

# Clean Sky JTI

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# Introduction

Is there a role for LCA in future technology development ?

Clean Sky is an example of how an established industry is trying to implement it today



# Clean Sky Project

Aviation is an essential element of today's global society, bringing people and culture together and creating economic growth across the globe

ABOUT CLEAN SKY

**THE "CLEAN SKY" JTI**

Aviation is an essential element of today's global society, people and cultures together and creating economic growth across the globe.

The air transport industry is paying a lot of attention to growing public concern about environmental issues. Although today air transport only produces 2% of the world's CO<sub>2</sub> emissions, this is expected to increase to 3% by 2050.

Clean Sky is a "Joint Technology Initiative" that will develop breakthrough technologies to significantly improve the impact of the air transport on the environment.

What is a Joint Technology Initiative (JTI)?  
A JTI is a type of project created by the funding research in Europe to allow the development of complex activities, including the validation of technologies at a high readiness level. The size and scale of the project allow for the mobilisation and management of very large investments and human resources.

The air transport industry is paying a lot of attention to growing public concern about environmental issues.

Clean Sky is a « Joint Technology Initiative » that will develop **breakthrough technologies** to significantly improve the impact of the air transport on the environment

Technology Initiative is a new way of conducting large research programmes, with research dedicated to environmental purposes, especially carbon emission and noise reduction, with all new technologies integrated in order to work together," says Mr. Dauriat. "Expectations from Clean Sky's stakeholders are high, and through the Joint Technology Initiative we aim to deliver the right technologies at the right time."

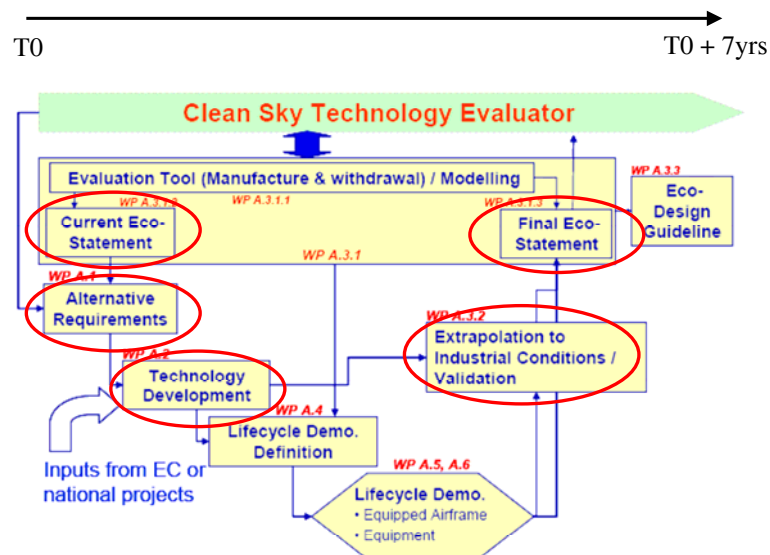
**Total Budget : ~80 M€ over 7 years**

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# Strategy

- Base on attributional LCA of current technologies: requirements and guidelines are defined for future technology development
- Technologies are developed
- Extrapolation to real industrial condition
- Final eco-statement at the end
  - Comparison with the old technology
  - Extrapolated to fleet level

# Strategy



## Concluding remarks

- Initial stages of the project:
  - Strategy is still developing (18 partners)
  - First ecostatement in progress, highlighting areas for change
  - Recommendations for change to LCA structure for aerospace
- LCA should be more usable and meaningful to engineers and designers
  - LCA integrated in existing tools (cost modeling, design,...)
  - Values of impacts not directly related to engineering values

## Discussion points

- Challenges related to assessing technologies in aerospace:
  - Tools difficult to use
  - LCI data
  - Time
  - Use of results from studies (who?)
  - Who is doing the studies : engineers or LCA experts ?
- Focus is now put current knowledge
  - REACH and current regulation
  - Integration of tomorrows regulations? How can we model it ?
- Possible changes in related technologies can decrease emissions in future
  - i.e. Waste becomes co-products