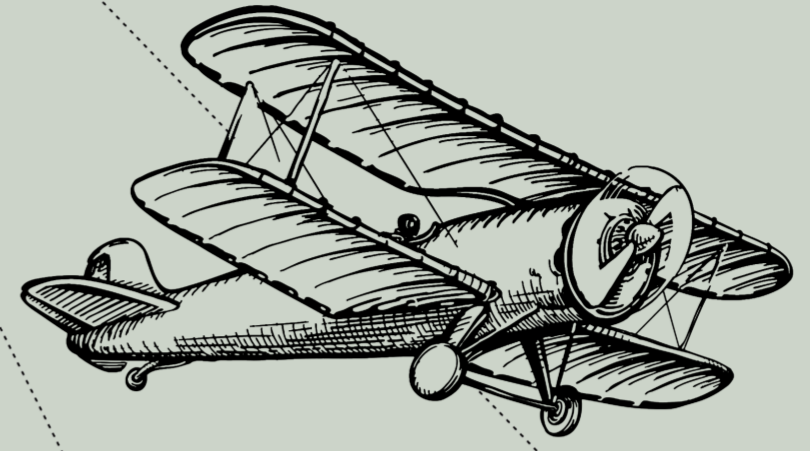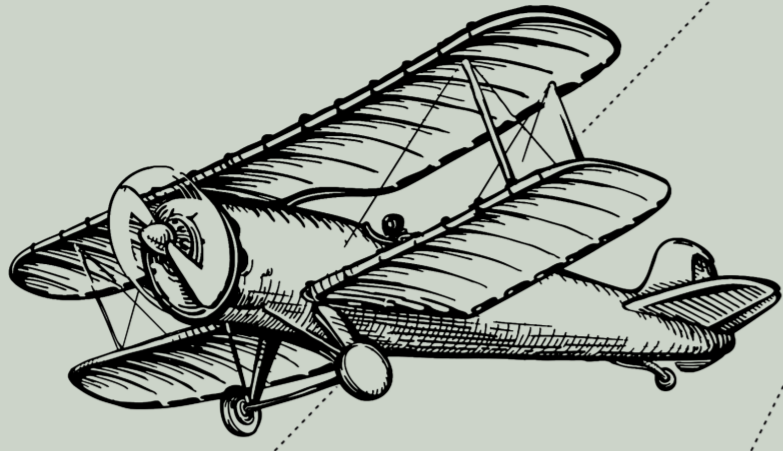# Flying is the new smoking!

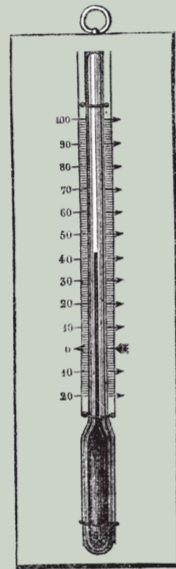## Is flying becoming outdated? But is a world without flying possible?

Fig. 1.

EARTH'S RISING TEMPERATURE

Currently, air travel accounts for 2.5% of global carbon emission (Ceurstemont, 2020; Nomadic Matt's Travel Site, 2022). Between 1990 and 2012 the amount of carbon emission from the aviation industry has increased by 75% (Lamb et al., 2020; Air Travel and Climate Change, 2022). In the next twenty years the total passenger numbers are expected to double according to the BBC (Timperley, 2020). Between 2013 and 2018 emissions from aeroplanes have increased 32%. Development in the technology of fuel, for example does result in lower emission per passenger but is not able to keep up with the rise in demand. The David Suzuki Foundation says that the improvements in efficiency only increases by 1 or 2% per year, while the aviation is growing up to 5% every year. Because other sectors are starting to reduce their emissions, it could be possible that in 2050 the aviation industry will take up 25% of the "carbon budget" that is set in order to limit the world's temperature rise to 1.5 degrees celsius.
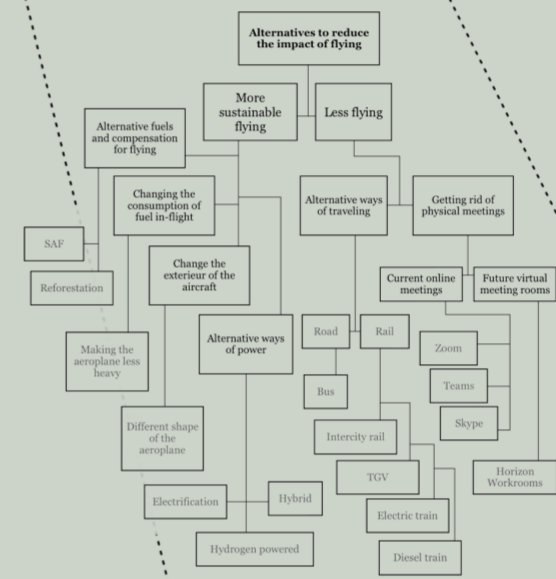

Fig. 2.

SUSTAINABLE AND FEASIBLE ALTERNATIVES

Are there alternatives that help reduce the impact of flying (also without loosing the advantages of flying)? Yes there are. Based on painpoints found in a customer journey map (created with insights from interviews), an overview of alternatives was created trying to find a more sustainable alternative (and to provide a solution to the pain points).

Reduction of carbon footprint compared to flying (between now and 2050) [%/year x 28 years]
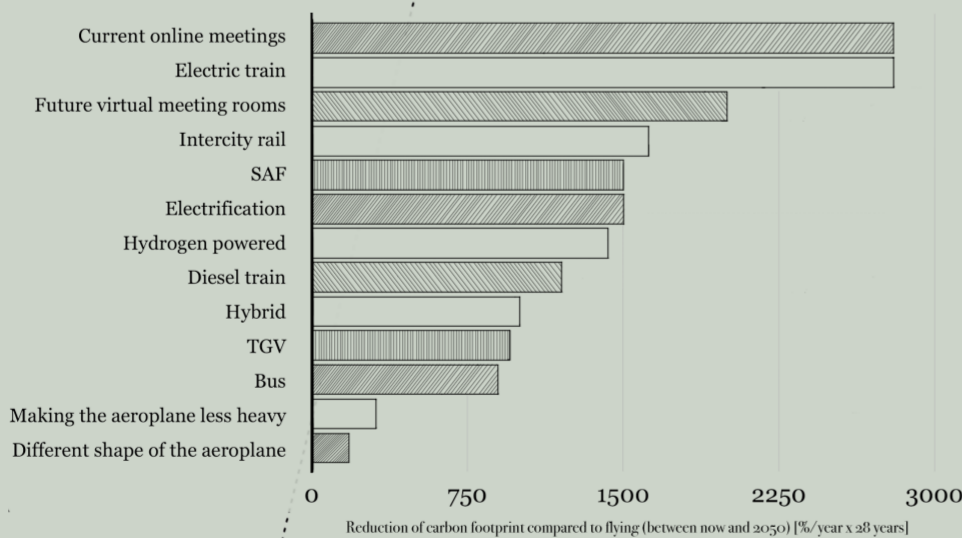
Fig. 3.

SOLUTION SPACES

Online meetings and the electric train are the best solution regarding a sustainability point of view. Both alternatives are part of the less flying alternative direction and can be linked back to the pain points. These alternatives can benefit a company for example financially. Somebody who takes 3 hours to go from A to B with flying and has no possibility to work, now spends 5 hours going by train from which they can work 4.5 hour. Then the train would have less time wasted on traveling and be more financially appealing.

The implications of this research will impact you, whether you are a stakeholder or not. A rise in the earths temperature will result in big consequences for everybody all over the world.

Swiss cheese plant (Monstera deliciosa LIEB)

Fig. 4.

So the next time the opportunity for a business trips comes around, know that flying is often not the best and definitely not the only option. And ask yourself, is the physical business trip really necessary (or can it be done online)?

If you still want to fly, make a paper aeroplane by folding this a2 on the dotted lines. Then you can fly as much as you want but without any emission!

Victor Hupe, 04/07/2022
Delft University of Technology