



# BusAv and the Potential Role of VLJs in Europe

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## What is Business Aviation?

Business Aviation is that sector of aviation which concerns the operation or use of aircraft by companies for the carriage of passengers and goods as an aid to the conduct of their business, flown for purposes generally considered not for public hire and piloted by individuals having at the minimum a valid commercial pilot licence with an instrument rating.

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# Why?

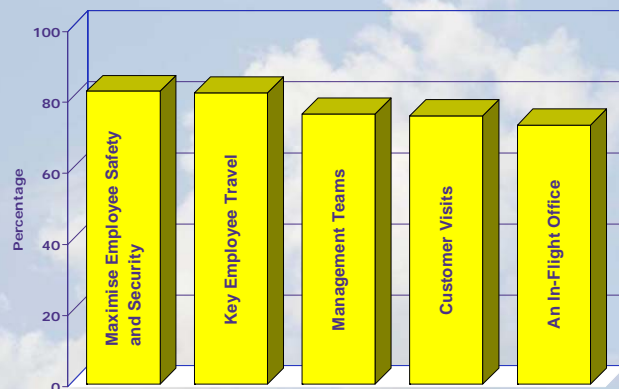
- New markets exist regionally, nationally & globally
- Even in the electronic age, travel is an essential fact of business
- Airline travel is becoming an ever worse experience and a severe negative factor on business productivity, especially on short haul
- Productivity drives profits
- Time wasted in airports and indirect travel lowers productivity
- Efficient use of time and high productivity are key success factors in business today
- Time kills deals

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## Value to the Business User Perspective - 5 Key Reasons for BusAv



Source: J. D. Power & Associates

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## Value to the Business Analyst Perspective

People who acquire business aircraft, perform better than industry average.

- EBAA sponsored study in mid 1990s by London Business School showed that companies with business aircraft performed 11% better than average.
- Similar US studies of almost 800 companies showed that those using business aircraft performed more than 8% above average.

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## Can VLJs Multiply the Efficiency Gains?

- BusAv operations in Europe are much more expensive than in the US driven by much higher airspace and airport charges
- Value of the time saved by the traveller must be worth more than the cost of travel;
  - Except for group travel this has made BusAv in Europe affordable only to high value managers
  - But travel time by airline gets ever longer
    - Typically use of a business jet between 2 short haul European locations saves at least 1 ½ hours each way
- If the VLJs really can deliver significantly reduced costs, then they can hugely improve the efficiency and productivity of SMEs and middle management

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# Can VLJs Deliver their Slated Performance in Europe?

4 key success factors will determine the success of VLJs in Europe:

- Timely and affordable access to Airports and Airspace both initially and in the SES era
- Delivering the envisaged cost savings over conventional small jets
  - Premier 1/CitationJet and other light (Part 23) jets already in service at \$ 4-6m
- Availability and all weather operations capability = **Reliability of Service**
- Safety

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# Airports and Airspace

## 1 of 2

- Most primary airports are now congested and with the rise of low cost carriers many all weather secondary airports are becoming restricted too:
  - Standard landing fees the norm at congested city airports
  - Continued access by BusAv to major airports including Luton, Geneva, Torrejon and Amsterdam increasingly threatened
  - Special feature airfields like LCY and Farnborough fast approaching capacity limits
- Whilst VLJs have good short field performance, when corrected for public transport standards (1.67) not significantly better than a number of current BusAv

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# Airports and Airspace

## 2 of 2

./...

- Few of the smaller airports in Europe currently offer all-weather operations, essential to reliable ops in Europe's often inclement weather
  - SBAS in the SES could herald a whole new era of opportunity
- SES must provide room in the airspace for ad hoc operations between secondary airports
- Ready access to convenient airports in all weathers with affordable landing fees will be a key success factor for VLJ operations in Europe

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# Delivering the Cost Savings

- Many public transport charter aircraft in Europe are privately owned, resulting in their being offered for charter below full cost
- VLJs will have to achieve high utilisation to deliver the targeted cost reduction compared with conventional small jets, many of which are already very competitively priced for those that look
- Operating a diverse fleet of small jets at high utilisations of around 1500 hours is not easy
- If not significantly cheaper than the existing small business jets, will pax accept the cramped cabins, limited luggage space and absence of lavatory?
  - Larger VLJs or small jets with such facilities likely to be preferred especially if cost savings not material

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## Availability and Reliability

- Many existing Bus Jet designs, spares and maintenance support arrangements cannot support utilisation above 1000 hour per year
  - Design for Reliability
  - Spare parts provisioning and affordability
  - Maintenance Infrastructure
- How many VLJs will overcome these failings to be able to fly the necessary 1500 hours/annum from diverse forward operating bases?

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## BusAv is Safe

### Global Fatal Accident Rate / 100,000 Departures by Operator Type

Operator Type	Fatal Accident Rate
Corporate	0.07
Scheduled Airlines Operating	0.09
Large Aircraft (> 60,000 lbs)	
All Business Jets	0.22
Non-Scheduled & Other Operators of Large Aircraft (> 60,000 lbs)	0.26
VLJs	?

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# Challenges for VLJ Safety

## 1 of 2

- Excellent inherent avionic design, but complex to use efficiently and need excellent training and currency to deal with progressive failures in a high performance aircraft
  - Pilot experience and training
  - Currency
  - 2 pilots
- High standards should be achieved in public transport operations but what about the private owner?
  - Training and experience
  - Currency
  - Single pilot
  - Distractions

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# Challenges for VLJ Safety

## 2 of 2

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- Lessons from the high performance single turboprops
- A BizJet is a BizJet
- Brazil accident
- The industry must manage VLJ safety or the whole public acceptance of Bus Av could be threatened

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# Market Trends

## Current Fleet Structure and Usage

- Mid Size aircraft predominate in European.  
Typical Fleet breakdown is:
  - 30% Small cabin (e.g. Lear 45)
  - 50% Mid-cabin (e.g. Hawker 800)
  - 20% large cabin (e.g. Gulfstream 400)
- Very young Fleet
  - Average age 8 years of global average of 18 years
- Very environmentally friendly
  - Low noise
  - Relatively low utilisation around 20% of a commercial airliner
- Excluding NetJets and a few other very large management companies, market comprises large number of operators each with small fleets of <5 aircraft

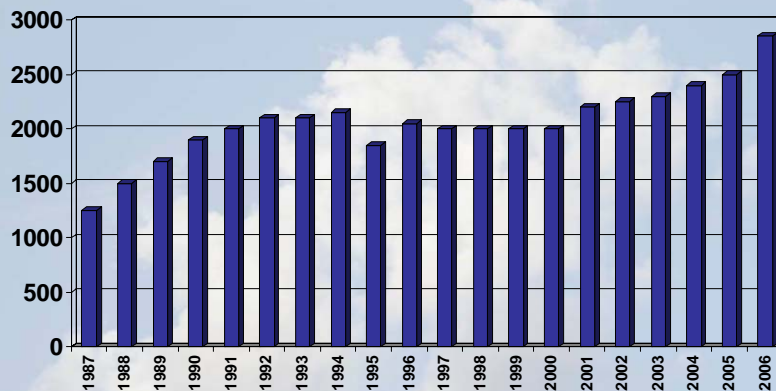
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# BusAv in Europe

## The Fleet is Growing

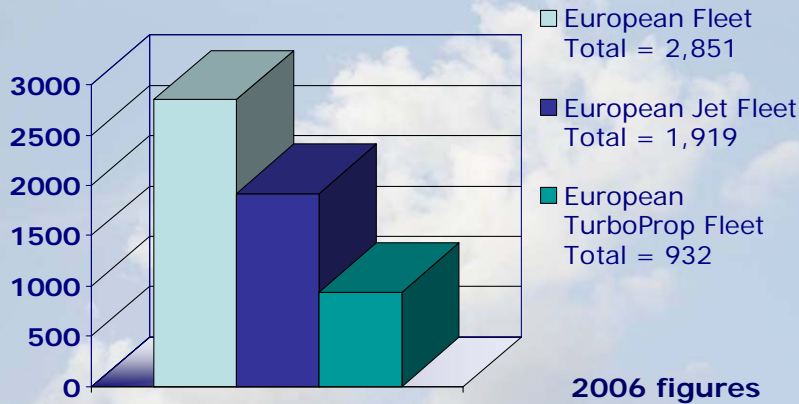


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## BusAv in Europe The Fleet is Growing



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## Market Trends Impact of the VLJ - 1 of 4

- Great opportunity to extend the benefits of BusAv to SMEs and middle management if VLJs can meet the promised price/performance/reliability requirements
- The larger VLJs most likely to succeed in public transport, with the smaller cheaper aircraft majoring on the wealthy private owner
  - Cost savings could be significant compared with existing jets but delta between larger and smaller VLJs unlikely to tempt the discerning EU business passenger to accept the very cramped conditions, and lack of baggage space and facilities on the smallest
  - Conversely \$3m cost of larger VLJs likely to be too expensive for most private owners

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# Market Trends

## Impact of the VLJ - 2 of 4

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- Selling seats unlikely to be viable in Europe
  - Low load factors and critical mass
  - Empty sectors and **public perception** of the environmental impact
  - Removes several key attractions of BusAv
  - Security/Screening implications

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# Market Trends

## Impact of the VLJ - 3 of 4

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- Some forecasts suggest European skies will be black with VLJs but they overlook
  - Few small airfields currently have the required IFR capabilities
  - Landing handling and operating costs very high in Europe meaning that the cost saving between a VLJ and an established light jet will not be as significant as in US
- Steady rather than explosive inroads into air taxi operations in Europe
  - ~50 aircraft per year within a current annual market growth of 300?

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# Market Trends

## Impact of the VLJ - 4 of 4

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- Perhaps greater impact at top end of private flying **BUT**
  - Must be properly regulated to assure safety
- SBAS under SES and subsequent development of local airfields hold the key to future growth

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# Way Ahead

- VLJs have a potential bright future in Europe for extending the compass of BusAv to the benefit of European Business and the Economy

## **BUT**

- Must deliver utilisation, safety, all weather reliability
  - Support, training, appropriate regulation, and infrastructure improvements in airports and airspace will be the key enablers to realising this promise

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