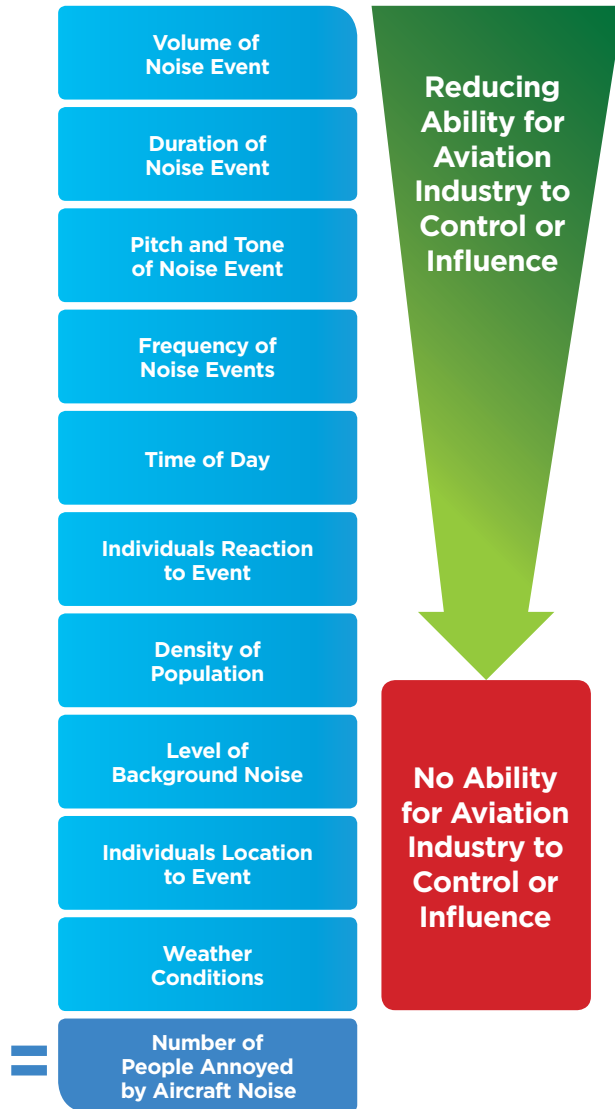


## THE NOISE CHALLENGE

The key objective in managing issues of aircraft noise is to limit and where possible reduce the number of people significantly affected. The diagram below shows the wide range of variables that can cause someone to be annoyed by aircraft noise - some of which the aviation industry can control, others however require a multi-stakeholder approach to resolve.



## WHAT IS SUSTAINABLE AVIATION?

Sustainable Aviation is a unique alliance of the UK's airlines, airports, aerospace manufacturers and air navigation service providers. Together, we drive a long term strategy to deliver cleaner, quieter, smarter flying. SA is the first alliance of its type in the world, and reports regularly on progress in reducing aviation's environmental impact. For a full list of members, see [www.sustainableaviation.co.uk/about/signatories](http://www.sustainableaviation.co.uk/about/signatories)

## THE RIGHT ROAD TO LIMIT AND WHERE POSSIBLE REDUCE NOISE

We all share responsibility for limiting and reducing aircraft noise in the future. Governments, individuals and the aviation industry must work together to reduce the number of people affected by aircraft noise. Our Noise Road-Map shows how we believe aviation can manage noise from aircraft operations between now and 2050.

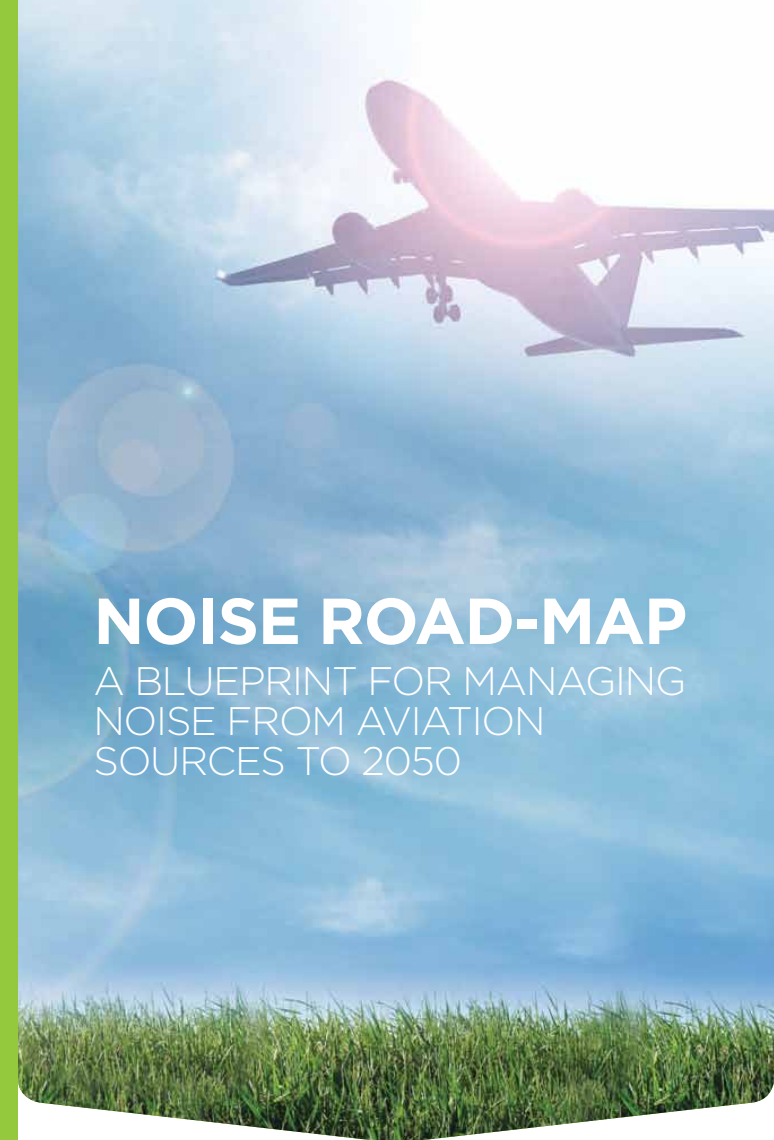
Whilst the industry remains committed to reducing noise impacts from aircraft operations, we need the Government to support and underpin our efforts through responsible policy, particularly regarding land use planning around airports.

SA members are committed to continuous improvement in reducing impacts from aircraft noise following the principles of the balanced approach.

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# NOISE ROAD-MAP

A BLUEPRINT FOR MANAGING NOISE FROM AVIATION SOURCES TO 2050

**SUSTAINABLE AVIATION**  
Cleaner. Quieter. Smarter.

[www.sustainableaviation.co.uk](http://www.sustainableaviation.co.uk)

# A ROAD-MAP TO SUSTAINABLE AVIATION

This is a world first from Sustainable Aviation (SA) as we present our Noise Road-Map, setting out the aviation industry's expert view of how UK aviation can continue to develop in a sustainable fashion. This shows what could realistically be achieved between now and 2050, taking account of the most recent evidence available to us.

**The SA Noise Road-Map prioritises four key areas of work to reduce noise before operational restrictions should be considered:**

## Aircraft and engine technology

Through improved technology aircraft operations today are 75% quieter than they were 50 years ago. New aircraft types such as the Airbus A380 and the Boeing 787 offer significant noise reductions compared to their predecessors. Further design improvements such as blended wing body and engine shielding by fuselage and tail plane offer the potential to reduce perceived noise from aircraft by 65% by 2050.

## Operational improvements

Implementation of a range of aircraft and airspace operational techniques offers a range of noise reductions between 1dB and 5dB. The exact noise improvements experienced by local communities with vary depending on how many of the operational improvements are already used at the airport in question.

## Land use planning

Studies have shown that historically land use planning guidelines have not always been followed. This has resulted in more people living within noise sensitive areas around airports. SA call on Government to work with key stakeholders to address this risk moving forwards.

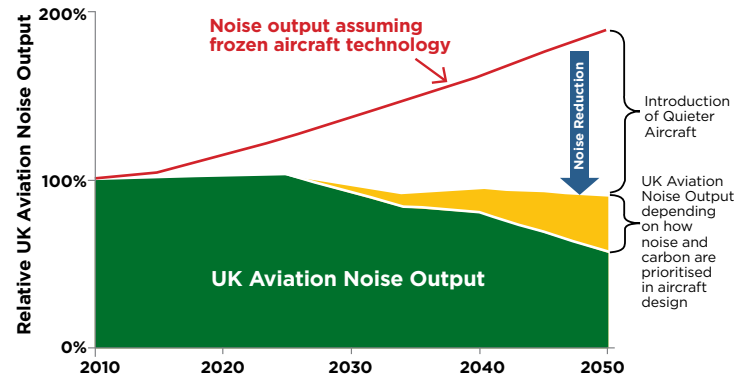
## Noise Communication and Community Engagement

SA believes there is an urgent need to improve ways that the issue of aircraft noise is communicated. We present a benchmark for constructive engagement and are committed to working with others to improve this issue moving forwards.

# THE SA NOISE ROAD-MAP

## SA Noise RoadMap

UK Aviation Noise Output  
(Not Airport Specific)



Even with air traffic movements nearly doubling in the next 40 years, noise from UK aviation will not increase, thanks to the development and introduction of quieter aircraft. Further opportunities exist to reduce noise through better operational procedures and controls on how land around airports is developed.

## WHAT DOES THE ROAD-MAP SHOW?

The Noise Road-Map shows that, as well as meeting people's increasing aspiration to fly, and helping the economy flourish through increased connectivity and trade, the aviation industry can also make major improvements in reducing the noise of flying. Furthermore, this can be achieved with passenger numbers forecast to more than double by 2050, and with air freight – vital to the UK's trade with emerging markets – expected to increase more than seven fold.



The SA Noise Road-Map is published at [www.sustainableaviation.co.uk](http://www.sustainableaviation.co.uk)

# WHAT COULD GOVERNMENT DO TO ENABLE AVIATION TO SUPPORT UK ECONOMIC GROWTH WHILST MINIMISING NOISE IMPACTS?

**There is considerable scope to reduce noise output from UK aviation through the improvements described in the Road-Map. Government engagement will be essential in delivering this vision:**

## Sustained Investment in Technology Research Programmes

The greatest opportunity to reduce noise output is through the design and introduction of new aircraft and engines. SA members are already involved in international research programmes, such as the EU ACARE Flightpath 2050 initiative which aims to reduce perceived noise by 65% by 2050. The UK Government could go further in assisting the aviation industry achieve these goals which require sustained long term commitment.

## Improving Land Use Planning Controls around UK airports

There is a clear need to improve how development around UK airports is controlled. Current controls are limited and in certain cases have led to more people exposure to high levels of aircraft noise. UK Government needs to strengthen and support local authorities' ability to enforce land use planning controls around airports.

## Enabling improved airspace and operational procedures

Aircraft operators and Air Traffic Management companies are already investing in new technology and new airspace design to enable quieter flights. Implementing the many suggested operational improvements in the Road-Map will require a number of additional changes to airspace and operational controls to be made. SA calls on the UK Government to work with the industry to ensure these opportunities are delivered in a timely manner.

## Improving understanding of how people become annoyed by aircraft noise

SA Calls on the UK Government to work with the industry to support independent research to improve our understanding of the noise challenge and how people react to aircraft noise events. This must be fully supported by all stakeholders. By better understanding how individuals become annoyed by aircraft noise, we can improve how we respond and communicate our work to reduce noise. This in turn SA believes will result in a reduction in the number of individuals annoyed by aircraft noise.