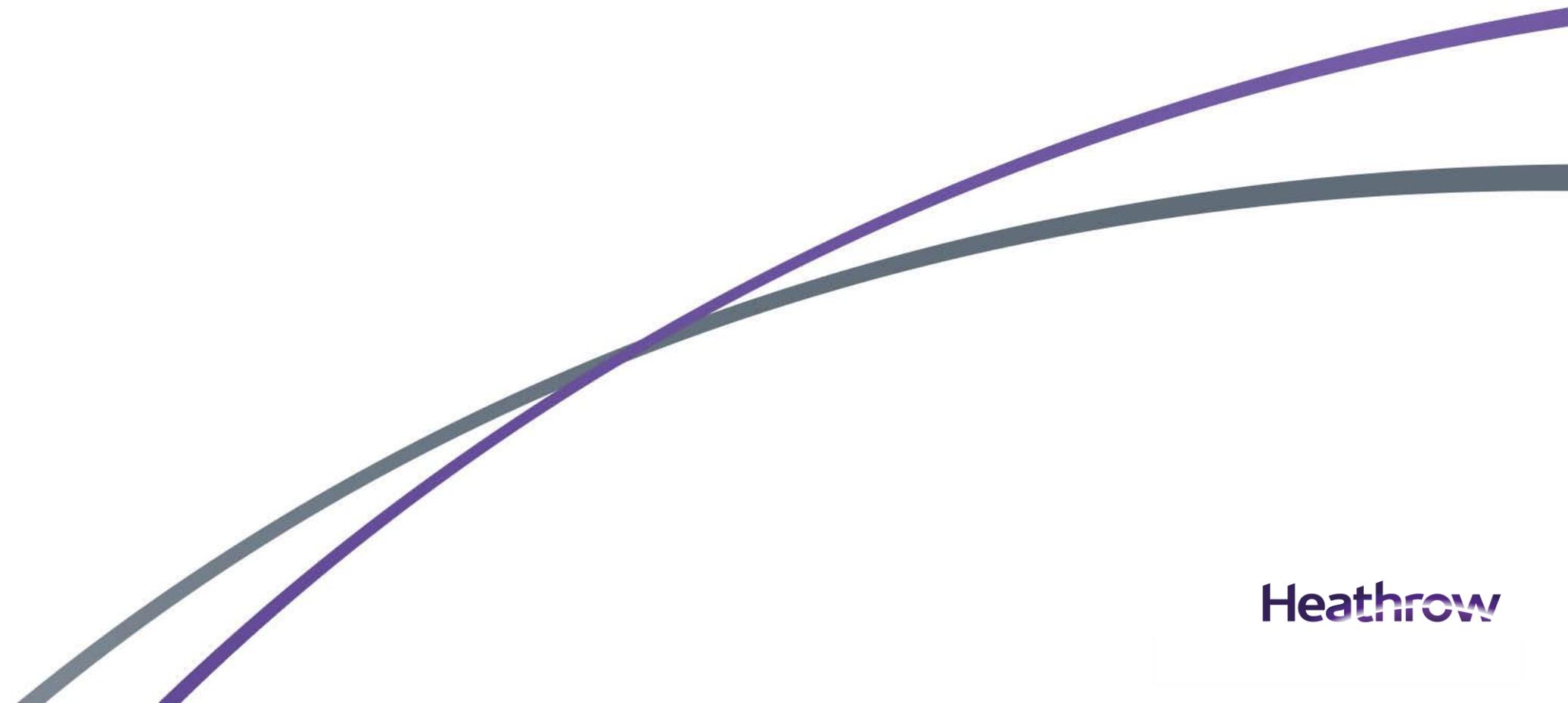# HCNF: Airspace Change Process (ACP)
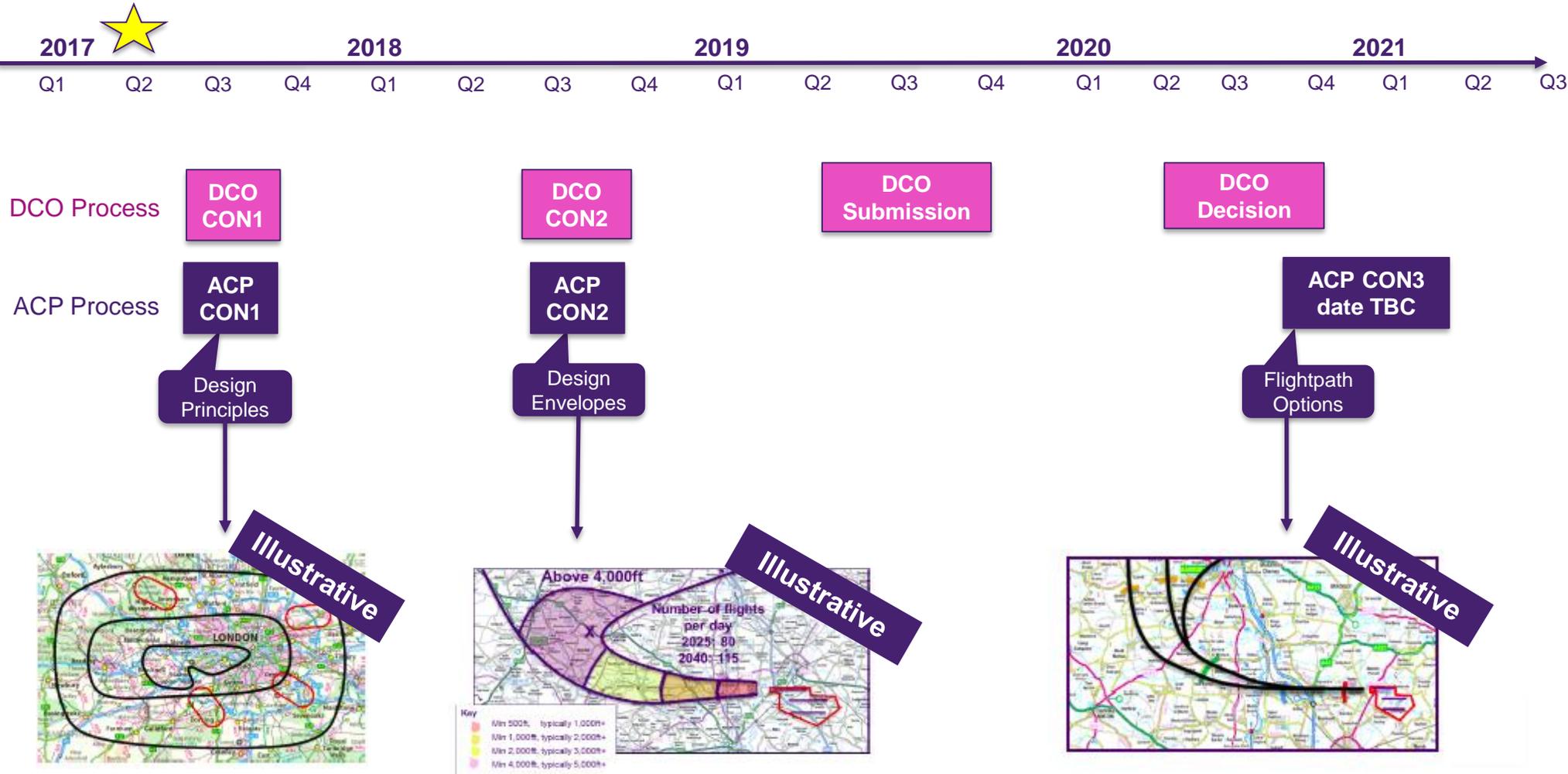**Rachel Thomas**

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Heathrow expansion – airspace change
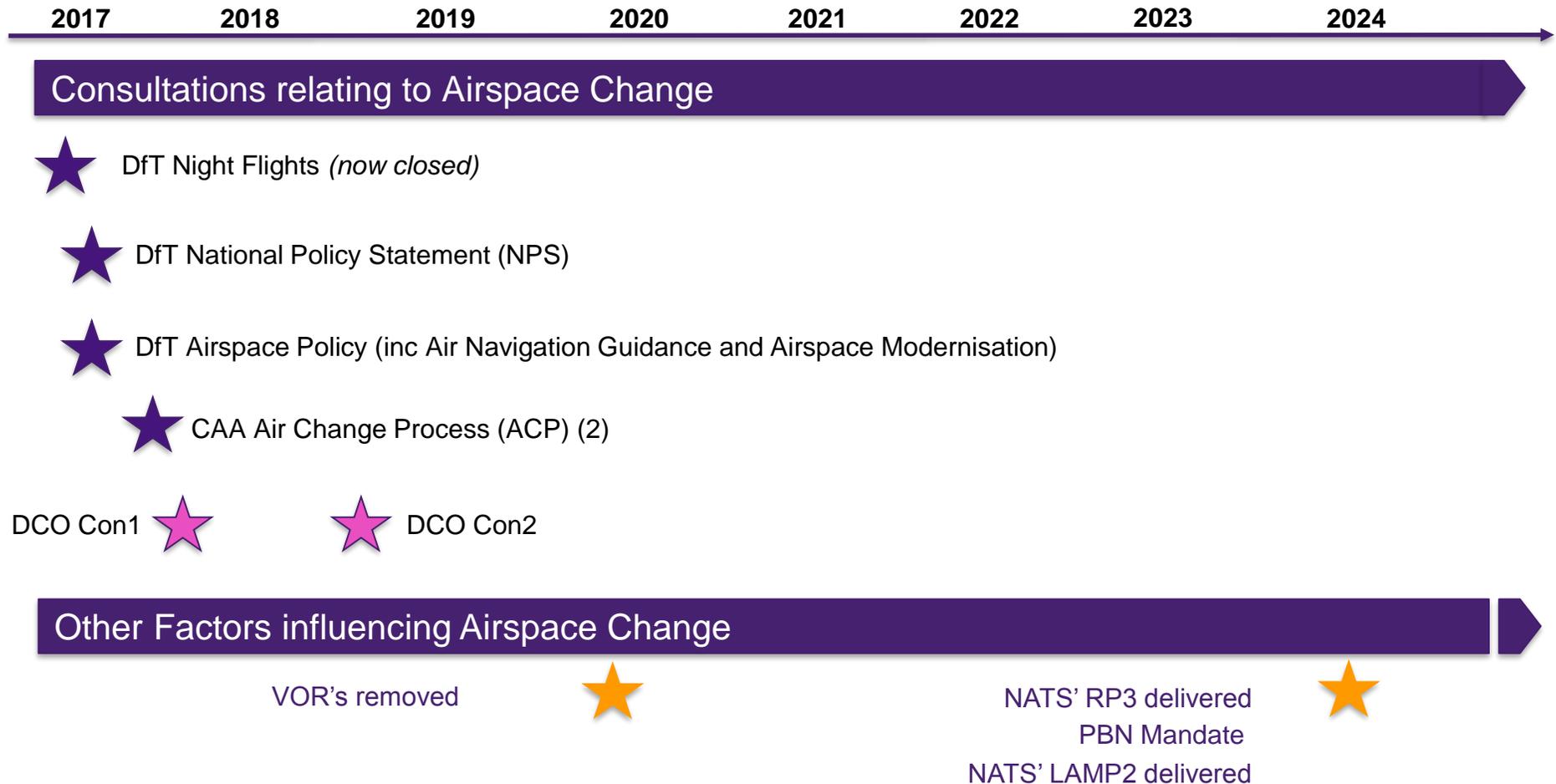
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Airspace Change Process (ACP) and Development Consent Order (DCO): two separate approvals for one 'good design' process

There are also a number of other consultations scheduled over the next 12 months

| 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |

Consultations relating to Airspace Change

★ DfT Night Flights *(now closed)*

★ DfT National Policy Statement (NPS)

★ DfT Airspace Policy (inc Air Navigation Guidance and Airspace Modernisation)

★ CAA Air Change Process (ACP) (2)

DCO Con1 ★   ★ DCO Con2

Other Factors influencing Airspace Change

VOR's removed   ★

NATS' RP3 delivered   ★
PBN Mandate
NATS' LAMP2 delivered

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Design process

- The Airspace Change Process (ACP) needs to be integrated with the Development Consent Order (DCO) process to ensure approvals are granted on both sides.

- The DCO application will require us to demonstrate likely noise impacts of the development, but the ACP sets out how we must develop the airspace for an expanded Heathrow through a staged process, demonstrating options analysis at each stage

Good airspace change design must:

- Devise options with input from those affected
- Have been developed through consultation - allowing sufficient time for consultation at key stages and take account of feedback
- Balance desire for early certainty vs. a transparent process that involves stakeholders from the outset

Good airspace change design will:

- Reduce the risk of later change
- Produce a optimal robust solution

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ACP: Three stage consultation

- To ensure we achieve "Good design" – we must ensure that all stakeholders get a chance to engage, input and influence the design from the earliest stage and as it matures.

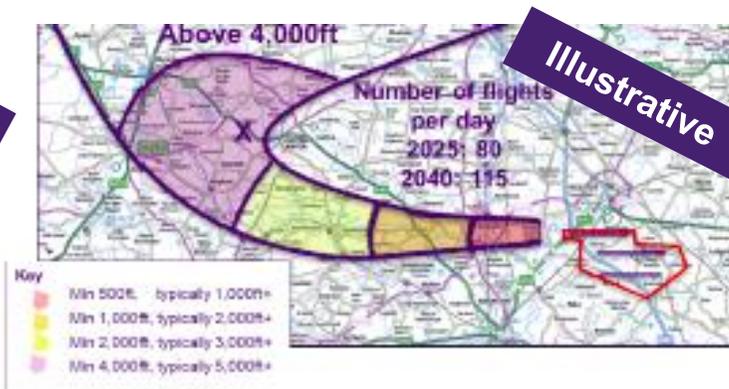- We are currently planning to undertake three stages of consultation:
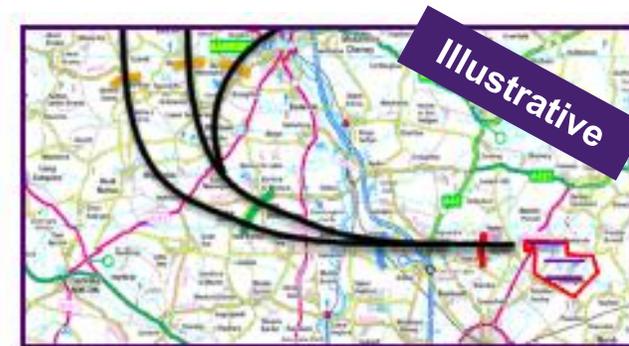
Stage 1
Design principles
(2017)

Stage 2
Design envelopes
(2018)

Stage 3
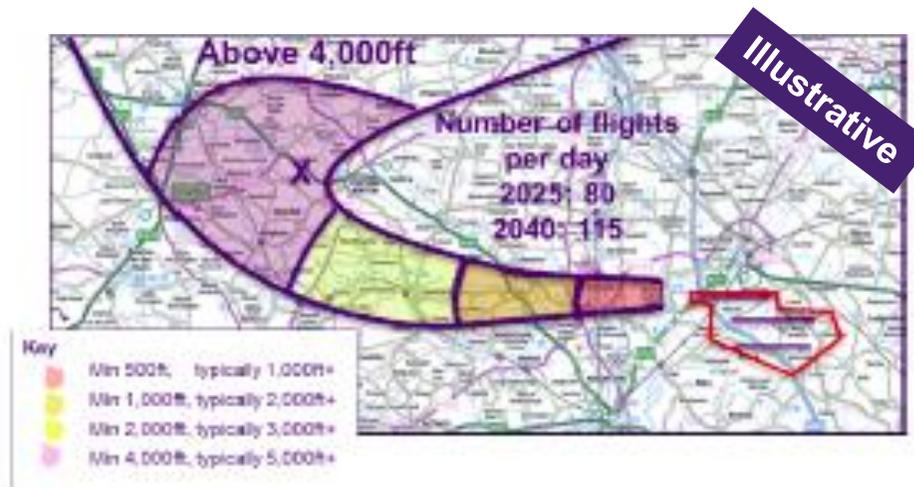Flight path options
(TBC)

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Design principles consultation (Stage 1 - 2017)

- In this consultation we will identify a set of principles to help shape and underpin the design and structure of Heathrow's airspace.

- These principles will be based on the feedback received over the years from stakeholders along with Government policy.

- We'll be asking stakeholders whether they agree with the design principles and how they should be prioritised.

- *This set of principles will apply to all future airspace designs*

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Design envelopes (Stage 2 - 2018)

- A design envelope is the area in which a route/flight path may be positioned - it does not mean that flights will be spread across the extent of the envelope.

- It shows the extent of the geographical area where flight paths could be positioned within that zone/"envelope".

- For this consultation we will be seeking feedback on what local factors we should consider in helping us to determine where to position options for the route(s) within each of the design envelopes.

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Flight path options (Stage 3 - TBC)

- Using the feedback gathered from the previous consultations – at stage 3 consultation we will presenting flight path options -"lines on the map" for each route.

- Following extensive analysis and evaluation of the data gathered throughout the different stages of the consultation, it will also:

  - Explain how we have formulated options through the design process
  - Present our preferred options and why these were selected
  - Provide details of why other flight path options were considered but are not preferred

- For this consultation we will be seeking feedback on these flight path options.

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Next steps

- Later this year we will be running a 12 week consultation on both DCO and airspace.

- We will be holding consultation events at numerous venues (locations to be confirmed) where we will be sharing more information.

- We would encourage you to respond to these consultations to have your say.

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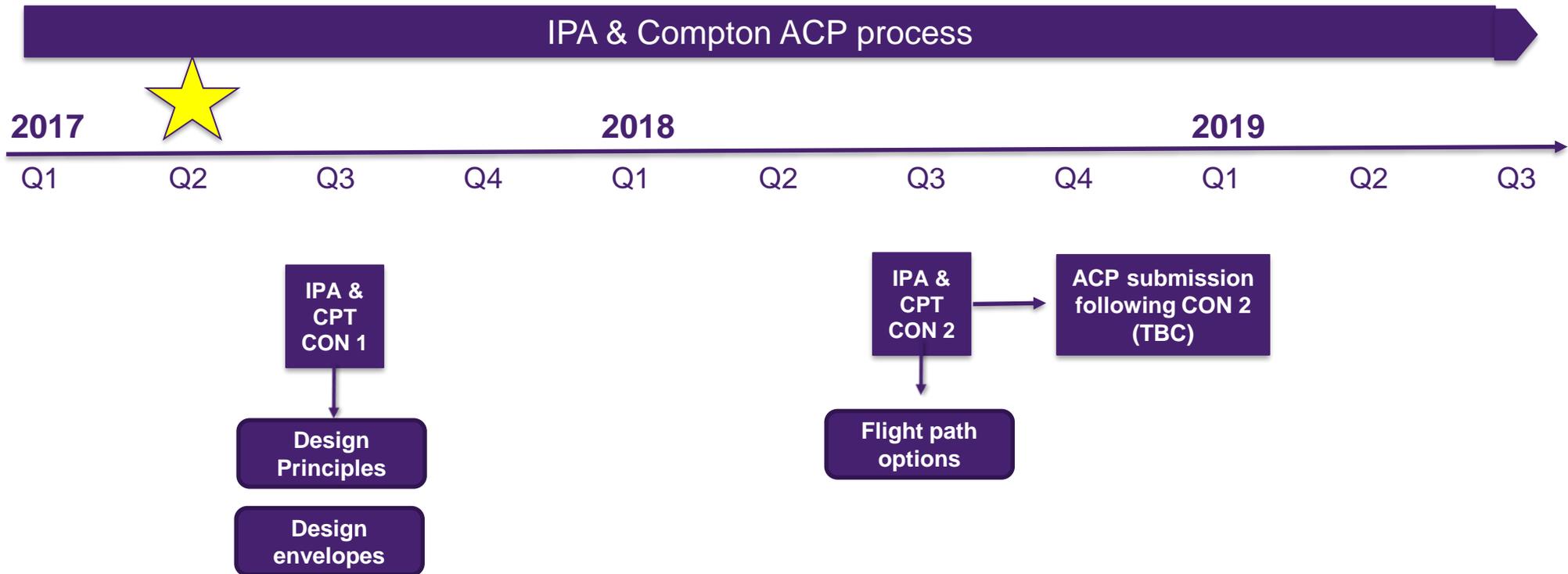# Current operations – airspace change
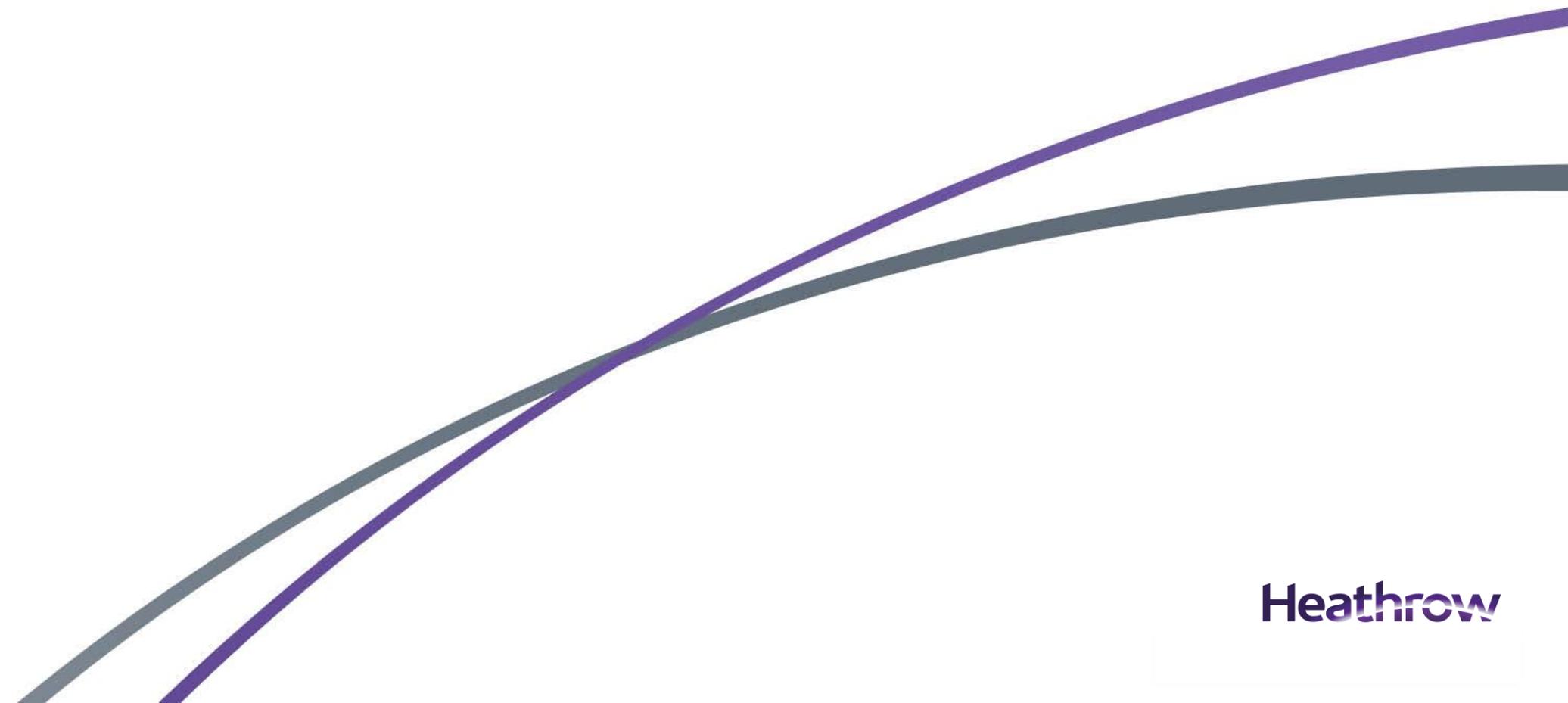
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Independent Parallel Approaches (IPA) & Compton (CPT) SID

- IPA & CPT have been identified as priority projects for current operations - scheduled for implementation in late 2019.

- We need to change the CPT departure route; this change is required by the CAA to make the route compliant to national standards.

- IPA has been identified as procedure to improve arrival efficiencies and to reduce delays (some IPA arrival routes will also be dependent on a new CPT departure so design of each needs to take account of the other).

- Therefore, we plan to consult on IPA and CPT at the same time as DCO/ACP Consultation 1 (later this year).

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IPA & CPT: consultation process

- Designs for IPA and CPT have to fit into the existing airspace system.

- This puts a practical limit on where the routes can go i.e. the design envelope.

- For IPA and CPT we will be consulting on the design envelopes at the same time as the design principles.

- After this consultation we will use the feedback on the design principles and design envelopes to determine where to position options for the 'lines on maps'/flight path options

- We then plan to consult on the flight path options in 2018.

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IPA & CPT: indicative ACP timeline

IPA & Compton ACP process

2017   **2018**   **2019**

Q1   Q2   Q3   Q4   Q1   Q2   Q3   Q4   Q1   Q2   Q3

IPA & CPT CON 1

Design Principles

Design envelopes

IPA & CPT CON 2

ACP submission following CON 2 (TBC)

Flight path options

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Why IPA?

- Today's aircraft have highly accurate navigation systems which means aircraft can fly a very precise route. This is known as Required Navigation Performance or RNP for short.

- If aircraft landing on the departures runway used RNP, there would no longer be the requirement as there is today for the diagonal spacing between arrivals on both runways (as illustrated below) – this is inefficient and reduces resilience.

- Using a procedure like RNP for TEAM arrivals, would allow Heathrow to operate the runways 'independently'. This is also known as Independent Parallel Approaches or IPA for short.

Departures runway

Arrivals runway

2-3 nm

2-3 nm

6-8 nm
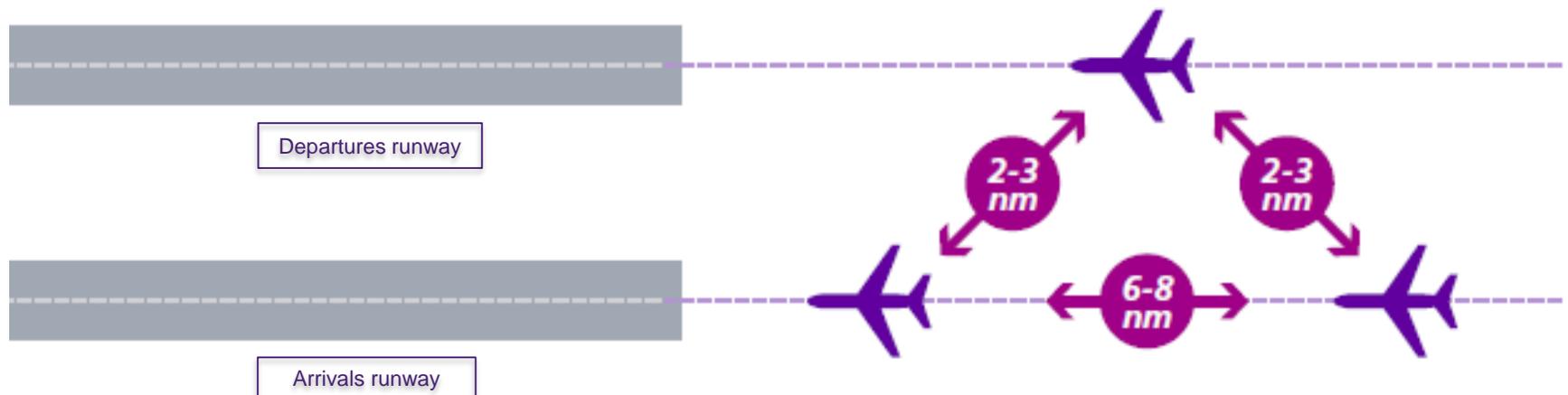
IPA using RNP – How would it work?

Aircraft landing on the *arrivals runway* would be directed by ATC on to the final approach known as the Instrument Landing System (ILS) exactly as they are today.

ILS
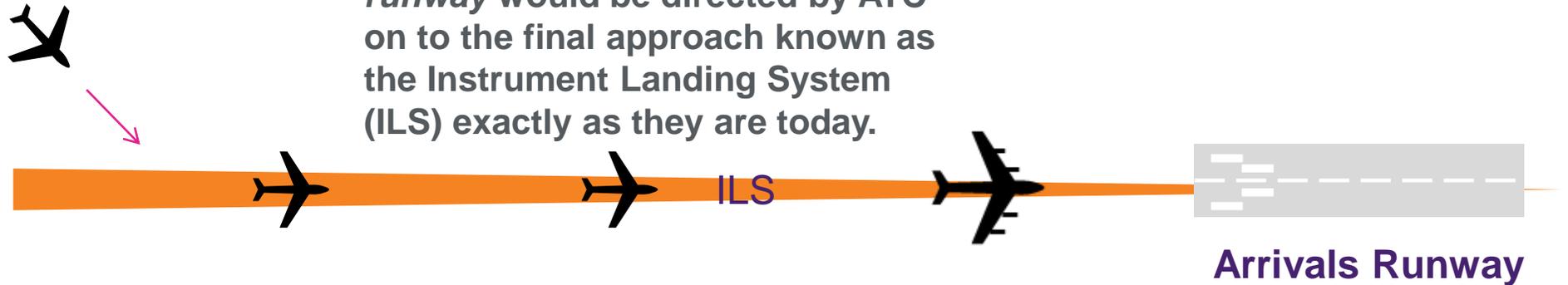
Arrivals Runway

The 'TEAM' arrivals on the *departures runway* would follow a fixed RNP procedure (from the holding stacks)

Departures Runway

The TEAM arrivals would essentially be contained within a 'tunnel in space', ensuring that the two streams of arrivals remain separate.

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What are the benefits of IPA?

- IPA **<u>would not</u>** change the rules for when or how many aircraft could be brought in on the departures runway (TEAM landers) but it would make TEAM much more efficient by:

  - **reducing** the time aircraft are held in a stack

  - **Increasing** resilience and reducing delays

  - **Improving** airfield punctuality by enabling an enhanced arrivals rate on the designated arrivals runway during the application of TEAM.

- It also offers the opportunity to **reduce** the number of arrivals that land out of alternation and provide the opportunity to reduce the amount of late runners that operate from the airport.

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