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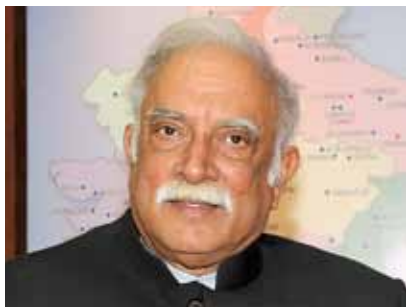
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INSIDE

EXCLUSIVE

Regional connectivity is sacrosanct for NDA: Civil Aviation Minister

4



'Right capacity is the solution for India' Dinesh Kesar

6

First Ultra Long Range Falcon 8X set for delivery

8

2016 crucial year for Indian civil aviation

14

E190-E2 rolls out, sets benchmark

16



ATR - Short haul proposition

17

It rings a Bell in India!

19

Airbus will deliver one aircraft per week over the next 10 years

20

Honeywell forecasts lowers global helicopter deliveries

22



By **R. CHANDRAKANTH**

There is excitement in the air. There is much anticipation that the Ministry of Civil Aviation may announce the finalisation of the National Civil Aviation Policy at the fifth edition of India Aviation 2016 which gets underway at the Begumpet Airport, Hyderabad, from March 16 to 20. These are good times.

The show is expected to draw several companies and some of them who are having display of aircraft include - B777 (Air India); Dornier (HAL); TAC-003 (Thrust Aircraft Co.); Mi-172 (Pawan Hans); A350 (Qatar Airways); A330-300 (AirAsia); Legacy 500 and Legacy 650 (Embraer); B787 and B777F; A380 (Emirates); DA40NG and DA42NG (Tribhuvan Technology); Falcon 7X (Dassault Falcon); KingAir 350i and Grand Caravan (Textron); Bell 429 (Bell Helicopter); Citation II (Textron); Phenom 100 and Phenom 300 (Embraer); Augusta 109 SP (Augusta Helicopters); G150 and G650 (Gulfstream); Extra 330 C (Mark Jefferies) and A320neo (IndiGo).

With the President of India Pranab Mukherjee inaugurating, the show is expected to draw participation from many foreign original equipment manufacturers who are looking at expanding their presence in India, considering the vast potential that the sector offers. India is expected to ascend to the top three spot in terms of passenger numbers, after China and the United States.

As per 2015 statistics, about 81.1 million people travelled by air which is expected to go up to a whopping 280 million by 2029, catapulting India to third place in global ranking. As per the International Air Transport Association (IATA), the projections are 360 million passengers by 2034 which is amazing growth

INDIA AVIATION, ALL SET TO ROLL

PRESIDENT OF INDIA, PRANAB MUKHERJEE TO INAUGURATE INDIA AVIATION 2016 WHICH OPENS TODAY

and is expected to bring untold benefits to India's economic development. Presently aviation and aviation-related tourism support over seven million jobs and contributes more than \$23 billion to the GDP.

ECOSYSTEM

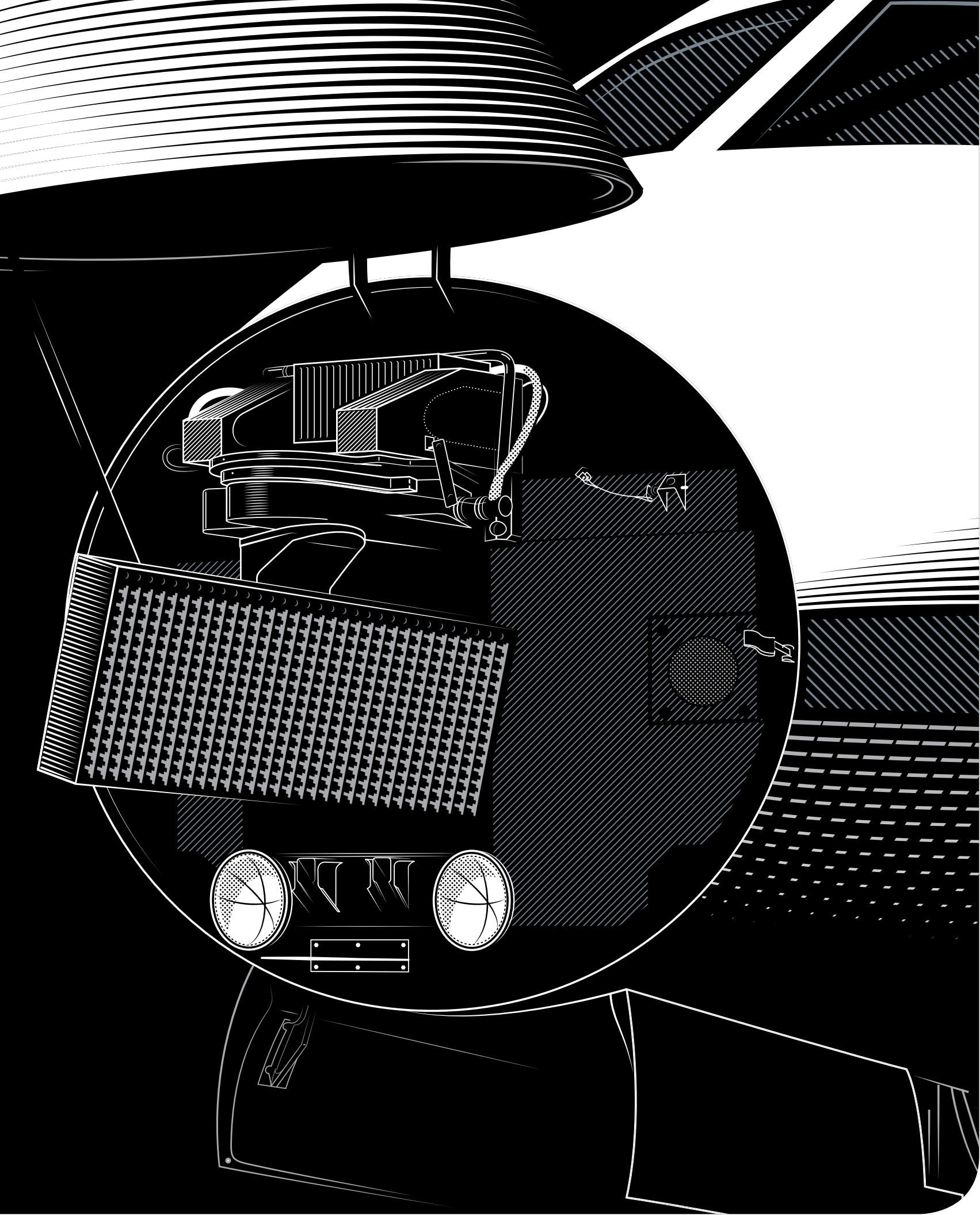
The vision of the policy is to create an ecosystem to enable 300 million domestic ticketing by 2022 and 500 million by 2027 and international ticketing to increase to 200 million by 2027. The mission is to provide safe, secure, affordable and sustainable air travel with access to various parts of India and the world. As per an ICAO (International Civil Aviation Organisation) study, the output multiplier and employment multiplier are 3.25 and 6.10 respectively.

500 MILLION TICKETS SALE TARGET

The government has proposed to take flying to the masses by making it affordable. The policy says that if every Indian in the middle class income bracket takes just one flight every year, it would result in a sale of 500 million tickets by 2027, a big jump from the 70 million domestic tickets sold in 2014-15. This will be possible if the air fare, especially on the regional routes, is brought down to an affordable level.

AIRLINES LOOKING UP

The health of the aviation industry is directly related to the health of the airlines in India. In the recent past, we have seen the death of Air Deccan, Air Sahara and Kingfisher Airlines. The flamboyant owner of the defunct Kingfisher Airlines, Vijay Mallya is grabbing all the headlines for all the wrong reasons. That Kingfisher Airlines owes over ₹7,000 crore to lenders and Vijay



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The government is laying emphasis on regional connectivity and it is hoped that we may see some more regional players emerging in the near future. Presently, only the South has regional airlines – Air Costa, Air Pegasus and TruJet (Turbo Megha Airways), with another FlyEasy waiting in the wings to start operations. The North should follow suit.

Mallya being named willful defaulter, is a sad thing for the airline industry.

However, barring IndiGo and GoAir, all other airlines in the recent past have gone through financial crisis, going deeper and deeper in debt with accumulated losses. The combined losses of airlines in India have been pegged at \$1.77 billion during fiscal 2013-14 according to data of the Centre for Asia Pacific Aviation (CAPA). The accumulated losses of Indian airlines touched \$10.6 billion during the past seven years, with Air India accounting for a major share. Air India is saddled with a debt of ₹40,000 crore that includes a long-term loan taken for aircraft purchase and working capital loan. It has accumulated a loss close to ₹30,000 crore. However, thanks to the falling prices of aviation turbine fuel (ATF) the airlines have returned to growth and are strategising accordingly to keep the momentum going.

15 SCHEDULED OPERATORS

Presently, there are 15 scheduled operators in the country as per the Directorate General of Civil Aviation (DGCA). Of that, two are cargo operators—Blue Dart Aviation and QuikJet Cargo. Of the remaining 13, there are four regional aviation operators – Air Costa; Air India Regional, Air Pegasus and Turbo Megha Airways. The rest are either full-service carriers—Air India, Jet Airways (Jetlite though has merged, DGCA is showing it as a separate entity) and Vistara; and low-cost airlines—IndiGo, SpiceJet, GoAir, Air India Express and AirAsia India. That is a number which does not reflect India's size and also the growing aviation sector, but the heartening factor is that these airlines are on an aircraft acquisition spree and are becoming 'healthy'.

IndiGo continues its amazing run, while other airlines are also faring well, coming out of financial mess. Airlines are building capacities in the hope that passenger/cargo growth is going to grow as per predictions. IndiGo recently announced a record breaking order for 250 Airbus A320neo aircraft. SpiceJet has bounced back after co-founder Ajay Singh has taken over reins from Kalanithi Maran of Sun Group. GoAir had earlier ordered 72 A320neo planes. Air Costa has got the no-objection from the government for pan-India operations and it is awaiting delivery of the 50 Embraer E-Jets it had ordered in 2014. Vistara and AirAsia are in an expansion mode, though the latter has deferred it for a while.

The government is laying emphasis on regional connectivity and it is hoped that we may see some more regional players emerging in the near future. Presently, only the South has regional airlines – Air Costa, Air Pegasus and TruJet (Turbo Megha Airways), with another FlyEasy waiting in the wings to start operations. The North should follow suit.

AIRPORT INFRASTRUCTURE DEVELOPMENT

There are 426 airstrips and airports in India, but not all are operational. The Airports Authority of India (AAI) has 125 airports under its belt and 95 of them are operational with 71 having scheduled operations. The AAI has taken up work in creating/modernising smaller airports which should help in regional connectivity.

AIR CARGO, KEY SOURCE OF REVENUE

Air cargo demand in India is expected to boost airfreight market to 2.8 million tonnes by 2018, going by the present compounded annual rate of growth at 5.5 per cent. Most of this growth, however, will benefit foreign-owned airlines rather than domestic carriers. E-commerce will drive the domestic air cargo market and airlines have already started working in tandem with this trend. Currently air cargo volumes in India are extremely low as compared to other leading countries due to high charges and high turnaround time.

The policy states that air cargo will be accorded 'infrastructure' status if co-located with an airport and will be eligible for Sec 80IA benefits. The Air Cargo Logistics Promotion Board (ACLPB) has been constituted to encourage growth by way of cost reduction, efficiency improvement and better inter-ministerial coordination. The Board and the industry will submit a detailed action plan after stakeholder consultation, with the objective of reducing dwell time of air cargo from 'aircraft to truck' to below 24 hours by December 31, 2016, and to 6 hours by December 31, 2017. The government has said it will streamline and simplify customs procedures.

GETTING MRO BUSINESS BACK IN INDIA

The MRO business of Indian carriers is alone around ₹5,000 crore, 90 per cent of which is currently spent outside India – in Sri Lanka, Singapore, Malaysia, UAE, etc. Given India's technology base, the government is keen to develop India as an MRO hub in Asia, attracting business from foreign airlines.

The policy states that service tax on output services of MRO will be zero-rated. Aircraft maintenance tools and tool kits will be exempt from customs duty. MROs are at present required to provide proof of their requirements of parts, or orders from their client airlines. The process for the clearance of the parts shall be simplified by allowing for self-attestation by the MROs. The period for which the spare parts imported by MROs can be stored tax-free shall be extended to three years. Foreign aircraft brought to India will be allowed to stay for the entire period of maintenance or up to six months, whichever is lesser, provided it undertakes no commercial flights during that period. The aircraft may, however, carry

Continued on page 15...

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Regional connectivity is sacrosanct for NDA: Civil Aviation Minister

Editor-in-Chief of SP Guide Publications, **Jayant Baranwal** (accompanied by Neetu Dhulia) had an exclusive rendezvous with the Union Minister of Civil Aviation **P. Ashok Gajapathi Raju** during the second half of January this year. The interaction included wide ranging subjects pertaining to India's civil aviation scenario. Some of them were the growth factor, 5/20 rule, regional connectivity, general and business aviation, cargo business and also the upcoming National Civil Aviation Policy.



SP GUIDE PUBLICATIONS CMD AND EDITOR-IN-CHIEF JAYANT BARANWAL WITH THE CIVIL AVIATION MINISTER P. ASHOK GAJAPATHI RAJU

Jayant Baranwal (Baranwal): Could you give a quick perspective on the growth pace of our civil aviation industry?

Civil Aviation Minister (Minister): The growth is reported to be around 20 per cent over the previous year; actually it's a good growth. I think it is a reflection of the economy and it also gains from the economy. Civil aviation has benefited in the past one year. Of course, there are many factors and one factor that, I think, which is fairly important is the price of ATF (aviation turbine fuel) coming down, and that has been a stimulus.

Baranwal: But in that case if ATF goes up, then what do you think?

Minister: I don't think it will go up now. It does not look as if it will go up.

Baranwal: But there could be a possibility that it will eventually go up?

Minister: You see, once you are born, death is eventual, but every day you don't really think about it. The trends don't show as if it will go up that way in the foreseeable future. You could say probably in this year, for instance, definitely, the trends don't look in that direction. I am no expert there, so generally, I think there will be growth in passenger traffic.

Cargo is literally miniscule in our country and so it has scope not only for exports but also within the country. We have so many agro climatic zones and good markets, so probably if we can get the industry and the trade entrusted, I think transport can help there, that's good if it happens, because I see an opportunity there.

Baranwal: But you want cargo industry to grow well?

Minister: Yes, cargo industry needs a push, needs incentives and infrastructure. The world over, most airlines don't make money from transportation of people, whatever they make it is from cargo.

Baranwal: So that offsets the losses they are bearing?

Minister: We hope they don't go under losses. The world over that is happening in a lot of places and we can see that it can happen here.

TARGETING HEALTHY GROWTH

Baranwal: The DGCA (Directorate General of Civil Aviation) is yet to emerge as a progressive organisation as per the sentiments of the overall industry. What steps are being taken to make it more conducive to industry's healthy growth?

Minister: You see, the DGCA is a regulator and most regulators don't endear themselves to people, but they can be transparent in their actions. Generally regulators don't endear themselves to trade because it will become a compromise in safety. They are opaque and they need to become transparent and they need to be faster and conducive to growth. A regulator is necessary. You can't throw a baby out of the bath water once the bath water goes, the clean baby remains so, and that is how we would like to see the DGCA as a cleaner organisation.

Those are the kinds of steps we are taking there to try to see the organisation modernises its thinking and pulls itself up.

5/20 RULE

Baranwal: Air India has now withdrawn its objection on the 5/20 rule. Does this pave way for faster growth of India's airline business?

Minister: It's okay some airlines object, some don't. Ultimately, it's the government to take a decision. Now why 5/20 was brought? What is the logic behind five years in 20 aircraft and who does it pull down? You can't regulate foreigners, you only regulate yourself, for what purpose? It is a decision that did come out of the Cabinet, so any change it has to go back to them. Now politically speaking, almost no political party's manifesto, regional or national, has ever talked about aviation.

There is a sentence in the BJP's manifesto on regional connectivity, so we are trying to keep the regional connectivity thing as sacrosanct, building the policy around it. Of course, as far as the 5/20 rule is concerned certain people after sometime will get used to a particular thing, it gives a comfort level or call it a discomfort level. I think this is an impediment to the growth of Indian aviation. No other country in the world ever has this type of regulation. I am individually convinced and I hope to convince my colleagues further.

Baranwal: And this will enable much faster growth on the domestic front.

Minister: I think so, because impediments are removed. Now what is this that they are calling level playing field. I went through hell so another fellow has to also go through hell, otherwise it's not a level playing field because I went through hell and he is not going through hell. I don't think that should be acceptable logic here, we need to see that this industry grows. Someone will benefit, someone won't benefit that's ok, but for eternity I don't think we can doom the things. That's what I feel and everybody knows that I am not for the 5/20 individually; I have voiced this at various forums too. So if I am able to convince my colleagues then it can go.

MRO WILL BRING INDUSTRY TO INDIA

Baranwal: MRO: I believe the draft policy sounded very friendly to the industry – what all have been the plans to enable the growth in this area?

Minister: MRO is one place where India has a lot to benefit. If we are able to bring in the policy, we will get the industry into India. Right now \$700 million of Indian business is going to Singapore, Dubai, Sri Lanka and when you interact with them they are giving few things, one is the service tax and customs for the Government of India. We interacted with the finance and customs; they wanted time for spare parts to be changed to three years instead of one year right now. Currently, they get it, and if they consume it within one year and they don't have to pay the duty. They are asking for three years time and in informal consultations, they seem to understand the problem. Also, the

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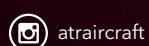
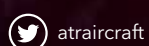
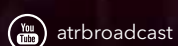
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PROPELLING THE NEXT CONNECTION



'Right capacity is the solution for India'

Dinesh Keskar

Boeing commercial airplanes are on a steady course and the US-based company has laid out its strategies in the world market in general and India in particular. In an interview with Editor-in-Chief **Jayant Baranwal**, the Senior Vice President of Sales, Boeing Commercial Airplanes (Asia-Pacific & South Asia), **Dinesh Keskar** talks exclusively to **SP's ShowNews** on how the company is going to expand its market share.



growth. It is mostly because of fuel price which is the fundamental reason why it is growing. The exchange rate is going in the reverse direction but what matters in India is the price, which is based in dollars, multiplied by the exchange rate and that number is still going down. Things will continue to get better.

Baranwal: You will fully agree that India's full potential is completely untapped?

Keskar: Oh, I won't say it is completely untapped but it is untapped. It relates to Tier-II and Tier-III cities and airports as well. Our potential largely depends on going from metros to the secondary cities and even at some point in time the tertiary cities which you call Tier-II and -III. I think what is going to be required for this continuous explosive growth to sustain, is to get flights between Tier-II, Tier-III and within Tier-II and Tier-III. Within Tier-II it is fairly possible in the near term, whereas within Tier-III is going to take at least another five to seven years. For example, flights between Nagpur and Lucknow, I consider both of these airports as Tier-II airports, there are enough operations around them and they have traffic of five million plus, and yet there are no direct flights. There are many such Tier-II cities where the airports already exist and we feel that once the airlines starts offering flights, the market will develop. The market won't develop overnight but certainly there is potential for the next growth to come from these Tier-II cities. Right now most of the metros are linked to the Tier-II cities but we need to start getting flights within the Tier-II cities. That is where the untapped potential is going to come from. Passenger are coming, choosing air travel, which is what has led to the all-time high growth of 20 per cent in the Indian domestic market.

I think there is still potential but I must tell you that I have been watching carefully the improvement under the leadership of Railway Minister Suresh Prabhu on getting better trains, better on-time, better facilities for the train travellers and all that is going to create a balance. Let me tell you that there is enough to go around for both the aviation market and continued prosperity of the railway passengers. What is going to make the difference is going to be what kind of money I have available and what is my profile. What I mean by that is: if a family of four is going on a vacation they can choose to can afford to pay additional money to fly on the airplane and save several hours or would they rather prefer to save the money and take 15 hours of train journey.. There is going to be both kinds of people and that's where the growth will continue.

Jayant Baranwal (Baranwal): How do you see the airlines industry in India moving at this point of time, particularly under the new government regime? Is it stagnant or growing or reversing...and why?

Dinesh Keskar (Keskar): The new regime has been in place since May of 2014, so it's been over a year-and-a-half. In my opinion it is clearly growing because you can see the steady stream of deliveries happening at many airlines. The bigger evidence of that is the highest growth rate that India has experienced, in both domestic travel and international travel to a certain extent. Domestically, we are growing at the rate of 20 per cent which is phenomenal. The total number of passengers flying in India is still around 75-80 million domestically; and the rate of growth and the propensity of people to travel in their discretionary money available to travel, all clearly points towards growth. So I think, yes while I don't see the new aviation policy in place, I think what we have in terms of huge airports that have modernised over the last two years – some in this regime, some before such as Mumbai, Delhi, Bengaluru and Hyderabad and of course started with Kochi as PPP (public-private partnership) – I think the capacity has been created and the growth continues; people have the money to travel and with the economic GDP growth in India, the commercial aviation industry will continue to grow.

I know the goal is to get to over 9 per cent but we are certainly doing well right now and we are touching around 7 per cent. All these points clearly lead me to believe that in spite of some of our infrastructure constraints, we are growing the fastest in the world. For example, the rate of growth in December it was even higher at 25 per cent, so all looks well towards the

Baranwal: Dinesh, can you give some ideas how to sustain and grow the transformation of railway passengers to become air travellers?

Keskar: That is going to only happen, Jayant, if they sell a few seats on each flight at a low price. All airlines are offering good fares but they only offer it to few seats on each flight or on flights which they know are not going to be filled up by the time the day of travel comes up. It is those seats when a traveller sees a good fare, for flights advertised for as low as ₹2,500. I am not saying on a Mumbai-Delhi flight but there are flights in that range and those are the ones that are going to be attractive for a railway passenger to shift from railways to the airlines for two reasons—novelty and speed. These are the reasons that the shift will continue. It is not going to continue if the Mumbai-Delhi fares stay at a minimum of ₹6,000 or ₹7,000 all the time and the other fares stay in line. For example if you have a 10-hour journey from Nagpur to Mumbai, which I have done a few times, and on that if you charge a fare of more than ₹4,000, chances are that no railway passenger is going to shift to pay about ₹4,000. The affluent people are paying about ₹2,200 for first class AC and I think they have a tendency to shift if they do advance booking and fly for about ₹3,000. They are able to fly for about one-and-a-half-hours instead of about 12 hours by train. Some people will always like going by train and some people will always value time. All these pragmatics will come into play but no matter what each segment will be represented and that with that you won't have an issue of growth in the traffic. •

(Continued in SP's ShowNews, Day 2)



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First Ultra Long Range Falcon 8X set for delivery to Indian operator by end of 2016

By SP's CORRESPONDENT

Dassault Aviation will present its fleet of Falcon large cabin, long range business jets at India Aviation, India's biggest civilian aviation Exhibition from March 16-20, 2016, Hyderabad, India

The fifth edition of this prestigious event, which opens on March 16 at Hyderabad Begumpet Airport, will feature Dassault's popular 4,000 nm/7,410 km range Falcon 2000LXS widebody twinjet.

Dassault is the Indian market leader for large cabin, long range aircraft, with 22 aircraft currently in service and several more on order. This position stems in part from the Indian Air Force's long experience with Dassault fighters, whose advanced technologies, notably digital flight control, served as the basis for that on the Falcon 7X.

"We expect the country's accelerating economic growth to translate into rising Falcon sales going forward," said Dassault Aviation Chairman/CEO Eric Trappier. "No other business jet line is more suited to local requirements, whether it be in terms of cabin design, flying performance, fuel economy or versatility, than Falcon."

Dassault's popular Falcon 2000 twinjet – now approaching the 600th production mark – accounts for the largest portion of the present Indian fleet. Sales are currently being driven by the Falcon 2000LXS, the newest edition in the 2000 line, which offers a short-field capability comparable to smaller midsize and super midsize business jet models but with a range and comfort level far better than these aircraft. This summer, the Falcon 2000 line will be certified to carry Dassault's new FalconEye Combined Vision System option, allowing the LXS and the shorter range Falcon 2000S entry level jet to be offered with this revolutionary head up display, the first in the industry to meld synthetic and enhanced vision capabilities.

Bulk of New Sales Coming from Falcon 7X, 8X.



FALCON FAMILY

The majority of new Indian Falcon orders, however, are for longer range models like the Falcon 7X and the new ultra long range Falcon 8X that can fly non-stop from anywhere in India to destinations such as London City Airport that are typically off limits to big business jets.

The 6,450 nm/11,945 km Falcon 8X, which will feature the quietest and most comfortable cabin in business aviation, is due to be delivered to its first Indian operator by the end of 2016. The 8X will offer all the advanced technological features of the popular Falcon 7X, from which it is derived, including the industry's leading digital flight control suite. It will also be certified with the advanced FalconEye Combined Vision System.

Set to be certified in mid-2016, the new trijet will offer the longest range of any Falcon along with the most extensive selection of cabin configurations available on any large cabin business jet. The three

8X's in the flight test program have nearly completed all certification test requirements, having accumulated over 550 flight hours to date. This spring, s/n 03, the first 8X with a fully fitted interior, will undergo a global test campaign to demonstrate aircraft operational reliability and performance in different flight conditions. The month-long campaign will subject the aircraft to the extremes of what Falcon 8X customers might expect to face during its operational life and focus particular attention on the performance of cabin equipment and functionalities and other high speed communications systems, especially during long intercontinental flights.

Dassault also predicts strong demand among Indian customers for the all-new Falcon 5X very large body twin, currently in development. Due to enter service in 2020, the 5,200 nm/9,630 km 5X will offer the largest cabin cross-section of any business jet and the lowest ownership and operating costs in the 5,000 nm segment.

"The unmatched ability of Falcons to combine short and long haul flights and fly out of short hard-to-reach airstrips with full range performance – even at high altitudes and high temperature conditions – make them perfect for Indian operating conditions," continued Trappier.

Meanwhile, Dassault continues to reinforce its regional support presence. Last year, the company opened a new Bangalore office and authorised Ligare Engineering, a division of Ligare Voyages, to provide AOG Service Level Maintenance for the Falcon 7X at its Delhi service facility.

The deal with Ligare followed previous Authorized Service Center agreements with Taj Air/Metrojet, for the Falcon 2000 series, and Air Works India, for the Falcon 900EX/LX line. Both of these operations are located in Mumbai and supported by satellite facilities around the country.

The regional service centers are backed up by spares warehouses in Mumbai and Chennai and off-shore facilities in Dubai, Singapore and Paris. •

Bombardier Introduces the world's only 90-seat turboprop

By R. CHANDRAKANTH

Bombardier Commercial Aircraft has demonstrated the unique versatility of the Q400 aircraft by introducing the world's only commercial turboprop capable of carrying 90 passengers. Bombardier has recorded firm orders for a total of 547 Q400 aircraft.

"As part of Bombardier's ongoing commitment to the evolution of the Q400 aircraft programme, we are thrilled to offer customers increased capacity on regional routes with high passenger demand and the growth potential to increase profitability," said Fred Cromer, President, Bombardier Commercial Aircraft.

"We are witnessing growth in the number of passengers per departure in the turboprop market and Bombardier is responding with a 90-seat Q400 aircraft – a new segment solution ideally suited for current and future short-haul and high-demand markets," said Patrick Bau-



dis, Vice President, Marketing, Bombardier Commercial Aircraft. "Once again, Bombardier's innovation leads the pack – industry players have talked about developing a 90-seat turboprop, and today, only Bombardier has turned that vision into a reality."

As a confirmation of Bombardier's focus on continuous improvement aimed at addressing traffic growth and customer bottom line, Bombardier is also pleased to announce a 2,000 lb-increase in payload and an escalation of the A-Check and C-Check intervals from 600/6,000 to 800/8,000 flight hours, all available for entry-into-service as early as 2018.

Compared to other turboprops, the Q400 aircraft offers unique speed flexibility driving higher scheduling efficiency; and 12 to 14 additional seats which when combined, deliver over \$8 million US in extra value to customers. •



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SP's Civil Aviation Yearbook to roll out in 2016

Continuing its relentless journey of excellence since 1964, SP Guide Publications is adding to its portfolio another publication – **SP's Civil Aviation Yearbook** – which is expected to be an exhaustive compendium of the civil aviation sector which is on the cusp of major transformation. The Union Minister of Civil Aviation P. Ashok Gajapathi Raju is expected to launch **SP's Civil Aviation Yearbook** brochure, signifying the arrival of a handy reference book to the sector which has no ready reference material from expert sources. The launch will happen during the India Aviation event being held in Hyderabad from March 16 to 20, 2016.

FIRST OF ITS KIND IN THE SECTOR

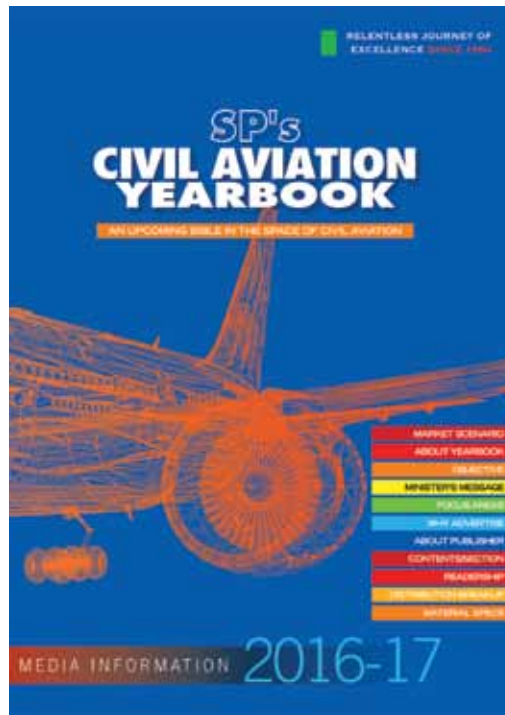
Indian civil aviation is on the cusp of take-off! Under the tutelage of a very supportive Minister of Civil Aviation P. Ashok Gajapathi Raju and a new team at the Ministry, drastic reforms and serious policy changes are being touted to unshackle the potential of the Indian civil aviation market.

From introducing a whole new National Civil Aviation Policy to the proposal of scrapping the 5/20 archaic rule, rationalisation of taxes, clearing bottlenecks for general and business aviation and reducing unnecessary bureaucratic procedures to encouraging niche sectors like air cargo and MRO, the Civil Aviation Ministry is completely behind the sector which will drive national growth.

Initial response of all these positive moves have been highly encouraging with the Indian civil aviation sector clocking a growth of 20-25 per cent in 2015, one of the highest growth rates in the world. Going forward, India is expected to be among the top three aviation markets in the world soon.

INFORMATION ON ALL SECTIONS

SP's Civil Aviation Yearbook will be one of its kind, providing in-depth information on sectors that need all the encouragement. It will have distinct sections such as civil aviation – intelligence



and trends simplified; business and general aviation in India; airports development; Indian MRO markets; Indian cargo markets and regulatory issues of India.

SP's Civil Aviation Yearbook will present the most effective platform to reach thought leaders, policy makers and decision takers in the airlines, airports and the government along with the industry. With its rich content and holistic insights garnered from the opinions and perspectives of experts in the field, it will be a veritable treasure-trove of accurate, relevant and indispensable information.

SP's Civil Aviation Yearbook will have a treasure of accurate, relevant and indispensable information, collated to give an edge to businesses, policies and the aviation segment at large. It will be the most effective platform to reach the flag bearers in the ministries, regulators, aircraft manufacturers, aircraft operators, airports, cargo companies and all associated aviation companies and aircraft users. •

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ATR at the India Aviation

By **SP's CORRESPONDENT**

The world's leading regional aircraft manufacturer, ATR, will attend the India Aviation Exhibition 2016, held at the Begumpet Airport, Hyderabad, on March 16-20. Visitors will be welcomed at Stand No. 1 – Hall A.

ATR are the best-selling regional aircraft in the below 90-seat segment, representing 77 per cent of world's regional turboprop aircraft sales.

India, one of the fastest growing markets for airline services, has always been and will remain a strategic long-term partner for ATR. Today, nearly 40 ATR aircraft operate in the colours of Indian carriers, and this number continues to grow. Featuring the most modern technology and highest standards of passenger comfort in the regional aircraft segment, ATR aircraft have proven to be the optimal choice for regional air connectivity across the country.

Proximity is key in maintaining strong relationships with customers, which is why ATR has considerably increased its global footprint in the region in recent years. The ATR Customer Support (AICS) team in Bengaluru provides its operators with counsel and 24/7 assistance. ATR has representative offices in Singapore, Beijing and Tokyo. A comprehensive range of training courses for pilots and maintenance technicians is offered at ATR training facilities in Singapore and Bangkok. ATR has warehouses in Singapore, Kuala Lumpur and Auckland. •





Excellent choice for business applications and special missions

India continues to be a steady market for Gulfstream. Presently, it has 22 aircraft flying in India and the numbers are up on the rise. Giving details of the plans in India is **Jason Akovenko**, Regional Vice President (Asia-Pacific) of Gulfstream, to Editor-in-Chief **Jayant Baranwal**. Excerpts of the interview:

Jayant Baranwal (Baranwal): Could you tell us about your presence in India Aviation and what will you be showcasing at the event?

Jason Akovenko (Akovenko): We'll have two aircraft on display at India Aviation, our entry-level Gulfstream G150 and the flagship of our fleet, the Gulfstream G650ER.

Baranwal: How many Gulfstream jets are flying in India at the moment and what do you see is going to be the numbers in another five years?

Akovenko: We have 22 aircraft flying in India. While we don't project or forecast sales, we can tell you that India continues to be a steady market for Gulfstream. It is an influential player in the global marketplace, and the need for private aviation becomes ever so important to enhance business efficiency and increase productivity. According to the National Business Aviation Association (NBAA), India is projected to become the world's third largest aviation market by 2020.

Baranwal: Which are the sectors that will contribute to the growth of business aviation in India and are you talking to these sectors to understand their needs?

Akovenko: Gulfstream aircraft are most popular with publicly/privately held and Fortune 500 companies, so we'll continue to focus our efforts on companies based in India that require safe, efficient, reliable travel in order to expand their business interests around the world. In terms of working with them to understand their needs, listening to our customers is a big part of Gulfstream's culture, whether it's working with potential customers to determine the best aircraft for their particular requirements or gathering feedback from current customers about what they'd like to see in a new Gulfstream aircraft model. So, we definitely connect with customers and potential customers in India (and around the world) to understand what they need from a private aircraft. Ultimately, India is a consistent market for Gulfstream. We look to India for sustained long-term growth because of its expanding economy, business interests and renewed confidence by business leaders within India and beyond.

Baranwal: How would you counter to the perception that business aircraft are only meant for rich class and their travel purposes?

Akovenko: That perception is misleading. In fact, the majority of Gulfstream customers are publicly/privately held and Fortune 500 companies, because their needs align with the capabilities business aviation provides: safe, reliable, flexible transportation almost anywhere in the world. For those same reasons, our aircraft make excellent

special mission platforms, with more than 195 aircraft in government/special mission use in 38 countries. Twenty-six countries use aircraft to transport heads of state. Gulfstream aircraft have a low-cost of operations (low fuel burn, easy to maintain); they offer range, speed and endurance; they have high cruise altitudes/areas of coverage; and they offer operational readiness/reliability. All of this makes them an excellent choice for both special mission and business applications.

Baranwal: What needs to be done to prop up general aviation/business aviation in India, from an OEM perspective?

Akovenko: We have already realised some improvements within India's business aviation industry in terms of permits, processing and operations. But, as it does in many other areas of the world, business aviation in India competes for aviation resources. Continued development of airport infrastructure, expanding airspace utilisation and reducing bureaucratic requirements are key to expanding business aviation and realising one of its key benefits: flexibility.

Baranwal: It is said that most Indian corporates tend to buy second-hand jets, is it so and do you think this trend could change if policies are conducive?

Akovenko: I think changing policies would have an overall effect on the business aviation industry, which would ultimately impact both new and pre-owned aircraft sales. Enhancing the business aviation infrastructure and streamlining the requirements for using business aviation would make the country more amenable to business aviation. In turn, this could result in increased sales of both new and used aircraft.

Baranwal: Are the policies of the present government conducive for business aviation growth? In the light of this do you see sales to go up and the sectors that will prop up sales?

Akovenko: India is working to establish the appropriate regulations and infrastructure necessary to ensure private aviation's continued growth. We continue to see changes and updates to policies impacting private aviation, including a possible reduction in import duty taxes, changes to charter operation regulations and the relaxing of taxes on jet fuel. The continued growth in India will require a reduction in taxes, streamlining rigorous importation requirements and the need to enhance the existing infrastructure for private aviation, including airports and fixed-base operators.

Baranwal: Any new innovation/unique feature is coming up within Gulfstream jets (for example,

G650 has the widest windows in the world, if I am correct)?

Akovenko: The G650ER does have the largest windows in business aviation. So, too, do our new G500 and G600, which share those same windows. The G500 and G600 offer the most optimised combination of speed, range, technology and efficiency. Speed is one of the biggest differentiators for the G500 and G600 with a high-speed cruise of Mach 0.90 and a maximum operating speed of Mach 0.925. Only Gulfstream aircraft have the ability to go so far so fast. The G500, for example, provides non-stop access between Mumbai and London. Additionally, the G500 and G600 feature Gulfstream's revolutionary new Symmetry Flight Deck, the most advanced, stylish, comfortable and intuitive in business aviation. The cutting-edge technology comes in the form of active control side-sticks (ACSS), integrated touch-screen controllers, a next-generation enhanced vision system (EVS) and Honeywell Primus Epic avionics. The industry-first ACSSs offer enhanced safety and situational awareness over passive sticks through tactile feedback. With electronic linking of the ACSSs, the pilot and co-pilot can see and feel each other's control inputs, which helps improve pilot coordination in the cockpit.

Adding to the pilots' more intuitive interaction with the aircraft are 10 integrated touch-screens, which will be used for system controls, flight management, communication, checklists and monitoring weather and flight information. The G500 and G600 incorporate a third-generation Gulfstream EVS, the Synthetic Vision-Primary Flight Display system and Head-Up Display II.

Baranwal: Which one is the fastest selling jet by Gulfstream and why?

Akovenko: Throughout 2015, Gulfstream received orders for all in-production aircraft. In fact, there were more orders for in-production aircraft in 2015 than there were in 2014. That said, we have seen particularly strong demand for the Gulfstream G650 and G650ER, which offer unsurpassed speed and range.

Baranwal: Are there areas where the business jet manufacturers can look at sourcing from India, to serve the growing Asia-Pacific markets?

Akovenko: We welcome efforts by Indian companies to develop infrastructure and services to help business aviation grow around the region. In terms of Gulfstream's manufacturing capabilities, we announced two significant facility expansions in the US in 2006 and 2010 that include additional production capacity to support the introduction of the G500 and G600. At this time, our manufacturing capacity is sufficient to meet worldwide demand. •



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2016 crucial year for Indian civil aviation

What is being seen today is the result of a windfall of low global oil prices, the spillover effect of Kingfisher's demise, and an overall increase in economic activities, getting more number of people to fly



By **ROHIT KAPUR**

If there is one thing the entire Indian civil aviation industry awaits, it is the announcement and the implementation of the new National Civil Aviation Policy (NCAP) 2016. This has been 'work in progress' for so long, that it's possible that some of the key functionaries have even forgotten as to why it was needed to start with! We do have an aviation industry that is growing at a CAGR of approximately 15 per cent for the past two years, so all seems to be well with the industry. We keep hearing statements as to how India will be third largest aviation market by 2020, or the largest by 2030, depending on which industry body is saying it. However, nothing could be more deceptive than to feel that the state of the industry is healthy. It would be a huge folly on the part of the government to be carried away by stated numbers and pat themselves on the back for a job well done. And here are my reasons why:

MACRO ENVIRONMENT STATUS QUO

The balance sheets of all airlines do not reflect any increase in efficiency, or any change in the macro environment to show any fundamental shift towards sustained profitability. What is being seen today is the result of a windfall of low global oil prices, the spillover effect of Kingfisher Airlines' demise, and an overall increase in economic activities, getting more number of people to fly. One small air pocket will get them into a tailspin of losses again. No long-term plan seems to be emerging for Air India, and it still continues to be in heavy losses (₹2,500 crore for 2015-16, as per some news reports) and the last choice for flyers, who have the option of flying something else (read non-government employees!). With the advent of new airlines such as Vistara and AirAsia, competition is going to increase, especially if the NCAP allows

them international flying rights, thereby putting pressure on the bottom line of most airlines.

DELHI AND MUMBAI AIRPORTS IN TROUBLE

The two main private airport operators, that is DIAL (Delhi International Airport Limited) and MIAL (Mumbai International Airport Limited), continue to be under severe financial stress and are heavily leveraged. Despite Indian airports being one of the most expensive in the world, these companies have not been able to reign in their inefficiencies to become profitable companies. The Airports Authority of India (AAI), which is a minority stakeholder for both the Delhi and Mumbai airports, continues to be a silent partner, interested only in getting its share of the profit, and with no further responsibility towards these airports. Going forward, the day is not far away when these companies will need major government bail outs to keep the airports operating, and the government will not have any other choice at that stage. A long-term policy for making these airports efficient and increasing their revenue stream, without increasing the cost of flying is the need of the hour. I don't see any serious discussion happening on this.

SECONDARY AIRPORTS, NOWHERE IN SIGHT

Mumbai's secondary airport at Navi Mumbai is a paradox which I do not know who can answer for. Despite the present government being in the saddle for almost two years, and also with a favourable government in Maharashtra, this decision is still nowhere near. By past experience, the tendering process can take years and execution several more. Even if things move now, this new airport is not going to be available for the next five-seven years to say the least. Meanwhile, the city is choking for want of more space at the airport. Similar case is of the second airport in Delhi. While we keep discussing the ridiculous 150 km rule, we

fail to understand that planning for the new airport needs to be done at least five to seven years before this airport reaches congestion, rather than after it does that. Has anyone done some number crunching to figure out as per present growth figures, when DIAL will reach its congestion? I fail to understand as to how we can dream of becoming a major aviation industry without having airports where we can operate out of.

REGIONAL AIRLINES NEED ENCOURAGEMENT

Regional connectivity in India is an idea which is about two decades over due. Despite following the failed Route Dispersal Guidelines (RDG) for airlines for decades now, the government policy has failed to develop a healthy regional network due to poor infrastructure, high costs and unfriendly policies towards regional players. The policy of coercing major airlines to also connect intra cities has not worked at all, and it is time that the government encourages the smaller and regional airlines to carry this out. The NCAP addresses this issue to a large extent, but there are still too many gaps to make it viable for small players who are going to risk their capital to do this. The state governments also need to step in with tax holidays, interest free capital and guarantees of underwriting of seats in the formative years. The establishment of the Regional Connectivity Fund is a great idea. However, it need not be charged as a cess to all travelling passengers. Surely, if the national carriers are released from their obligation of flying on unprofitable routes, they can definitely be told to contribute towards this Fund. The state governments cannot be absolved of their share of contributions too. There are ways and means to find the resources, once the decision is made.

HELIPORT INFRASTRUCTURE NEEDED

Long-term infrastructure planning for aviation is still lacking. It was heartening to hear the Finance Minister speaking of developing 160 airports for improving regional connectivity. However, this needs careful planning and execution to ensure that the airports that are developed are also put to use for improving connectivity. AAI has to work in close coordination with the state governments, and develop airports only in those states where the state government is willing to extend all concessions to encourage regional connectivity. But besides development of these airports, we hear of no plans for developing the heliport infrastructure in the country. One Pawan Hans helipad in Rohini, Delhi, and another one in Juhu, Mumbai are all that we have to boast off, after 68 years of independence. Helicopters are one of the biggest economic enablers in most countries. Besides promoting tourism, connecting remote areas, saving lives and increasing efficiencies in utility roles, it adds to the GDP of the country. It is not understood as to why the government continues to remain apathetic towards this segment.

OVER-REGULATED INDUSTRY

The mindset of most government bodies still remains as per the year when the aircraft rules were last written, that is, 1937. Indian aviation is one of the most over-regulated industry in the world, besides probably some African countries.

Airports Authority of India Bags ACI ASQ Awards

- Jaipur is No. 1 airport in 2 to 5 million pax category
- ACI ASQ survey covers 34 service categories
- AAI Chairman R.K. Srivastava thanks AAI team

SP's ShowNews (SP's): Mr. R.K. Srivastava first and foremost congratulations on bagging the Airports Council International (ACI) Airports Service Quality (ASQ) Survey awards for 2015. Could you give details about the same?

R.K. Srivastava: At the outset, I take pride in informing you that persistent efforts of AAI team has paid off resulting in bagging the awards and international recognition. We have been striving for improvement of service quality and passenger facilitation at all the AAI airports. The results are there to see. Four AAI airports are among the top five airports in the category of 2 to 5 million passengers. Jaipur Airport is at No. 1 position, Lucknow Airport at No. 2, Goa Airport at No. 4, Trivandrum Airport is at No. 5.



use their performance as well as benchmark results against airports across the globe. Over the years this has evolved as a benchmark to compare the performance of individual airport against the global average.

SP's: What are its benchmarks and how easy is it to get such awards?

Srivastava: Thank you very much for putting a very straight question. It is not at all easy to get these awards as this can be gauged from the fact that AAI is receiving the best airport award for the first time. It is heartening to inform you that all 11 participating airports in the ACI's ASQ Survey are rated above the world average, that is 4.13. I would like to add that the awards are a feather in the cap of AAI and the awards recognise our airports for their outstanding service excellence and we are very proud of

SP's: What is this ASQ Survey?

Srivastava: The awards are decided based on the ranking achieved on a scale of 5 in the ASQ Survey covering 34 key service areas including categories such as access, check-in, security, airport facilities, food & beverage, retail, etc. All participating airports use the same survey questions thereby creating an industry standard set for responses that allows participants to track and anal-

ysis this achievement. This has been possible not only due to hard work put in by our team but also due to involvement of numerous stakeholders working for airports. I will take this opportunity to congratulate my team and all the stakeholders who have helped us in making this happen which include our ultimate customer, i.e., passenger, for whose ultimate delight we all are working. •

For any industry to grow, it needs to be set free from outdated shackles, and the 'Inspector Raj' under which it is presently suffocating. It still takes eight months to buy an aircraft, and probably another six months to make it operational. The DGCA oversight is fully subjective and manual, and susceptible to individual whims and fancies of inspectors and officials. The monetary stress of operators is of no concern to them, and unless this mindset changes, we cannot progress. We need to decide whether we are mature enough to be the third largest aviation industry in the world by 2020, or whether we are not mature enough to go there yet. If we want to grow, a collaborative approach needs to be adopted by the regulator to ensure that the operator is able to fly safely and profitably. Both have to go hand in hand. The Civil Aviation Authority, which was mooted by the previous government, seems to have died a natural death, even though everyone agreed that it was the need of the hour. Unless, civil aviation is steered by people who have domain knowledge, we will continue to bumble along, waiting for the next US Federal Aviation Administration (FAA) downgrade to happen.

5/20 RULE NEEDS TO GO

My last point is on the much discussed 5/20 rule. Except a few airlines who stand to have increased competition, there is no one who doesn't agree that this needs to go. It is a restrictive and biased rule, which probably had its use when it was implemented, but in today's time is totally out of sync with modern aviation. The Prime Minister and Minister of Civil Aviation are both on record to say that it will be replaced. What is disappointing that it has been allowed to simmer for too long and a decision has not been taken, we still continue to debate on it, and allow various vested interests to assign 'reasons' to why it should stay. The government must revoke this rule urgently and allow free market forces to decide who wants to fly where. Restrictions can be laid down on new airlines to ensure that major percentage of their aircraft are dedicated to the domestic market in the initial few years, gradually allowing them increased forays into international destinations. It doesn't seem rocket science to me. And even if it is rocket science, it has experts, right?

To sum up, I would like to state this is a very crucial period as to how the Indian aviation industry will develop over the next few decades. A nurturing approach with sensible policies will take us right up to the sky. On the other hand, if the government does not do the right thing now, we can stare at another wasted decade, as the last decade has been. I hope it is the former. •

Rohit Kapur is Managing Director, Arrow Aircraft and former President of Business Aircraft Operators Association.

India Aviation...continued from page 3

passengers in the flights at the beginning and end of the stay period in India. For stay beyond six months, DGCA's permission will be required.

GENERAL AVIATION GROWTH AT SLOW PACE

Canadian aerospace and transportation company Bombardier has in its 2015-24 outlook forecast that South Asia will receive 310 deliveries valued at \$12 billion and this number does not reflect the kind of growth one would expect in the region. For instance, the ultra high networth individuals in India are on the rise and they seem to be on a buying spree. Credit Suisse Global Wealth report has pegged the ultra high networth individuals in India at 2,080. Besides this surge in purchasing power, the government is also opening up the sector with liberal policies and yet the demand for business jets is not that exciting.

There are 122 non-scheduled operators and the number of aircraft, helicopters and hot air balloons registered with DGCA are 353, including nine hot air balloons. Then there are private jets with many individuals but regulatory and licensing issues are bottlenecks which the government will have to clear first.

MANUFACTURING, THE NEW MANTRA

Thanks to the aggressive push being given by the Modi Government on 'Make in India', a number of foreign OEMs are collaborating with Indian companies, some as defence offsets, some as stand-alone joint ventures and partnerships. Majors such as Airbus, Boeing, Saab, Honeywell and others have started projects which have already been successful and this is going to get accelerated.

The policy also mentions how the Ministry of Civil Aviation (MoCA) will be a nodal agency for developing commercial aero-related manufacturing and its ecosystem in India. MoCA and the Ministry of Defence will work together to ensure that commercial aero-manufacturing is covered under defence offsets requirements. The area where aero-manufacturing takes place will be notified as SEZ. The government will provide fiscal and monetary incentives and fast-track clearances to global OEMs and their ancillary suppliers. In case the cost of 'Made in India' aircraft and components work out to be higher than those supplied from their original sources, the government will consider an incentive package to nullify the cost differential.

The intent is there on the part of the government to tap into the potential and the industry is eager to coordinate and get the aviation sector on the runway to success. It remains to be seen how all the players are going to go about their acts. The show is indeed on !!! •

E190-E2 rolls out, sets benchmark

With an investment of \$1.7 billion, the E2 programme was launched in June 2013 and reinforces Embraer's commitment to continuously invest in its commercial aviation products as well as maintain market leadership in the segment of 70 to 130 seats



By **R. CHANDRAKANTH**

On February 25 this year, Brazilian aerospace major Embraer achieved a major milestone in the realm of commercial jets when it rolled out the E190-E2, the first E2 jet, Embraer's second-generation of the E-Jets family. The presentation ceremony was held at Embraer's plant in São José dos Campos. Embraer, the world's leading manufacturer of commercial jets up to 130 seats announced that the aircraft's maiden flight would happen in the second half of 2016, with entry into service scheduled for 2018.

"Today we have taken another step into the future of Embraer commercial aviation with the world premiere of our second-generation E-Jets," said Paulo Cesar Silva, President & CEO, Embraer Commercial Aviation. "I'm sure that as a result of this event, the market's interest in the E2 will grow even further, increasing the commercial success of this programme throughout the world."

With an investment of \$1.7 billion, the E2 programme was launched in June 2013 and reinforces Embraer's commitment to continuously invest in its commercial aviation products as well as maintain market leadership in the segment of 70 to 130 seats. The aircraft will have state-of-the-art engines, which, combined with new aerodynamically advanced wings, full fly-by-wire flight controls, and improvements to other systems, will deliver significant reductions in fuel burn, maintenance costs, emissions and external noise.

640 orders and more. Since the E2 was launched, the programme has reached 640 commitments, 267 of which are firm orders and 373 of which are options and purchase rights, from both airline customers and leasing companies. Currently, the E-Jets are operating with about 70 customers in 50 countries and, with over 50 per cent market share, they are the global leader in the segment of aircraft with up to 130 seats.

"The rollout held today marks the completion of the assembly of the first E190-E2 and paves the way for the start of the tests that will lead to the first flight," said Luís Carlos Affonso, Senior Vice

President Operations & COO, Embraer Commercial Aviation. "We are delighted to reach this phase of the programme, considering all of the technical and economic objectives set out at its inception."

This aircraft is the first of four prototypes that will be used in the E190-E2 certification campaign. Two additional planes will be added for the E195-E2 campaign, entry into service for which is expected in 2019, and three more will be used in the E175-E2 campaign, which is scheduled to enter service in 2020.

The E190-E2 has the same number of seats as the current generation E190 and can be configured with 97 seats in dual class service or with 106 seats in a single class layout. Additionally, the range of the E190-E2 has been significantly increased over the current generation aircraft, by 400 nautical miles, with the capacity to cover distances of 2,800 nautical miles.

Fully loaded features. The E190-E2 with 97 passengers will give minus 16 per cent fuel burn per passenger compared to the E190. It is a fourth generation fly-by-wire aircraft offering better fuel efficiency and a smoother flight. The E2 will take advantage of the FWB expertise developed by Embraer for the E-Jets, Legacy 500 and the KC-390. E2 three-axis closed loop system improves aircraft stability during turbulence and provides complete envelope protection in all phases of flight. The system is also designed to maximise fuel efficiency. The closed loop configuration allows the E2 empennages to be smaller thus reducing aircraft drag and weight.

AHEAD-PRO. AHEAD-PRO is a computational web-based platform to continuously monitor the health of the fleet, providing timely maintenance information in a friendly and straightforward way. With AHEAD-PRO aircraft systems health condition is systematically assessed and unplanned maintenance of monitored systems is avoided by means of failures occurrence prediction. Moreover the activities of fault identification, troubleshooting and resources planning occur before the aircraft lands its destination, optimising airline turnaround time between flights.

AHEAD-PRO offers functionalities to optimise

all steps to execute health monitoring process in the airline, from data acquisition to time-to-failure prognosis.

Advanced Avionics. E2's advanced integrated avionics system provides exceptional situational awareness enhanced by large landscape displays and reduced pilot workload. Innovative technologies such as synthetic vision and advanced flight management support more fuel-efficient direct approaches to airports. Cockpit commonality with current-generation E-Jets allows for a smooth transition to the new E2 platform.

E2 has wireless connectivity; enhanced central maintenance computer, and 'SmartView.' It has improved navigation with graphical flight planning; next-generation FMS; INAV and GBAS and GLS. For improved situational awareness, it has good cockpit display of traffic information (CDTI); IntuVue 3D weather radar; and SmartRunway and SmartLanding.

Commonality. One of the features of the E2 is the common type rating between current-generation E-Jets and the E2s which makes it easy to transition between aircraft. In fact, it takes a maximum of three days of training. Pilots complete self-instruction and classroom modules before reviewing cockpit procedures in a trainer. High-level flight training systems and time in a full-flight simulator are not necessary for E-Jets pilots to qualify on the E2.

Wing. The E2s sport high-aspect ratio wings with swept tips that, combined with redesigned pylons and other aerodynamic improvements — coupled with our enhanced fourth-generation full fly-by-wire — achieve double digit lower fuel consumption compared to current-generation E-Jets. The wing and engine combination for the E175-E2 and a common larger wing and engine for the E190-E2/E195-E2 are optimised to deliver maximum performance.

Geared to save fuel. Pratt & Whitney PurePower Geared Turbofan Engine E2's new GTF engines — the PW1700G (E175-E2) and PW1900G (E190-E2 and E195-E2) — have an advanced gear system that allows the engine's fan to operate at a different speed than the low-pressure compressor and turbine. They work in combination with new aerodynamically advanced wings and other advanced controls and systems to create doubledigit improvements in fuel burn, maintenance costs, emissions and external noise.

Cabin Interior. A look inside E2 reveals thoughtful, well-conceived design that has the power to please from all perspectives. A totally new environment far exceeds the norm and thoughtfully addresses the varied needs of passengers, crew, airlines and leasing companies alike.

As within a fashionable hotel or restaurant, a prevailing sense of quality begins with the welcoming atmosphere of the boarding point and continues with such elements as style and tone of lighting, contemporary materials, quality fabrics and glass partitions. Within these surroundings passengers enjoy their own physical and emotional 'space within a space' — their 'personal territory.'

This 'bubble' with control is achieved through

Continued on page 22...

ATR – Short haul proposition

France-based turboprop aircraft manufacturer ATR is the world leader in the market for regional aircraft up to 90 seats. Established in November 1981, ATR is a joint partnership between two major European aeronautics players, the Airbus Group and Finmeccanica. ATR has sold more than 1,500 aircraft and has over 200 operators in 100 countries. Every 8 seconds, an ATR turboprop takes off or lands somewhere around the world.



By **R. CHANDRAKANTH**

In India, there are over 35 aircraft in operation. ATR is well established in India with over 35 aircraft in operation. ATR entered the Indian market in 1999 with the introduction of the comfortable and fuel-efficient 70-seat ATR 72 by Jet Airways. Among current ATR operators in India, there are Jet Airways (18 ATR 72s), Alliance Air (11 ATR 42s and 72s), and Air Pegasus (2 ATR 72s). A new regional start-up, TruJet, also introduced ATRs in 2015 (2 ATR 72s), operating from Hyderabad. Following its expansion in India, ATR set up in 2006 a Customer Support Centre in Bengaluru. Today, this centre supports more than 50 ATRs operated in South Asia.

For ATR, India is a very promising market. The growth of regional aviation market in India will substantially depend on the ability of the government to simplify the system. The regional aviation market will clearly grow if it is less burdened by the many taxes and administrative procedures. ATR understands there is a real demand to further expand regional connectivity across the country. There are 100 operational airports in India: all of them can be served with ATRs, while only 80 can accommodate single-aisle aircraft.

Indeed, some metros are getting congested, and the development of regions is the next impulse (regional connectivity as a key driver for economic development). A lot of thin short routes need to be developed in the North East, South India, Gujarat, Rajasthan, Madhya Pradesh...ATR aircraft are right sized, offer the lowest trip costs (minimise risks), and give access to more airports with minimum infrastructure (Kullu, Agatti Island, Shimla, Kota). ATRs do not require heavy investments, and can be used to test and develop new markets (especially at communities that today represents less than 10 per cent of the total domestic seat deployment). ATRs can also be the right tool

to increase frequencies and complement larger aircraft on short distances and feed mainline jets flying trunk routes.

The Indian market is looking at regional jets as well. However, ATR believes that regional jets and turboprops are not operating exactly on the same field and this despite the decrease in oil prices. Jets are optimised for longer distances, or at larger capacities, while ATRs are perfect for short hauls and thin routes. Also, as mentioned, there is a number of airports in India where ATRs are able to operate while jets cannot. And ATR aircraft require fewer infrastructures, thus allowing airlines to develop their regional network with limited investments.

Train network is very well developed in India showing a strong propensity of Indian people to travel. Yet, trains in India are slow (50-70 kmph) and thus not convenient. ATR states that average travel distance by train is very short – not even 300 km indeed. This shows the strong potential of regional air transport. Should high speed train be implemented, it would address the much larger traffic flows between metros to fill in capacity as large as 700-1,000 seats per trip. ATR is not threatened by high speed train neither as it addresses thinner traffic demand. More, from a political standpoint, regional air transport can be implemented very quickly and gives a lot of network flexibility and opportunities. Indian road network is much less efficient and although it is an alternative transportation mode, driving time is not valuable. More, when comparing with ATR fuel burn per seat – 2.5 litres per 100 km – and a car fuel burn, owing there is barely 2 people by car, one would admit driving the same distance double emissions.

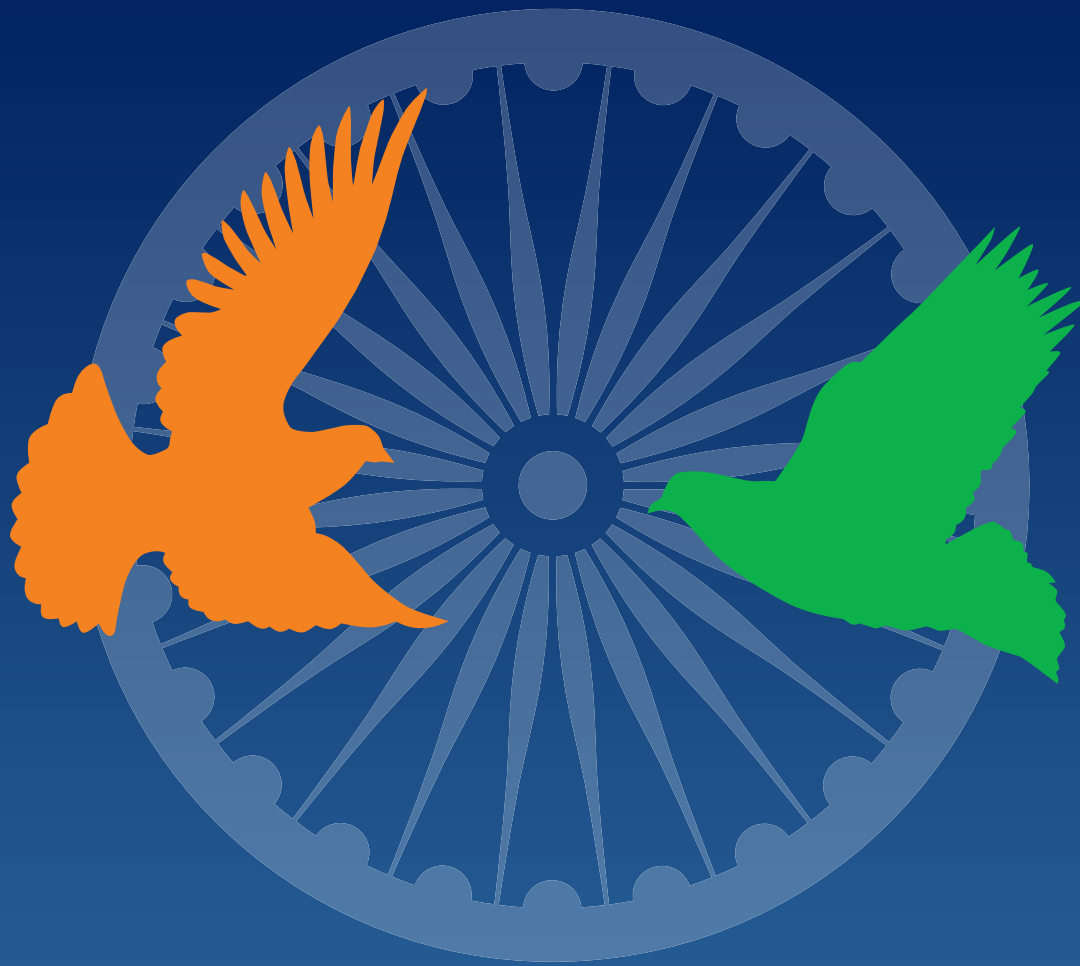
Based on current market dynamics and subject to right policy initiatives being implemented – many of them have already been announced in the draft new National Civil Aviation Policy – we foresee massive opportunities that will not only benefit the regional aviation but the Indian broader econ-

omy. The Indian domestic market grew by more than 20 per cent last year and the number of passengers carried could reach 100 million quickly. ATRs are optimally positioned to link middle-sized and small-sized towns, while contributing to feed main hubs. The ATR flexibility coupled with their low operating costs position them as the optimal tool to contribute to the expansion of regional air traffic. ATRs have been by far the preferred regional aircraft by Indian carriers in recent years, and the arrival of the newest ATR-600s with Jet Airways and Alliance Air is a clear evidence of their suitability for the Indian regional market.

ATR is already well-reputed worldwide by the fuel-efficiency and low environmental footprint of its aircraft. When compared to an equivalent-sized regional jet, an ATR burns up to 50 per cent less fuel. Besides this, ATR became in 2011 the very first regional aircraft manufacturer to get its ISO14001 certification for the entire life-cycle of its aircraft, from production to dismantling. ISO14001 is the world reference in terms of environmental friendliness in the industry. In addition, ATR is a key player of the European Union Clean Sky programme, which works on the greener aviation of tomorrow. In July 2015, an ATR 72 prototype did the first flight test campaign of the Clean Sky programme, with the aim of testing new and more effective composite insulation materials and new vibro-acoustic sensors integrated into a large panel of the ATR aircraft fuselage. The flights also tested new generation optical fibres for improved identification of micro-cracks and easier maintenance. More recently, in February 2016, the same ATR 72 prototype took to the skies on a second flight test campaign, to test an all electrical energy management system, optimising the electrical power distribution, as well as a new all electrical air conditioning system.

In an interview with *SP's AirBuz* (August-September 2015) the ATR CEO Patrick de Castelbajac had said: "India is a very promising market. It looks to me that the current government is trying to resolve the blocks in the system. The system needs to be simplified. If that happens, then India will be a big market, if not the biggest. Indonesia is an important market for us. They have 60 to 70 aircraft on order and their GDP growth is 6.5 per cent and they fly a lot. Jet Airways was the first client in India when it bought a turboprop in 1999, followed by Alliance Air (Air India Regional). There are four operators in India with a fleet of 30 aircraft. We are talking with some startups and with quite a few people in India. The next growth market in the regional market is here. ATR has a 80 per cent market share in the turboprop market. When we look at regional aircraft below 90 seats we have 40 per cent market share, followed by Embraer."

To a question on what the government needs to do to prop up the business aviation industry, he had said: "Simplicity will be most welcome. It is paramount that civil aviation should grow in India. It will grow if it is less burdened with way too many taxes and administrative burden. When we talk to the customer, this is what we hear and we share the expectation of our customers." •



“In a country like India with limited support from the industry and market, initiating 50 years ago (in 1964) publishing magazines relating to Army, Navy and Aviation sectors without any interruption is a commendable job on the part of SP Guide Publications. By this, SP Guide Publications has established the fact that continuing quality work in any field would result in success.”

Narendra Modi, Hon'ble Prime Minister of India (*message received in 2014)



SP GUIDE PUBLICATIONS

OVER **5** DECADES SINCE 1964

It rings a Bell in India!

Bell Helicopter continues to penetrate the market in India with its innovative and diverse commercial product line. **Sameer Rehman**, Managing Director, Asia-Pacific of Bell Helicopter, gives details of the plans to **Rohit Goel** of *SP's ShowNews*. Excerpts of the interview:

Rohit Goel (Goel): What is the current size and nature of the market for civil helicopters in the Asia-Pacific region, especially in India?

Sameer Rehman (Rehman): Bell Helicopter has maintained a solid presence in the Asia-Pacific for over 30 years, with an installed fleet of more than 1,000 helicopters serving every mission segment. We continue to see a lot of diversity throughout the region, with interest across every segment and every Bell Helicopter platform. Bell Helicopter's portfolio of products are highly relevant to diverse climate and mission needs of Asia-Pacific operators.

Specifically in India, we entered the market 20 years ago, and with over 90 helicopters operating in India, our aircraft are well known throughout the region. Just this year, we have announced some key wins for the region including the first Bell 407GXP purchased by Premair, an air charter management company. We also announced the delivery of the Bell 412EPI to the Government of Uttar Pradesh and this aircraft is being used for VIP transportation. India remains an important region for Bell Helicopter to develop and grow our balanced business, so we will continue to invest in our aftermarket support offerings and invest in our product offerings to meet the needs of our customers.

Goel: What are the prospects for civil helicopters in the region over the next decade?

Rehman: Last year was a great year for Bell Helicopter despite market challenges, and we will continue to build on our momentum into 2016. We continue to have steady interest from our corporate and VIP operators – particularly for the 429 and 412 platforms. The Bell 412EPI remains the most rugged and reliable medium helicopter on the market. We recently completed our Asia-Pacific demonstration tour of the Bell 429WLG and received a lot of great customer feedback, so we're very optimistic about the opportunities coming in 2016. From corporate and VIP travel to assisting in humanitarian efforts and search and rescue operations, Bell Helicopter's state-of-the-art commercial lineup fits the diverse needs of our operators throughout the region.

Goel: With the economy opening up and general aviation sector getting a prop from the government, do you see Bell Helicopter expanding substantially by 2020? And what would be the targeted numbers in India by then?

Rehman: Bell Helicopter started its operations in India in 1995 with a liaison office in New Delhi. Today, Bell Helicopter has grown to over 100 employees and has offices in New Delhi, Bengaluru and Mumbai. Bell Helicopter continues to penetrate the market in India with its innovative and diverse commercial product line. We have invested heavily in our products to ensure they include the latest technology and performance capabilities in order to meet customers' mission requirements in India and throughout the world. We are committed to continue our investment and build upon our existing capabilities and those of local partners.

Goel: Which are the sectors that are predominantly driving the civilian helicopter market in India and which new sectors can be tapped?

Rehman: There are three market segments that we are placing significant focus on and that includes law enforcement, emergency medical services and search and rescue operations.

Bell Helicopter has a rich history in the law enforcement sector that began when we provided the first police helicopter in 1948. Today, with the incorporation of the latest technologies, Bell Helicopter products are setting the pace in the parapublic industry around the world. We now have the ability to deliver significant safety improvements through technology to operate in degraded visual environments and assist in high pilot workload stressful situations. To complete a mission in these conditions, customers need next-generation technologies that provide pilots with greater situational awareness and capability to control the aircraft. Plus we can provide operators advanced avionics – improvements in HTAWS, heads up displays – with the cost/benefit allowing for expansion in commercial industry. Touch-screen glass flight decks designed for helicopters keeps pilots informed of aircraft or obstacle hazards using features such as HSVT, HTAWS and TCAS-II for further safety of flight enhancements. This has been and continues to be a key market segment across Asia-Pacific.

In addition, we're very optimistic about the emergency medical service market, as orders have steadily increased over the last two years, but will continue to have conversations and demonstrate our aircraft capabilities to our customers.

Goel: Which are the products from your company that are best suited for the Indian market? could you give a broad break-up of your products and the sectors they are serving?

Rehman: We continue to expand our presence across the Asia-Pacific region – growing our global footprint with more than 1,000 commercial turbine helicopters in our installed fleet. We have nearly 450 aircraft operating in the general/utility segment, one of the largest market segments in our installed fleet base. The corporate/VIP segment is also a large segment for us with around 250 aircraft. It's important to note that every commercial Bell model have been sold in India, including the Bell 407GXP and Bell 412EPI.

Programmes:

Bell 412: The strength of this aircraft is apparent through its rugged and versatile platform. This is the right platform for parapublic and utility operations. This platform was chosen by the Philippine Department of National Defense and to the Government of Uttar Pradesh.

Bell 407GXP: We recently demonstrated the heightened capability and customer-driven enhancements of the popular Bell 407 platform during a demo tour through Nepal. Proving this incredible helicopter's capability in the Himalayan mountain range was a true testament to the



BELL 412 EPI HELICOPTER

Bell 407GXP's game-changing performance in the highest terrain on the planet.

Bell 505: We continue to make great progress on the 505 with more than 600 hours of operation flight miles. We plan to certify the aircraft as quickly as possible in 2016 with deliveries to begin immediately following certification. This aircraft is ideal for corporate/VIP operations, and continue to have discussions for this aircraft to be used as a trainer.

Bell 525: The marketplace is anxiously awaiting the transformational capabilities of the Bell 525 and demand is intensifying around the world. Specifically in Asia-Pacific, the oil and gas market may produce significant, and the Bell 525 is ideally suited for these missions. Another application for the aircraft in the region where we continue to see potential growth is in the corporate/VIP segment.

Goel: Could you talk about 'Make in India' with specific reference to your company?

Rehman: Bell Helicopter is forging new partnerships to address the growing needs in the Indian rotorcraft market in accordance with 'Make in India' initiative. Bell Helicopter, working through its Textron affiliate TIPL, looks forward to continue the momentum we have established with Dynamatic, and will continue to strengthen the aerospace industry in Bengaluru.

Bell Helicopter is engaged in discussions with potential partners in India to support our local manufacturing footprint and the 'Make in India' approach to defence procurement. For example, Dynamatic became the single source supplier of major airframe assemblies for the Bell 407GXP and 407GT. Dynamatic is proving a highly competent manufacturing provider in country – delivered their first major aerostructures for the Bell 407 in early 2015.

Goel: What is going to be your long-term market strategy in India?

Rehman: The long-term view of rotorcraft industry remains positive, and we continue to expand our presence across the Asia-Pacific region. We believe Bell Helicopter will continue to outpace the competition and see a number of key wins this year with continued emphasis on growing commercial sales and delivering aftermarket solutions for our customers. For 22 years, Bell Helicopter has been recognised as the best in the business by our customers, but we will continue to drive improvements and invest in our people and our facilities to better service our customer base.

Bell Helicopter has an established presence in India and continues to see a great deal of potential for both the civil and military market. Bell Helicopter remains committed to India and continues to look for opportunities that will strengthen our ties with the region. With Bell Helicopter's long-standing history in Asia-Pacific, India aviation serves as an integral opportunity for us to build upon that legacy. We look forward to showcasing how our products are ideally suited for the diverse climate and geography across Asia-Pacific and offer the advanced technology, performance and safety for any mission. •



Airbus will deliver one aircraft per week over the next 10 years

That India is a hugely important market for airframers is a given fact. Airbus has been in India for much longer than one can remember and its relationship with India has been growing from strength to strength, from a seller to a partner, the journey has been long. Giving further details of Airbus' interest in India, the Head of Airline Marketing (South Asia), Airbus, **Aymeric Dupront**, in an exclusive interview with the Editor-in-Chief of *SP's ShowNews* **Jayant Baranwal**, has pointed out how every Airbus aircraft has something to do with India. Excerpts:

SP's ShowNews (SP's): Airbus recently made the first delivery of A350 XWB (extra wide body) to Singapore Airlines. What is so special about it?

Airbus: The Airbus A350 XWB is a game-changer. It has 25 per cent lower fuel consumption, next-generation aircraft with great versatility of regional and ultra-long range capabilities. It is a key product for Singapore Airlines giving it option of using it regionally or on long range. Singapore Airlines is one of the largest A350 900 customers and it is the second Asian operator of the aircraft. It is the first of the four new Asian customers who will get the aircraft this year. The aircraft will further increase positioning of Singapore Airlines with regard to long haul flights. It has an ultra-long range capability for flights of up to 19 hours from Singapore to J.F.K. airport in New York. The A350 XWB will be very useful for all the Indian operators who can fly to any destination in Europe. It offers airlines low cost of operation, high profitability and direct long haul routes between India and the US.

SP's: What you are saying is it will be a nice aircraft for the Indian operators... whether it is Air India, IndiGo, AirAsia, Vistara. Are you talking to all these airlines?

Airbus: Of course, whatever the market, this aircraft can serve it. It is a game-changer. We are talking to all our customers about our products and for the long haul market, the A350 XWB can play a strong role for operators. In fact, this morning the aircraft had its first revenue flight for Singapore Airlines.

SP's: How do you see the airlines industry in India moving under the new government regime – stagnant/growing/reversing – and why?

Airbus: First of all, the airline industry in India is definitely growing. Over the last few months the domestic growth has been 20 per cent and this trend will continue. Why this trend will continue is because all the fundamentals are strong... you have a strong middle class; very high GDP growth and corresponding consumption; low number of aircraft in India today, there are less than 400 jets, one of the lowest in the world for India's size. We have a vision for Indian growth and we will give the details of the vision at the India Aviation event in Hyderabad.

SP's: Do you believe that the airlines potential in India is still untapped?

Airbus: Actually when you look at figures today, in India an Indian is doing on an average one air trip every 14 years which is low; a Chinese is doing one air trip every three years and in Europe and the US it is less than one trip every year. I agree there is a large potential in India which is waiting to be tapped. Right now, less than 4 per cent of domestic travellers are doing trips by air. So, definitely as the economy expands, so will the aircraft movements.

SP's: Would you like to comment on 5/20 rule of India? Do you agree that this rule is disruptive in the growth of India's civil aviation?

Airbus: Basically we trust the operators with their decision. I don't want to comment on this. But we will support the operators on whatever decision they take.

SP's: Recently, we had an exclusive interview with the Civil Aviation Minister and he personally believes that the rule has to go.

Airbus: Whatever the decision of the Minister takes, we will honour the decision.

SP's: Does Airbus perceive competition from the railways as this remains the strongest and most popular means to travel within the country irrespective of the price levels?

Airbus: First of all that railways remains strong and popular is good news. There is still small option of domestic trips which happen by air. Air transport is limited and this demonstrates that all of India will benefit by proper transportation network. A strong railways is a partner and not a competitor. The railways can also feed the airlines which operate on international routes.

SP's: What kind of percentage of railway traveller can one expect to reach in 10 years as air traveller?

Airbus: This is very difficult question to answer. We cannot compare India with any other country too as India is a subcontinent and the distances within are huge. It will be difficult to estimate what

will be the share of air transport to rail transport. Definitely it will grow, but it is difficult to point out.

SP's: Smaller airports—Tier-II and -III level cities – what do you think is the solution in terms of proper connectivities and serve such destinations through the eyes of Airbus?

Airbus: There is growth that is agreed upon. You are right to point out that growth is not only from metro to metro or Tier-I to city but growth is also from smaller sectors and Tier-III level cities. On Tier-II cities, the airlines can operate jets such as A320 to reach the markets efficiently. It is true that in the new markets connecting Tier-II or Tier-III level cities, one might need an aircraft which offers seats less than what an A320 or 737 can offer. In India our view is that due to high octane prices in some states and relatively low revenues, destinations with less than 100 seats can be definitely served by turboprop aircraft. In India it is very difficult for jets below 100 seats to be profitable. In our view for the future of India, metro to metro traffic jets with 150 seats and traffic from smaller cities the turboprops would be the most ideal way to tap the growth in the country.

SP's: There is an ongoing debate – overcapacity versus right capacity. What are your views on this?

Airbus: This is one of the solutions of Indian airlines to tap the growth, as long as the smaller aircraft is turboprops it is good. Jets with less than 100 seats will not be profitable.

SP's: Jets will not be a good option according to you for regional connectivity?

Airbus: Depending on the sector and markets, but certainly turboprops are strong alternatives than jets.

SP's: But turboprops take long to reach destinations.

Airbus: Yes, in the case of India right now turboprops are ideal. India is a high growth market, served well by A320 or 737. A very small aircraft will become smaller in the next few years and will be served by the bigger jets. So it makes perfect transition.



SP's: What kind of future do you foresee in the context of airline operations with the fuel prices which are currently down but might go up?

Airbus: The volatility of the fuel prices is something one cannot predict. Especially in India where fuel accounts for substantial cost of operations, there is need to unlock profitability for which airlines will have to look at long-term solutions. When fuel prices go up, airlines may not have a choice, so it is essential to find an aircraft which has lower fuel burn and which can accommodate more seats on the aircraft and that is what Airbus is offering with its single aisle aircraft.

SP's: How would you comment on price war that is taking place in India? Is this a healthy and sustainable practice?

Airbus: India is a competitive market and it will be difficult to unlock profitability particularly when the competition is strong. The only way to deal with such a situation is for the aircraft to be an enabler. The single aisle A321 can fit up to 240 seats and these provide airlines capacities from which they can earn.

SP's: What kind of positioning Airbus expects in India in view of the market dynamics evolving quite fast?

Airbus: Airbus has above 70 per cent market share. It has aircraft with low fuel burn. The A320neo is a game-changer. We have 530 aircraft to be delivered to India, that is one delivery every week over the next 10 years. We have more single aisle aircraft, 246 A320neo and it has a strong role to play in the next few years.

SP's: How do you perceive the potential of A380 sales in India?

Airbus: The A380 is a transport leader and its sales is increasing. It helps in solving congestion of passengers. A380 is one solution for long haul markets and has a good demand for destinations from India to long distances. It can unlock new direct markets and a number of carriers have recognised this strength. It can fly efficiently from Mumbai to Singapore and even further.

SP's: Could you give details about your future innovation, particularly when we hear media reports that a new development that may happen in aviation is an aircraft flying from London to Sydney in 11 minutes which is next to impossible. What is Airbus working on?

Airbus: We are working on different projects. Our next projects are for short-term. This year we are working on A350 100; which is a big step for us. The A350 XWB long range is another big improvement. The A321neo has improved low fuel consumption. These are many development needs of the industry and we are addressing them.

SP's: Airbus has been sourcing material from India and it has touched \$500 million. Will you be sourcing more from India?

Airbus: Yes, we are sourcing substantially from India and different parts of the world. For instance, a lot of aviation equipment supplies such as engines come from the UK, the US and other places. India is also important sourcing hub. Nothing is decided on how we expand this but surely it is going to happen.

It just shows our commitment to India is long-term. India is hugely a most important market for Airbus. There is an untapped potential which is huge. It is going to be among the top five economies in the world and the requirement of aircraft would go up. Indians wanting to travel within the country is going up, it is good growth anywhere in the world. We are extremely proud of our presence in India and Airbus has a bit of India in each and every aircraft. •

Regional connectivity...continued from page 4

states will have to come out with their VAT problem, so if the Government of India does that, then probably this industry might move to states which are friendly. In Delhi, everyone is trying to bring down the ATF, the Delhi Government has hiked it to five per cent. So like that you do have things happening. MRO will help us to get back business to our country, with it our 'Make in India' will become more vibrant, we are working on that.

GA / BA: OPEN TO DISCUSSIONS

Baranwal: It will save lot of money outflow from the country. Regarding general aviation and business aviation, the industry still feels that they are being treated as a stepchild?

Minister: General aviation is interesting; we got some of their reactions. Why is it that, what is it they want, what is it we can do? Like if they say I want parking in a place like Mumbai, it is already congested. Like they say I don't mind parking in a place like Bhopal, for instance, you have 12 aircraft you can park simultaneously, no problem 12 big ones. What is this they exactly want?

Neetu Dhulia (Dhulia): If they come up with requisite solutions, would you be open to it?

Minister: My god! I will welcome everybody. Why should I say no for it?

Dhulia: Would you welcome if the industry jointly wants to come and voice their thoughts?

Minister: You see voicing is okay, I even put the draft policy on the Internet and requested, please respond whether we agree or disagree. We can always agree on something and disagree on another thing, but we have to understand your problem.

Dhulia: If they raise the problem and seek the support, would the government look into it addressing the issues?

Minister: Why not if they can raise anything and I am sure we will look into it.

Dhulia: Could we be instrumental and bringing them together to have a discussion with them?

Minister: If you are willing to send the ideas across we can try to understand them and then if we find it necessary we can always interact, after all we are Indians, we are not different countries warring with one another. So general aviation feels like a stepchild, why is that I need to know?

GA/BA TAXATION

Baranwal: The level of taxation they say on the aircraft is very high unlike any country in the world.

Minister: Yes, that must be there, because generally scheduled airlines are given benefit because they are understood to be the common man's way of transport. General aviation has probably given this impression that it is only rich man's transport and that impression stays. So anyway whatever it is, they might be having other applications also, and we need to look at that.

Baranwal: Yes other applications, the business expansion, moving from one point to the other, like a business tool, contributing back to the economy.

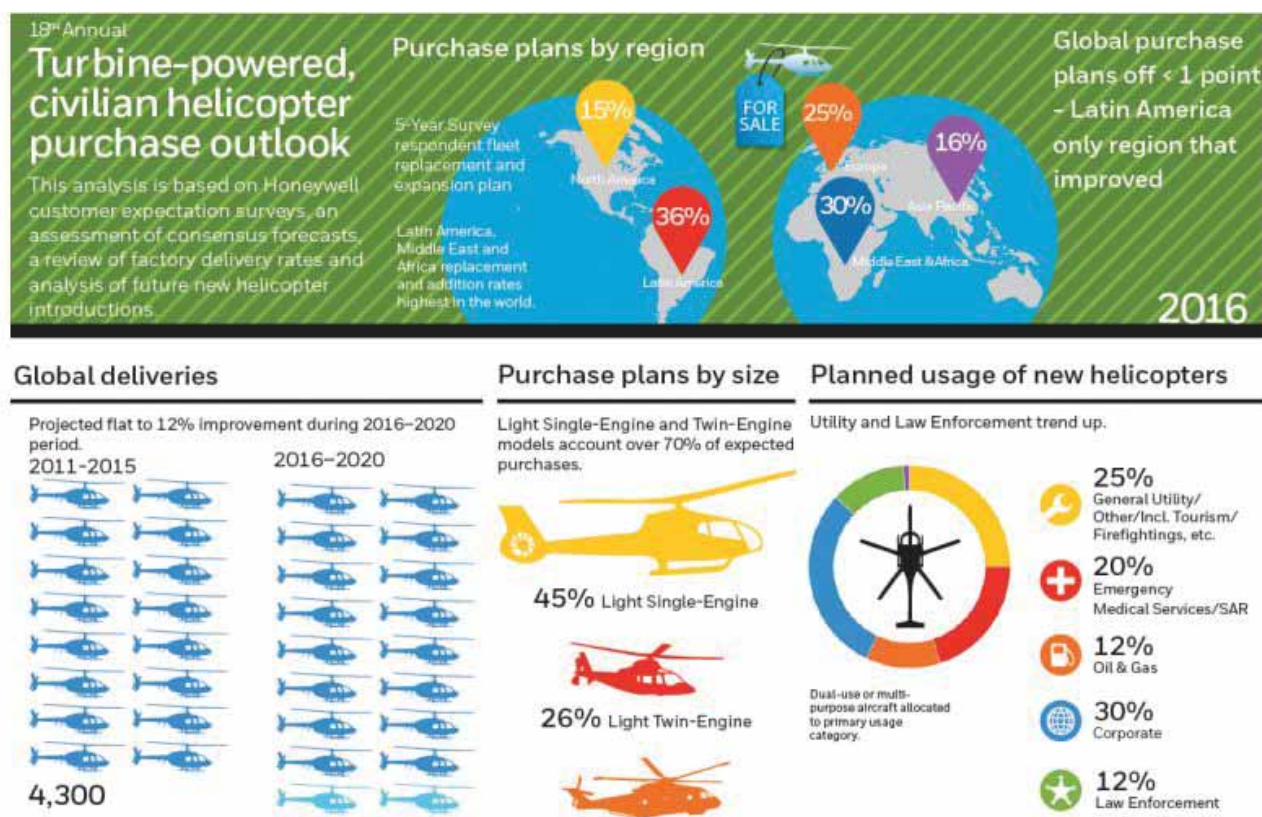
Minister: Ultimately, aviation benefits from the economy. It also gives back to the economy. In that sense, aviation in general terms is that. Because, the economy appears to have behaved, your growths are there, otherwise it would not have been.

DATE OF NEW CIVIL AVIATION POLICY

Baranwal: When can we expect the new Policy?

Minister: The new policy has now come to an advanced stage. One or two things that we are trying to iron out, then, it will go to the inter-ministerial consultation and then the Cabinet because certain decisions have come out from the Cabinet in the past. We would like to push it soon. •

Honeywell forecasts lowers global helicopter deliveries



By SP's CORRESPONDENT

In the face of a slower global economic growth environment and increased volatility in oil and gas-related markets, the helicopter industry is reacting with a cautious outlook for near-term new purchases. In its 18th annual Turbine-Powered Civil Helicopter Purchase Outlook, Honeywell forecasts 4,300 to 4,800 civilian-use helicopters will be delivered from 2016 to 2020, roughly 400 helicopters lower than the 2015 five-year forecast.

KEY GLOBAL FINDINGS IN THE OUTLOOK INCLUDE:
The survey showed new purchase-plan rates were stable, but operators cited fewer total new model

purchases over the five-year period, leading to a more cautious near-term outlook. When considering a new purchase, operators' results mirrored those from last year, with make and model choices for their new aircraft most strongly influenced by range, cabin size, performance, technology upgrades and brand experience. Helicopter fleet utilisation generally declined compared with last year. Over the next 12 months, usage rates are expected to improve but at a reduced rate.

HELICOPTER USE EXPECTED TO INCREASE

Helicopter fleet utilisation reported in the survey generally declined compared with last year. Over the next 12 months, usage rates are expected to

increase but at a reduced rate, as the gap between operators planning increases and those planning decreases has narrowed in every region.

BRIC COUNTRIES SUCH AS

Demand continues to ebb and flow with stronger results recorded for India and Brazil in the 2016 survey. In India and Brazil, new helicopter purchase-plan rates exceed the world average by a wide margin. Planned Chinese purchase rates slipped, reflecting near-term slower economic growth prospects. Notably, no Chinese-built models received specific purchase interest mentions in the survey; however, civil deliveries are occurring and are reflected in the Honeywell outlook. •

E190-E2 rolls out...continued from page 16

the coming together of small things that deliver a larger benefit — elements such as clarity of seat signage, individual PSUs, seat back screens, and additional leg room in economy. The passenger-preferred 2x2 configuration gives a perception of wider aisles while simplifying movement through the cabin. The position of bin doors when open, coupled with dramatic ceiling illumination, creates a sense of height and space above the aisle.

Premium seating further conveys a feeling of openness. Overall, the E2 interior generates a smoothing-out effect on the passenger journey experience — reducing the traditional stress points of boarding, inflight activity and disembarking.

Personal space. The new overhead bins have over 40 per cent volume per passenger increase over current E-Jets. It maximises the number of cases and expedites boarding. The personal PSU concept for economy and first class. The first class is a 2+1 concept with maximum seat width with 23" seat pan and typical seat pitches from 36" to 40". It has a staggered concept with increased legroom for individual seats. It has a wide-body cabin feel with 50; seat pitch and facilitates easy re-configuration.

In the economy class it has a slim profile. It is compatible with up 12"

IFE screen. The upper literature pocket maximises legroom space.

At home with mainline, regional or low-fare. The E190-E2 is equally at home in mainline, regional and low-fare business applications. The flexibility of the E2's cabin configuration means it can offer the same on-board standards and amenities found on their larger single-aisle jets. Airlines can improve fleet efficiency by scheduling the E190-E2 on the same long-haul routes as their big narrow-bodies. Flying as a complement to larger jets that are harder to fill can make long, thin routes profitable. On the E2, no one is ever stuck in the middle. All seats are either by the window or on the aisle.

Range Circles. Discover where in the world the E2 can take you. Short haul routes, long sectors, feeding hubs, opening new markets—whatever the mission, E-Jets E2 go the distance. It is the ideal combination of capacity and range in one high-performance aircraft. The E2 easily can replace ageing fleets with the world's most advanced aircraft. While passengers will love the experience, Embraer says airline accountants will love the better bottom line.

The E2 has a pretty good order book already, with firm orders for 267 aircraft and 373 options a total of 640 commitments. •



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