

A NEW ROLE FOR THE AIRPORT

THE TRANSITION OF HYBRID AND ELECTRIC AVIATION TO FACILITATE THE PARADIGM SHIFT WITHIN THE INDUSTRY.



INTRODUCTION

The current sustainability ambitions set for 2050 push the aviation industry to innovate. Simultaneously the battery market is exponentially growing. With this, niches within the electric aviation industry, many parties have developed novel electric initiatives, enabling ranges up to 815 km. This enables the commercial pursuit in electric aviation as a mobility modality on specific trajectories. Based on this technology and the human interaction with it, metrics have been composed for an entry use case.

METRICS

-  **The 300-400 km range**
With Eviation Alice as OEM facilitating aircrafts, 815 km is feasible.
-  **Innovation resources**
Human and financial capital available to invest in the innovation.
-  **Substitution potential**
Potential amount of passengers to substitute, resulting in CO₂ reduction.
-  **Network potential**
The connecting airports to the trajectory, enabling a large future network range.
-  **Viral factor**
Influencing other organisations and regime structures in your direction.
-  **Location in the Netherlands**
Location close to the Randstad to facilitate OD and transfer flights.

Most crucial metric

ENTRY USE CASE



substitution flights	1.7 - 2.7 million	/year
CO ₂ reduction	193 - 300 k	/year
energy demand	246 - 382 GWh	/year

INITIAL STEPS

1. Gather industry stakeholders and form the Coalition. Stakeholders essential within this coalition for the entry use case are airports, airlines, OEMs, governments, research institutes and startups (whom could fall under both OEM and airline).
2. Research & development towards airside infrastructure, mainly the megachargers.
3. Research & development towards the provision of a sufficient energy supply. Currently RSG is collaborating with Eneco, communicating the endeavour of increasing the energy demand would be a valid step.
4. Consumer research for the development of the niche market, thus developing the market for the early adopters of electric aviation on the entry use case. This also includes research into a shift in service model enabled with the novel modality.
5. Developing & implementing a shift in current aviation regulations for electric aviation regarding tax and subsidies.
6. Developing & internationally collaborating a shift in current aviation regulations for electric aviation regarding European aviation borders and flight patterns.
7. Opening the discussion and collaborating on the development of changing regulations and policies regarding the limit on the number of flight movements at AAS with the government and other involved stakeholders.

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A new role for the airport: the transition of hybrid and electric aviation to facilitate the paradigm shift within the industry.

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