Airlines supporting sustainable jet fuel commercialisation

- **R&D/Proof of Concept**
  - 1st technical certifications
  - Test/demo flights
  - virgin atlantic etc.

- **Operational Feasibility**
  - Over 2000 commercial flights (single or small series):
    - Lufthansa 1,100+ flts
    - GOL 360+ flts
    - KLM 260+ flts
    - and 20 other airlines, incl.

- **Commercial-Scale Deals**
  - Airline/Supplier offtake agreements, e.g.
    - United
    - AltAir Fuels

- **Bioports**
  - OSL
  - KSDarp.br.
  - BioPort Holland

~2008 - 2011

2011 - 2015

2016+
Sustainable jet fuels – Airline perspectives

- Airlines support sustainable jet fuels as a major instrument to meeting aviation’s long-term emissions reduction goals
- Since early 2016, continuous supply starting:
  - airline/supplier offtake agreements (mostly US)
  - bioports (e.g. OSL)
- Today’s barriers are economic rather than technical
- Sustainability is key requirement for most aviation customers
- Positive political and legislative framework needed
  - Offtake agreements can be at competitive price with right support
  - De-risk investments, encourage production
  - Effective in US
- Opportunity with changes in EU directives (RED / FQD) → include sustainable aviation fuel into national transpositions