



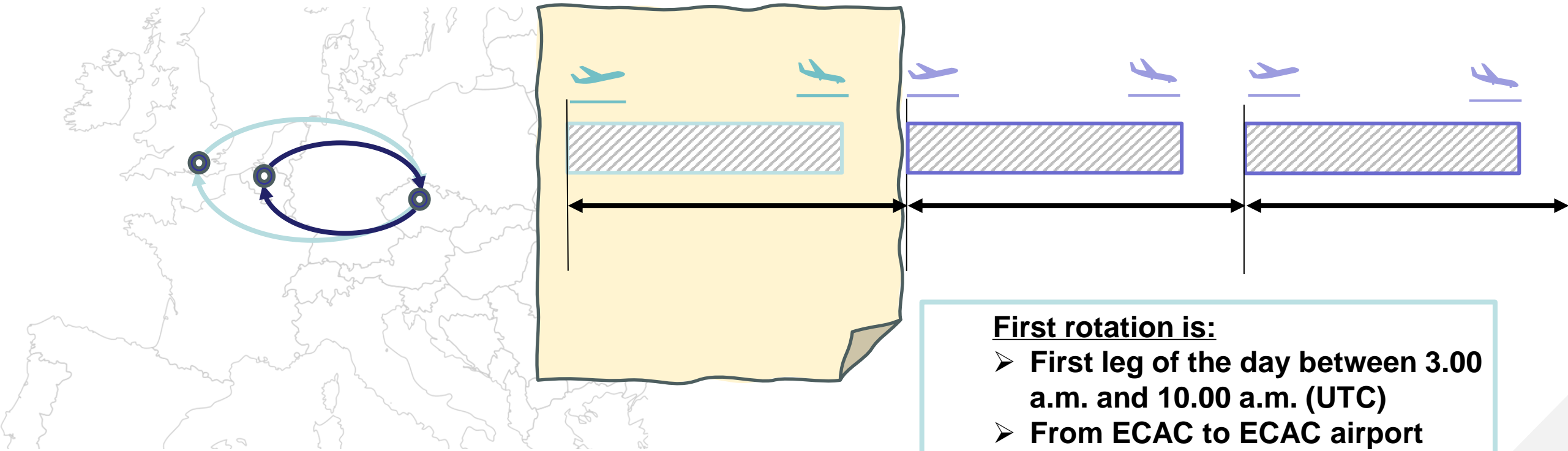
SUPPORTING  
EUROPEAN  
AVIATION

# Prioritising First Rotation

Jaroslav Niewinski  
01/02/2024



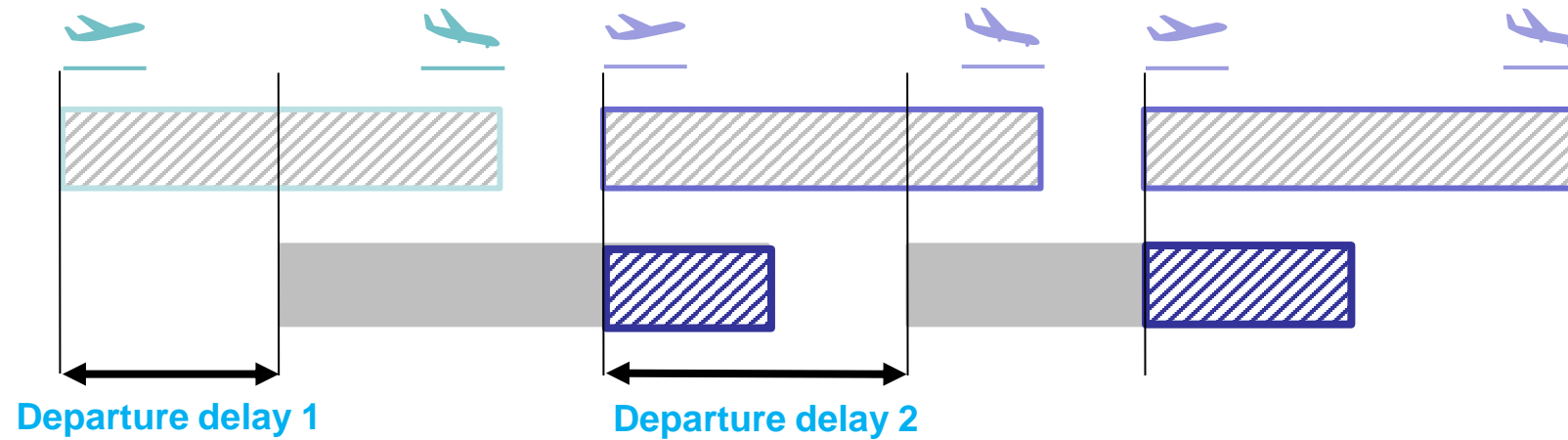
# First rotation flight



## **First rotation is:**

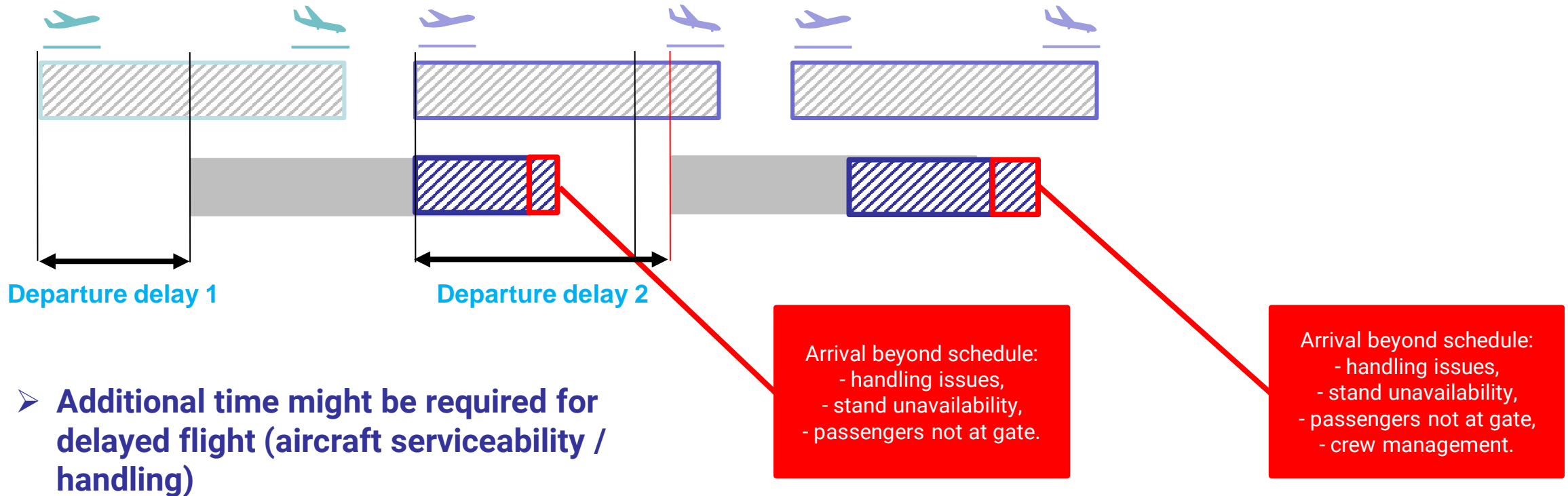
- **First leg of the day between 3.00 a.m. and 10.00 a.m. (UTC)**
- **From ECAC to ECAC airport**

# First rotation flight: knock-on effect



- Any first rotation delay impacts next arrivals & departures.

# First rotation flight: knock-on effect



- **Additional time might be required for delayed flight (aircraft serviceability / handling)**
- **First rotation departure delay may result in further delay increase for the next legs.**

# Summer 23: First rotation delays (minutes)

First rotation flights	First rotation departure delay [min]
322,425	<b>2,952,168</b>



Cumulated arrival delay [min] resulting from first rotation departure delay
<b>8,030,287</b>

Split into primary causes



Impact on Network

First rotation <b>departure ground delay</b> [min]	First rotation <b>ATFM departure delay</b> (Enroute and Arrival) [min]
<b>2,254,157</b>	698,012

**76%**

**24%**



Cumulated arrival delay [min] resulting from first rotation <b>departure ground delay</b>	Cumulated arrival delay [min] resulting from first rotation <b>ATFM departure delay</b>
<b>6,000,463</b>	2,029,824

**75%**

**25%**

# Summer 23: First rotation delays (average/flight)

First rotation flights	Average first rotation departure delay
322,425	<b>9.2 min.</b>



<u>Average “end of day” cumulated arrival delays</u> resulting from the first rotation departure delay
<b>24.9 min.</b>

Split into primary causes



Impact on Network

Average first rotation <b>departure ground delay</b>	Average first rotation <b>ATFM departure delay</b> (Enroute and Arrival)
<b>7.0 min.</b>	2.2 min.



<u>Average cumulated arrival delay</u> resulting from first rotation <b>departure ground delay</b>	<u>Average cumulated arrival delay</u> resulting from first rotation <b>ATFM departure delay</b>
<b>18.6 min.</b>	6.3 min.



## Summer 23: impacts

**The impact** (on average, cumulated at the end of the day) **of:**

- **Each minute of the first rotation departure delay** led to **2.7 min** of arrival delay across the Network .
- **Each minute of the first rotation departure ground delay** led to **2.7 min** of arrival delay across the Network.
- **Each minute of the first rotation departure delay due to ATFM** led to **2.9 min** of arrival delay across the Network.



SUPPORTING  
EUROPEAN  
AVIATION

