HyImpulse Rocket Flight from SaxaVord Spaceport (Shetland)

ACP-2021-058

Assessment Meeting, 30.09.2021

Airspace change

Assessment Meeting Agenda

1. Introduction
2. Statement of Need (discussion and review)
3. Issues and Opportunities arising from proposed change
4. Process Requirements
5. Provisional Timescales
6. Next Steps
7. AOB

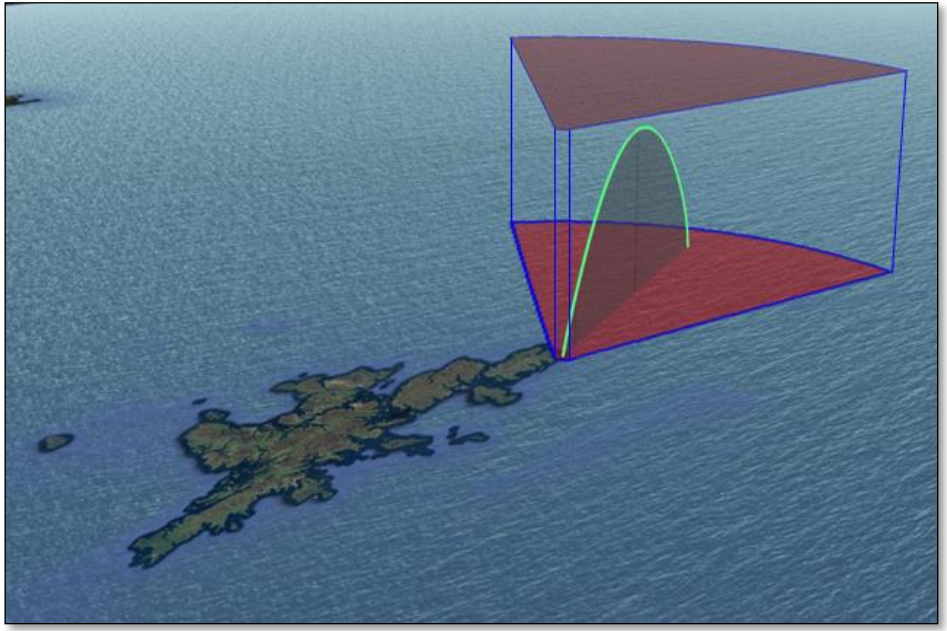
1. Introduction

Team

- CAA
- HyImpulse

Proposal and Plans

- Company details
- ACP



2. Statement of Need

HyImpulse Technology GmbH is a new German space company developing small orbital launcher and sounding rockets, powered by its green hybrid propulsion technology. The company mission is to unlock the full potential of the rapidly growing satellite market by eliminating the current bottleneck to frequent, reliable, and low-cost access to space.

The SR75 sounding rocket is a single stage vehicle for microgravity experiments and atmospheric research. The in-house developed hybrid rocket motor uses paraffin and liquid oxygen and SR75 will be the first European rocket that exploits such a combination of propellants.
HyImpulse is targeting the end of 2021, and a possible entry on the market in 2022. In its first flight, SR75 will be a technology demonstrator and will be used to flight-prove the motor.

Discussions between HyImpulse and SaxaVord Spaceport are currently on-going, foreseeing the possibility of a maiden flight from the Shetland islands. The Shetland Islands are particularly suitable from a flight safety perspective due to their geographical position and to the low volume of sea and air traffic.

This would be an important milestone for both companies and a step towards enabling access to space in Europe.
Involvement by SaxaVord Spaceport in the SR75 launch would enable it to build up operations to reach the objective of being a UK orbital vertical launch site.
This would include participation in the use of a temporary ACP to deliver Range services in support of the HyImpulse Launch.
The establishment of a suitable temporary airspace structure to the north of the Shetland Islands would allow HyImpulse rocket launch operations to safely proceed from SaxaVord Spaceport (Unst).

3. **Issues** and Opportunities

ON GOING

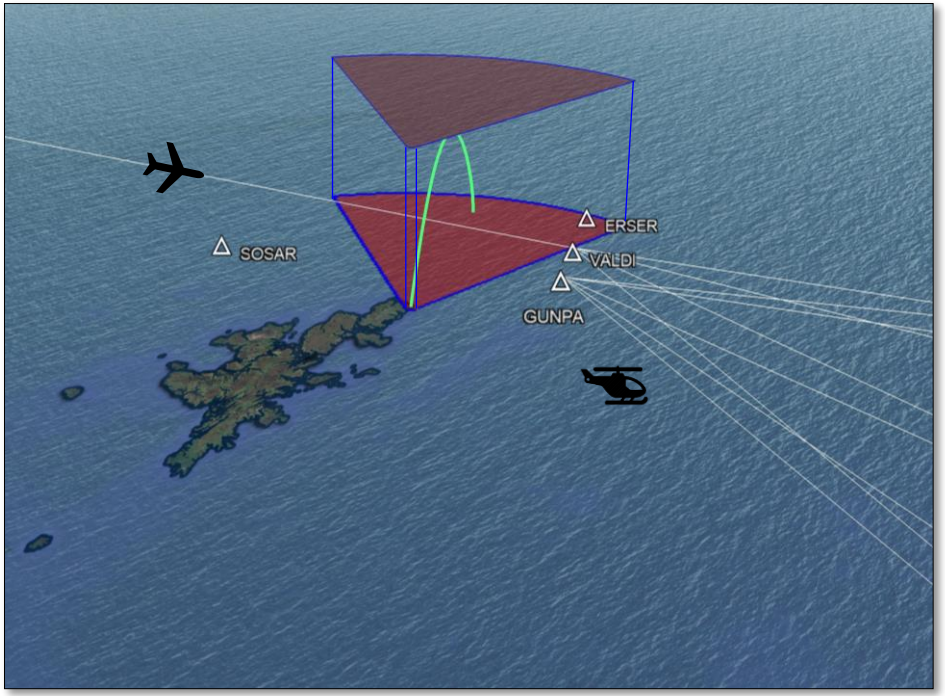
- Development and qualification of rocket
- A.N.O./S.I.A. Application
- Launch Site Licensing and Infrastructures

ISSUES

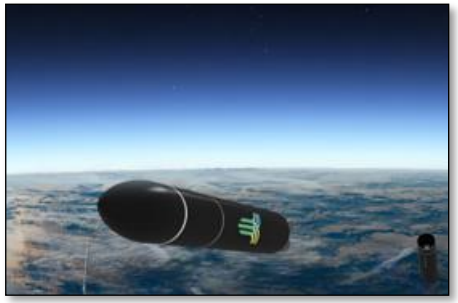
- Maiden Flight of SR75
- Launch Date to be defined
- Possibility of extension of TDA for later flights
- Airways – Reporting Points

Option to address issues

- Potential extension of implementation



3. Issues and **Opportunities**



OPPORTUNITIES

- Demonstrate hybrid rocket propulsion
- Enable future funding opportunities
- Enable test flights for HyImpulse R&D program
- Enable suborbital commercial flights from SaxaVord

4. Process Requirements

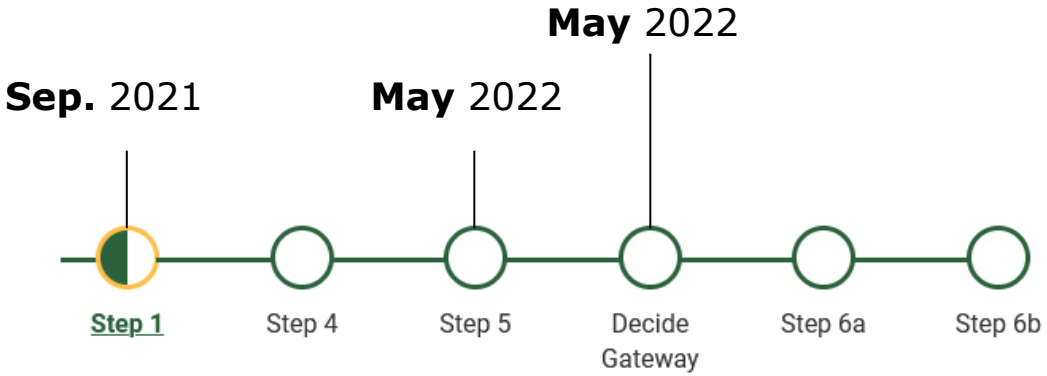
[CAA]

- TDA Policy Statement
- Stakeholder engagement
- Safety Assessment

5. Provisional Timescales

Steps

- Stage 1, 4: September 2021 → March 2022
- Submission to CAA: March 2022
- CAA Decision: May 2022
- AIC SUP: May 2022
- TDA Notified: July → September



6. Next Steps

Discussion

7. Any Other Business

Discussion

References – Q&A

[1] Airspace Change, CAP 1616, UK CAA, March 2021

[2] CAA Airspace Portal – Sponsor Training Manual, CAP 1706, UK CAA, 2018