

# MBA in Aviation Management

## Written assignment

Frankfurt, 2023, January

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Jörg BUXBAUM

## *Requirements*

In accordance to the UAS

The examination for this module is a written project!

Decide about the topic that you choose until **end of February 2023** ! Send your choice via mail to Knut WALTHER

Submission period 8 weeks from **13<sup>th</sup> of March 2023**

The paper shall be delivered latest **08<sup>th</sup> of May 2023**

## *Requirements for the paper*

- The report should not exceed 5000 words excl. tables, graphs and the bibliography.
- In your report you should provide a thorough analysis of the topic and come up with conclusions and recommendations. When you make recommendations keep in mind that you are not a qualified expert expressing “ex cathedra” opinions. Make sure you support your conclusions and recommendations with facts, assumptions, analysis, and argument.
- For the bibliography, you need to cite a minimum 5 academic references. Only what is cited or referenced in your report becomes a part of the bibliography.

## *Proposed Topics for assignment paper*

Topic \_:

xx

xx

# ***Airport Management***

Knut R. WALTHER

## **Topic 57** (2023)

### **Ukraine situation**

**Proposed person in charge:**

[Passenger Traffic]

Elaborate on the topic:

### **Change of Traffic (number of passengers / flights) after February 2022**

- Was there a change in total from and to Russia / Belarus?
- Was there a relocation of traffic to other airports / countries?
- What has changed in point-to-point and transfer traffic?
- How high was the market loss (absolute and relative) for Western-European airlines?
- Which airlines have gained a market?

# ***Airport Management***

Knut R. WALTHER

## **Topic 58** (2023)

### **Ukraine situation**

**Proposed person in charge:**

[Air Cargo Traffic]

Elaborate on the topic:

### **Change of Traffic (number of tons / Cargo-flights) after February 2022**

- Was there a change in total from and to Russia / Belarus?
- Was there a relocation of traffic to other airports / countries?
- What has changed in point-to-point and transfer traffic?
- How high was the market loss (absolute and relative) for Western-European airlines?
- Which airlines have gained a market?

# ***Airport Management***

Knut R. WALTHER

## **Topic 59** (2023)

### **Ukraine situation**

**Proposed person in charge:**

[Passenger and Cargo Traffic]

Elaborate on the topic:

### **Change of Routings (Long Range Flights to/from Eastern Asia) after February 2022**

- Which routes are used (Before / after / changes)?
- What are the economical, ecological and logistic consequences für the airlines concerned (Crews, equipment etc) airport stations?
- Were there any changes in type of aircraft used? If so, which changes and why?

# ***Airport Management***

Knut R. WALTHER

## **Topic 60** (2023)

### **Ukraine situation**

**Proposed person in charge :**

[Airline Business Model]

Elaborate on the topic:

### **Change of Airline Business Model after February 2022**

- What were the strategic reactions of airlines concerned due to the Crisis situation?
- How far business models were reshaped? Are those changes short or long-term considerations?
- Additionally:  
Were there any changes in the liability/insurance policies of airlines for certain routes?



# ***Airport Management***

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## **Topic 61** (2023)

### **Ukraine situation**

**Proposed person in charge :**

**[Airspace]**

Elaborate on the topic:

### **Change of Airspace use and capacity after February 2022**

- Where and how have there been changes in airspace use?
- Have there been new capacity adjustments and/or restrictions established?
- What were the reactions of European Air Navigation Service Providers?
- Are there additional actions necessary due to increased military operations (e.g.: OAT or manoeuvres) in certain areas?
- How can this be compensated?

# ***Airport Management***

Knut R. WALTHER

## **Topic 62** (2023)

### **Ukraine situation**

**Proposed person in charge :**

[Material / Technology]

Elaborate on the topic:

### **Challenges for Maintenance and Service after February 2022**

- Were there any changes in special aviation logistics e.g. In providing spare parts for aircraft or engines in certain regions due to sanctions?
- Have there been shortcomings and how did the airline industry/manufacturers react?
- Are there any changes in maintenance cycles (MRO)?
- What is the impact on Kerosine availability and pricing?
- Are there any changes in the fuel hedging strategy of airlines?
- Will there be any long-term effect?

# ***Airport Management***

Knut R. WALTHER

## **Topic 63** (2023)

### **Ukraine situation**

**Proposed person in charge :**

[Trend]

Elaborate on the topic:

### **Future effects after February 2022**

- Can there be a long-term effect detected for the aviation industry in Europe?
- Have a look on markets, sustainability, strategy, structure (e.g. airspace, ANS)

# ***Airport Management***

Knut R. WALTHER

## **Topic 64** (2023)

### **Limits to growth**

[Capacity]

**Proposed person in charge :**

Elaborate on the topic:

### **Capacity development since 2019 (Germany/Europe) (pot. recovery)**

- How was the development of the capacity concerning
  - Airspace
  - Airline transport
  - Airports
  - Staffing
  - Aircraft used (e.g.: 4-engine aircraft)
- Try an estimation/outlook for the next 5-years

# ***Airport Management***

Knut R. WALTHER

## **Topic 65** (2023)

### **Limits to growth**

**Proposed person in charge :**

[Markets]

Elaborate on the topic:

### **Change in business models since 2019 (Germany/Europe) (outlook)**

- Which business models of airlines and airports have been established since the beginning of the COVID crisis?
- Are there changes in the market share?
- What was the development of Ticket-/Cargo-prices over the last decade?
- Is there any correlation price and traffic figures?
- Try an outlook for the next decade

# ***Airport Management***

Knut R. WALTHER

## **Topic 66 (2023)**

### **Limits to growth**

[Cargo]

Proposed person in charge :

Elaborate on the topic:

### **Change of Air-Cargo since 2019 (Germany/Europe) (outlook)**

- What is the role of Air-Cargo concerning intra-European logistics (supply chains)?
- Is there a change to be detected into and out of Europe/ Germany?
- For which branches Air Cargo is elementary?
- How high is the contribution to the GDP?
- Will there be a future change?

# ***Airport Management***

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## **Topic 67** (2023)

### **Limits to growth**

[Passengers]

**Proposed person in charge :**

Elaborate on the topic:

### **Change of passenger traffic since 2019 (Germany/Europe) (outlook)**

- What is the change of volume and structure of passenger traffic over the last two decades?
- Was there a change concerning touristic destinations (new destinations / regions, increased or decreased numbers)
- What are the expectations of travellers and airlines for the future?
- What are new requirements for airlines concerning market and service concepts?
- Is there already any correlation between sustainability and price?

# ***Airport Management***

Knut R. WALTHER

## **Topic 68** (2023)

### **Limits to growth**

**Proposed person in charge :**

[Framework conditions]

Elaborate on the topic:

### **Implications for passenger traffic since 2019 (Germany/Europe) (outlook)**

- What are the consequences of the EU – “fit for 55” program!
- What may be the consequences of national / european regulations for aviation: Taxation, restrictions, bans. E.g. “no more short range flights”
- Are there any limitations for airspace use over Germany / Europe (Capacity / restrictions 7 regulations)?
- What is the status of SES?



# ***Air Traffic Management***

Jörg BUXBAUM

## **Topic 1 JB** (2023)

### **Traffic Development**

**Proposed person in charge :**

[Civil Passenger Transport]

Elaborate on the topic:

### **Capacity growth vs traffic development**

- If air traffic continues to grow worldwide – to which extent does this seem to be feasible concerning runway capacity, airspace capacity and environmental aspects?
- How does this perspective differ from region to region, e.g. North America, Europe, Asia and Africa?
- Will there ever be a global “level off” of longhaul passenger transport numbers? And if – when and why? What would be the consequences for passengers and actors like aircraft manufacturer, airports, airlines, ANSP?

# ***Air Traffic Management***

Jörg BUXBAUM

## **Topic 2 JB** (2023)

### **Traffic Development**

**Proposed person in charge :**

[Civil Passenger Transport]

Elaborate on the topic:

### **Traffic development USA vs. Europe**

- While air traffic in Europe – interrupted by COVID-19 – is still growing, traffic in the US apparently faces near stagnation since roughly 15 years
- How exactly traffic has evolved on both continents concerning traffic numbers and transportation performance (PAX miles p.a.) and what are the further scenarios?
- Discuss the reasons for both developments and state the consequences: What are the different current and expected future requirements concerning airlines, airports and especially air traffic management?

# ***Air Traffic Management***

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## **Topic 3 JB (2023)**

### **Single European Sky (SES)**

**Proposed person in charge :**

[Civil Passenger Transport]

Elaborate on the topic:

### **Harmonisation of air traffic management services in Europa**

- Started in 1998, SES is in place for 25 years and has strengthen the performance of European ATM substantially. However, airlines and politicians still claim SES goals have not been fulfilled yet
- For an exemplary flight from Frankfurt to Madrid – show, what still could be operationally optimized by which technical and operational means and which KPI of ATM could thereby be promoted to which extent
- How could pilots and passenger on this flight “feel” this improvement in contrast to nowadays? Is there a way to monetarize the potential benefits?

# ***Air Traffic Management***

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## **Topic 4 JB (2023)**

### **Innovation in Aviation**

**Proposed person in charge :**

[Challenges / Development]

Elaborate on the topic:

### **Accelerating technical developments on the ground + airborne**

- It takes “centuries” to implement new technology in aviation. Digital communication between cockpit and ATC (combined text + speech) is under development, but not expected to be available before 2035.
- What are the reasons for technical stagnation in aviation and who is profiting from this? Discuss the financial consequences of slow innovation in aviation. What is necessary to speed up innovation in aviation, taking into consideration safety and financial aspects and with regard to the need of worldwide standardization and certification?

# ***Air Traffic Management***

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## **Topic 5 JB** (2023)

### **Costs of “Green Flying”**

**Proposed person in charge :**

[Environment]

Elaborate on the topic:

### **Financial efforts for environmental trajectories**

- To provide environmental friendly trajectories in a high density airspace, it needs “green” operational procedures and technical assistance for pilots and air traffic controllers + instant and reliable digital data exchange
- Build a business (+“environment) case for an assistance system, that helps to save 120 kg fuel consumption per approach in German airspace.
- Sum up arguments (financial and other) to convince the CEOs of DFS, Airbus and Lufthansa to jointly develop and finance such innovative system and to bear development risks as launching customer.