



Presentation to the GIACC
by the
International Business
Aviation Council
(IBAC)



Purpose

To provide an introduction to the business aviation industry and to summarize ongoing initiatives in contribution to an environmentally responsible aviation community.



Presentation

1. **Understanding business aviation.**
2. **Demographics of the industry.**
3. **Business Aviation & the Environment.**
3. **Industry policies and organization.**
4. **Business Aviation Initiatives.**
5. **The way forward.**



Understanding Business Aviation

Types of operations:

1. Corporate - non commercial, professional crew
2. Owner Operated - non-commercial, personally flown
3. Fractional - non commercial, shared ownership
4. Air Taxi - commercial on demand charter



Understanding Business Aviation

Aircraft sizes vary from large cabin down to Very Light Jets and small turbo prop.



Large Cabin



Medium



Light



Very Light Jets

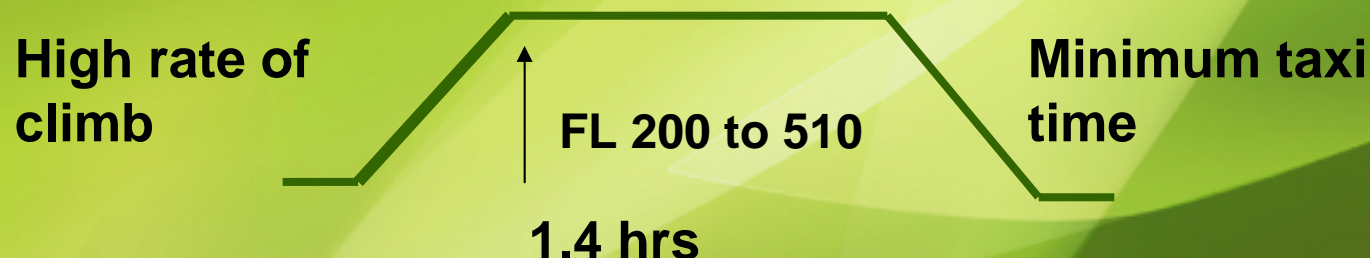


Turbo Prop



Understanding Business Aviation

1. Typically aircraft fly 400-500 hrs per year versus over 3000 for commercial air transport.
2. 70% by middle management and staff; 30% by senior management.
3. Operations into small &/or satellite/regional airports, minimizing ground taxi and flight time/distance.





Demographics of the Industry

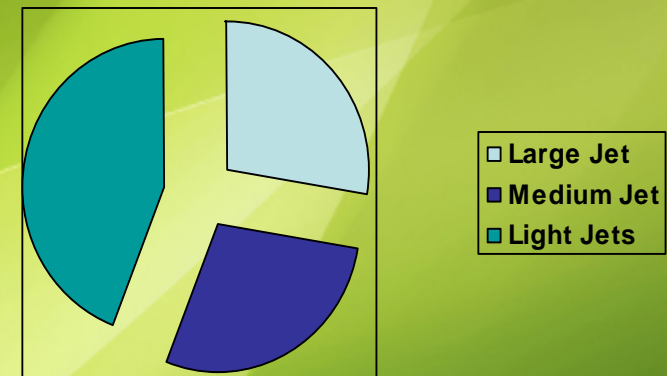
Turbine Aircraft – 27,470

Turbo-Jet – 16,631

Turbo-Prop – 10,839

Operators approx 15,000

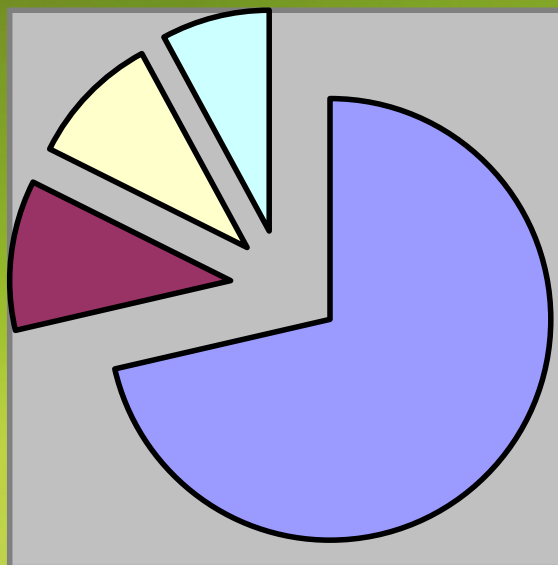
Aircraft per operator between 1.4 & 1.7





Demographics of the Industry

The global aircraft fleet
27,470 turbine aircraft.



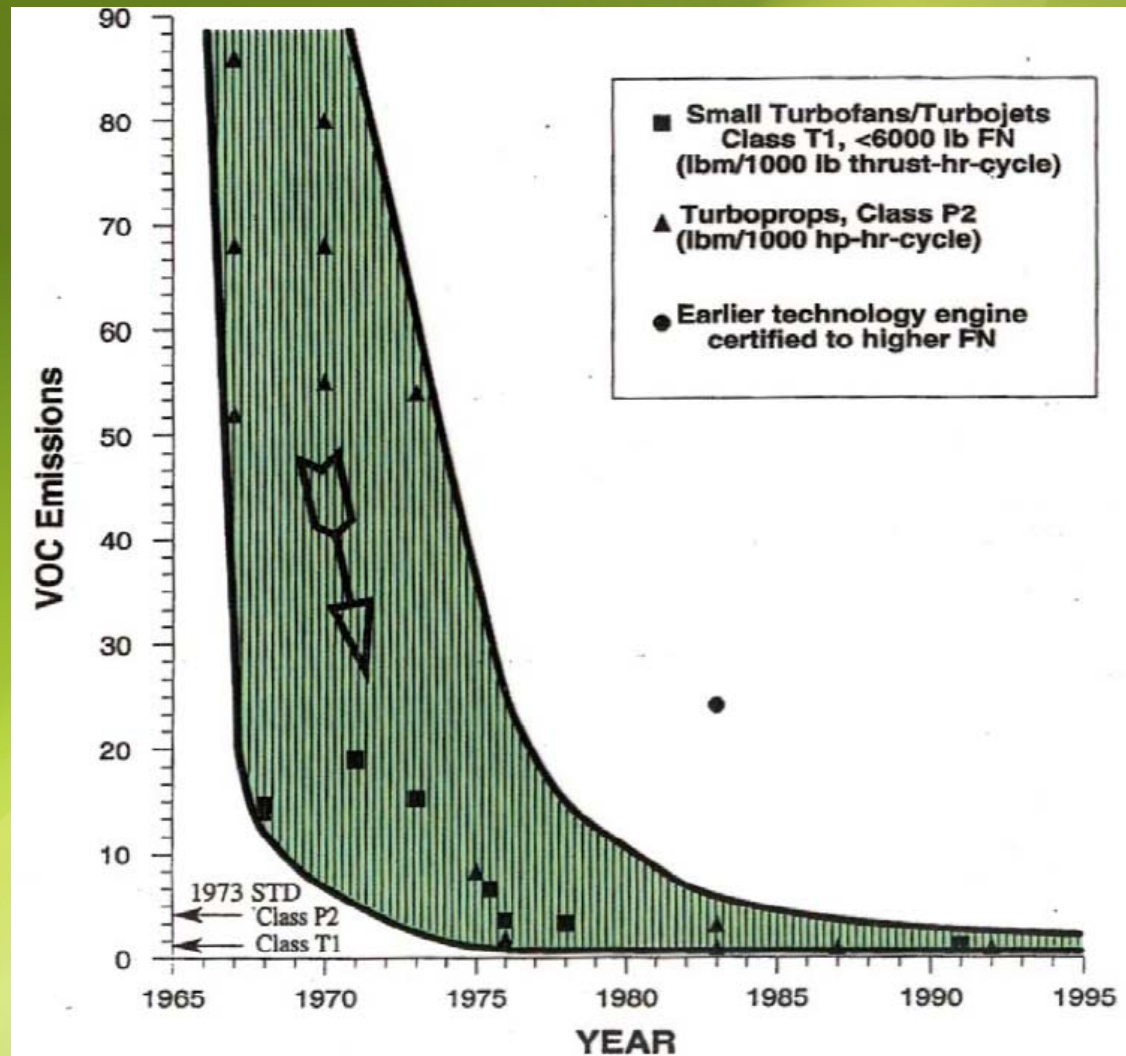
- North America 72%
- Europe 11%
- South & Cent America 10%
- Remainder 7%

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Business Aviation and the Environment

Engine technology improvements have resulted in notable improvement in emissions. Example to the right (VOC).





Business Aviation and the Environment

**Typical medium size BA turbo-jet aircraft
CO₂ Production:**

- **Per flight – 3.5 tonnes CO₂**
- **Per year - 1,250 tonnes CO₂**



Business Aviation and the Environment

- 1. Business aircraft produce approx 1 to 1.5% of all aviation CO2 emissions.**
- 2. Overall CO2 emissions per year by all business aircraft combined are approximately the equivalent of one medium sized power plant.**
- 3. Hourly emissions of business aircraft range from under 1000 kgs to approximately 4000 kgs.**



Industry Policies and Organization



**Council of BA Associations
worldwide working to coordinate the
industry policies and practices.**



EIWG

**Group, appointed by the Council,
dedicated to developing options for
business aviation contribution to
environmental best practices.**



BA Industry Initiatives

1. **Environmental Issues Work Group** meets regularly to seek solutions.
2. **BA Environment Project** initiated to seek optimum path forward.
3. **Technology Enhancements** by engine manufacturers.
4. **Aerodynamic Enhancements** by aircraft manufacturers.



BA Industry Initiatives

5. **Airspace management and technology improvements.**
6. **Voluntary offset programs** by associations e.g. EBAA and BBGA programs.
7. **Flight department participation** in broad corporate GHG initiatives.
8. **Operational Measures** – e.g. evaluation programs to reduce flight time.



Conclusions

Although the business aviation aircraft fleet is large, the total contribution to the impact on climate and air quality is small given the small size aircraft and low utilization.

The industry is dedicated to working with the aviation community towards a broad aviation framework for enhancing the environment.



The way forward – recommendations

Recommendations are made to the GIACC that will help position the aviation community on a path to excellence in environmental responsibility.



Specific Recommendations

Develop an

Aviation Community Environmental Strategy

... featuring a multi-path approach,

1. Agreement by both governments and industry on a way forward.
2. Partnership approach to environmental responsibility.
3. Proportionate, evolutionary, reasonable and balanced.



... and also featuring

4. **Accelerate Global Air Navigation Plan implementation (CNS/ATM).**
5. **Strengthen emphasis on Operational Measures.**
6. **Establish realistic goals for engine and airframe technology enhancements.**
7. **Establish improved metrics and tools.**



... and

8. **Enhance research on actual impact of aviation on the environment.**
9. **Improve information – remove the ambiguity and mystique.**
10. **Improve policies, controls and accountability for market based approaches and ensure voluntary industry practices are considered.**

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Thank You!