

Assignment 2

The challenges and opportunities to achieving circularity: an analysis of end-of-life best-practice guidelines

Problem statement

Aircraft decommissioning and recycling is a complex process, with environmental, operational, safety, legal and economic aspects, and related challenges. Therefore, it is important that all involved stakeholders in the aviation sector act together to develop and implement best practices in this area. The *AFRA Best Management Practice for Management of Used Aircraft Parts and Assemblies and for Recycling of Aircraft Materials* (BMP) is a document that represents a collection of recommendations concerning best practices for the management of parts that are removed from an aircraft, engine or other asset during the disassembly of the asset at the end of its service life, and for the recycling of parts and materials that are recovered from an aircraft, engine or other asset during the recycling of the asset at the end of its service life. If AFRA aircraft end-of-life best-practice guidelines are followed, 90% of the weight of current decommissioned aircraft can be reused or recycled. However, they have not yet been implemented widely.

Research question(s)

What are the obstacles towards widely achieving circularity (e.g. as outlined in AFRA aircraft end-of-life best-practice guidelines) and how can they be overcome in the present situation and in the future?

Suggested academic backgrounds

- Governance of Sustainability (Leiden)
- Aerospace engineering (TUD)
- Management of Innovation (EUR)
- Urban, Port and Transport Economics (EUR)
- Global Business & Sustainability (EUR)
- Industrial Design (TUD)

Expected type of work

Can be a technical study (evaluation of the implications of AFRA guidelines on a case study) or qualitative study (based on interviews with manufacturers and recyclers of the legislative, societal, economic implications).