Fraport

Fachhochschule Frankfurt am Main - University of Applied Sciences

EBS Business School

Business Aviation in Europe
Current State and Future Outlook

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Inspiring Personalities.

Agenda

- Research Questions
- Methodology
- Status quo of European Business Aviation
- Future outlook on European Business Aviation in 2025
- Summary

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Two main research questions have been addressed.

- What is the current state of Business Aviation in Europe regarding the external and transactional business environment?

- How will Business Aviation in Europe most likely evolve in 2025? Which eventualities and surprises have to be taken into account?

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A multi-method approach was applied to assess the current status and future of Business Aviation in Europe.

✈ What is the current state of Business Aviation in Europe regarding the external and transactional business environment?

- Desk Research
- STEEP analysis based on secondary data
- Porter 5-Forces analysis based on secondary data

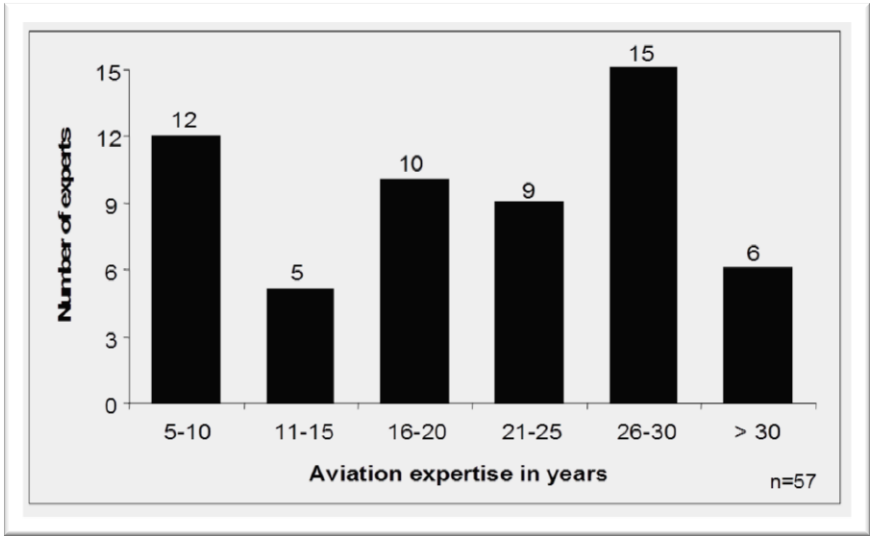
✈ How will Business Aviation in Europe most likely evolve in 2025? Which eventualities and surprises have to be taken into account?

- Development of relevant future projections based on desk research and STEP expert workshops
- Assessment of the projections' probability and industry impact via Online Realtime-Delphi
- Identification of probable high-impact, eventual and surprising developments via hierarchical cluster analysis (in SPSS)

The sample incorporated all aviation segments in order to include a variety of views on the European Business Aviation industry.

Sample:

- 57 Experts
- Aviation strategists, managers, researchers, consultants
- Ø industry experience 22.7 years



The integration of the Delphi methodology in the scenario process ensures more complete pictures of the future.

1 Planning

- Empirical Details
- Sample
- Projections (int., ext. expert workshops, desk research)
- Questionnaires
- Pre- & Pilottests

2 1st Delphi round

- Recruitment
- Assessment: Probability, impact (+justification)

3 Interim analysis

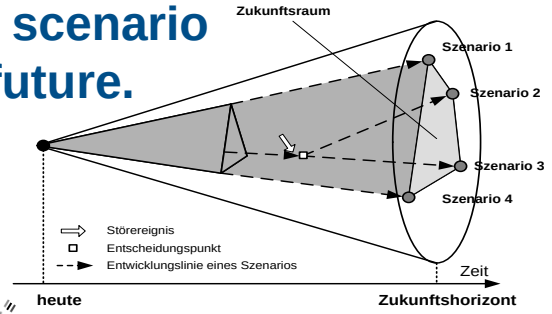
- Statistical group opinion
- Consensus measurement
- Content analysis of arguments

4 N Delphi round

- Feedback
- Re-assessment

5 Scenario development

- Probable + surprising future
- „Scenario writing“
- Expert checks



6 Scenario transfer

- Opportunity identification
- Strategy Development

The Delphi technique is an anonymous, systematic, multi-round survey procedure of experts, where feedback of the group opinion is provided after each round.

- ***High instrumental value for scenario development[1]***
- ***Standard research instrument (1,300 scientific articles, 270 dissertations in 2000-2004[2])***

Sources: [1] Kinkel et al. 2006; Bijl 1992; Rikkonen 2005; Sviden 1988. [2] Landeta 2006.

The Online RealTime-Delphi optimizes the process and assures a consistently high data quality.

Innovation RT-Delphi

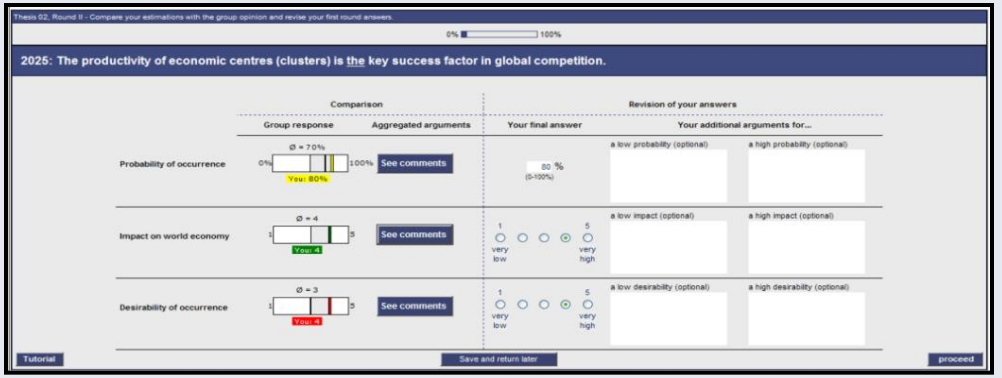
Worldwide only 4 RealTime-Delphi Platforms exist.

The platform of the SMI Center for Futures Studies and knowledge management is the most advanced so far.

It has been successfully applied in more than 20 futures studies in various industries and has been the basis for several TFSC and IJPE publications.

Step 1
Evaluation

Step 2
Analysis



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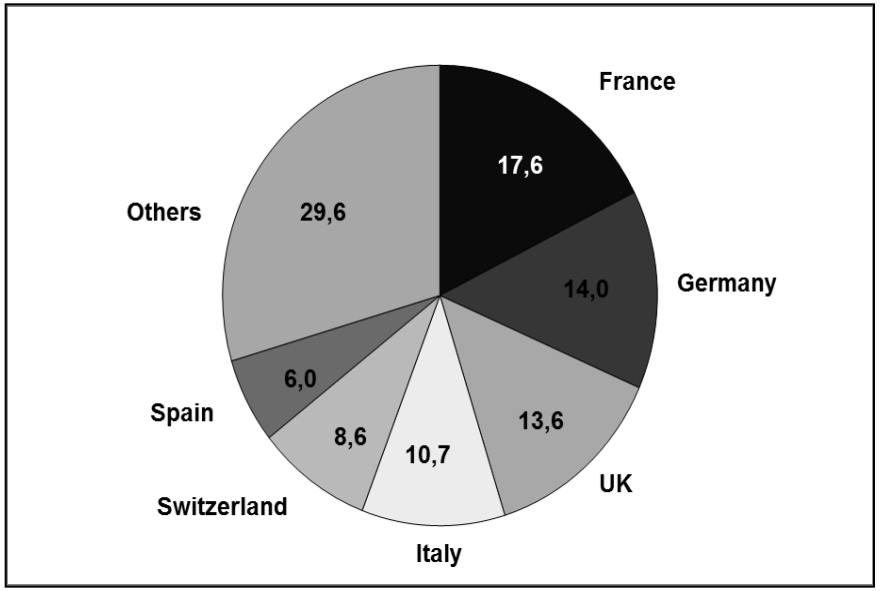
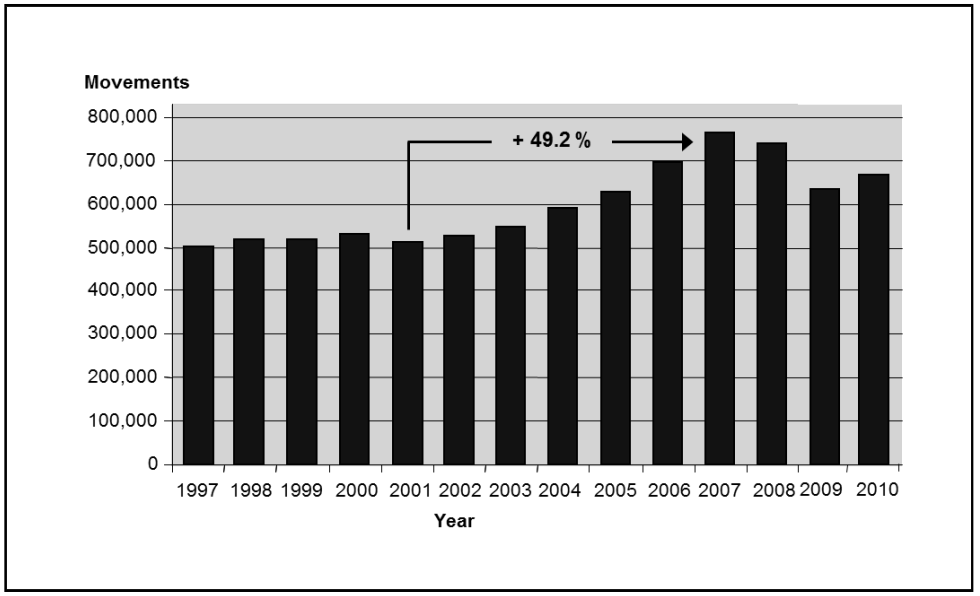
Key facts on European Business Aviation



Country shares of all Business Aviation movements in Europe in 2010.

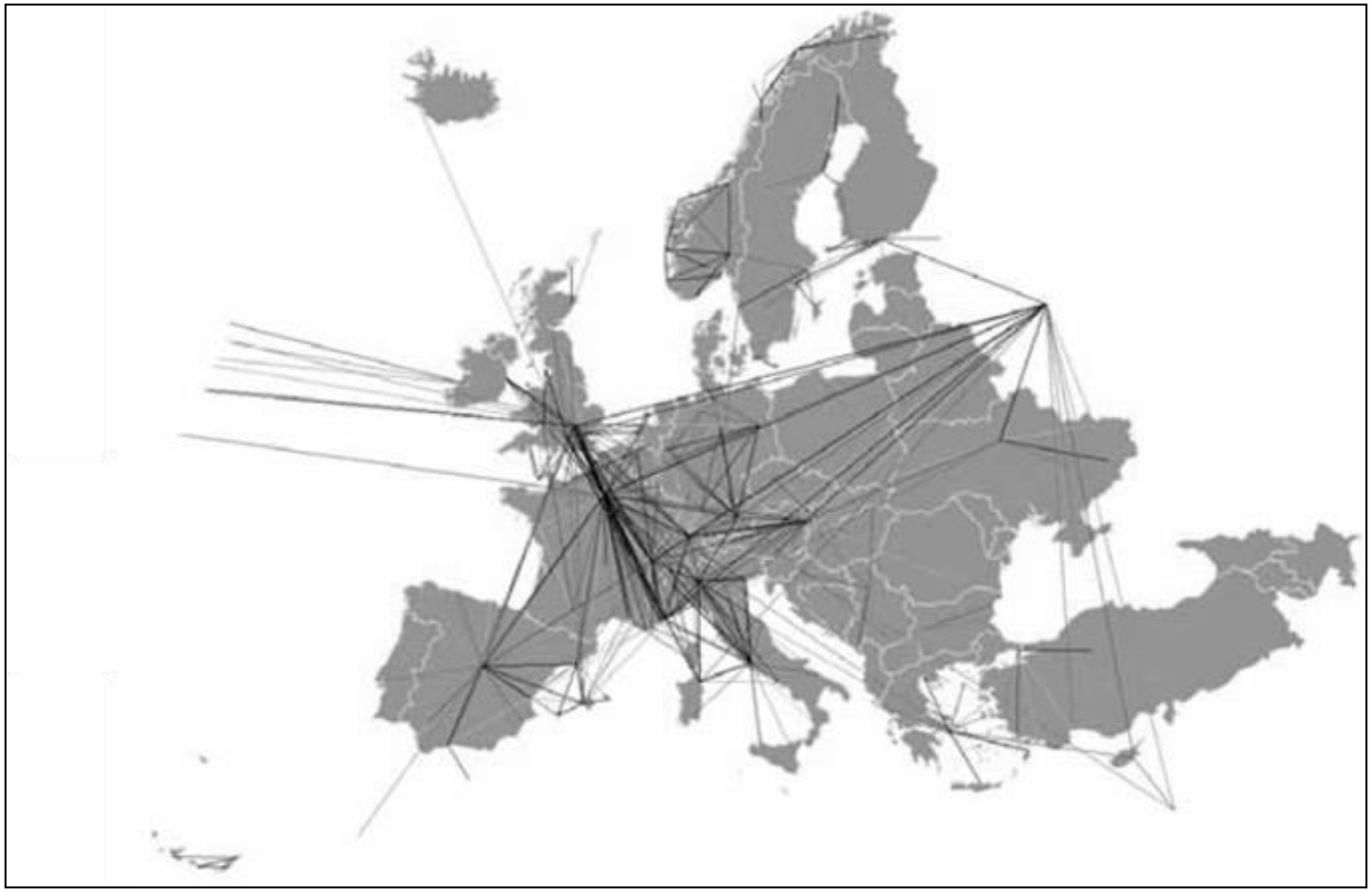
Source: based on Eurocontrol data.



Total volumes of Business Aviation movements in Europe from 1997 to 2010.

Source: based on Eurocontrol data.

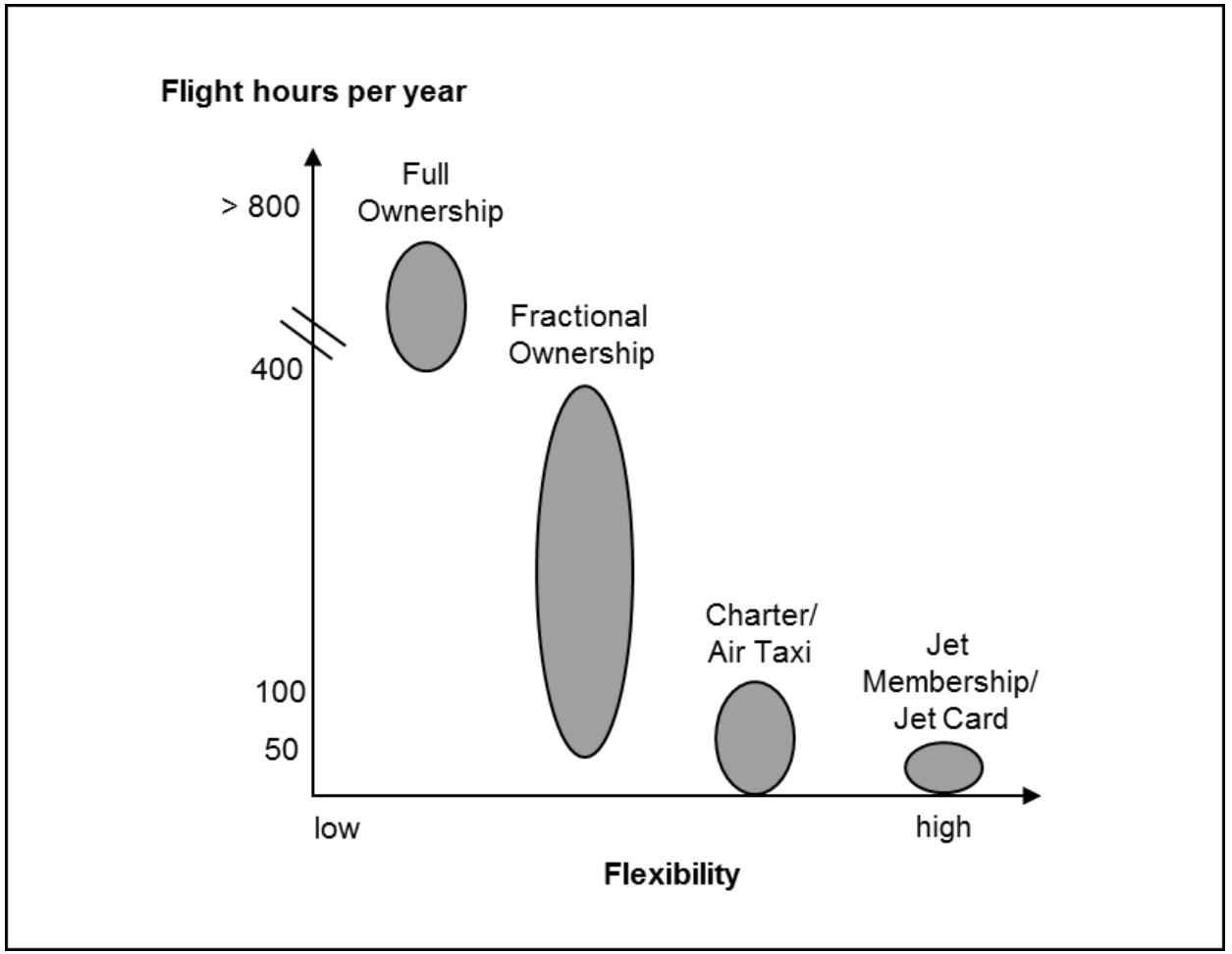
Traffic analysis



The top 500 bi-directional Business Aviation routes in Europe.

Source: Eurocontrol 2008.

Business Models



Business models and intensity of use
Source: based on HSH Nordbank, 2005.

STEEP Analysis

Socio-cultural

- Critical **societal acceptance** of business aircraft, esp. in times of increasing unemployment
- **Negative ecological image** of aviation industry in general

Technological

- **EASA** responsible for licensing aircraft for use in Europe
- Newly introduced **Very Light Jets** (VLJ) are cheaper, produce lower operational costs and are more fuel-efficient

Economical

- **Future enlargement of European Union** → new subsidiaries at remote locations induce demand for individual air services
- **Financial and economic crises led to reduced travel budgets** → reduced demand for business aviation

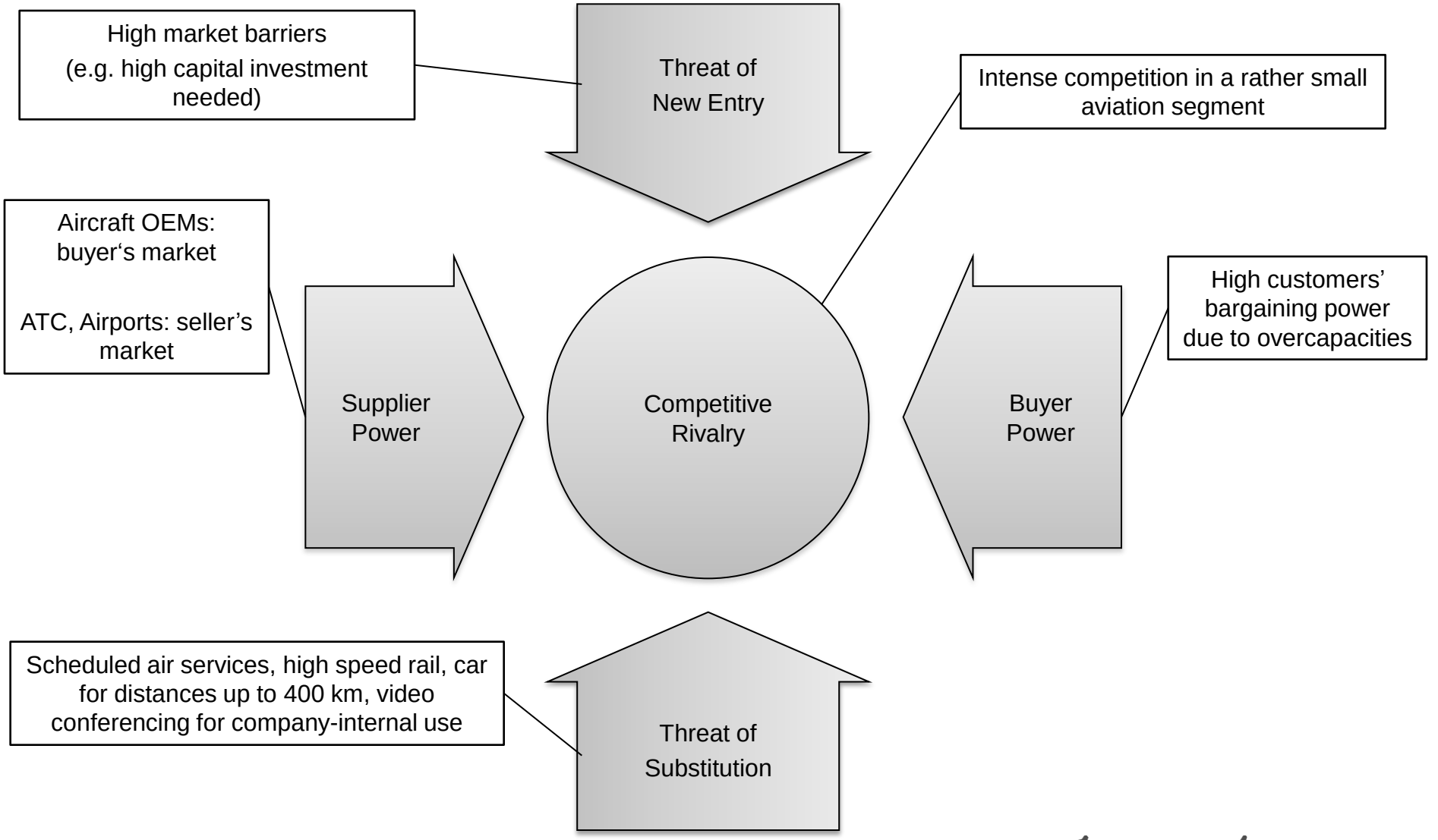
Ecological

- **Resource Scarcity**
- **CO_2-Emissions**
- **Noise-related restrictions** at airports
- Inclusion of aviation industry in **European Emission Trading Scheme (ETS) in 2012 will only consider aircraft > 5,7 t MTOW**

Political

- **Increasing influence of European Community Law** (e.g. slot allocation at 30 most capacity-restricted European airports, Single European Skies initiative)
- Regulations of **European Aviation Safety Agency (EASA)**

Porter 5-Forces Analysis



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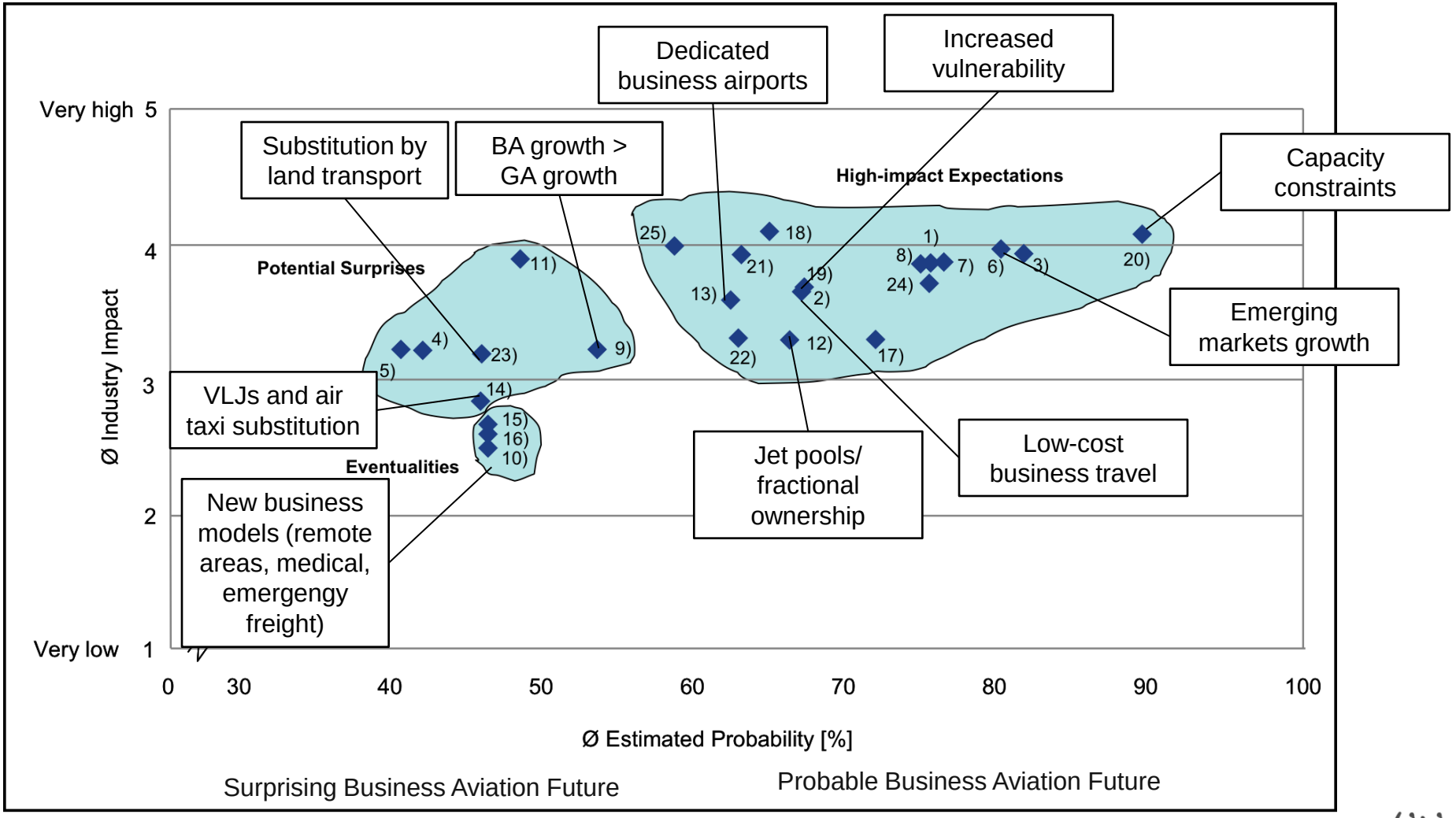
Consensus was achieved for 60% of the projections.

	Estimated Probability (EP)								Impact (I)
	Round 1 (n=57)			Round 2 (n=57)					
	IQR	*Mean*	*SD*	IQR	*Mean*	*SD*	*Mean Change*	*SD Change*	*Mean*
1. "Easy" air transportation demand	**18.8**	79.7	8.5	**18.8**	75.4	8.4	-4.3	-0.1	3.8
2. Low-cost business travel	**30**	63.3	19.1	**30**	66.8	18.1	3.5	-1	3.5
3. Demand for integrated products	**20**	66.8	19.6	**20**	81.0	19.3	14.2	-0.3	3.9
4. Societal acceptance of Business Aviation	35	41.1	21.2	35	41.1	21.2	0	0	3.2
5. Lower value of short-haul Business Aviation	**20**	42.1	17.6	**20**	40.7	16.4	-1.4	-1.1	3.2
6. Emerging markets	**10**	83.3	9.8	**10**	78.6	8.9	-4.7	-0.9	3.9
7. Long-haul growth > short-haul growth	35	67.9	18.2	**25**	77.1	16.7	9.2	-1.5	3.7
8. LCC growth > Business Aviation growth	**30**	68.6	15.4	**17.5**	76.4	13.8	7.8	-1.6	3.7
9. Business Aviation growth > general aviation growth	47.5	53.6	23.6	47.5	53.6	23.6	0	0	3.2
10. Business Aviation to remote areas	37.5	46.4	21.2	37.5	46.4	21.2	0	0	2.5
11.System partnerships	40	58	17.8	**20**	49.64	15.7	-8.4	-2.1	3.7
12. Jet pools and fractional ownership	37.5	66.4	20.7	37.5	66.4	20.7	0	0	3.3
13. Dedicated Business Aviation airports	40	62.5	22.1	40	62.5	22.1	0	0	3.6
14. Very light jets and air taxis	**30**	48.8	18.2	**30**	44.29	15.7	-4.5	-2.6	2.9
15. Medical air transportation	45	46.4	24.6	45	46.4	24.6	0	0	2.6
16. Emergency freight	55	46.4	25.5	55	46.4	25.5	0	0	2.6
17. Emission rights	40	64.5	18.7	**30**	70.4	16.7	5.9	-2.1	3.3
18. Scarcity of fossil fuels	40	69.1	19.9	**30**	65.4	17.6	-3.7	-2.3	4.3
19. Vulnerability	**30**	62.5	22.3	**30**	67.1	21.3	4.6	-1	3.6
20. Capacity constraints	50	62.8	25.2	40	87.1	24.4	24.3	-0.8	4.3
21.Liberalization and deregulation	40	60.1	21.1	35	63.21	18.8	3.11	-2.4	3.8
22.Virtual communication	**30**	62.4	17.6	**30**	62.3	18.3	-0.1	0.7	3.3
23.Substitution by land transport	40	61.3	22.9	**30**	45.0	20.7	-16.3	-2.2	3.2
24.Smaller long-haul aircraft	47.5	62.4	23.3	47.5	75	23.3	12.6	0	3.6
25.Satellite-based ATC	40	57.5	19.9	**30**	59.3	19.3	1.8	-0.6	4.0

Hierarchical cluster analysis was applied and the results mapped in a strategic future map.



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Summary

Business Aviation is an international growth industry.

The identified STEEP factors provide opportunities and threats for the business aviation industry.

The 5 Forces analysis shows that Business Aviation competition will remain high.

The future of Business Aviation is multiple and demands intense scenario and contingency planning.

The best way to predict the future is to create it (e.g. by being first mover in the business aviation niche markets identified).

Thank you for your attention!

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