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PARIS 2017 – THE MAKING OF A STRONG VINTAGE

Key Takeaways

"Those who have knowledge, don't predict. Those who predict, don't have knowledge. " Lao Tzu

Value of Paris airshow contracts: \$150B (+15.3% over 2015)

Attendance: 140,000 (-6% over 2015)

Total net orders & commitments: 1,051

Asia & Middle East again dominate orders with a total of 349 orders. Boeing comfortably ahead of the Paris Airshow orders and commitment contest.

Firm Orders	Options
Boeing: 179	140
Airbus: 144	0
Embraer: 18	10
Bombardier: 7	25
ATR: 4	0

Total Firm orders: 352

Total Options: 175

LOI/MOU: 699

Conversions: 229

Michel Merluzeau

Director, Aerospace Market Analysis | AirInsightResearch mmerluzeau@airinsight.com www.airinsightresearch.com In the heat of the Dubai, I mean the Paris Airshow, this was our general feeling following four grueling days on the ground at Le Bourget Airport. Dozens of meetings with supply chain participants and OEMs have generally focused on many of the issues that have been on our radar screen over the past five years – supply chain risks, financial stress and strength of the order books. Airshow orders are important, but these days can partially be discounted as the true measure of the health of the aerospace & defense industry. This 2017 Paris airshow has all the makings of a vintage event in particular, because of the high degree of convergence between emerging technologies, entrepreneurial innovation and growing application domains. The wealth of innovation coming from European SMEs bodes well for that local supply chain at many levels. The diffusion of innovation will support Tier 1s and 2s future solutions and, in turn, will benefit Airbus, ATR, Dassault, DAHER and Leonardo's next generation designs. The nextgen narrowbody was taking shape in front of our eyes at Le Bourget 2017, from new technologies, to innovative production automation (complex 3D printing), to new materials (composites and ceramics). While this supply chain is global, the relationships remain somewhat local and this could impact the capture of innovation within the realm of the previously mentioned aircraft OEMs.

As far as the other key takeaways from the 2017 PAS, our media colleagues at AirInsight have been extensively covering these issues but there are a few elements that have generally striking us at AIR as significant on the order book side of the equation:

- Quality not as many as what could be referred to as "quality" established orders from stable segments of the operator's community but the numbers are much higher than last year's Farnborough.
- MAX10 weaker launch than expected Mostly conversions, for a total of 43 aircraft net the remainder being MOUs and the massive conversion from the UAL MAX 9 order. MAX10 seems to be finally the right "MAX" and we will continue to witness conversions from previous MAX9 commitments. We anticipate no more than 300-400 net new orders for the programme and a sizeable number of conversion. Boeing finally has the right aircraft but A321 will dominate that segment for the decade ahead. Over half of the MAX10 orders are swaps, not new orders.
- Things we like: the 787-9 order from AerCap; that's a strong vote of confidence for 787 and a sign that there
 is positioning taking place in the widebody segment ahead of a recovery in the early 20s. The GECAS order
 for 100 A320NEOs is the winner of the show. Q400 lives! Alright, it's not a massive order, but if you are
 looking for good news at Bombardier, there it is.
- Alabama shines at the show and lands Blue Origin engine production ("as expected"). Huntsville has been at the heart of the space programme for over 60 years did we say logical?
- Things we did not like: 777X and A380 commitments? The very large aircraft market is still very quiet due to overcapacity and will remain so for a while. We had expected the A380plus last year at FIA. Singapore and Emirates are the natural early adopters for the updated design, but there are too many variables in the Middle East at this juncture to get certainty on this issue. MRJ continues to disappoint, we still have it in our forecast (for now) but the risk is elevated with rumors of new designs from Embraer and ATR coming on line.
 - A relatively quiet show on the military side, the action was very much political with the appearance of the new French defense minister Sylvie Goulard, replaced 48 hours later by financial specialist Florence Parly. This is causing a bit of uncertainty within the corridors of the Hexagone Balard; the ongoing tension between Bercy (Ministry of Economy & Finance) vs Brienne (Ministry of Defense) now appears to have gone the way of Bercy. Jean Yves Le Drian was simply too powerful and influential (and successful). He will continue to be a highly effective support for French defense exports as President Macron's Foreign minister.

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