



# PRC – ACI Europe APOC Exchange

**Round table 3: APOC Systems** 

Monday March 10th, 2025

#### **Content**

- 1. Introduction
- 2. Hardware
- 3. Software
- 4. KPI's
- 5. Questions
- 6. Round-table discussion

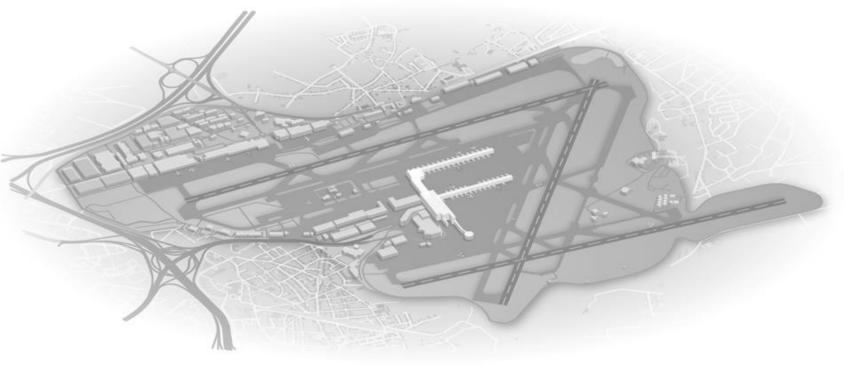




### Brussels Airport – Facts and figures

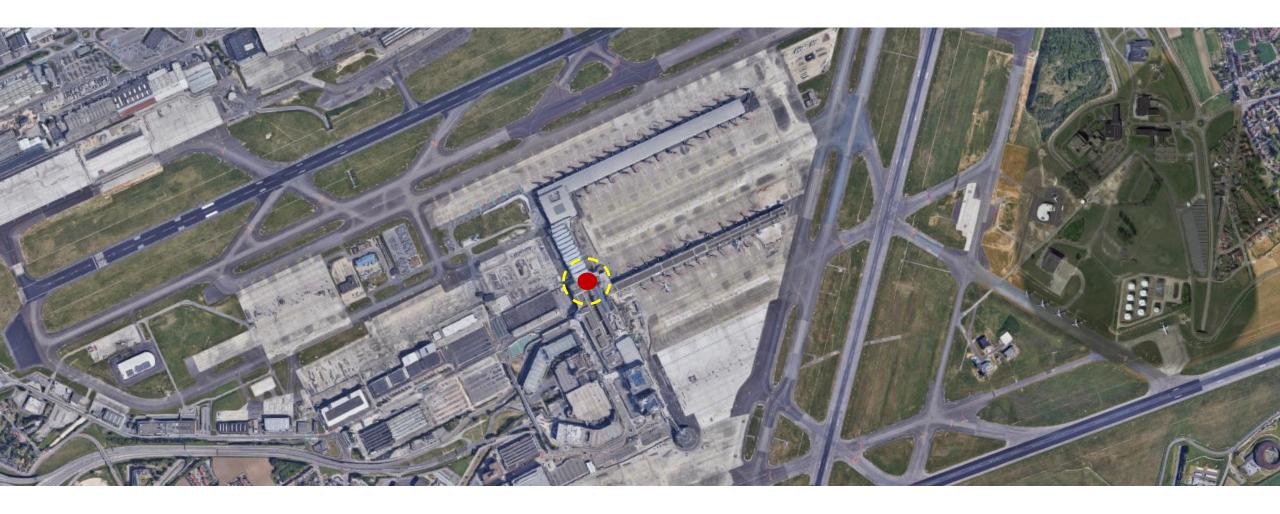
- Terminal2 Piers (A & B, optional T)
- Concourses57 Contact gates22 Bus gates
- Runways
  74 Movements per hour
  Short taxi times
- Transfer Hub

  Star Alliance Hub in Europe
- 5 Key partners
  In the Airport Operations Center (APOC)

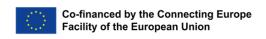




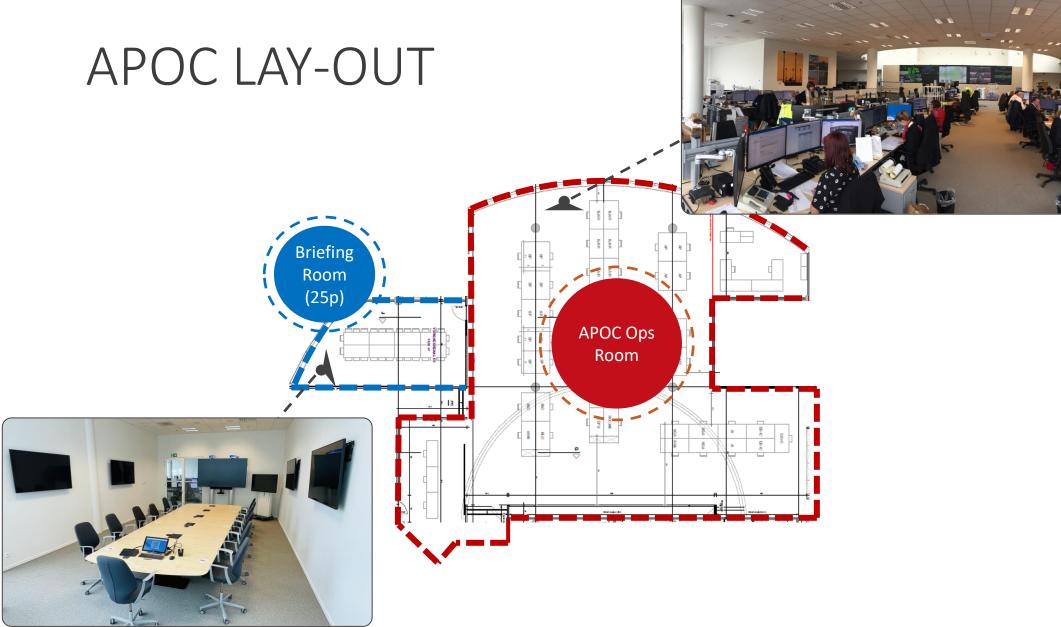
# APOC LOCATION















#### PUTTING PEOPLE TOGETHER TO ENSURE EFFICIENCY







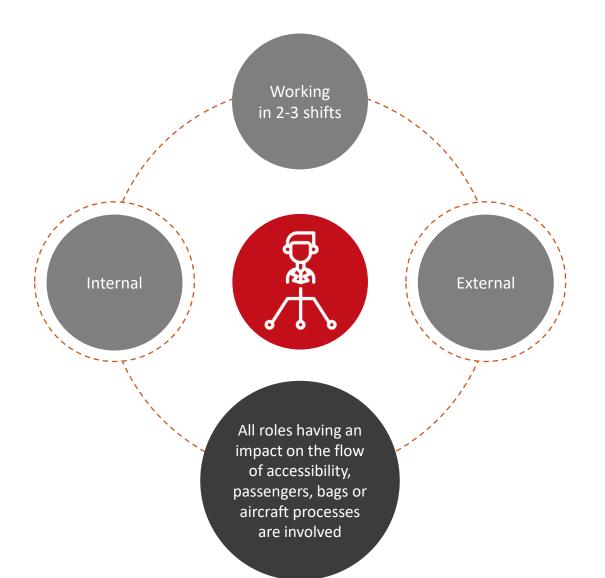




















#### **Current hardware**

- Large video wall
- Desk set-ups with 2 up to 11 screens
- Multiple conventional communication systems
  - telephone
  - trunking
  - VHF
  - Teams, Whatsapp, VCSB
- Non-adjustable desks (suboptimal ergonomy)
- Limited to no soundproofing
- One keyboard, one mouse through KVM

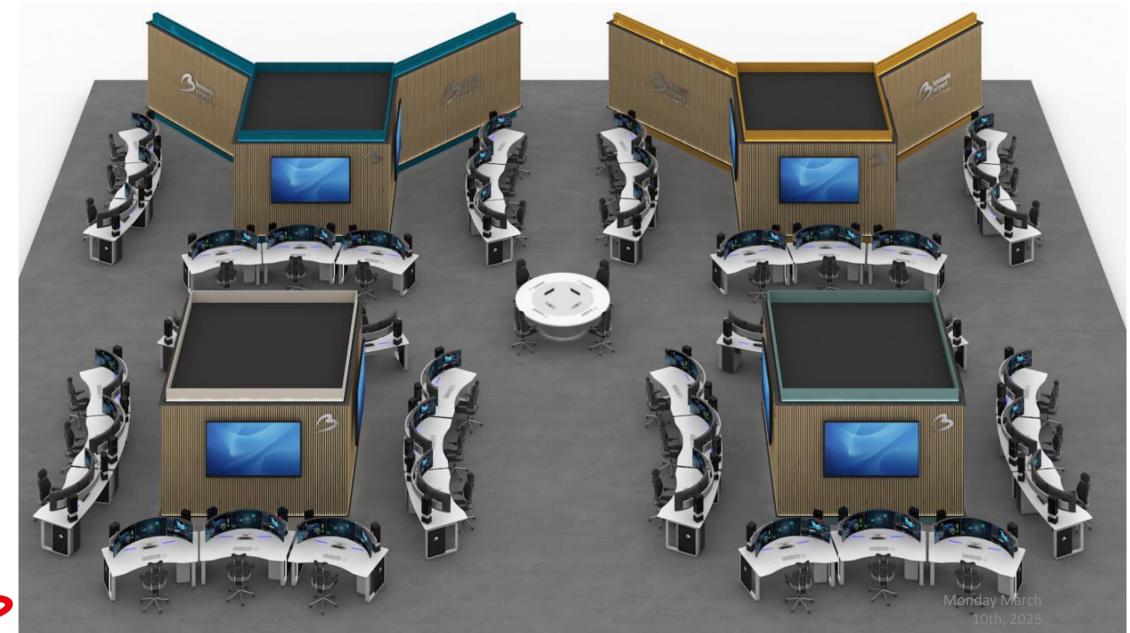
After 10 years they have become **legacy systems** and need urgent replacement





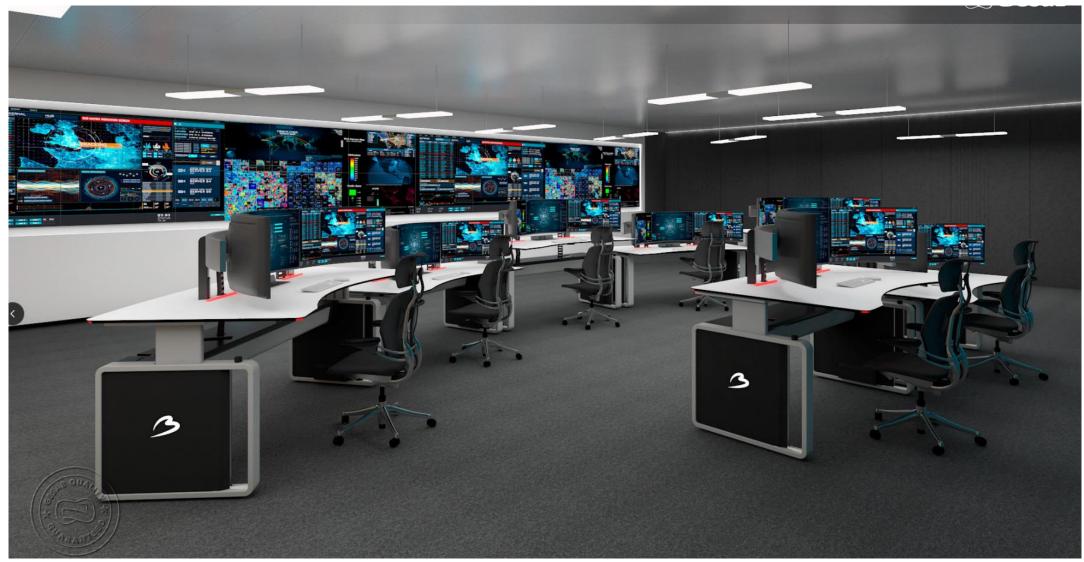


# Our vision for the future





# Our vision for the future







#### **Software Tools**

Honeywell



**SCADA** 

Q QUINTIQ



















**AIP** 



Airport Corner MIRROR NOP



Monday March 10th, 2025

#### **Software Tools**

FACT24

**Crisis Management and Emergency Notification** 









**AOP** 

























**AIP** 

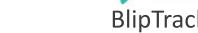


**Airport Corner** 

brussels airport



NOP







# **AOP - Forecasting**

#### **Heatmap Screening Connector** (grouped based on arrival time at screening)

How to interpret 30 min intervals? ==> 08:00 refers to 08:00-08:30



FROM

Sat 15/03/2025

ТО

Mon 31/03/2025

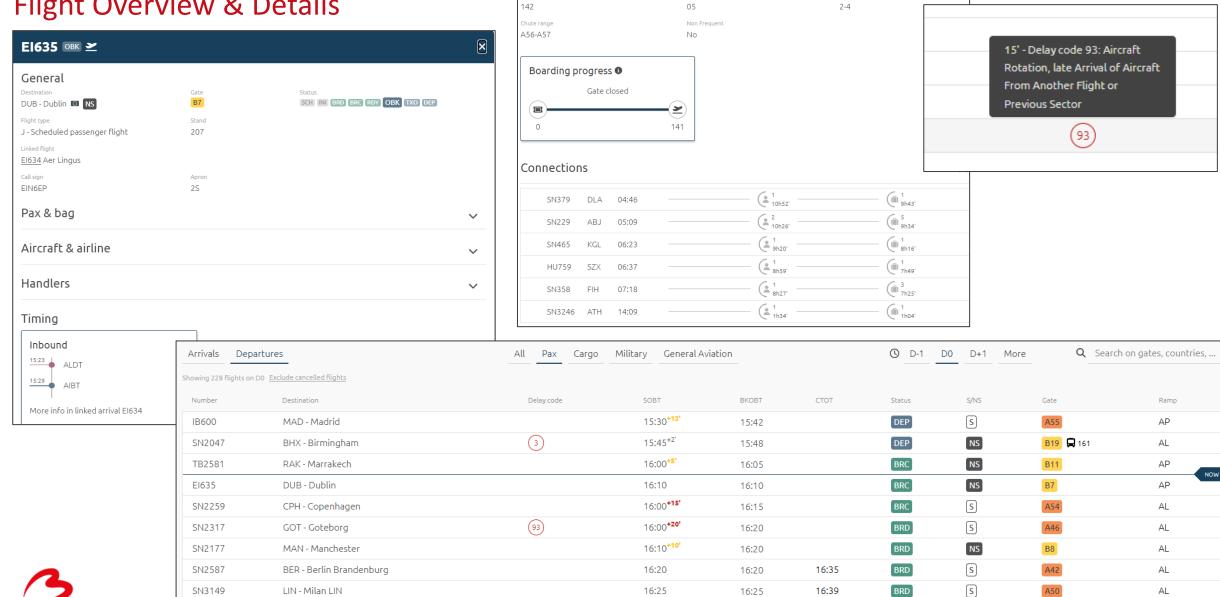
Screening Connector
Screening Transfer

	Sat 15/03	Sun 16/03	Mon 17/03	Tue 18/03	Wed 19/03	Thu 20/03	Fri 21/03	Sat 22/03	Sun 23/03	Mon 24/03	Tue 25/03	Wed 26/03	Thu 27/03	Fri 28/03	Sat 29/03	Sun 30/03	Mon 31/03
00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	48	71	62	61	67	82	86	51	72	58	64	63	103	82	55	96	75
03:30	219	261	173	185	203	195	216	223	257	165	191	193	242	207	214	311	208
04:00	532	790	448	404	482	466	480	548	737	430	417	456	540	459	513	682	561
04:30	779	1,065	616	586	581	683	645	812	978	604	616	564	725	619	754	916	780
05:00	807	727	554	571	526	605	597	849	710	561	612	527	613	583	784	644	664
05:30	580	390	464	459	518	423	492	613	446	482	494	526	436	496	598	522	498
06:00	398	299	370	410	326	371	515	404	331	383	439	340	398	533	408	450	404
06:30	480	353	520	501	370	539	635	483	386	496	569	381	577	640	495	547	543
07:00	880	712	909	779	712	863	1,057	907	732	883	835	731	928	1,045	998	820	969
07:30	1,328	1,222	1,456	1,144	1,219	1,199	1,465	1,358	1,196	1,413	1,231	1,250	1,301	1,487	1,546	1,271	1,512
08:00	1,334	1,321	1,525	1,215	1,309	1,287	1,547	1,406	1,307	1,577	1,273	1,325	1,390	1,630	1,546	1,467	1,630
08:30	1,136	1,075	1,451	1,168	1,168	1,226	1,419	1,196	1,106	1,580	1,186	1,194	1,315	1,457	1,270	1,253	1,474
09:00	973	945	1,201	979	1,009	1,025	1,214	1,049	982	1,352	976	1,050	1,107	1,207	1,102	1,159	1,378
09:30	1,000	922	919	850	927	968	1,026	1,067	939	949	809	965	1,063	1,012	1,110	1,139	1,321
10:00	939	864	786	703	772	956	894	975	849	743	667	784	1,051	896	995	1,098	1,074
10:30	702	683	659	509	551	712	726	725	634	626	498	542	755	708	725	930	747
11:00 11:30	506	583	585	383	490	451	671	537	530	575	391	509	471	623	550	738	546
	643	618	709	477	706	528	873	683	606	729	506	751	536	852	756	763	577
12:00 12:30	910 988	672 828	917 984	581 580	839 826	802 1,022	1,112 1,182	950 1,015	699 865	952 1,024	627 630	905 875	804 1,015	1,169 1,275	1,026 1,065	816 911	782 883
12:30	731	881	952	567	734	917	990	751	915	992	602	734	911	1,275	750	1,067	983
13:30	586			655	587	809	721	601		876	670	584	797		559	1,143	1,069
14:00	516	967 911	848 656	629	485	688	597	534	993 922	658	616	487	620	780 649	467	936	947
14:30	453	755	442	540	589	602	680	473	774	438	537	598	540	707	434	772	712
15:00	344	689	435	470	725	613	698	341	729	427	468	741	595	697	345	811	726
15:30	349	705	578	407	687	614	679	314	757	572	403	705	598	673	319	681	696
16:00	469	708	689	497	591	730	833	443	747	683	501	612	704	831	446	662	719
16:30	548	815	732	757	632	949	1,059	560	820	728	777	677	936	1,068	565	699	792
17:00	598	929	768	904	735	1,026	1.108	635	930	785	945	809	1.027	1.128	653	768	822
17:30	592	1,003	698	851	779	941	1,018	635	1,039	733	895	846	953	1,067	667	919	798
18:00	596	967	676	675	774	791	965	615	1,024	714	720	826	822	1,030	683	963	808
18:30	471	1.028	715	610	908	947	1,052	461	1,069	761	659	955	981	1.111	539	1.067	980
19:00	309	1,084	627	593	890	1,001	945	280	1.111	669	641	911	1.015	997	359	1,092	1.102
19:30	234	746	397	410	596	670	529	221	759	422	442	590	673	563	273	867	827
20:00	156	315	190	223	237	283	205	164	321	203	241	229	285	215	178	460	384
20:30	66	81	62	76	72	98	73	71	84	67	85	70	101	74	72	183	139
21:00	15	16	12	17	17	19	16	16	17	13	18	17	19	15	16	55	59
21:30	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	8	9
22:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0	Ō	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	22,216	27,002	24,785	21,427	23,640	26,102	29,021	22,967	27,374	25,323	22,252	24,323	26,948	29,641	23,836	29,686	29,198
															l N		



# AOP – Heli

#### Flight Overview & Details



Pax & bag

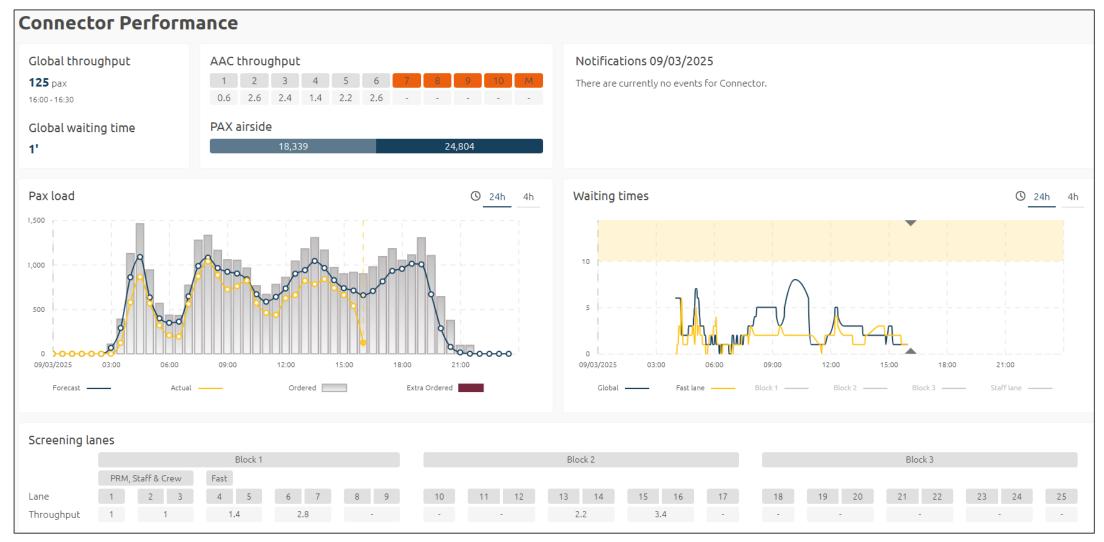
Best-known Passengers 🛭

CI Row

CI Desk

#### AOP - Heli

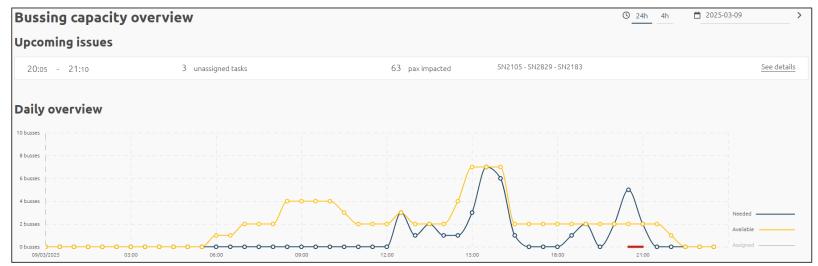
#### Real-time Security Screening performance (Demand Capacity Balance)

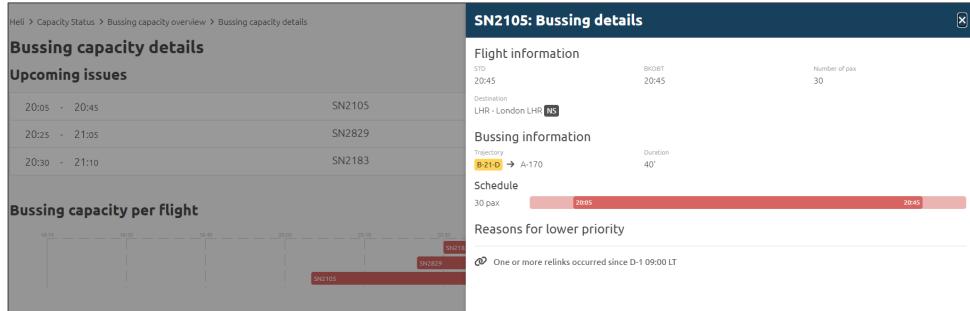




### **AOP - Heli**

#### Airside Bussing performance (Demand Capacity Balance)

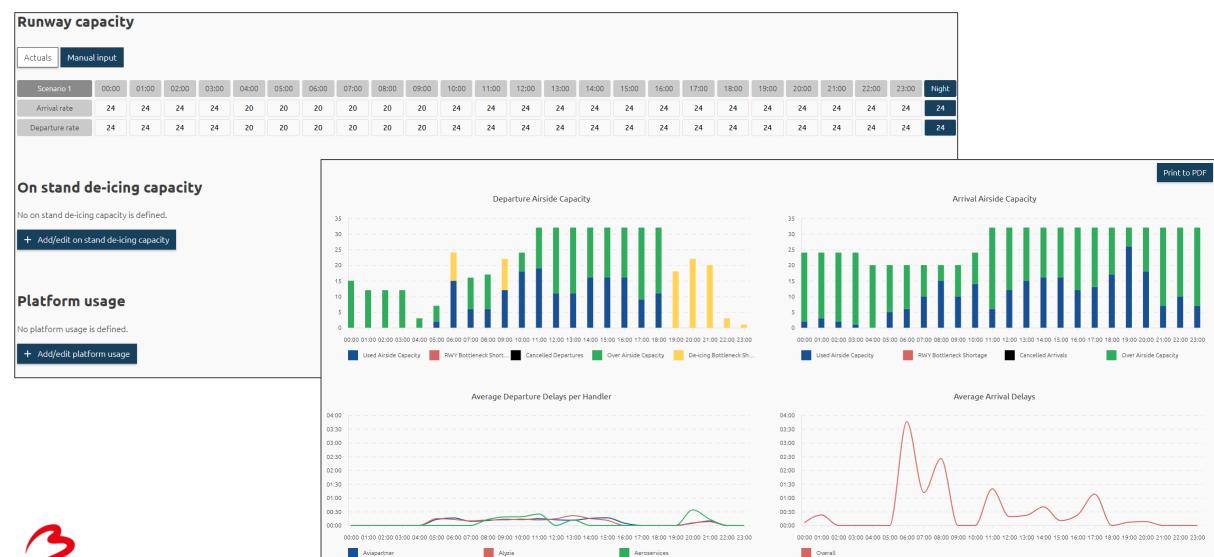






## **AOP – Airside capacity simulation**

#### Airside Demand Capacity Balancing Tool

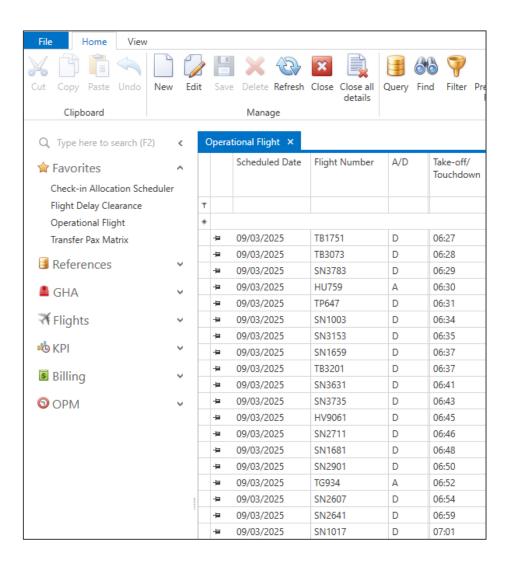




#### **AODB**

- Current AODB 15 years old and in need of upgrade
- In-house or off-the-shelf?
- Low code platform?



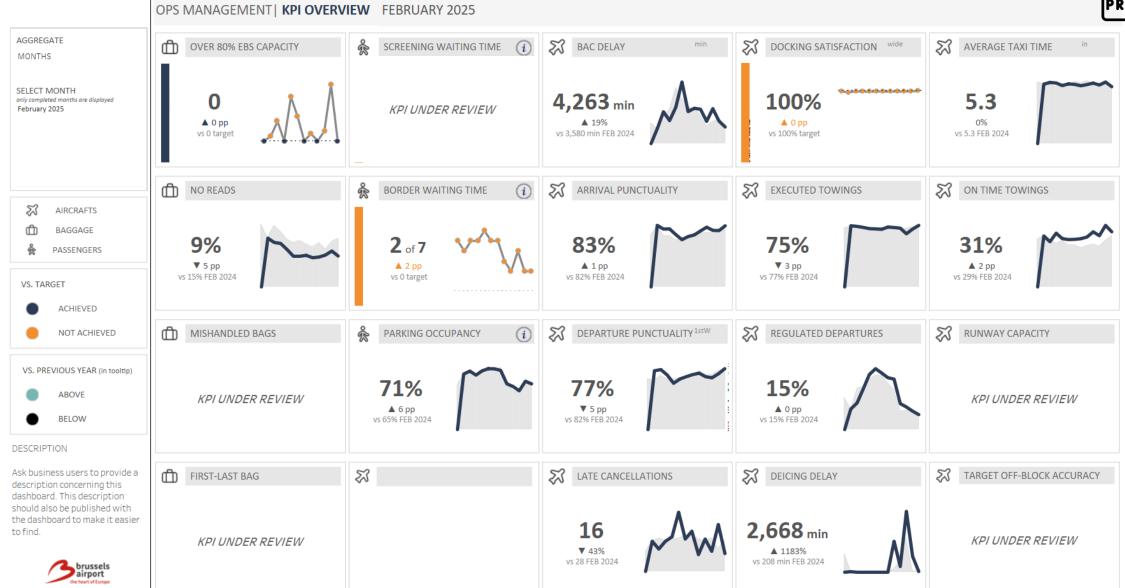






# **Steering / Post-Ops KPI's**





## **Monitoring KPI's**

Demand Capacity Balance of all airport processes (Total Airport Management)
 Passenger Accessibility -> Check-in -> Screening -> Border Control -> Boarding
 Baggage Check-in -> Sorting -> Loading -> Reconciliation
 Aircraft Inbound -> Turnaround -> Outbound

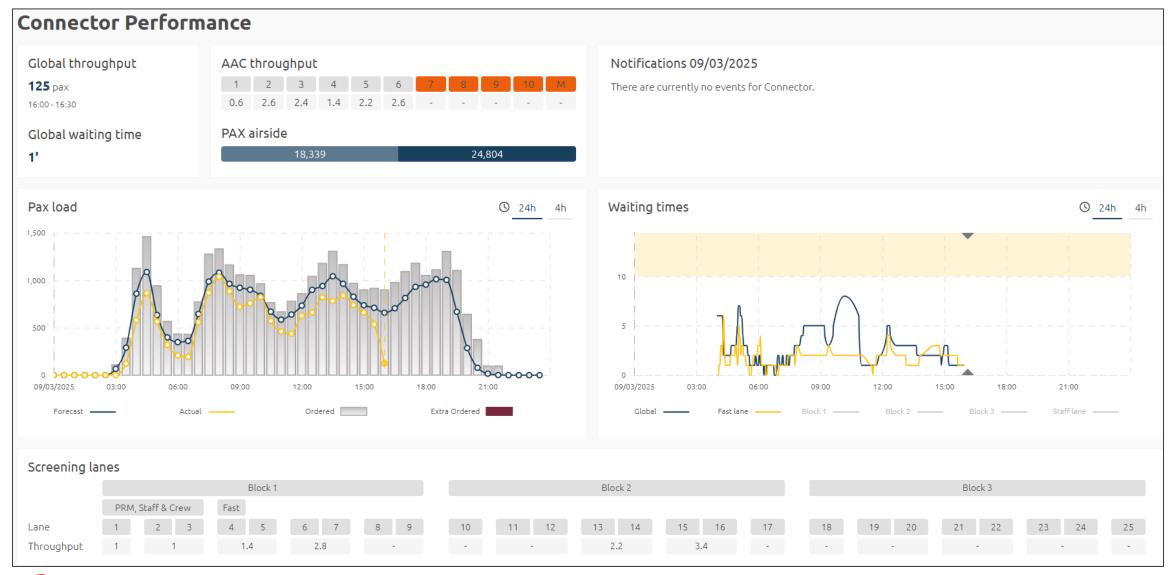
• Insufficient capacity for your demand? -> Delay / Waiting times in your process

Ultimately leading to: Punctuality & Delay

Holy grail = Proactive view on DCB -> Avoid congestion rather than dealing with it afterwards



# Monitoring KPI's – zoom-in on Security Screening









# Thank you!

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