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[Technology Developments? --A Systems Analysis Application to the Multi Actor Aviation Technology System](#)

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[Abstract](#)

Air travel demand is growing worldwide with an approximate worldwide long term average of 5 to 6% annually. This growth has both very positive and negative effects. Aviation is deeply embedded in our society. Dramatic decrease in ticket prices has brought

to many the possibility of reaching many destinations worldwide in a day's travel. It is claimed by some that the negative effects – such as noise pollution and greenhouse gas emissions - will not become more problematic in the future, because technologies are being developed that will compensate them.

The starting point of this research is to discover whether this claim concerning the potential of current aircraft technology developments is true. In other words: is the current development in aircraft technology capable to contribute to a sustainable development in the aviation sector by keeping current positive effects, while mitigating the negative effects?

Existing research on this issue is mostly trend research, focussing at the average technology efficiency increase and extrapolating this to the future. In a context where multiple actors have to decide about what to do, this extrapolation is not