

Going Green

A Strategic Analysis of Swiss International Air Lines Towards Full Environmental Sustainability

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Master Thesis by Juliette Kettler



The Challenge

Large contributor to
global emissions

Strong Growth

Essential part of
globalized economy

Pressure to mitigate
emissions

Research Questions:

1. How is SWISS currently addressing environmental challenges?
2. What are important facilitating and impeding factors – externally and internally – for long-term strategies towards environmental sustainability?
3. How might economically attractive strategies for becoming a fully sustainable airline look like?

Goal Definition

Full Environmental Sustainability for Airlines (FESA)

- ✓ No use of fossil resources
- ✓ Net neutrality concerning its 1st scope GHG emissions by 2050

1st scope emissions in this case = emissions of burnt fuel

Three Ways Towards Sustainability

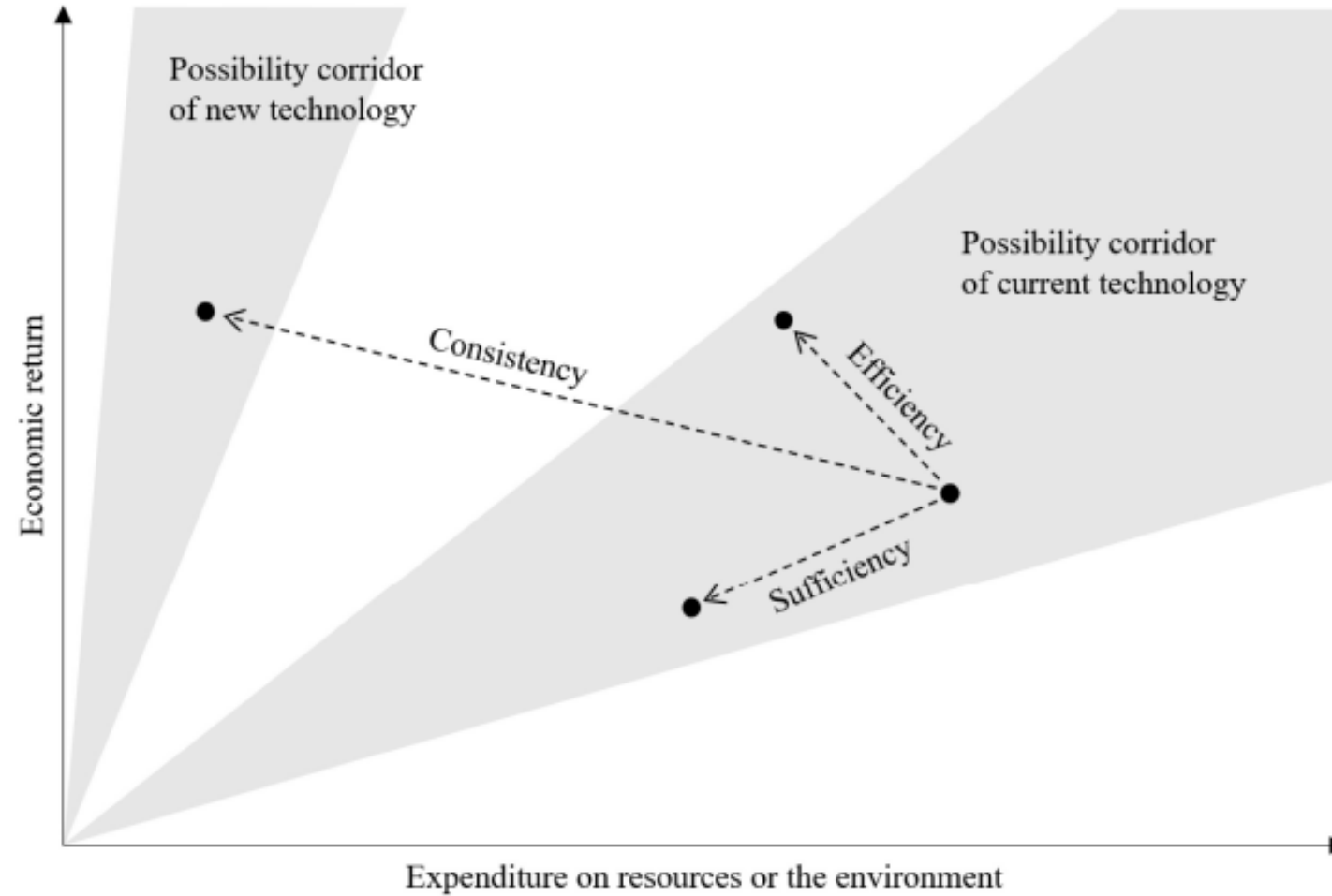


Figure 1. Visualisation of the three sustainability strategies. (Adapted from Schmidt, 2008, p. 14)

Research Design

Qualitative Case Study Design



11 Expert Interviews

- SWISS
- Federal Office of Civil Aviation
- NGO
- Fuel expert
- Industry Experts / Consultants
- Investment Analyst



Desk Research

- Public resources by SWISS and Lufthansa
- Industry Reports (e.g. by IATA, ICAO)
- Reports by other credible institutions (e.g. IPCC, European Commission, IEA, UIC)

Main Findings

- Current strategy is not drastic enough to reach the Paris Agreement
- **Efficiency**: little further potential
- **Consistency**: **Electric** or **hydrogen** aircrafts are not the solution for decarbonizing commercial long-haul flights. Instead, **synthetic fuels** are *the* key to decarbonizing aviation
- **Sufficiency**: Replacing short-haul flights with **high-speed rail** is important to reach the goals in time



Strategy Overview

«Green Status Quo»

Scenario

- little governmental support for synthetic fuels
- little policy effort to limit air travel growth
- steady demand growth
- sinking climate change-awareness of the public
- little willingness of customers to switch to trains
- little progress concerning the improvement of the European rail network

Vision

2050 Vision:
SWISS's core business is aviation.
Next to aviation, the Lufthansa Group has invested heavily in synthetic fuels and has acquired producing companies.
FESA is achieved by a complete replacement of fossil fuel with synthetic fuel and a few compensation projects.

Measures

Efficiency measures:
- Continue improving efficiency

Consistency measures:
- Cooperation with synfuel-research and –producers, eventually acquire producing company
- Request state subsidies
- Push for Synfuel-promoting policy (in CH, but also on EU and ICAO level)
- Advocate for compensation via Synfuel, not generic climate projects
- Communication campaign about Synfuels
- Push voluntary compensation e.g. with additional incentives/rewards
- Monitor alternative engine technologies

Sufficiency measures:
- CORSIA
- Raise awareness about aviation's impact

Capabilities

Capabilities used:
- Government relationships
- Past R&D activities concerning synthetic fuels
- Ability to work on incremental improvements and major innovation
- Lufthansa embedding
- Synfuel research & production partnerships
- Unique compensation tool
- Fleet management
- Any other built environmental capability indirectly supports the strategy

Capabilities to be built or expanded:
- Compatibility of environmental goals with FESA
- Environmental R&D concerning synthetic fuels
- Clear added value of sustainability
- Financial resources to invest in synthetic fuel production and acquire a producing company
- Control over development of crucial technology
- Business model which profits from two sustainability strategies
- Innovation concerning compensation

Scenario

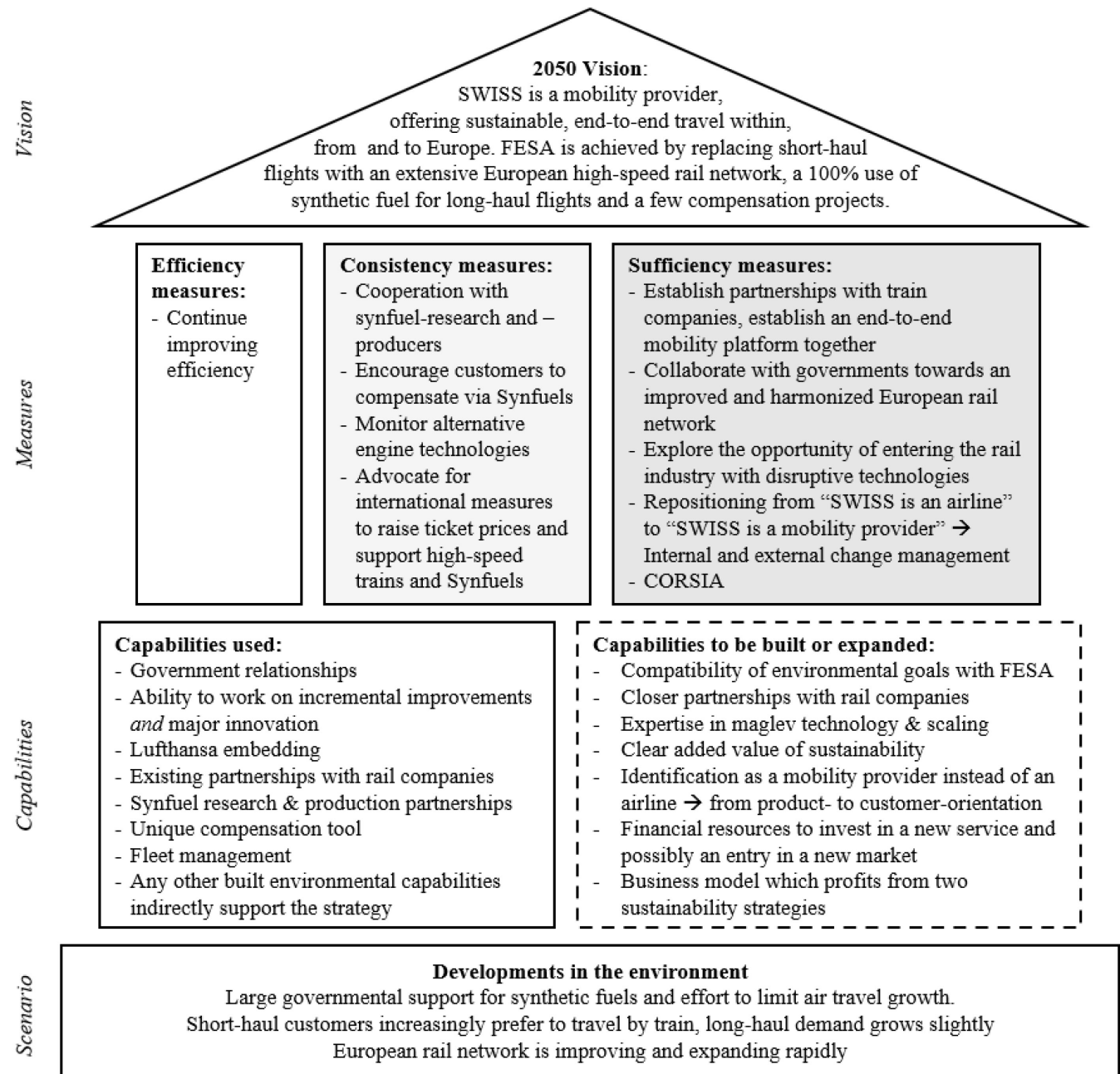
Developments in the environment
Little governmental support for synthetic fuels or effort to limit air travel growth.
Steady demand growth, little willingness to switch or reduce
Little progress concerning European rail network

Strategy Overview

«Multimodal Mobility»

Scenario

- considerable governmental support for synthetic fuels
- policy effort to limit air travel growth
- slowing demand growth for long-haul flights
- customers increasingly taking the train instead of flying (a trend already visible today)
- increased efforts to improve the European rail network



Call to action

- Compensate your flight with sustainable aviation fuel (e.g. through compensaid.com)
- Learn more in the upcoming book «Sustainable Aviation»
- Reach out to me via LinkedIn or E-Mail (juliette.kettler@gmx.ch)

