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Phoenix Initiative

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The Corona crisis is hitting global aviation extremely hard, but also offers perfect opportunities for disruptive innovation that could help the industry to recover more swiftly by improving efficiency and introducing new processes.

Therefore, FLIGHTKEYS proposes to initiate/accelerate the following projects:

1. Get rid of oceanic track systems, particularly the NAT system
2. Expand worldwide free-route airspaces
3. Get rid of flow management route restrictions
4. Clean up the NOTAM system
5. Introduce a modern, standardized fuel policy in the US
6. Introduce the metric system in US aviation meteorology
7. Research the climate impact of missing contrails

The stakeholders for these projects are regulators, ANSPs, service providers and airlines.

We think that airlines should work together (maybe via IATA?) to swiftly push for these changes.

FLIGHTKEYS will be glad to help with expertise, ideas, simulations and early adoption

Get rid of oceanic track systems

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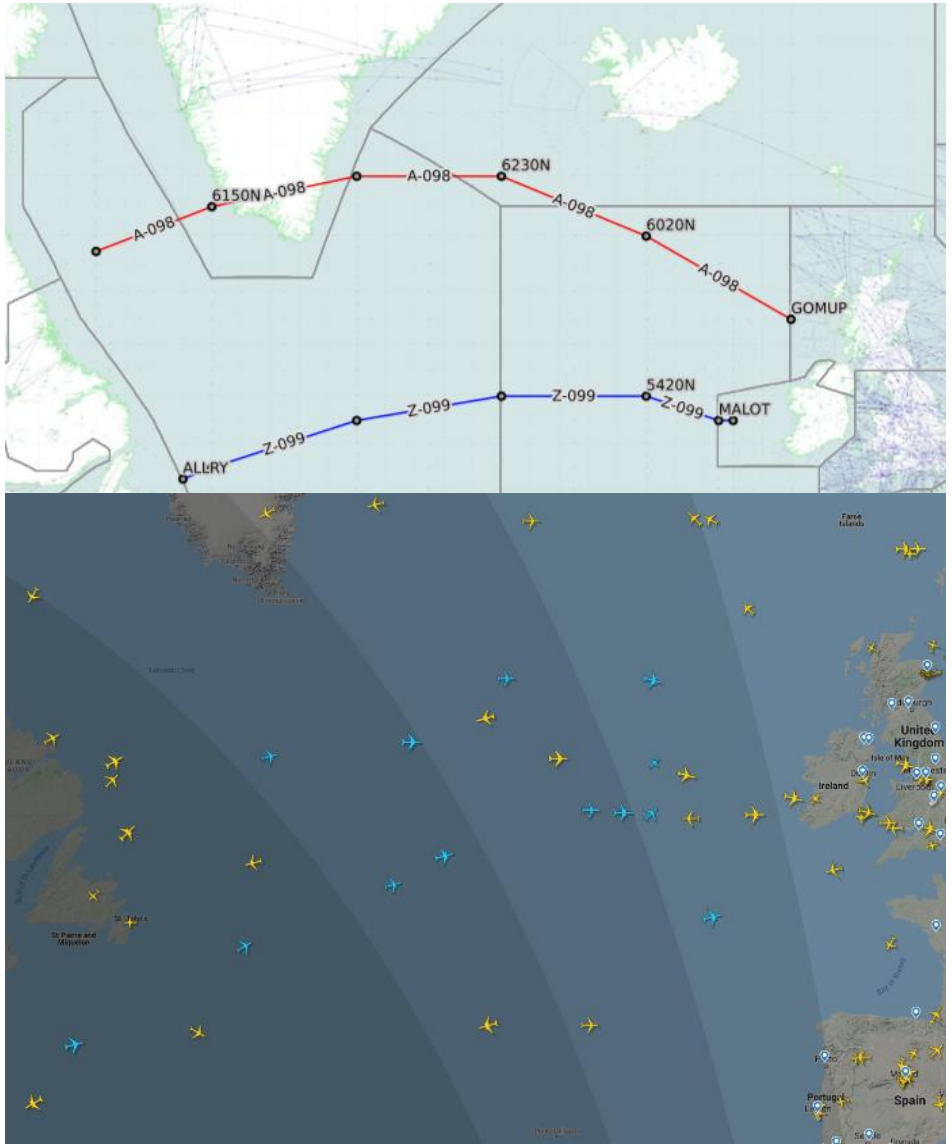
There's not much traffic in the air these days, and NAT tracks have been reduced to a single one in each direction. This doesn't make much sense, as they now create some sort of "wall" for no obvious purpose, when in fact the north Atlantic could be a free-route airspace now.

Let's take the last step and get rid of those remaining tracks entirely!

Even now, there is no regulatory requirement to have fixed tracks at all.

With traffic recovering after the crisis, re-introduction of tracks should be delayed as long as possible, or at least be restricted to a narrow altitude band (e.g. FL290-FL330).

Investigate other track systems like PACOTS, Hawaiian and AUSOTS in the same way.



Primary stakeholders: FAA, Eurocontrol, NavCanada

Expand worldwide free-route airspaces

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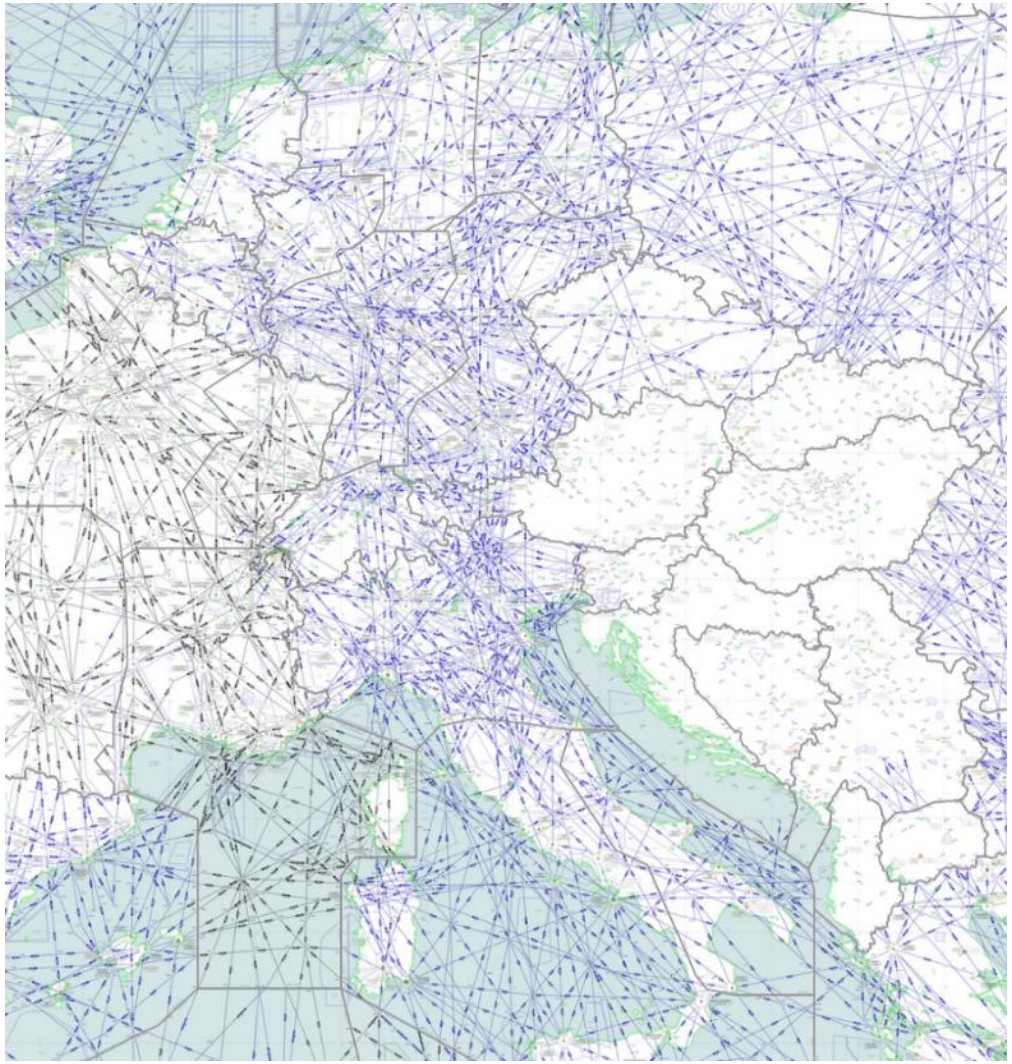
With a bare minimum of air traffic, the expansion of free-route areas can be speeded up significantly, also in regions where lacking ATC equipment capability prevented it so far.

A collaboration with ADS-B providers could lead to better situational awareness, medium-term conflict alerts and hotspot predictions for ATCOs.

Global introduction of FIXM flight plan filing and distribution of those trajectory data to ADS-B providers would increase predictive accuracy significantly.

It would also be a perfect opportunity to test and introduce remote ATC sectors, e.g. ATCOs from the west coast controlling a sector on the east cost. Dynamic capacity balancing would gain a big boost, particularly during severe weather operations.



Primary stakeholders: ANSPs, ADS-B and flight planning providers

Get rid of flow management route restrictions

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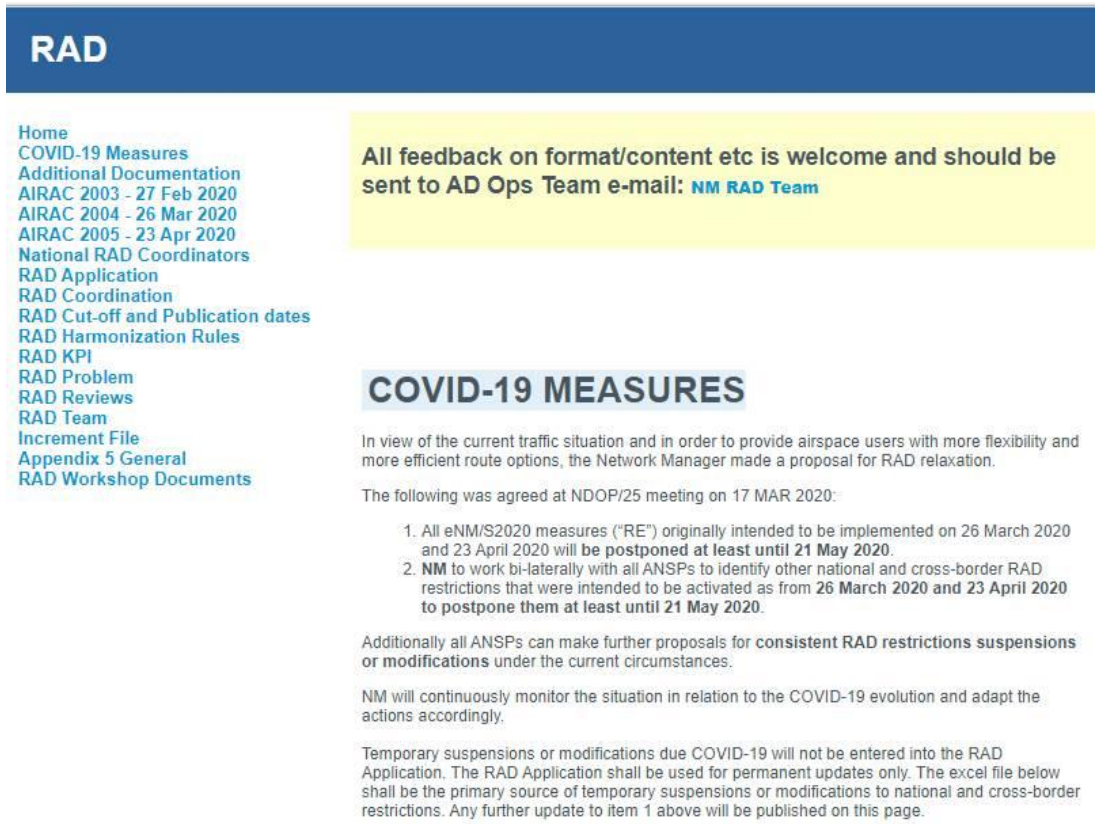
Since there is no mentionable traffic flow currently, some restrictions have already been temporarily suspended in Europe.

This would be a perfect time to abandon most of those restrictions and only re-introduce new, well thought through ones when increasing traffic volume really demands so.

Re-introduction of restrictions should be done in close cooperation with airline ops centers to avoid introducing restriction types that create issues in trajectory generation, like multi-conditional constraints.

A reworked flow management control system should be based primarily on temporarily restricted areas instead of route-centric restrictions.



RAD

Home
COVID-19 Measures
Additional Documentation
AIRAC 2003 - 27 Feb 2020
AIRAC 2004 - 26 Mar 2020
AIRAC 2005 - 23 Apr 2020
National RAD Coordinators
RAD Application
RAD Coordination
RAD Cut-off and Publication dates
RAD Harmonization Rules
RAD KPI
RAD Problem
RAD Reviews
RAD Team
Increment File
Appendix 5 General
RAD Workshop Documents

All feedback on format/content etc is welcome and should be sent to AD Ops Team e-mail: NM RAD Team

COVID-19 MEASURES

In view of the current traffic situation and in order to provide airspace users with more flexibility and more efficient route options, the Network Manager made a proposal for RAD relaxation.

The following was agreed at NDOP/25 meeting on 17 MAR 2020:

1. All eNM/S2020 measures ("RE") originally intended to be implemented on 26 March 2020 and 23 April 2020 will **be postponed at least until 21 May 2020**.
2. **NM** to work bi-laterally with all ANSPs to identify other national and cross-border RAD restrictions that were intended to be activated as from **26 March 2020 and 23 April 2020 to postpone them at least until 21 May 2020**.

Additionally all ANSPs can make further proposals for **consistent RAD restrictions suspensions or modifications** under the current circumstances.

NM will continuously monitor the situation in relation to the COVID-19 evolution and adapt the actions accordingly.

Temporary suspensions or modifications due COVID-19 will not be entered into the RAD Application. The RAD Application shall be used for permanent updates only. The excel file below shall be the primary source of temporary suspensions or modifications to national and cross-border restrictions. Any further update to item 1 above will be published on this page.

Primary stakeholders: FAA, Eurocontrol

Clean up the NOTAM system

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All NOTAMS not deemed absolutely necessary at the current traffic level should be terminated.

As traffic recovers, new rules should be applied strictly on what should be published as a NOTAM.

Get rid of domestic NOTAMs.

Join the EAD NOTAM system.

We all know the Problems:

The NOTAM system is full of irrelevant information about Grass cutting, Military activity, Bird, Distant obstacles, Men working, Fireworks, Trigger Notams, Chart Changes, Unlighted towers, Broken bulbs. Key point: If we stuff the system full of every possible bit of information, we don't see the CRITICAL items.

AND THE CHARCTER SET IS FROM 1924.

Primary stakeholders: ANSPs

(NOTAMR H1107/17) - 413 FT AMSL BRG 014 MAG 2.78 NM FM ARP 466 FT AMSL BRG 006 MAG 3.41 NM FM ARP 203 FT AMSL BRG 014 MAG 1.46 NM FM ADP 246 FT AMSL BRG 026 MAG 2.56 NM FM ARP OBST MARKING NON STANDARD) 345 FT AMSL BRG 011 MAG 2.69 NM FM ARP 262 FT AMSL BRG 275 MAG 1.46 NM FM ARP 229 FT AMSL BRG 325 MAG 3.21 NM FM ARP 217 FT AMSL BRG 276 MAG 1.46 NM FM ARP OBST UNLIT 245 FT AMSL BRG 300 MAG 1.56 NM FM ARP 205 FT AMSL BRG 011 MAG 2.75 NM FM ARP 227 FT AMSL BRG 017 MAG 2.91 NM FM ARP 210 FT AMSL BRG 288 MAG 1.24 NM FM ARP 261 FT AMSL BRG 299 MAG 1.55 NM FM ARP 232 FT AMSL BRG 291 MAG 1.38 NM FM ARP OBST UNLIT 500 FT AMSL BRG 005 MAG 3.42 NM FM ARP 234 FT AMSL BRG 355 MAG 2.50 NM FM ARP 349 FT AMSL BRG 071 MAG 2.31 NM FM ARP OBST UNLIT 235 FT AMSL BRG 022 MAG 2.48 NM FM ARP 187 FT AMSL BRG 357 MAG 2.61 NM FM ARP 210 FT AMSL BRG 003 MAG 1.58 NM FM ARP 432 FT AMSL BRG 004 MAG 3.78 NM FM ARP 205 FT AMSL BRG 020 MAG 2.52 NM FM ARP 205 FT AMSL BRG 002 MAG 1.58 NM FM ARP 830 FT AMSL BRG 359 MAG 6.59 NM FM ARP 175 FT AMSL BRG 317 MAG 2.74 NM FM ARP OBST MARKING NON STANDARD 364 FT AMSL BRG 020 MAG 3.17 NM FM ARP 210 FT AMSL BRG 088 MAG 1.45 NM FM ARP 705 FT AMSL BRG 352 N NM FM ARP 413 FT G 014 MAG 2.75 NM FN MAR 04:00 2017 EST

FLIGHT

JANUARY 27, 1921

NOTICES TO AIRMEN

Donibristle Aerodrome—Obstructions

WITH reference to Notices to Airmen No. 49 of 1920 and No. 2 of 1921, pilots are also warned that a row of poles 18 feet high, carrying electric light cables, has been erected at Donibristle aerodrome, Fife (56° 2′ 0″ N., 3° 21′ 0″ W.), on the south side of the main road leading from the technical buildings to the camp buildings. (No. 4, 1921.)

A New Landing-Ground

NOTICE to Airmen No. 5 announces that a ground at Harras, Dyke Whitehaven, should be added to the list of Civil aerodromes licensed as suitable for Avro 504K and similar machines. The ground is one mile W.S.W. of Whitehaven.

The same notice also announces that the ground at Billesley should be deleted from the list.

Introduce a modern, standardized fuel policy

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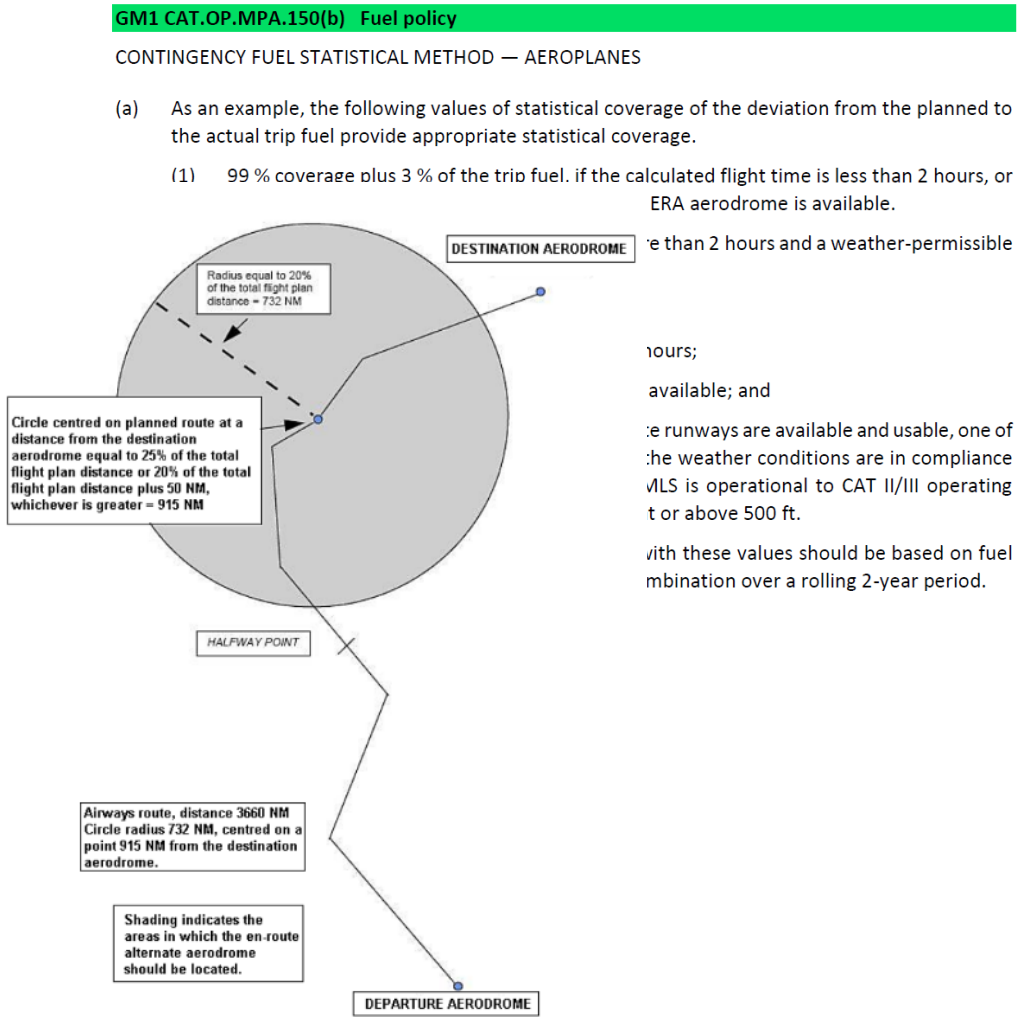
Most of the EASA rules define a modern, flexible and efficient fuel policy which could be adopted by FAA, too.

Identify obsolete ops specs - like B43 – and replace them with contemporary rules.

Introduce analyzed contingency fuel and probabilistic approach mileages into fuel policies.



Primary stakeholders: FAA, US Airlines, CFSPs

Introduce the metric system in US aviation meteorology

FL/GHTKEYS

Temperature has been successfully switched to metric Celsius degrees many years ago, but visibility, RVR and air pressure are still being handled in imperial units in the US.

Besides surface weather reports, this would also affect charting and AIPs (runway dimensions, approach minima).

Primary stakeholders: ICAO, WMO, FAA, Charting providers

International Civil Aviation Organization

WORKING PAPER

A39-WP/160
TE/57
12/8/16

ASSEMBLY — 39TH SESSION

Agenda Item 35: Aviation safety and air navigation standardization

SINGLE SET OF UNITS OF MEASUREMENT TO BE USED IN AIR AND GROUND OPERATIONS

(Presented by the United Arab Emirates)

EXECUTIVE SUMMARY

This working paper presents the United Arab Emirates (UAE) proposal for the reconsideration of a singular set of Units of Measurement for Air and Ground Operations. It acknowledges the existing Annex 5 — *Units of Measurement to be Used in Air and Ground Operations* Standards and Recommended Practices (SARPs) and the ambiguity of the implementation thereof.

It also contextualises the abilities of modern digital and legacy avionics suites and their possible impact on Human Factors experienced by crews under stress whilst operating under unfamiliar units of measurement.

Action: The Assembly is invited to:

a) note the information contained in this paper;

b) encourage States and international organisations to reconsider the need for a singular set of Units of Measurement to be used in Air and Ground Operations; and

c) invite States and international organisations to provide comment in relation to their own status and issues with the use of diverse units of measurement.

Strategic Objectives:	This paper relates to the Safety and Air Navigation Capacity Strategic Objectives.
Financial implications:	
References:	Annex 5 — *Units of Measurement to be Used in Air and Ground Operations*

Research the climate impact of missing contrails

FL/GHTKEYS

Contrails have been reduced significantly and for the longest period in the last decades.

This opens an opportunity to study the climate impact of this dramatic change and develop a better understanding of contrail-cirrus formation rate.

FLIGHTKEYS is already in contact with several contrail research initiatives.

Primary stakeholders: Scientific community, DLR, MetUK

Initiative

FL/GHTKEYS

Besides all its dramatic negative impact on the industry, we see the current crisis as a once-in-a-lifetime opportunity to advance several almost stalled innovation projects like SESAR, NEXTGEN etc.

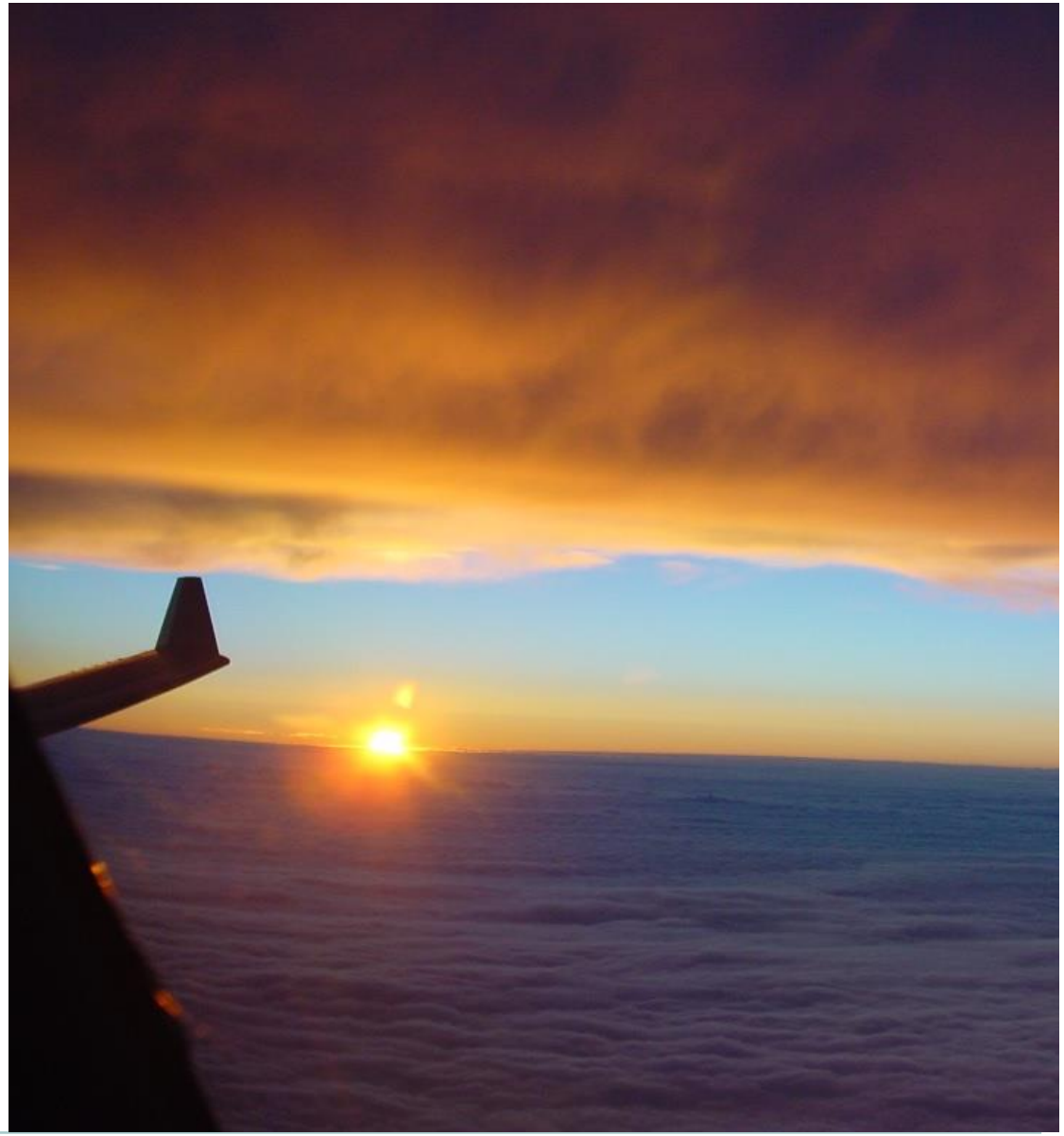
The seven projects mentioned here are the ones we identified from our viewpoint – there are probably many more.

FLIGHTKEYS would be happy to assist in any possible way to help advance innovation in these areas and other that may come up. This presentation is intended for re-distribution and to act as an initiator for new ideas. The whole industry needs to work together globally on such solutions now.

We'd already be very happy if in 2 years from now at least 2 of those projects have materialized!

Vienna, April 10th 2020

Raimund Zopp,
Director Innovation
FLIGHTKEYS

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Innovation in 5D