.

Since opening our doors to leisure tourism in September 2019, STA has unveiled many new destinations and experiences for audiences from home and abroad.

The campaigns highlight what Saudi has to offer today – its rich culture, deep heritage, diversity of landscapes and unparalleled hospitality. It is the authentic home of Arabia: a place of exploration, of unique experiences. This is what we want the world to discover about Saudi.

AW: With that move can we expect ease of regular visa services for international visitors?

STA: In September 2019, the tourist e-visa was introduced.The launch of the e-visa was a significant milestone in the opening up of the Kingdom. From September 2019 to March 2020, we had issued more than 400,000 tourism visas, and we are confident that we will exceed this target once borders re-open.

Visitors from 49 countries are able to apply for the visit visa online, while other nationalities are able to apply for the visa at the Saudi embassy or consulate in their home country.

AW: What steps are being taken for the resumption of tourism activities in the country?

STA: We continue to work closely with the Ministry of Health on health and safety standards. The Ministry has put in place comprehensive protocols for establishments to provide visitors and their families with a safe experience, which are aligned with the guidelines recommended by the WTTC.

- ✪ Free healthcare is provided to anyone in Saudi Arabia (citizens and visitors alike) affected by COVID-19
- ✪ Tracking and testing apps have been introduced to help people assess their health and manage any quarantine requirements
- ✪ The Saudi tourism e-visa process is 100% digital, ensuring the reduction of touchpoints ahead of travel and upon arrivals

AW: Which all cities will be primarily promoted for leisure activities through the cultural and heritage sites?

STA: Saudi has a diverse and exciting offering when it comes to culture and heritage. The country is home to five UNESCO World Heritage Sites, and a further 11 sites on the UNESCO tentative list. As we develop this aspect of our offering, Hegra in AlUla and Diriyah on the outskirts of Riyadh are spotlight projects for tourists considering a visit to Saudi in the coming months.

Hegra, once the southern capital of the Nabataean kingdom, officially opened to leisure tourism in October 2020. Located in AlUla, there are several exciting infrastructure projects in the pipeline, such as French architect Jean Nouvel's luxury resort in the Sharaan Reserve and Singapore luxury hotel group Aman's three eco-focused resorts.

Diriyah, the birthplace of the Saudi state, aims to become one of the region's foremost destinations for historical and cultural knowledge-sharing activities and international events.

AW: Anything specific if you would like to share with our readers?

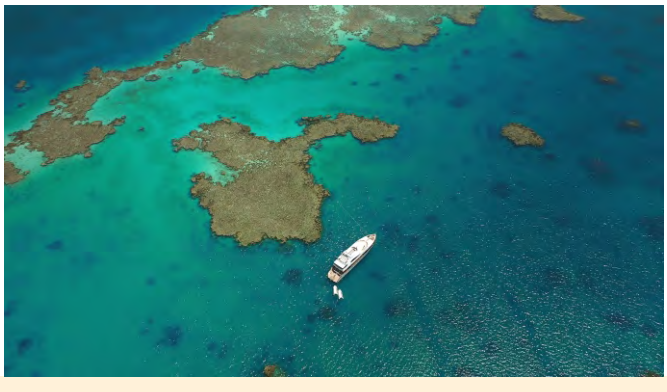
STA: In January 2021, we launched the biggest international destination marketing campaign in the country's history. The goal of our 'Welcome to Arabia' campaign is to build awareness of Saudi in key source markets as a warm, welcoming, fascinating leisure destination that offers a unique and diverse range of cultural, heritage, adventure and nature experiences.

Running across North America, Europe, Asia and the GCC, the campaign targets travelers seeking the great outdoors, wide open spaces, inspiring views and authentic experiences.

We know that while border and travel restrictions exist for most countries around the world, people are still dreaming of travel and this campaign aims to inspire, so that when travel is able to safely resume, Saudi is top of mind.

We are investing in developing strong relationships with key partners in the travel trade sector in all of our priority source markets. We are in the process of building a network of international offices, responsible for both trade and consumer marketing activities, to expand the reach and relevance of Saudi's tourism offer.

Each market will be tasked with developing a tailored, strategic approach to most effectively engage with their target audiences, whether it be workshops, road shows, training, marketing campaign or FAM trips. AW



DELTA 105

AN ARMY EXPERIENTIAL ZONE

It is not possible for civilians to venture into the army camp due to high security and regulatory restrictions. But, one can certainly feel and experience the army life and understand what makes them special at an army experimental zone "Delta 105", located few kilometers away from Manesar, Gurugram.

Delta 105 has been started by retired army personnel Major Dinesh Sharma along with jawans from his regiment. The camp is set up in 40 acre of land, completely lush green which includes activity areas, camps for night stays, dedicated space for food, cafeterias and ample parking space. All the activities are inspired from the Indian Army and visit to this place gives a sneak peek into a jawan's life and what goes into making him a national fighter.

It is a one of its kind concept that recreates the whole army life experience for everyone despite of his/her age. One can plan it as a day's picnic or as a getaway, making it ultimate camping experience. One can navigate through a maze to build the presence of mind and stamina, paintball in body armor and battle fatigues, and a guided tour of an artificial war zone among other things.

ACTIVITIES AT THE CAMP

It is a day's picnic that provides visitors with fulfilling experiences by recreating life in an Army camp and a glimpse into "What makes a Jawan?" The stay at camp involves activities like adventure courses, friendship peak and much more. The facilities include food, training, camping, army obstacle course, tent pitching, obstacle run, jumaring, rappelling, bonfire, survival training and more adventure. And most interestingly, they have a war zone which looks like an international border. Here, they explain how the enemy enters, how to stop them, what weapons are used.

At Delta 105, apart from fun-filled activities, one can experience how jawans stay in peace and war, how to fold National Flag, rest under tents made of parachutes once used by the Indian Air Force, War Zone created on a 300 ft border made of bunkers, trenches, minefield, etc, and much more which can be recalled as once-in-a-lifetime unique experience. The zone also has amazing food options that can be relished throughout the day. The highlight is the regional food of troops of various regiments served in the Jawan's village. The guests are also briefed on the sand model about the layout of the camp, expectations from visitors and do and don'ts, etc.

NIGHT CAMPING

Delta 105 has 10 luxury tents with attached toilets which are provided for night stay, booking need to be done in advance. The package includes one-night camping stay, camping activities, bonfire and barbeque, all three meals, evening snacks and tea .The room size is of 350 sq ft, with a twin bed with side table.

Delta 105
Address: Village Pada, Manesar, Gurugram

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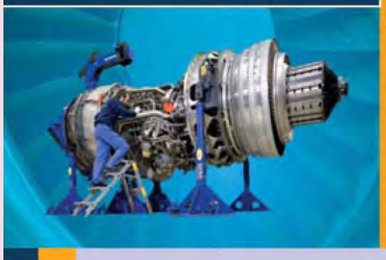

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- Palitana (Bhavnagar)
- Morbi (Morbi)
- Dwarka (Devbhumi Dwarka)
- Ambaji (Banaskantha)
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