Welcome!

- The webinar will be recorded and shared later on
- Please type your questions in the Q&A box, addressing the speaker

Welcome words

Ms Alexandra Covrig
Senior Project Manager, ARC

14:05 – 14:20

Jorge Pinto
Policy Officer, DG MOVE

Marco Paviotti
Policy Officer, DG ENV

European noise policies – upcoming

Jorge PINTO

Marco PAVIOTTI

ANIMA Webinar – 14/04/2021

The future of the EU noise policy

- Why to care of noise?
- What should the EU do?
- What will the EU do?
- Conclusions

European Commission

Why to care of noise?

European Commission

Noise endangers our health

- WHO – noise guidelines
  (53dB road, 54 dB rail, 45dB aircraft)

- Ischaemic heart disease, stroke, stress, bad sleep, cognitive impairment

- EEA 2020 / EAER reports – noise is increasing

Should authorities care about noise & health?

- Health (15 Mil. people at noise risk)
- Real estate value
- Quiet areas

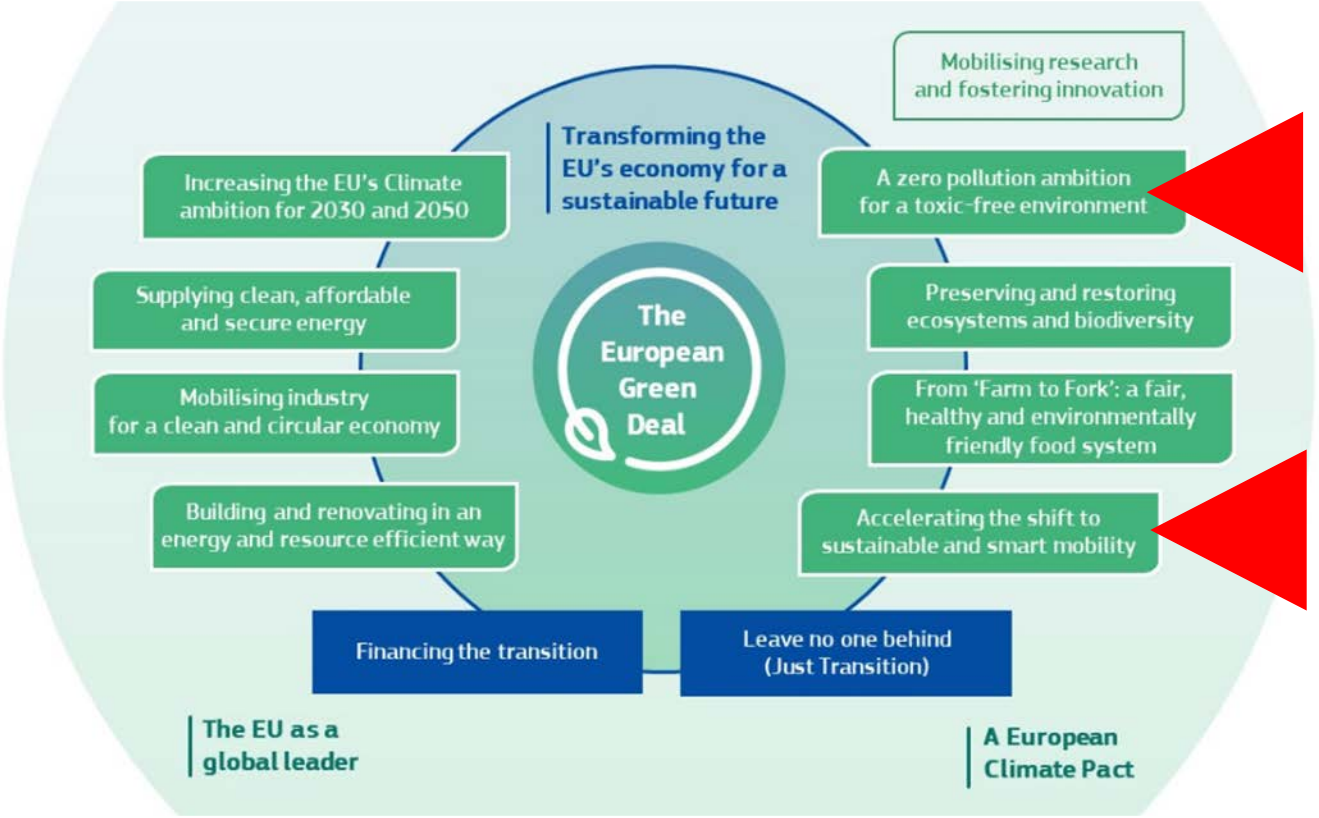
- Urban planning coordination
- Airports revenues
- Costs of measures

European Commission

What should the EU do?

European Commission

- Green Deal
  - ZPAP
  - SSMS



European Commission

PHENOMENA – a review of noise policy

- Which are the existing solutions?
- Which are the most cost-effective ones?
- Are stakeholders and Member States ready to commit to them?
- What reduction on health burden can we achieve in 10 years?
- Is there any law that needs to be revised?

Airport study – a review of Balanced Approach

- Which noise reduction objectives?
- How is health impact assessed?
- How is cost-effectiveness achieved?
- Are measures “balanced”?
- All 63 airports under Reg. 598/2014
- By end 2021

What will the EU do?

The EU would eventually…

- Reflection ongoing on follow up of the PHENOMENA study, including:
  - shall we revise the Environmental Noise Directive?
    - streamline the action plans;
    - introduce targets;
    - link with urban planning;
  - shall we revise the limits at source (aircrafts)?
  - shall we add polluter pays principle (charges/taxes)?
  - what use of environmental labelling?

The EU would eventually…

European Commission

Conclusion

Conclusion

…we want **noise to be properly understood**…

…we prefer quiet places…

…we look for efficient solutions…

…**relevant legislation to be amended as appropriate**!

Thank you

marco.paviotti@ec.europa.eu

European Commission

14:20 – 14:30

Paul Hooper
Chair of Environmental Management and Sustainability, Manchester Metropolitan University (MMU), ANIMA Project

ANIMA key messages and research priorities

Prof Paul Hooper

Manchester Metropolitan University

Webinar: Quality of Life in Airport Communities – beyond the ICAO Balanced Approach – 14th April 2021

ANIMA
Aviation Noise Impact Management through Novel Approaches

Horizon 2020

Airport Focus – State of the Art

ANIMA is grounded in airport experiences as these help define:

- Best/effective practice for wider dissemination
- Gaps in knowledge, which if addressed, would support more effective interventions to reduce noise impacts and improve quality of life

WP 2 aim is to establish the 'state of the art' in the implementation of ICAO Balanced Approach across the EU and to identify:

- Examples of what makes for an effective/ineffective noise noise management intervention
- Role of communication and engagement
- The extent of systematic evaluation of outcomes
- Areas for improvement – does noise mitigation lead to a reduction in community impacts? If not always, what should be done?

ANIMA Aviation Noise Impact Management through Novel Approaches

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No [769627]

Horizon 2020

Targeted Outcomes

Overall objective of ANIMA is to develop new methodologies, approaches and tools to manage and mitigate the impact of aviation noise. The identification of a set of core principles for effective noise management allied to appropriate toolkits including scenario analysis and decision-support techniques is intended to impact on:

- **Communities near airports** – dissemination and enhancement of best practice in noise management across the EU is intended to improve Quality of Life and community well-being.
- **Airports** – support for more comprehensive and effective evaluation of noise management practice and its links to community well-being should inform decision-making and optimise contributions to improving health and QoL
- **Authorities** – by offering scientifically endorsed guidelines to support the alignment of local authority and airport plans, ANIMA is designed to optimise the the economic, social and environmental consequences of airport operation and growth in a given context.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No [769627]

Understanding current noise management challenges

3 key activities:

- Snap-shot review of implementation of END and ICAO BA across EU Member States
- Review of health impacts, annoyance studies and implications for noise management
- Detailed case studies of BA implementation at a range of airports across the EU (representing different levels of experience)

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Horizon 2020

Headline findings and implications[1]

- Wide variety in airport noise management experience.
- Impact of noise management interventions poorly understood and potentially under-valued by communities.

- *Approaches need to be tailored to local circumstances*
- *More systematic approach to evaluation required to assess the community benefit (i.e. impact on QoL)*

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Horizon 2020

Headline findings and implications[2]

- Long-term health impacts linked to short- and medium-term responses (sleep disturbance and annoyance). Latter influenced by changes to the nature of the acoustic environment and non-acoustic factors.

- A comprehensive approach to noise impact mitigation must address sleep disturbance and annoyance directly
- Must embrace both acoustic and non-acoustic contributions to annoyance
- Meaningful communication and engagement critical

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Horizon 2020

ANIMA RESPONSES

Aviation Noise Impact Management through Novel Approaches

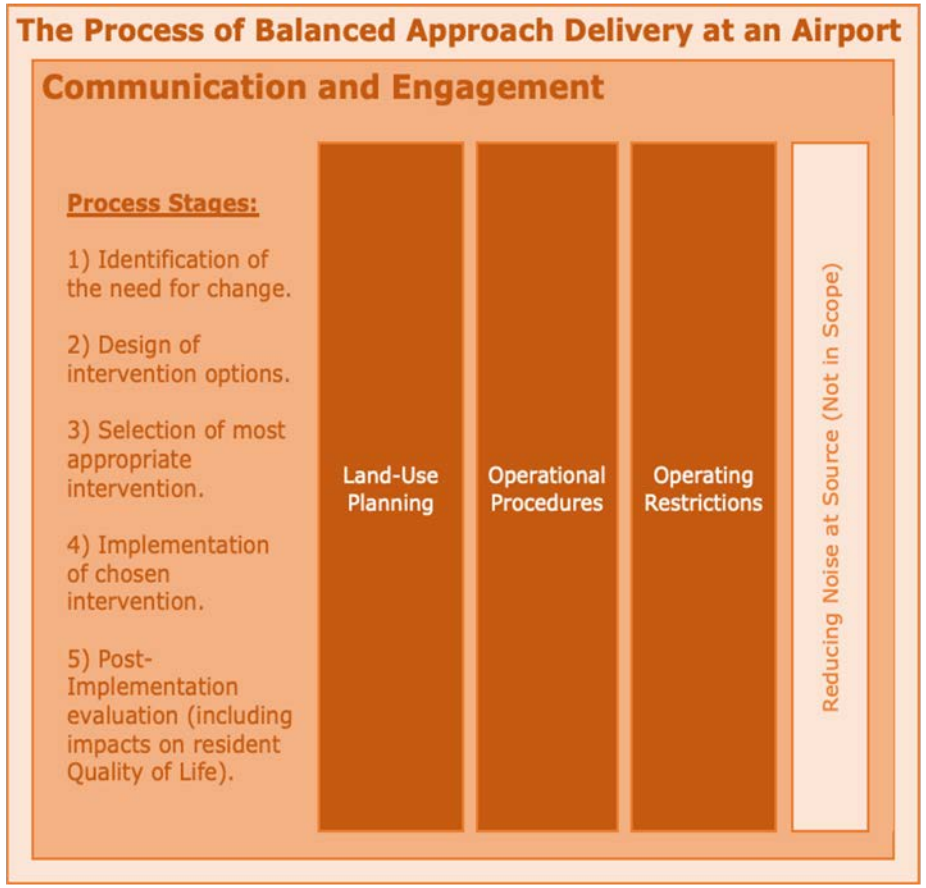
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No [769627]

Horizon 2020

Tailor support to local circumstances

BP portal:

- *Supports design processes intended to deliver societal benefit*
- *Assists airports with different levels of noise management experience*
- *Focuses on understanding SH needs*
- *Provides access to tools to better understand and communicate management options*



ANIMA
Aviation Noise Impact Management through Novel Approaches

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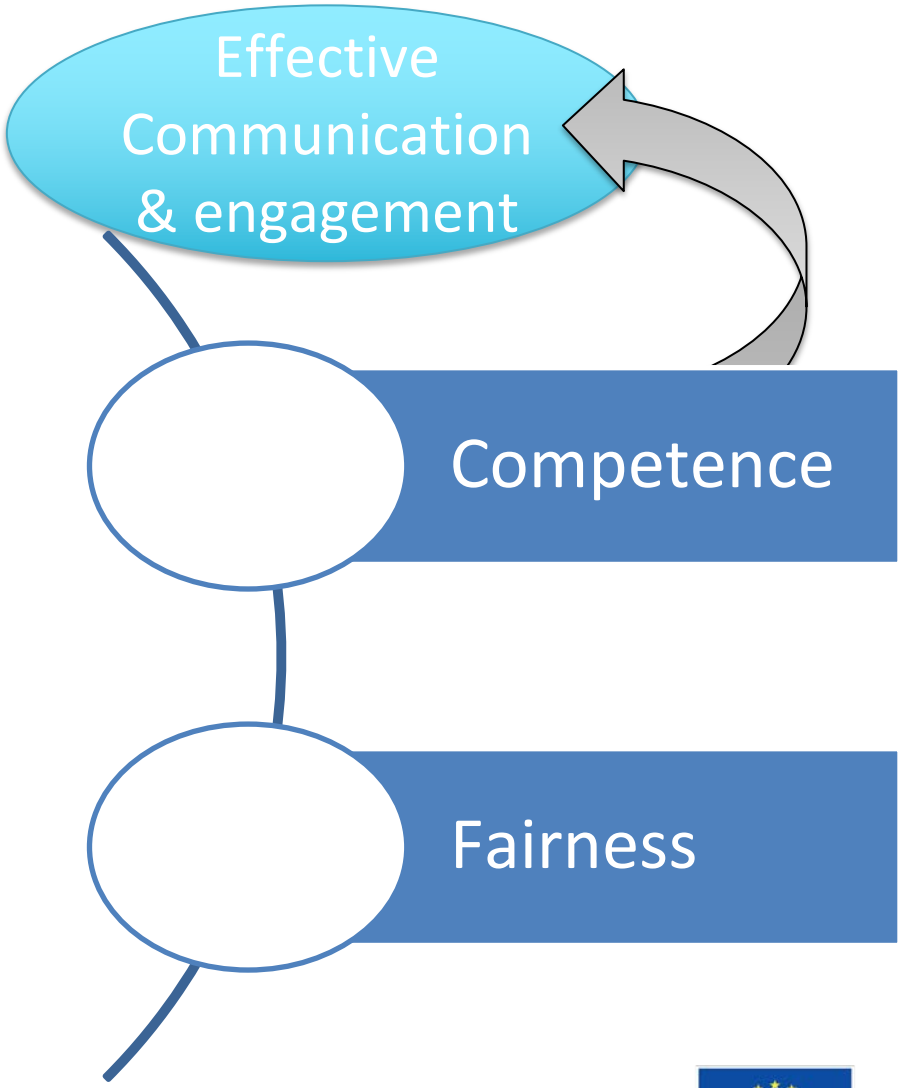
Horizon 2020

Interventions to deliver QoL benefits

- *QoL framing study*
- *Communication and engagement to understand community priorities and inform on actions*
- *More sophisticated understanding of our interaction with the soundscape*



ANIMA
Aviation Noise Impact Management through Novel Approaches

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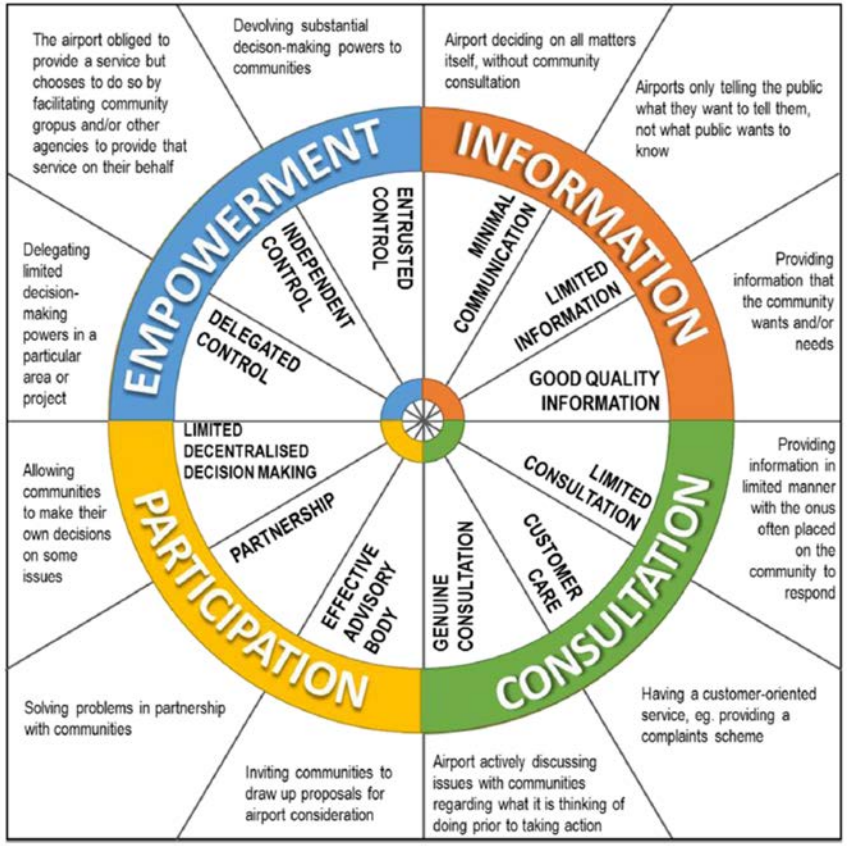
Horizon 2020

Supporting ‘Meaningful’ Communication and Engagement

- *Establish core communication and engagement principles and associated best practice*
- *Understand range and application of acoustic and operational metrics*
- *Apply to build consensus as to intended beneficial outcomes and utilize in comprehensive evaluation of the impact of specific actions*



ANIMA
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This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No [769627]

Horizon 2020

Overall implications for noise management

- By focusing on the **process** by which
  - change is designed,
  - decisions are made **on options**,
  - **procedures** are implemented and
  - **appropriate monitoring regimes** determined,

  more socially acceptable outcomes should arise that may have **beneficial impacts on tolerance/ annoyance levels**.
- Stakeholder communication and engagement central to effective processes. Impact needs evaluation.

ANIMA Aviation Noise Impact Management through Novel Approaches

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No [769627]

Horizon 2020

Reflection

- If noise management is about improving/preserving QoL then evaluation of the outcomes of BA interventions needs to extend beyond the consequences for noise exposure
- Addressing non-acoustic factors directly demands a wider perspective on noise impact mitigation
- Noise management inextricably linked to wider management of the positive and negative consequences of airport operation and growth – effective community engagement central to determining/agreeing this social contract

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Aviation Noise Impact Management through Novel Approaches

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No [769627]

Horizon 2020

14:30 – 14:40

Eszter Kantor
Associate Director, Valdani Vicari & Associati (VVA),
PHENOMENA project

Assessment of **P**otential **He**alth Benefits of **No**ise Abate**ment** Me**a**sures in the EU

Phenomena Project

April 2021

TNO innovation for life

VVA Valdani Vicari & Associati ECONOMICS & POLICY

Disclaimer

The Phenomena study has been carried out for the European Commission.

The final results of the study have not yet been approved by the Commission and are thus subject to potential changes.

The Basics

Assessment of Potential Health Benefits of Noise Abatement Measures in the EU (Phenomena)

- Duration: 15-months
- Starting date of the project: December 2019
- Consortium led by VVA in partnership with TNO
- Supported by specialists: Anotec Engineering, Tecnalia, UAB

Objectives and Scope

Objective

- Defining the potential of measures capable of delivering a significant reduction (20-50%) of health burden due to environmental noise from roads, railways and aircrafts
- Assessing how relevant noise related EU legislation could enhance the implementation of measures, while considering the constraints and specificities of each transport mode

Scope

- Roads and railways inside agglomerations of more than 100.000 inhabitants
- Locations around major roads of more than 3 million vehicles a year, where noise levels are above 53 dB L_den
- Around major railway lines of more than 30.000 trains a year, where noise levels are above 54 dB L_den
- Around major airports of more than 50.000 movements a year, where noise levels are above 45 dB L_den

Methods

- Evaluation of relevant literature, policies, and noise abatement solutions
- Data collection and analysis: noise action plans (NAPs) and noise maps of Member States
- Review of national and EU legislation on noise
- Cost-benefit analysis (CBA) for a selected list of noise abatement solutions
- Scenario development on how the current regulatory landscape could be improved in terms of cost-effectiveness and reduction of noise related health burdens
- Comprehensive stakeholder consultations including interviews
- 2 workshops
- Comparative assessment

Main findings from NAP analysis

NAP analysis

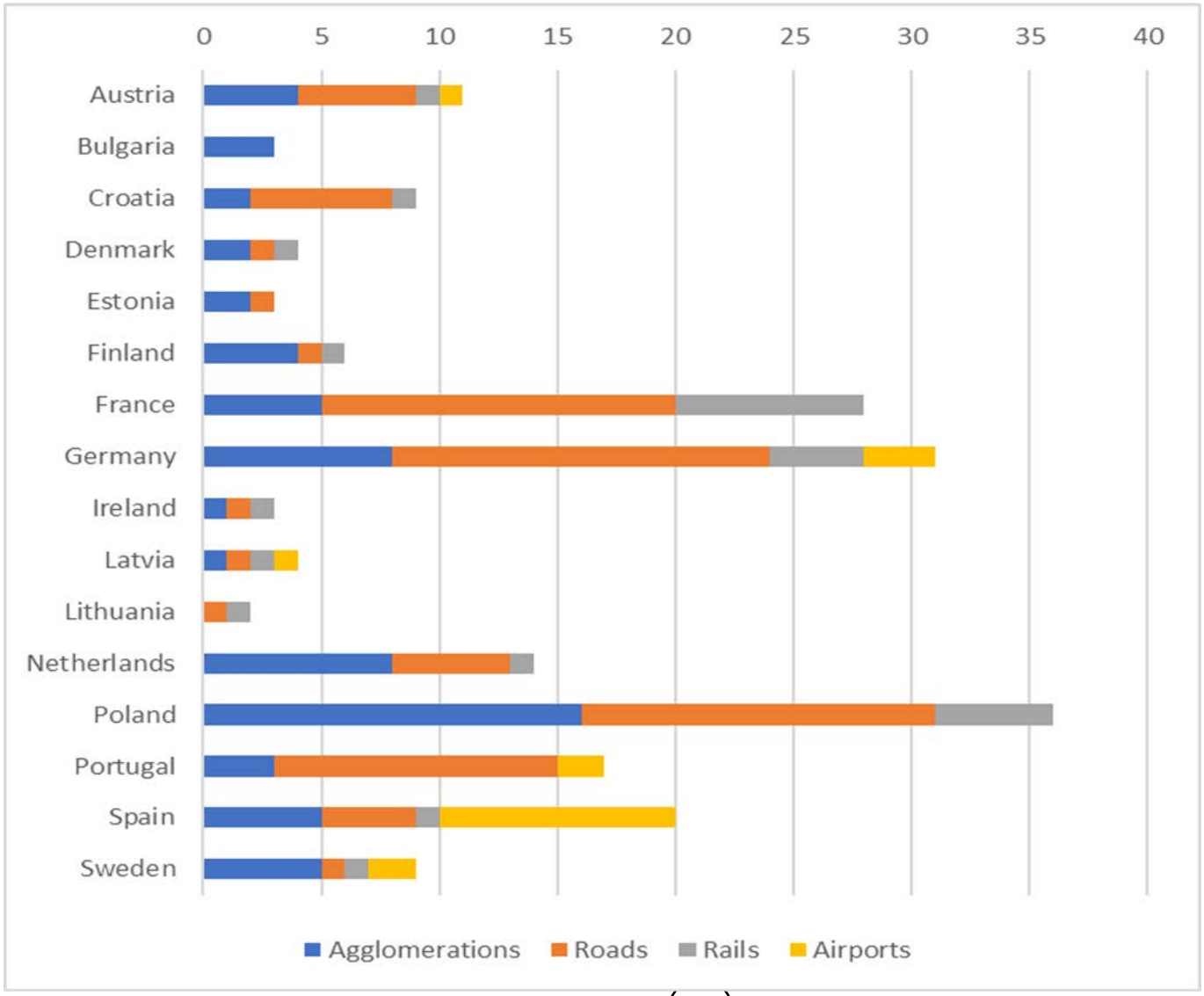
- Identifying noise solution measures implemented by Member States
- **Approach**
  - **overarching** outlook of 200 NAPs in 16 member states

⇒**identifying the types of noise solutions implemented.**

  - **in-depth analysis** of 100 NAPs in 23 Member States

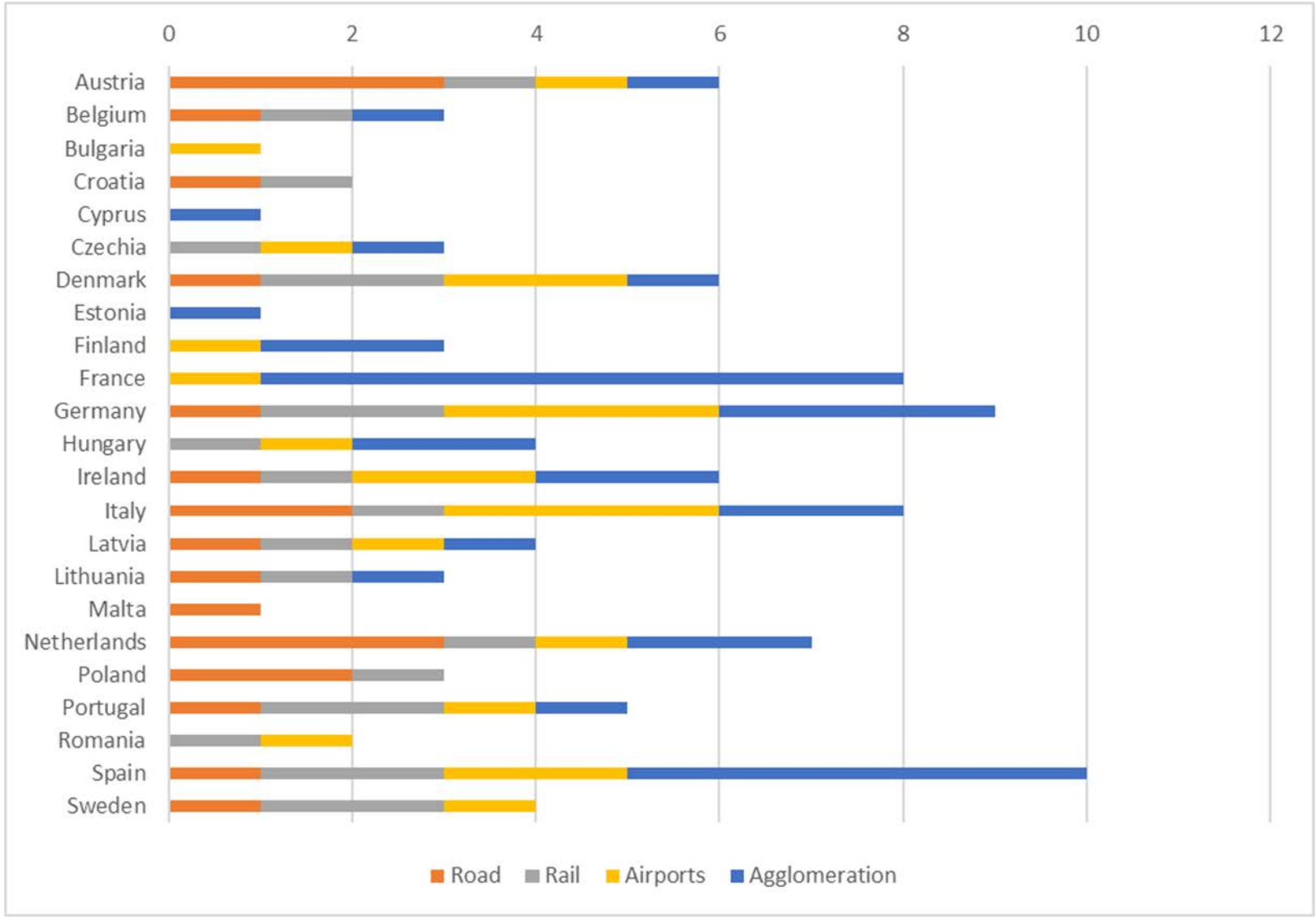
⇒**identifying drivers behind the application of noise solutions and the extent to which the measures planned have actually been implemented**.

Overarching assessment of NAPs



200 NAPs in 16 Member States

In-depth assessment of NAPs



100 NAPs in 23 Member States

Air traffic noise 1/5 – NAP analysis

Implemented measures in airport NAPs

	Measures	DE	ES	LV	PT	%
Source interventions	Regulation of routes					20
	Air operational measures					13
	Certification limits for aircraft					11
	Airport curfew					10
	Noise tax for aircraft					9
	Threshold (shift) for operations					2
	Aircraft engines inspection					1
Mobility plans	Renew aircraft fleet					1
Infrastructure interventions	Noise zoning					6
	Anti-icing areas					1
Path interventions	Building insulation					7
	Noise barriers					1
Education and communication	Complaints					11
Monitoring	Noise monitoring					6

% shows share of occurrence from NAPs reviewed

Air traffic noise 2/5 – NAP analysis

Implemented measures in agglomeration NAPs

	Measure	BG	EE	Total
Source interventions	Air operational measures			20.0
	Airport curfew			20.0
	Regulation of routes			20.0
Other physical interventions	Quiet areas			20.0
Monitoring	Noise monitoring			20.0

% shows share of occurrence from NAPs reviewed

Air traffic noise 3/5 – NAP analysis

Planned measures in airport NAPs

	Measures	AT	DE	ES	LV	PT	SE	%
Source interventions	**Air operational measures**		■	■		■		12.1
	Regulation of routes			■				12.1
	airport curfew	■	■	■		■		11.2
	Noise tax for aircraft			■				7.8
	Threshold (shift) for operations			■				3.4
	Certification limits for aircraft			■				1.7
	Aircraft engines inspection				■			0.9
Mobility plans	Renew aircraft fleet			■				8.6
Infrastructure interventions	Noise zoning			■				8.6
	Land use planning	■	■					1.7
	Anti-icing areas				■			0.9
Path interventions	**Building insulation**	■		■		■	■	12.1
	Noise barriers					■		0.9
	Sound-proof windows	■						0.9
Education and communication	Complaints			■				8.6
	Dissemination of noise information					■		0.9
Monitoring	Noise monitoring			■	■			7.8

% shows share of occurrence from NAPs reviewed

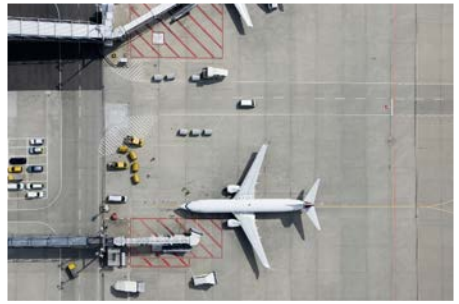
Air traffic noise 4/5 – NAP analysis

Planned measures in agglomeration NAPs

	Measure	AT	BG	DE	ES	FR	LV	NL	PL	SE	%
Source interventions	Air operational measures	■	■	■		■					5.1
	Regulation of routes		■	■							3.8
	airport curfew	■									1.3
Infrastructure interventions	**Land use planning**		■	■	■	■			■		11.4
	New flight path		■								1.3
Path interventions	**Noise barriers**		■	■	■				■	■	17.7
	Sound-proof windows			■					■	■	10.1
	Building insulation	■			■			■		■	5.1
Other physical interventions	**Quiet areas**		■	■	■	■	■			■	20.3
	Protection of spaces, landscapes, sites		■		■						5.1
Education and communication	Complaints		■								1.3
Monitoring	**Dissemination of noise information**		■		■	■			■		10.1
	Noise monitoring		■		■				■		7.6

% shows share of occurrence from NAPs reviewed

Air traffic noise 5/5 – NAP analysis



- Assessment of airport NAPs from 16 countries
- Trend towards employing **a wide combination of measures**
- **Mitigation of health impacts** from the receiver as well as noise source perspective.
- Measures are largely **a continuation of previous noise solutions** with improvements resulting from technical implementation and innovation.
- Some airports also focus on long-term measures (Sofia), such as investment in noise measuring technology and methodology, and in IT platform for communication
- A focus is also put on transparency and communication measures
- Very few information on costs. Frankfurt: EUR 335 million for passive noise protection, EUR 265 million for noise insulation
- The impact of COVID -19 on aviation

NAP analysis – Limitation of research

- Uneven quantity of content, structure and information across the NAPs or across countries;
- Lack of data on costs, cost-effectiveness of measures and absence of harmonised processes for the evaluation of effectiveness, except for a few NAPs;
- Uneven data on:
  - monitoring and evaluation and the evaluation process criteria of NAPs;
  - length of road/surface area/number of dwellings concerned by the measure;
  - what are considered the main sources of noise in the NAPs;
  - highlighting ‘bad’ and ‘best’ practices;
- Uneven information on public consultation and whether measures outlined in the NAPs are new or a continuation of previously implemented ones;
- Difficult comparability of data between two rounds: lack of information on effectiveness of previous measures
- Due to the small size of some EU member states, the size of the airports is not large and/or busy enough to surpass the threshold

Good practices and challenges

NAP analysis – Good practices - aviation

Solution	Examples	Notes
Noise protection screen	Sofia Airport	Noise protection screen for the aircraft engine testing platform, providing noise abatement reduction of 15-17 dB(A).
The use of technology	Helsinki Vantaa Airport	The WebTrak is a public Internet application provided by Finavia that allows authorities, residents and other interested parties to give feedback and monitor aircraft routes and noise levels using radar data.
Financial support scheme to noise insulation of buildings	Paris-Charles de Gaulle, Madrid-Barajas, Frankfurt Airport	Financial support schemes for noise insulation in buildings in high-noise zones. In Frankfurt: access to loans supporting residents affected by noise to move outside of noise zones within the Hessen federal country.
Urban-architectural measures	Prague Ruzyně Airport	The main principles of the measure can be applied within the framework of spatial planning: (1) noise protection zone (2) monitoring changes in airport operations (3) urban planning with noise cancelling measures.
Projects to strengthen collaboration with residents and stakeholders	Schwechat, Vienna Airport	A forum for public consultation and a noise protection office were established, and a webpage has been available for the submission of opinions and sharing of information.
	Tegel, Berlin Airport	The public consultation for Tegel Airport included various interest groups and associations, a public forum and a public internet platform.

NAP analysis – Good practices - agglomerations

Solution	Examples	Notes
Planning process	Limerick	Manual containing measures preventing the construction of residential areas near major roads
Coordination with existing plans	Lisbon	Implemented and planned measures are presented together to take into account what is existing and could have impact on noise and coordinate.
Sound plan	Bordeaux Metropole	Continuing measures are listed in the noise plan, while new measures are presented in a sound plan, focusing on improving the sound quality in the Metropole.
Low urban noise walls	Nice Metropole	Experiment and evaluation of the impacts of low urban noise walls of 1 meter high, built in different materials (concrete, metal and plexiglass).
Vehicle procurement criteria	Helsinki	Noise pollution is one of the criteria in the city's public procurement for vehicles. The city is increasing the share of hybrid and electric buses.
Education and communication	Milano	Activities in schools and with pupils for the International Noise Awareness Day (in 5 years around 1000 pupils from Milan participated in the initiative).
Transport-organizational measures	Prague	Restricting the access of heavy vehicles in urban roads with shifting their routes towards major roads/highway, introducing fees/tolls.
Closing traffic lanes (weekends/holidays)	Paris	This scheme is part of the Paris Breathe programme tackling air pollution and beneficial for noise challenges.
Noise radars	Nice Metropole	The Metropole is experimenting on noise radars to be implemented.
Collaboration with national and regional stakeholders to develop and promote NAPs	Vienna	The implementing municipal authority involved the main transport company, the district chairmen, residents and public stakeholders for consultation and planning (2012-2013).
	Berlin	A public forum was implemented, in which the individual stages of the NAP process were presented, with the participation of various interest groups. A public internet platform was opened in 2013. This public platform was prepared, promoted and facilitated by several communication engagements.

Closing remarks

Conclusions

- NAPs are relatively descriptive and comprehensive, providing information on the planned measures, the results from the noise mapping, public consultations, and other data.
- Few NAPs provide reduction targets in terms of people exposed to high noise levels, therefore, providing goals to the NAP for the given timeline.
- Data on the evaluation of previous NAPs was provided in an uneven way across NAPs.
- Innovative measures are observed in some NAPs, but the majority follow a trend of common solutions.

Thank you for your attention

14:40 – 14:55

Q&A

Please type your questions in the Q&A box, addressing the speaker

14:55 – 15:15

Operational procedures measures: Heathrow Case Study

Rick Norman
Head of Noise, Heathrow Airport, ANIMA Project

Graeme Heyes
Manchester Metropolitan University (MMU), ANIMA Project

Rick Norman

Head of Noise Strategy

Heathrow Airport

London Heathrow Airport Steeper Departure Trial 2018

14/04/2021

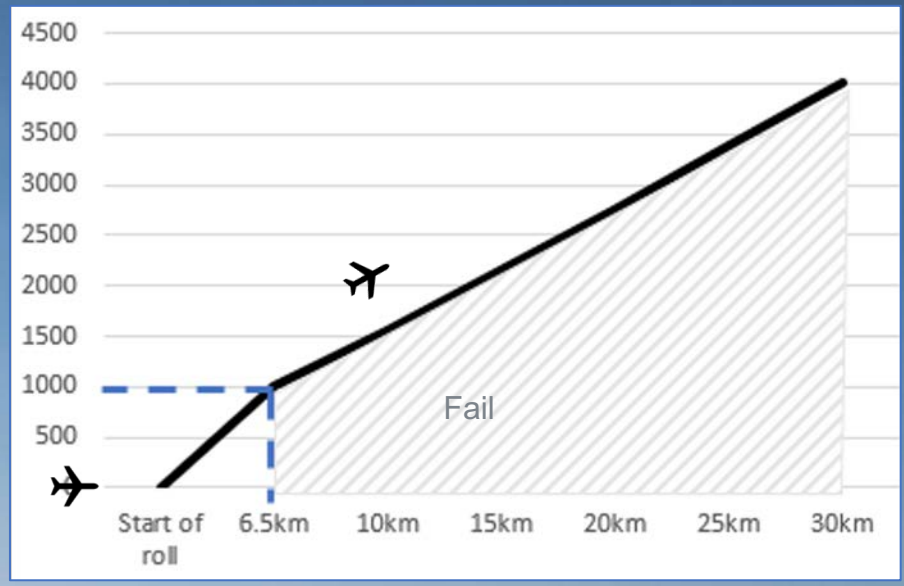
Background

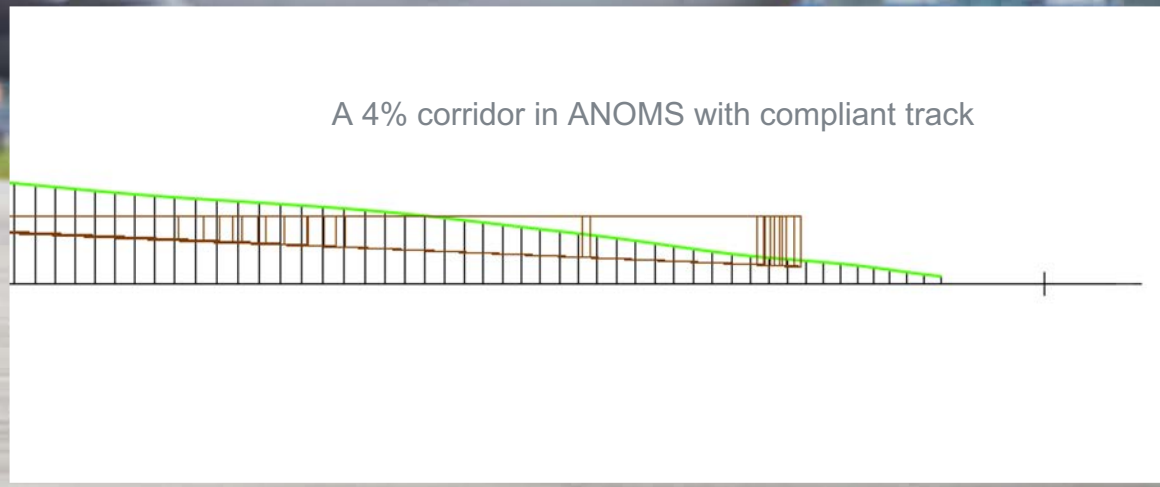
EGLL AD 2.21 NOISE ABATEMENT PROCEDURES

• 1. After take-off the aircraft shall be operated in such a way that it is at a height of not less than 1000 ft aal at 6.5 km from start of roll as measured along the departure track of that aircraft

• 7. Where the aircraft is a jet aircraft, after passing the point referred to in sub-paragraph (1) above, it shall maintain a gradient of climb of not less than 4% to an altitude of not less than 4000 ft. The aircraft shall be operated in such a way that progressively reducing noise levels at points on the ground under the flight path beyond that point are achieved.

- Heathrow's published climb gradients are solely for noise abatement reasons
- The gradient is defined differently to the Instrument Flight Procedure (IFP) gradient shown on most charts
- We strictly monitor this requirement via a rule set up within ANOMS
- Regular feedback is provided to airlines
- This feedback has led to several airline SOP changes to improve compliance. Currently >99.5%





Heathrow

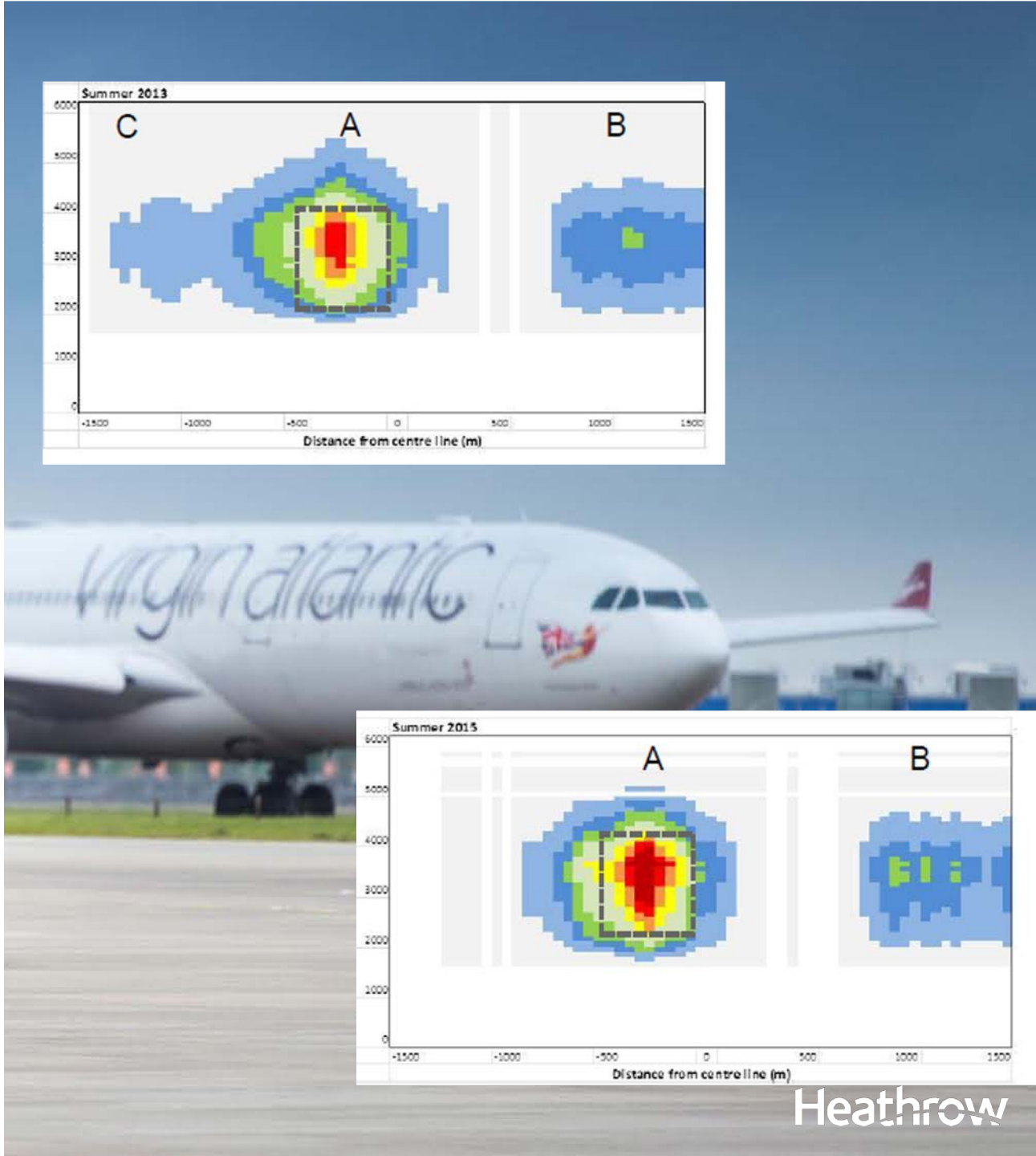
Changing Perspectives

- PBN TRIALS 2014 – Sensitised new communities to aircraft noise
- Belief that aircraft lower than before even after PBN trials ended
- Consultancy commissioned to compile an independent report

- This showed;
  - An increase in daily traffic on the route from ~150 to ~180
  - An increase in A380 departures from 4 to 14 per day
  - A cyclical pattern with higher volumes in the summer months
  - No change in the lateral position of the traffic but a concentration
  - A decrease in the average height of aircraft from 3400ft to 3100ft (at the gate used for the analysis) but still compliant with 4% gradient

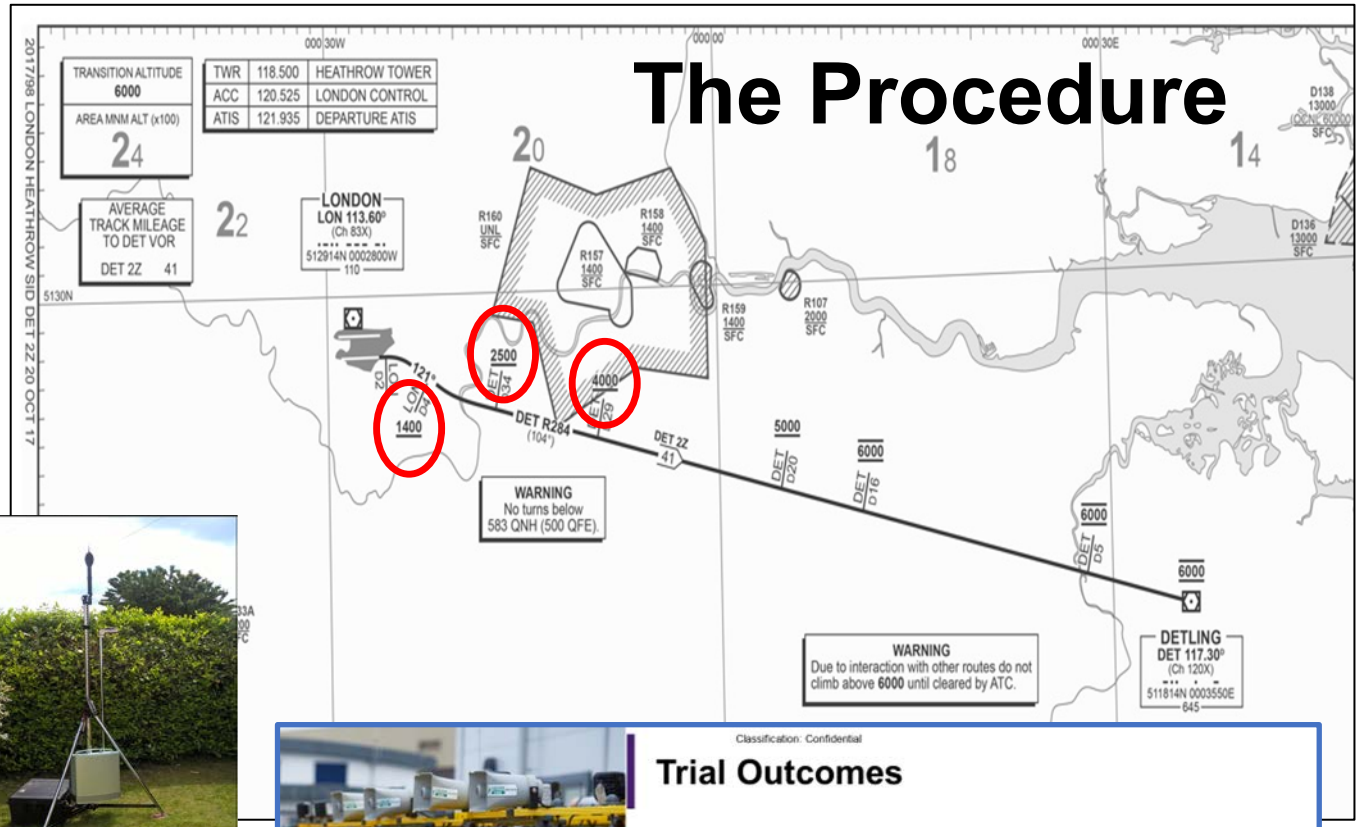
- Heathrow Community Noise Forum asked to see what could be done to ‘improve’ noise performance

  - **The steeper climb trial was born**

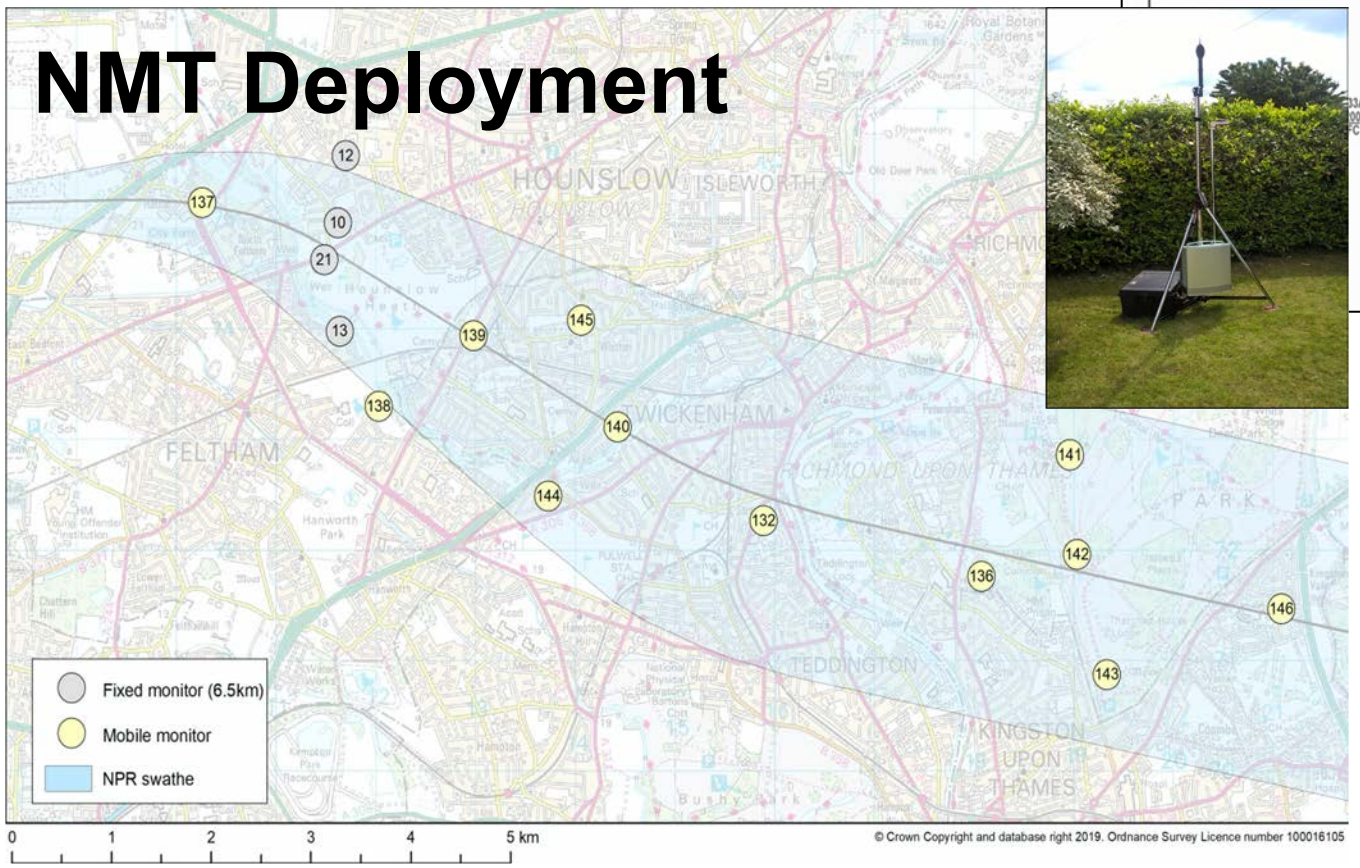


Trial required a new procedure, additional noise monitors and large data sample

The Procedure



NMT Deployment



Classification: Confidential

Trial Outcomes

36.91% Easterly Operations

22,080 DET2Z Departures

9,232 (41.82%) Heavy Departures

A380 made up 7.84% of easterly DET departures in 2018

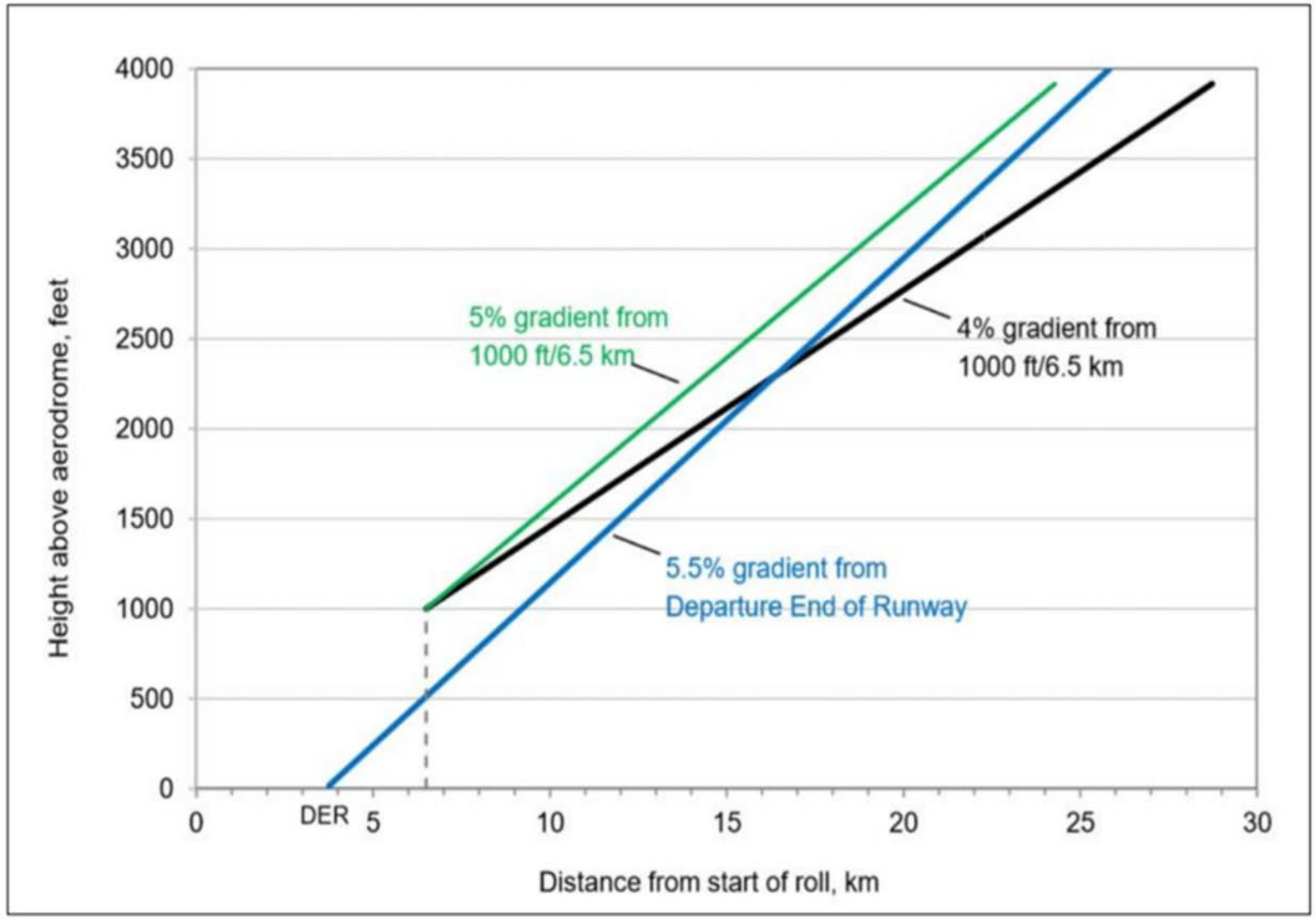
2.7% increase in passengers

Heathrow

Classification: Confidential

Heathrow

Communities expressed their views that 5% was not ambitious enough and that other European airports specified higher gradients



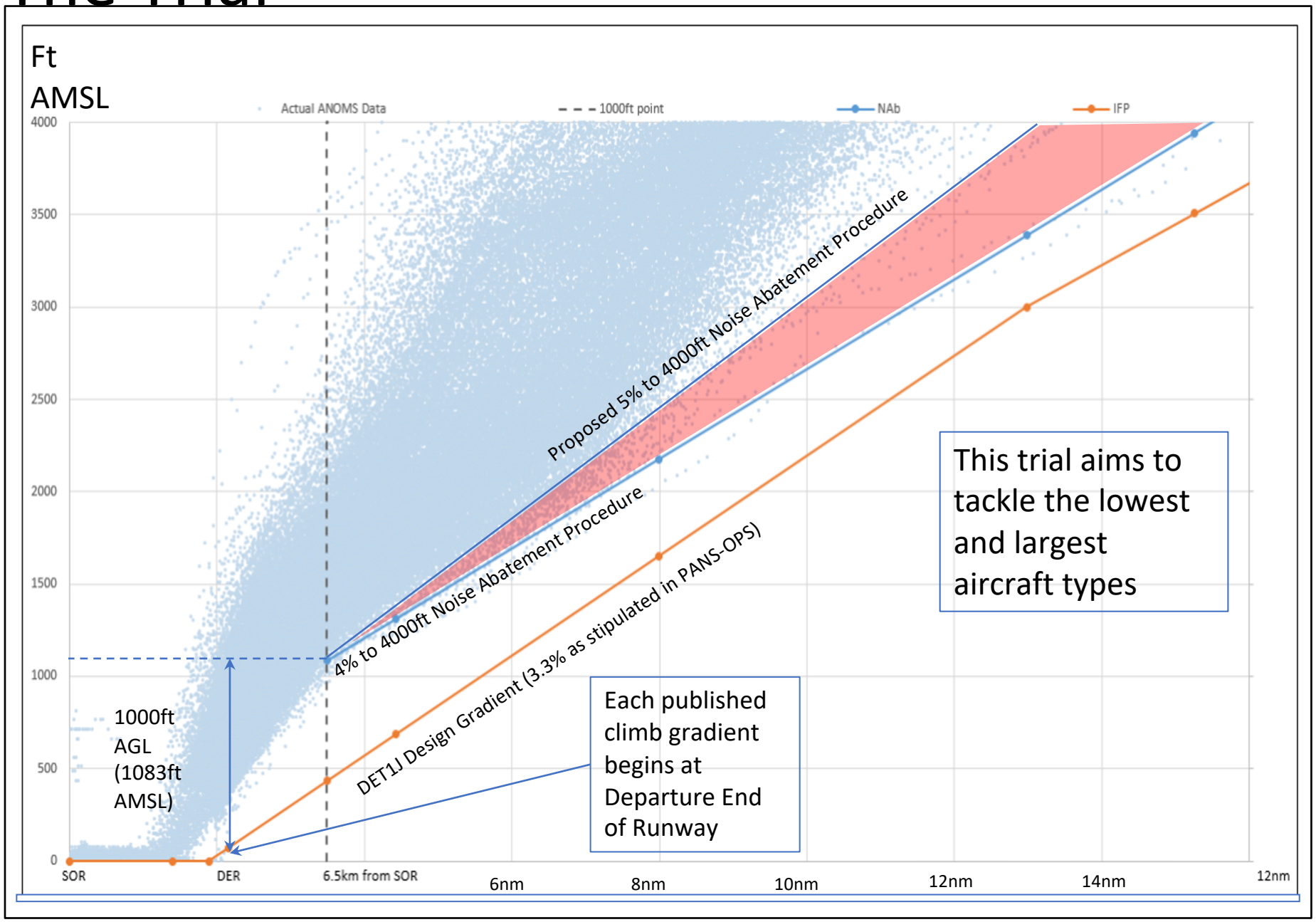
If the trial gradient was measured from the Declared End of Runway (DER) as is normal for IFP SID design, the climb gradient for the DET2Z SID would be:

8.83% until LON D4
6.55% until DET D34
5.82% until DET D29

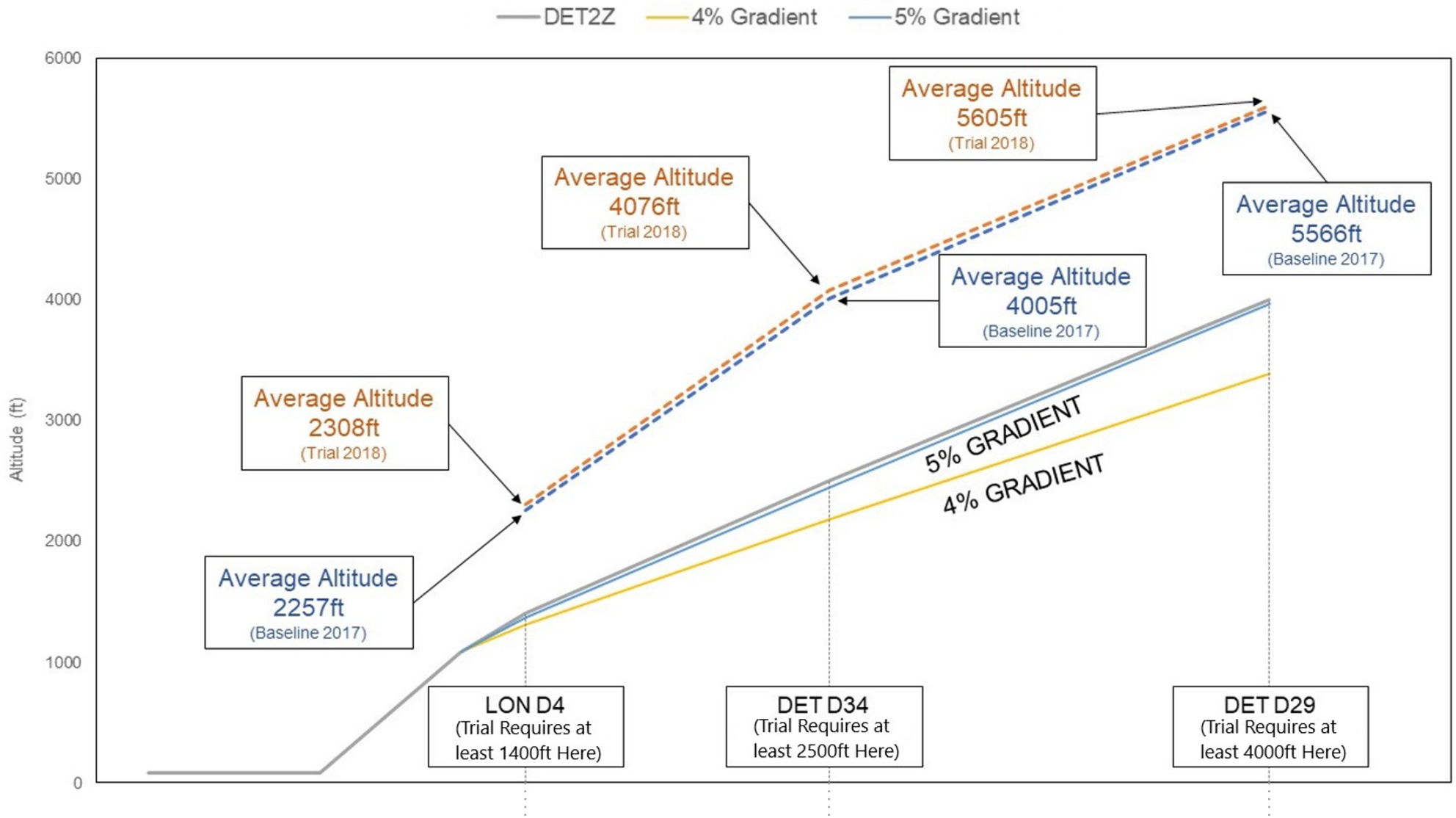
Heathrow is regularly compared to Paris (blue line), Madrid and other worldwide airports who specify a minimum noise abatement climb gradient which may seem higher. It's all in the definition!

Heathrow

The Trial

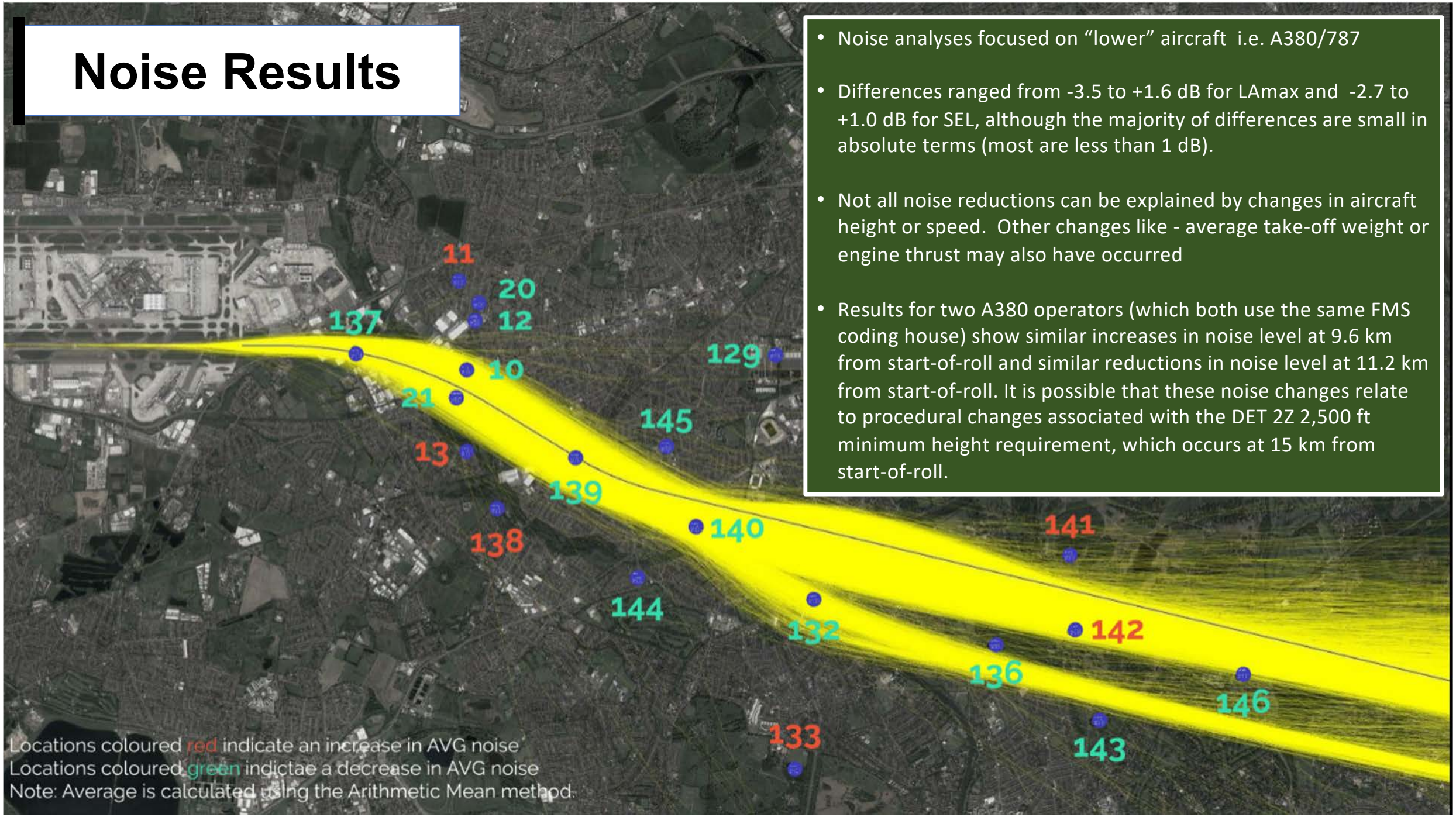

Ft
AMSL
Actual ANOMS Data
1000ft point
NAb
IFP
4000
3500
3000
2500
2000
1500
1000
500
0
Proposed 5% to 4000ft Noise Abatement Procedure
4% to 4000ft Noise Abatement Procedure
DET1J Design Gradient (3.3% as stipulated in PANS-OPS)
1000ft AGL (1083ft AMSL)
SOR
DER
6.5km from SOR
6nm
8nm
10nm
12nm
14nm
12nm
This trial aims to tackle the lowest and largest aircraft types
Each published climb gradient begins at Departure End of Runway

Aircraft Climb Performance



The A380 average altitude increased by: 4.67% 2.93% 1.38%

Noise Results



- Noise analyses focused on “lower” aircraft i.e. A380/787
- Differences ranged from -3.5 to +1.6 dB for LAmax and -2.7 to +1.0 dB for SEL, although the majority of differences are small in absolute terms (most are less than 1 dB).
- Not all noise reductions can be explained by changes in aircraft height or speed. Other changes like - average take-off weight or engine thrust may also have occurred
- Results for two A380 operators (which both use the same FMS coding house) show similar increases in noise level at 9.6 km from start-of-roll and similar reductions in noise level at 11.2 km from start-of-roll. It is possible that these noise changes relate to procedural changes associated with the DET 2Z 2,500 ft minimum height requirement, which occurs at 15 km from start-of-roll.

Summary

- The number of aircraft achieving 1400ft at LON D4 improved
- The number of aircraft achieving 2500ft at DET D34 improved
- The number of aircraft achieving 4000ft at DET D29 improved
- The number of aircraft maintaining a 5% climb rate improved
- All trial objectives met or partially met
- All success criteria fulfilled

Results suggest a 5% gradient from 1000ft to 4000ft is a realistic ambition for Heathrow.

Heathrow

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ANIMA
Aviation Noise Impact Management through Novel Approaches

Designing ‘desirable’ operational procedures.

‘Holistically’ successful operational procedures must be:

Viable

i.e. in terms of complex factors such as aircraft performance, safety, security, environmental interdependencies and legislative compliance

Feasible

i.e. in terms of airport resources and other objectives

Desirable

i.e. to stakeholders – including residents.

- All of these are highly subjective according to local factors.
- Airports need <u>bespoke</u> solutions to the <u>unique</u> challenges that they face.

‘Desirable’ procedures…

Are ‘designed’.

The ANIMA Method

- Discovery
- Design
- Select
- Implement
- Evaluation

‘Desirable’ procedures…

Assume nothing. Question everything.

‘Desirable’ procedures…

Have targeted outcomes, and evaluable impact.

‘Desirable’ procedures…

Consider impact beyond numbers.

‘Desirable’ procedures...

Acknowledge that ‘the map is not the territory’.

‘Desirable’ procedures…

Seek public participation.

As important as is it is to do the right thing…

…It is as important to do the thing right.

15:15 – 15:35

Land-use Planning measures: Iasi Case Study

Dan Radulescu
Researcher at COMOTI, ANIMA Project

Narcisa Elena Burtea
Researcher at COMOTI, ANIMA Project

Victor Minchevici
Counsellor, Ministry of Environment, Romania

LAND-USE PLANNING MEASURES: IASI CASE STUDY

(Iasi Airport, 2021)

Presenters:
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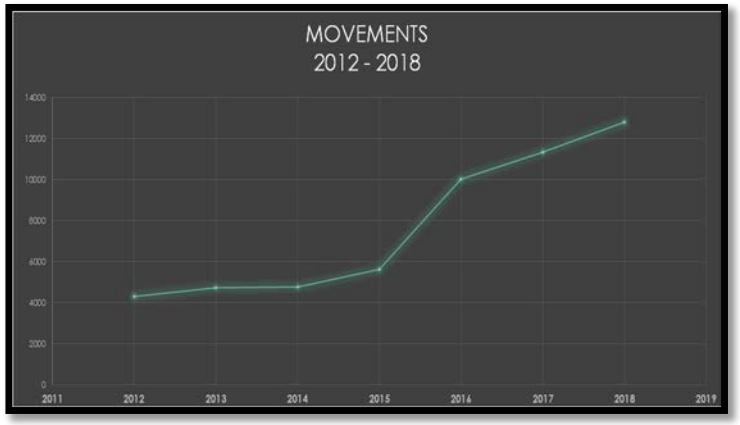
Aviation Noise Impact Management through Novel Approaches

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No [769627]

Horizon 2020

INTRODUCTION ABOUT THE AIRPORT

(AEROPORTUL IASI - Date demografice, 2021)



(Iasi Airport, 2021)

- "Aeroportul International Iasi, Romania" (N-E Romania);
- New RWY 14/32 (2400 m);
- Benefits for approx. 4 million people (catchment area of approx. 37 000 km^2);
- Among top 5 Romanian Airports (pax number).
- Regional county authorities declared a plan for further development of the airport as being an essential objective for the region

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Aviation Noise Impact Management through Novel Approaches

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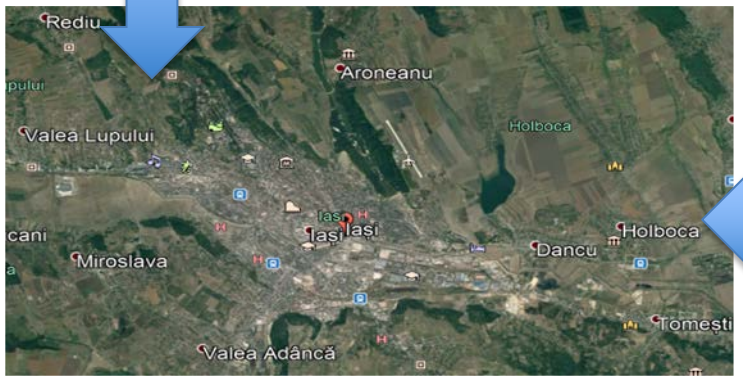
Horizon 2020

INTRODUCTION ABOUT THE CASE STUDY

DRIVER:
Becoming one of the airports facing encroachment in the absence of LUP provisions

NATURE:
Raising awareness regarding LUP at a National level & supporting harmonisation and completion of provisions across the legislative framework – through communication and stakeholder engagement



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Horizon 2020

Air traffic noise management legal framework at a National level

- *H.G. 321/2005 – transposing END (modified in 2007, 2012, 2016)*
  - *Iasi Airport = "urban airport", with < 50 000 movements/ year;*
  - *Requirement to develop Strategic Noise Maps and Action Plans (2012)*
  - *Main identified issue: encroachment*
- *Introduction of NADPs (AIP)*
- *LEGE 121/2019 – transposing END*
- *Updated Air Code (March 2020) – first LUP provisions*

Methodology and guidance still need to be issued offering an opportunity for the LUP intervention

(Iasi Airport, 2021)

ANIMA Aviation Noise Impact Management through Novel Approaches

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Horizon 2020

ANIMA methodology for intervention

- Identify BP for LUP
- Identify Key success factors of intervention
- Develop a work plan :

  - Identify key stakeholders for LUP
  - Find gaps, links within legal framework
  - Initiate open dialogue with stakeholders to understand their awareness , opinions and interest regarding LUP
  - Present key findings and discuss possible solutions
  - Evaluate stakeholders satisfaction during the process

- Final evaluation of the success

ANIMA Aviation Noise Impact Management through Novel Approaches

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Horizon 2020

Main challenges and findings

- *Identification of stakeholders that should be involved in LUP (based on National context);*
- *Identification of gaps and barriers (here: absence of LUP for aircraft noise);*
- *Raising awareness among stakeholders about the importance of LUP and the consequences of its absence; engaging them and establishing distributed responsibilities.*

- *Although creating the regulatory framework for managing encroachment issues through LUP was the initial goal, many other legislative changes had to be pursued in order to ensure a harmonised legislative basis for future LUP provisions, thus aiming at developing a long-term, effective strategy.*

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Horizon 2020

Important to note!

- *Specific problems require tailored solutions.*
- *BP from other case studies can provide support*
- *Integration of Airport LUP with local and regional LUP strategy should give best results on long term*
- *In the case of Iasi Airport (small, but fast-growing), no budget or resources are allocated for noise management (main difference compared to private airports). To be able to tackle encroachment, active cooperation with National legislative bodies remained the only solution for developing a common and effective strategy.*
- *Voluntary initiatives towards opening dialogue, communication and engagement with relevant stakeholders could support in raising awareness about a pressing issue and actively support the development of a long-term strategy.*

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Horizon 2020

Thank you for your attention!
Questions?

LAND-USE PLANNING MEASURES: IASI CASE STUDY

(Iasi Airport, 2021)

Presenters:
Dan RADULESCU
Elena-Narcisa BURTEA

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Horizon 2020

15:35 – 15:55

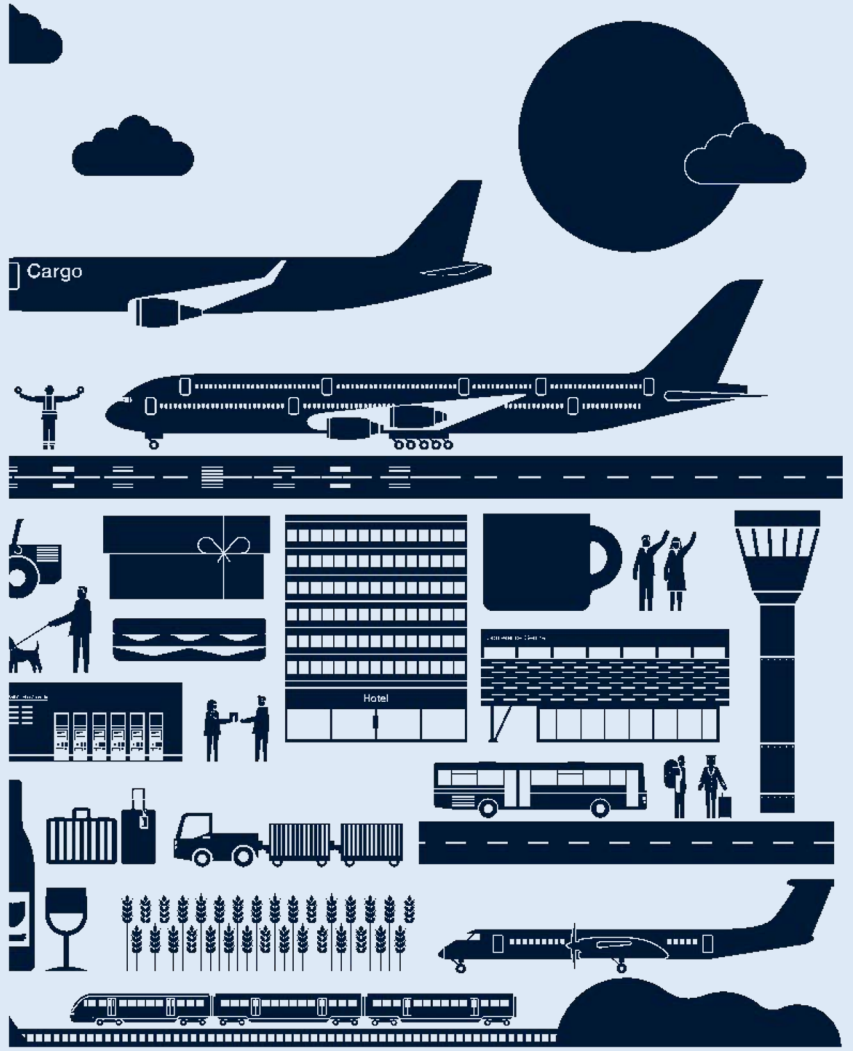
Community engagement: Arlanda (Stockholm) Case Study

Asa Göransson
Noise issues officer at Stockholm Arlanda Airport

Barbara Ohlenforst
Research and Development Engineer at Netherlands Aerospace Centre (NLR),
ANIMA Project

IRIS program Stockholm Arlanda Airport

Pre-study ÖKA and project BKI



Åsa Göransson
Officer Noise issues
Stockholm Arlanda Airport

IRIS – Non straight in approaches Stockholm Arlanda Airport

New environmental permit in operation since January 2016:

- Condition 10 – Avoid densely built-up area of Upplands Väsby when possible
- Additional requirement for development of techniques for and the use of non straight in approaches at the airport. Report on the development to authorities every third year (first in January 2019)

Aim of the program: To fulfil conditions in the environmental permit of the airport and contributing to advancing the research situation in a number of different areas to make operations more effective and develop technology to reduce urban noise exposure

The program includes a variety of projects and activities in collaboration with different actors with competence within airport, air navigation service, airline, industry and authorities

Pre-study ÖKA

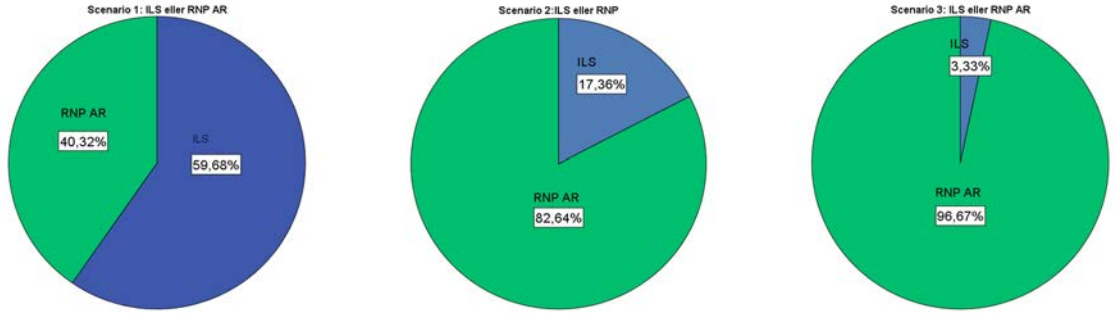
- Smaller interview and survey based prestudy (Sep 2020 - Jan 2021)
- Asking pilots and air traffic controllers to contribute with their experiences and opinions concerning curved RNP AR approaches
- 11 2-hour interviews
- 122 pilots from SAS and Novair completed surveys
- 38 air traffic controllers from Stockholm ATCC completed surveys

Swedavia Airports

geistt

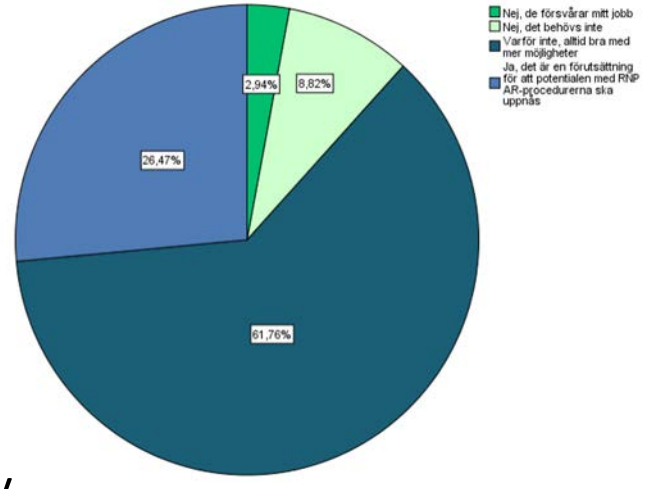
Example ÖKA survey results

Pilot would accept/plan for an RNP AR approach in Scenario 1-3

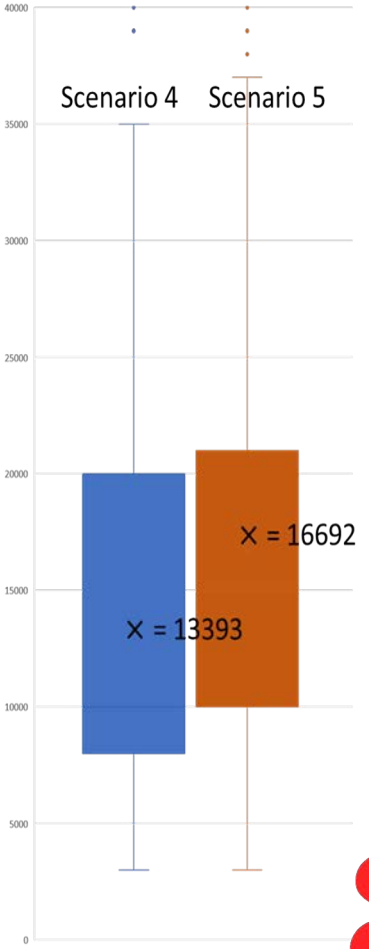


- Lots of qualitative recommendations and opinions in free text questions and from interviews
- Both pilots and ATCO's are generally very positive to curved RNP AR approaches
- 20 possible actions identified to increase frequency

ATCO consider RNP AR to more runways useful



Altitude at which, at the latest, an RNP AR request is acceptable by pilot



Swedavia Airports

geistt

Project BKI (Decision Support System for curved approaches)

- R&D project developing a prototype for a decision support system, DSS, for air traffic controllers (Sep 2019 – Jan 2022)
- Innovation close to current ATCO work practice and could be integrated with current ATCO systems
- Iterative development of ATCO interface and visualisations (HMI) with advanced prediction algorithms and ”what-if” capability
- User tests starting in April 2021

15:55 – 16:15

Concluding remarks & discussion

Laurent Leylekian
ANIMA Coordinator

Marco Paviotti
DG ENV

Jorge Pinto
DG MOVE

Thank you for your participation!

The webinar recording and presentations will be shared with you shortly.

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Aviation Noise Impact Management
through Novel Approaches