

# *Commercial Aviation Report Events*

## *U.S. Valuation Conference*

*September 13-15, 2000*

*Narrowbody Aircraft Values*

*Airbus A320 Family*

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**Presented by:**

**Tulinda Larsen Vice President**



## *My presentation today will include:*

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- **Assessment of the Airbus Narrowbody aircraft markets**
  - **Orders, Options, Deliveries, Active fleet**
  - **Operators and Owners**
  - **Values**

*In May, we announced the re-branding of our firm*

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**BACK Associates**

... the Aviation Information  
Source

**AvSOLUTIONS**

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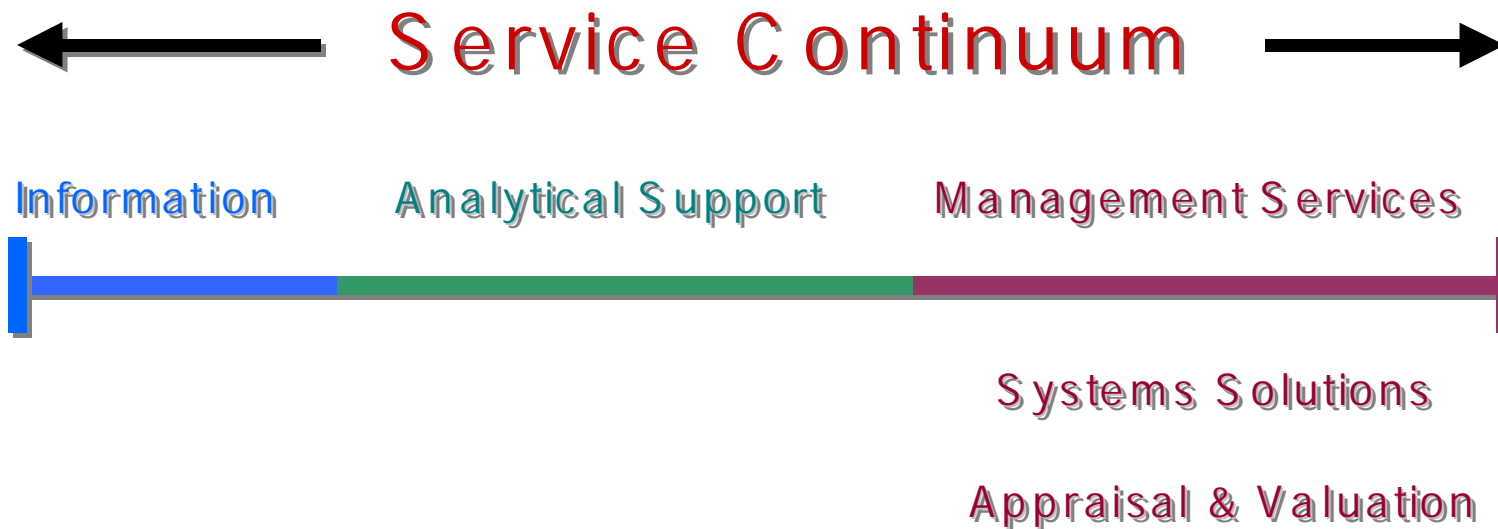
*And we announced the launching of our strategic partner ...*

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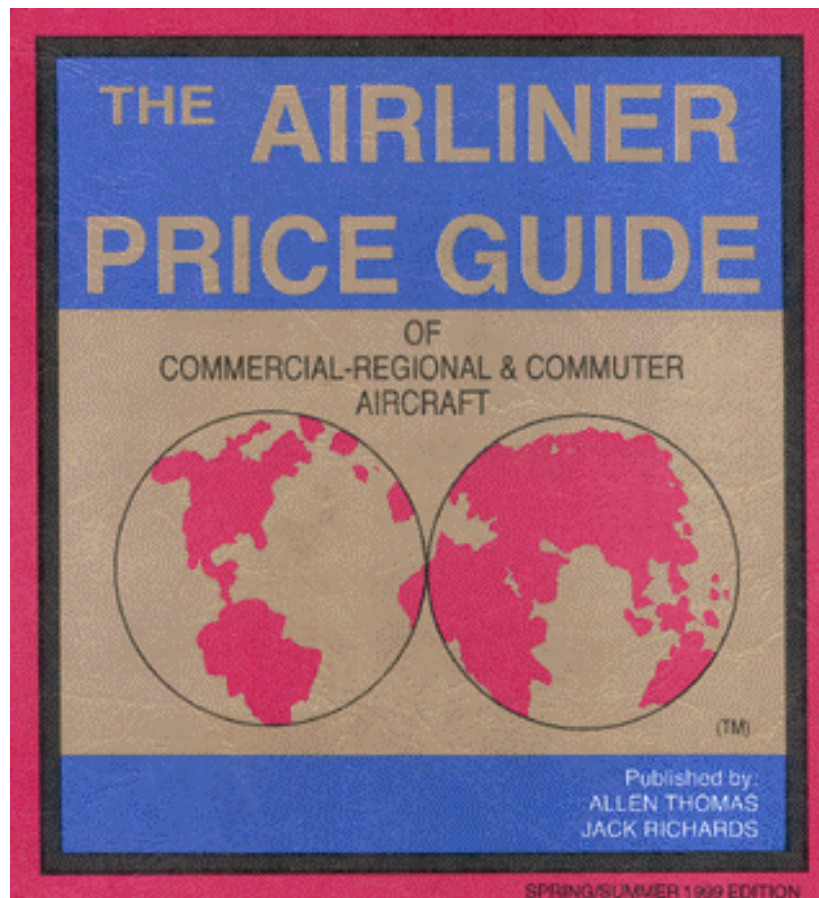
*The combination of data, management services, systems solutions and appraisal and technical services creates a unique service continuum*

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*We are pleased to announce our intent in principle to take over the management of*

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**Editor Jack Richards  
will remain on as  
Editor in Chief**

## *Airbus introduced the...*

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- ➔ **A320 in March 1984**
  - **First delivery in March 1988**
- ➔ **A321 in November 1989**
  - **First delivery in January 1994**
- ➔ **A319 in June 1993**
  - **First delivery in April 1996**
- ➔ **A318 in April 1999**
  - **First delivery scheduled for 4th quarter 2002/1st quarter 2003**



# A320

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- **Two models**
  - **-100 First 21 built**
  - **-200 Higher MTOW and fuel capacity**
- **150 Seats two class**
- **MTOW**
  - **-100 145,500 pounds**
  - **-200 169,755 pounds**
- **Engines**
  - **CFM56-5A**
  - **V2500-A1**
- **Range**
  - **-100 1,800 to 1,900 nm (wing fuel tanks only)**
  - **-200 2,700 to 3,000 nm**
- **Underfloor capacity**
  - **7 LD3-46 containers**

# A320 Owners

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## Largest Owners

	Active
→ <i>ILFC</i>	57
→ <i>GE</i>	52
→ <i>AIRBUS INDUSTRIE FINANCIAL SERVICES</i>	33
→ <i>DAIMLER-CHRYSLER</i>	30
→ <b>LUFTHANSA</b>	30
→ <b>AIR CANADA</b>	29
→ <b>UNITED AIR LINES</b>	28
→ <i>ORIX AIRCRAFT CORPORATION</i>	27
→ <b>IBERIA</b>	26
→ <b>NORTHWEST AIRLINES</b>	26
→ <i>AERFI GROUP PLC</i>	25
→ <b>AIR FRANCE</b>	20

# *A320 Operators*

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## Largest Operators

	Active
→ NORTHWEST AIRLINES	70
→ UNITED AIR LINES	62
→ AIR FRANCE	58
→ AMERICA WEST AIRLINES	43
→ IBERIA	38
→ AIR CANADA	34
→ LUFTHANSA	33
→ INDIAN AIRLINES CORPORATION	29
→ ALL NIPPON AIRWAYS	21
→ ANSETT AUSTRALIA	20
→ CHINA SOUTHERN AIRLINES	20
→ SWISSAIR	20
→ US AIRWAYS	18

# A320 Orders

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## Largest Orders

→ <i>ILFC</i>	61
→ <i>GE</i>	45
→ <b>UNITED AIR LINES</b>	32
→ <b>JETBLUE AIRWAYS</b>	28
→ <b>US AIRWAYS</b>	26
→ <b>IBERIA</b>	24
→ <b>LAN CHILE</b>	24
→ <i>S.A.L.E.</i>	24
→ <b>BRITISH AIRWAYS</b>	21
→ <b>TACA INTERNATIONAL AIRLINES</b>	20
→ <i>CIT AEROSPACE CORPORATION</i>	16
→ <i>BOULLIOUN AVIATION SERVICES INC.</i>	15
→ <i>DAIMLER-CHRYSLER</i>	15



# A321

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- ➔ **Almost 23 feet longer than A320**
  - ➔ **Two models**
    - **-100**
    - **-200 Higher MTOW and fuel capacity**
  - ➔ **185 Seats two class**
  - ➔ **MTOW**
    - **-100 183,000 pounds**
    - **-200 205,000 pounds**
  - ➔ **Engines**
    - **CFM56-5B**
    - **V2500-A5**
  - ➔ **Range**
    - **-100 2,300 nm**
    - **-200 2,700 nm**
  - ➔ **Underfloor capacity**
    - **10 LD3-46 containers**

## *A321 Owners*

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	<b>Largest Owners</b>	<b>Active</b>
→	<b><i>ILFC</i></b>	<b>32</b>
→	<b>LUFTHANSA</b>	<b>23</b>
→	<b>ALITALIA</b>	<b>19</b>
→	<b><i>GE</i></b>	<b>8</b>
→	<b>AIR FRANCE</b>	<b>6</b>
→	<b>ALL NIPPON AIRWAYS</b>	<b>6</b>
→	<b>TRANSASIA AIRWAYS</b>	<b>6</b>
→	<b>AUSTRIAN AIRLINES</b>	<b>5</b>
→	<b><i>BABCOCK + BROWN AIRCRAFT MANAGEMENT</i></b>	<b>4</b>
→	<b>BRITISH MIDLAND AIRWAYS</b>	<b>4</b>
→	<b>EGYPT AIR</b>	<b>4</b>
→	<b>FINNAIR</b>	<b>4</b>

Source: BACK Aviation Fleet Database, August 2000

# *A321 Operators*

## **Largest Operators**

	<b>Active</b>
→ <b>LUFTHANSA</b>	<b>26</b>
→ <b>ALITALIA</b>	<b>23</b>
→ <b>AIR FRANCE</b>	<b>13</b>
→ <b>SWISSAIR</b>	<b>12</b>
→ <b>BRITISH MIDLAND AIRWAYS</b>	<b>9</b>
→ <b>AERO LLOYD</b>	<b>7</b>
→ <b>ALL NIPPON AIRWAYS</b>	<b>7</b>
→ <b>AER LINGUS</b>	<b>6</b>
→ <b>AIR 2000</b>	<b>6</b>
→ <b>TRANSASIA AIRWAYS</b>	<b>6</b>
→ <b>AIR MACAU</b>	<b>5</b>
→ <b>AUSTRIAN AIRLINES</b>	<b>5</b>

Source: BACK Aviation Fleet Database, August 2000

# A321 Orders

## Largest Orders

→ <b>US AIRWAYS</b>	<b>34</b>
→ <i>ILFC</i>	28
→ <i>GE</i>	21
→ <b>IBERIA</b>	<b>14</b>
→ <b>SCANDINAVIAN AIRLINES SYSTEM</b>	<b>12</b>
→ <b>ASIANA AIRLINES</b>	<b>10</b>
→ <b>CHINA NORTHERN AIRLINES</b>	<b>10</b>
→ <i>GATX FLIGHTLEASE AIRCRAFT COMPANY LTD.</i>	10
→ <i>DAIMLER-CHRYSLER</i>	5
→ <i>S.A.L.E.</i>	5
→ <b>AIR FRANCE</b>	<b>3</b>
→ <b>AERO LLOYD</b>	<b>3</b>
→ <b>SPANAIR</b>	<b>3</b>

Source: BACK Aviation Fleet Database, August 2000



# A319

- 
- **12 feet shorter than A320**
  - **One model**
    - **-100**
  - **124 Seats two class**
  - **MTOW**
    - **141,000 to 162,000 pounds**
  - **Engines**
    - **CFM56-5A/B**
    - **V2500-A5**
  - **Range**
    - **1,900 to 3,000 nm**
  - **Underfloor capacity**
    - **4 LD3-46 containers**

## *A319 Owners*

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	<b>Largest Owners</b>	<b>Active</b>
→	<b>UNITED AIR LINES</b>	<b>30</b>
→	<b>AIR CANADA</b>	<b>25</b>
→	<b><i>FIRST SECURITY BANK</i></b>	<b>25</b>
→	<b><i>GE</i></b>	<b>22</b>
→	<b>LUFTHANSA</b>	<b>20</b>
→	<b><i>ILFC</i></b>	<b>19</b>
→	<b>TAP AIR PORTUGAL</b>	<b>13</b>
→	<b>US AIRWAYS</b>	<b>13</b>
→	<b>AIR FRANCE</b>	<b>12</b>
→	<b>BRITISH AIRWAYS</b>	<b>12</b>
→	<b><i>DELVAUX AIRCRAFT LEASING LTD</i></b>	<b>8</b>
→	<b><i>GENERAL FOODS CREDIT CORPORATION</i></b>	<b>5</b>

Source: BACK Aviation Fleet Database, August 2000

## *A319 Operators*

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	<b>Largest Operators</b>	<b>Active</b>
→	<b>US AIRWAYS</b>	<b>42</b>
→	<b>AIR CANADA</b>	<b>35</b>
→	<b>UNITED AIR LINES</b>	<b>30</b>
→	<b>AIR FRANCE</b>	<b>24</b>
→	<b>LUFTHANSA</b>	<b>20</b>
→	<b>NORTHWEST AIRLINES</b>	<b>16</b>
→	<b>TAP AIR PORTUGAL</b>	<b>16</b>
→	<b>BRITISH AIRWAYS</b>	<b>14</b>
→	<b>AMERICA WEST AIRLINES</b>	<b>13</b>
→	<b>SWISSAIR</b>	<b>9</b>
→	<b>SABENA</b>	<b>8</b>
→	<b>TAM TRANSPORTES AEREOS REGIONAIS</b>	<b>6</b>

Source: BACK Aviation Fleet Database, August 2000

# A319 Orders

## Largest Orders

→ <b>NORTHWEST AIRLINES</b>	<b>52</b>
→ <i>ILFC</i>	48
→ <b>UNITED AIR LINES</b>	<b>25</b>
→ <b>BRITISH AIRWAYS</b>	<b>24</b>
→ <b>US AIRWAYS</b>	<b>20</b>
→ <b>TRANS WORLD AIRLINES</b>	<b>20</b>
→ <b>TAM TRANSPORTES AEREOS REGIONAIS</b>	<b>18</b>
→ <b>SABENA</b>	<b>17</b>
→ <i>GE</i>	16
→ <b>AMERICA WEST AIRLINES</b>	<b>15</b>
→ <i>BOULLIOUN AVIATION SERVICES INC.</i>	15

Source: BACK Aviation Fleet Database, August 2000



# A318

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- **20 feet shorter than A320**
- **One model to be introduced in 2002**
  - **-100**
- **107 Seats two class**
- **MTOW**
  - **130,000**
- **Engines**
  - **CFM56-5A/B**
  - **PW 6000**
- **Range**
  - **1,500 to 2,800 nm**
- **Underfloor capacity**
  - **Will not have container capability**

# A318 Orders

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## Current Orders

→ <i>ILFC</i>	30
→ <b>TRANS WORLD AIRLINES</b>	25
→ <b>AIR FRANCE</b>	15
→ <b>AMERICA WEST AIRLINES</b>	15
→ <b>BRITISH AIRWAYS</b>	12
→ <i>GATX FLIGHTLEASE AIRCRAFT COMPANY LTD.</i>	12
→ <b>AIR CHINA</b>	8
→ <b>EGYPT AIR</b>	5
→ <b>FRONTIER AIRLINES</b>	5

Source: BACK Aviation Fleet Database, August 2000

## *Summary of Fleet*

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	<b>Active Fleet</b>	<b>On Option</b>	<b>On Order</b>	<b>Grand Total</b>
<b>A318-100</b>	<b>0</b>	22	127	<b>149</b>
<b>A319-100</b>	260	426	359	<b>1045</b>
<b>A320-100</b>	17	<b>0</b>	<b>0</b>	<b>17</b>
<b>A320-200</b>	820	226	518	<b>1564</b>
<b>A321-100</b>	88	18	75	<b>181</b>
<b>A321-200</b>	77	27	95	<b>199</b>
<b>Grand Total</b>	<b>1262</b>	<b>719</b>	<b>1174</b>	<b>3155</b>

Source: BACK Aviation Fleet Database, August 2000

# *VALUES*

## *A320 Family Values*

<b>A320 Family Values</b>				
Sep-00	(\$US Millions)			
Build Year	Expected	High	Low	2005
<b>A320-200</b>				
1998	37.60	39.80	35.50	31.20
2000	41.00	42.90	38.80	34.40
<b>A319</b>				
1998	32.70	34.20	30.70	25.80
2000	35.10	36.70	33.00	27.60
<b>A321</b>				
1998	45.40	46.90	42.70	37.40
2000	48.40	50.00	45.60	40.50
<b>A318</b>				
				34.50