

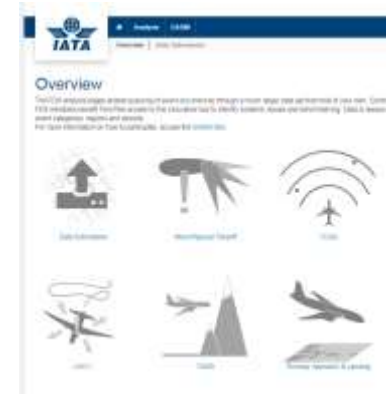
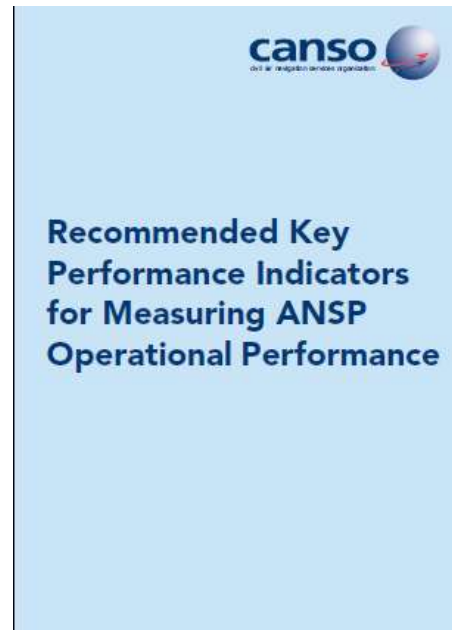
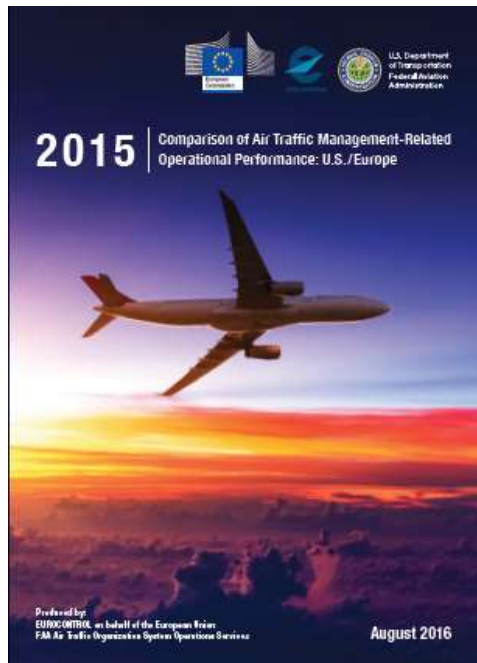
Indicadores de desempeño de los sistemas de navegación aérea en la Región SAM



13 August 2019



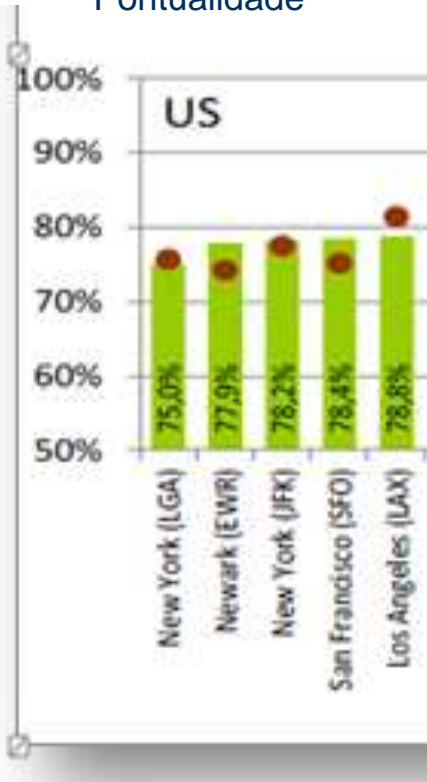
Key Performance Indicators



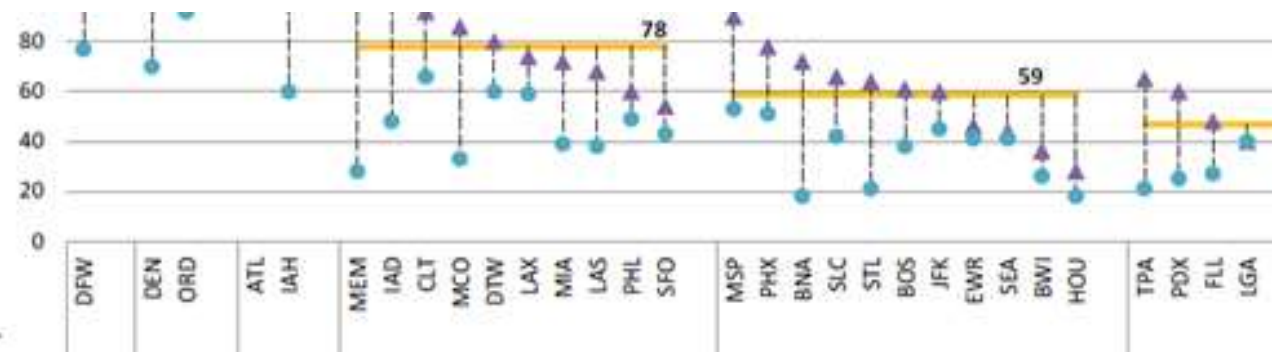
Eficiência x Capacidade



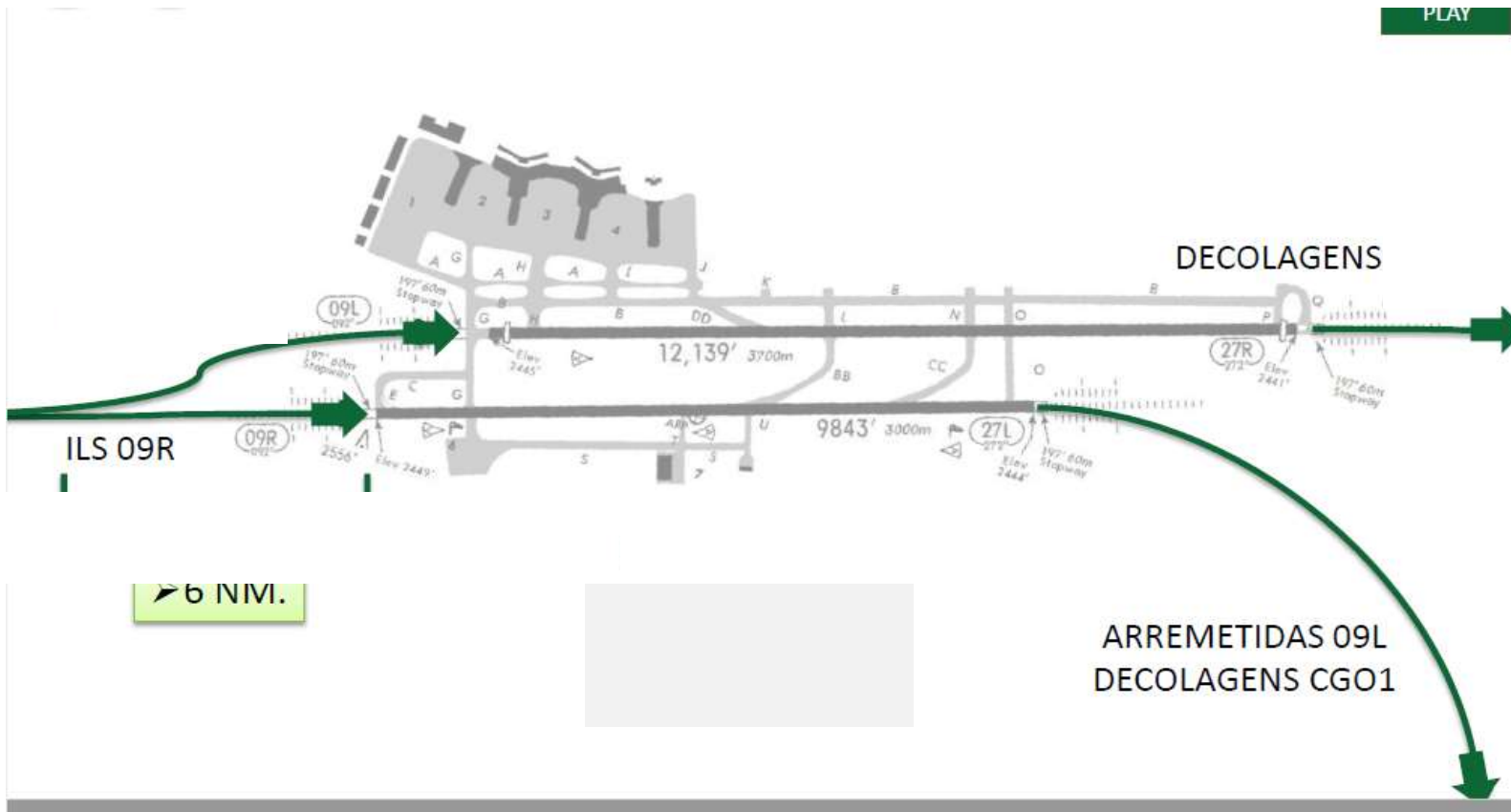
Pontualidade



Capacidade e sua utilização efetiva - pousos



Eficiência x Segurança Operacional



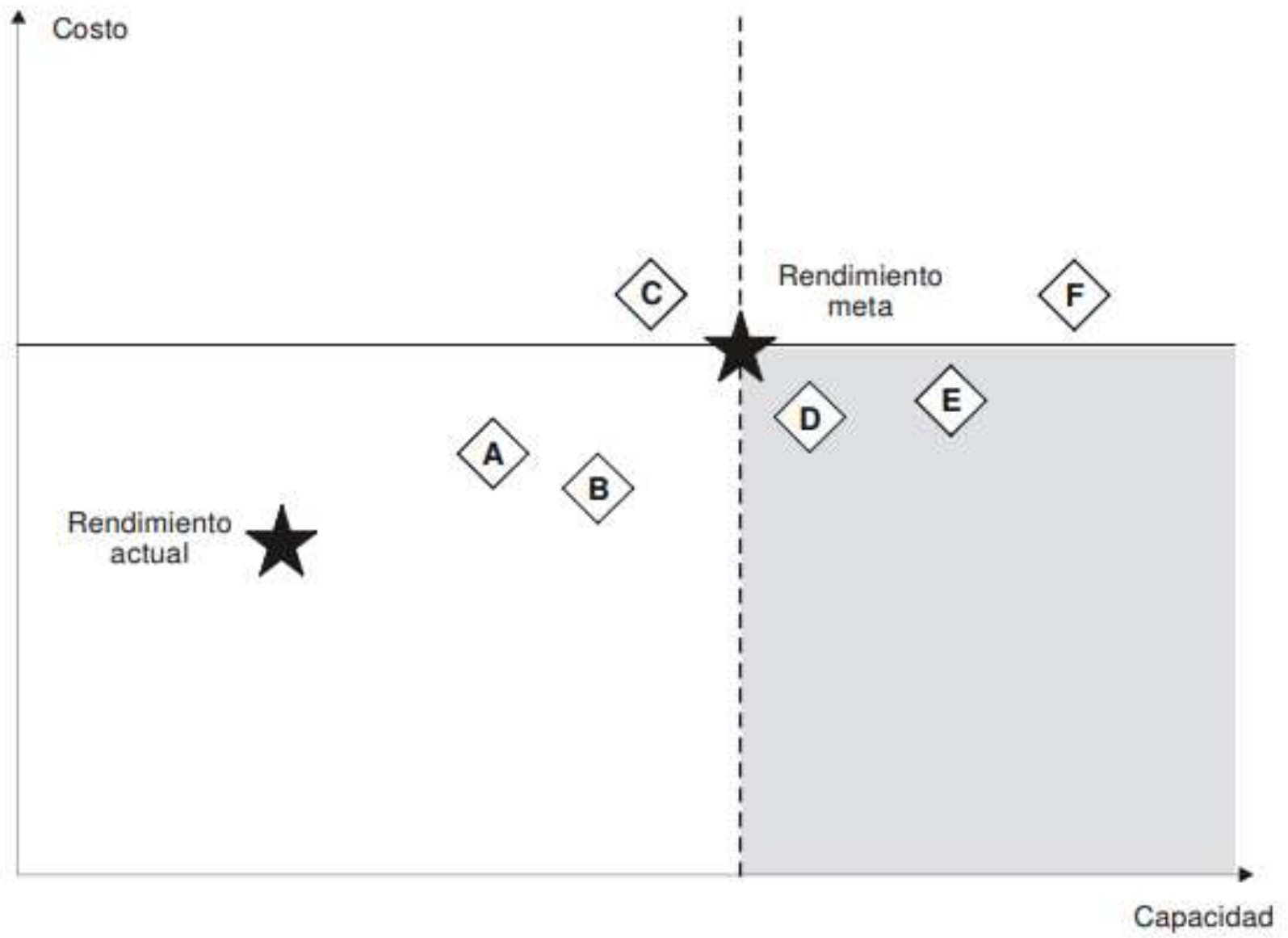


Figura I-2-2. Rendimiento previsto de las posibles soluciones (ejemplo)

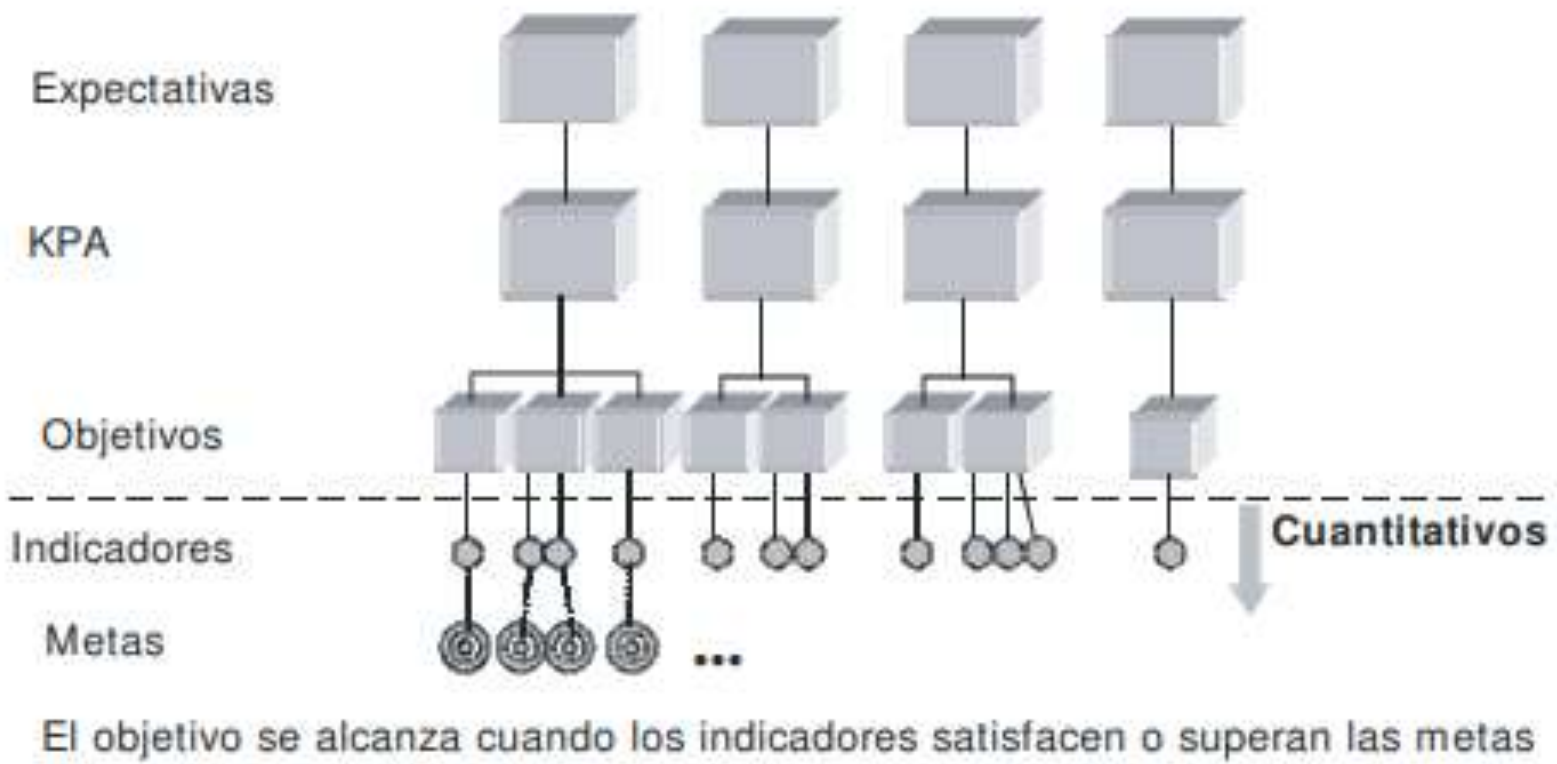


Figura II-2-1. Proyección de las expectativas de la comunidad ATM en metas de rendimiento

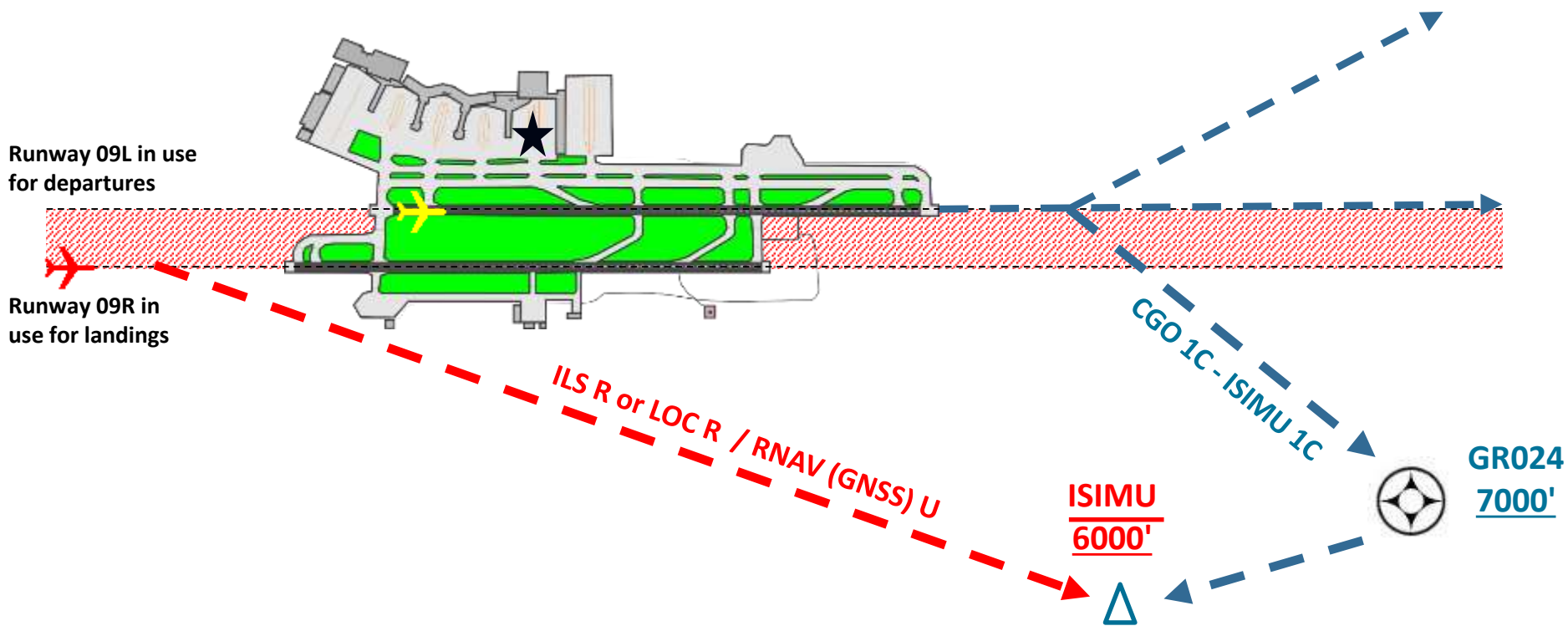


AGILE·GRU

- Plan de Medición de Performance-



Segregated Operations under VMC - Operations 09R/09L after 06 DEC 2018 -



KPI's

**Responsables/
Fuente de los
Datos**

KPA	KPI	RESP.	Datos	Período de análisis
EFICIENCIA OPERACIONAL	DISTANCIA VOLADA P/GRU	ABEAR	Aerolíneas Nacionales	ENE/Mar 2018 X ENE/Mar 2019
	Tiempo vuelo para GRU	ABEAR	Aerolíneas Nacionales	
	Esperas em vuelo p/GRU	Aerolíneas Nacionales	Aerolíneas Nacionales	
	TAXI OUT	ABEAR	Aerolíneas Nacionales	
		GRU AIRPORT	GRU AIRPORT	

KPA	KPI	RESP.	Datos	Período de análisis
EFICIENCIA OPERACIONAL	TAXI IN	GRU AIRPORT'	GRU AIRPORT'	ENE/Mar 2018 X ENE/Mar 2019
		ABEAR	Aerolíneas Nacionales	
	MEDIDAS ATFM	CGNA	CGNA	
	Aproximaciones Frustradas /Arremetidas	ABEAR	Aerolíneas Nacionales	
		GRU AIRPORT'	GRU AIRPORT'	
Punctualidad	IATA	ANAC		

KPA	KPI	RESP.	Datos	Período de análisis
SEGURIDAD OPERACIONAL	Incidente Riesgo Crítico	EPTA-GR	ASEGCEA	ENE/Mar 2018 X ENE/Mar 2019
	Incidente Riesgo Potencial	EPTA-GR	ASEGCEA	
	TCAS/RA	SIPACEA	ASEGCEA	
	Incursiones en Pista	EPTA-GR	ASEGCEA	
CAPACIDADE	Utilización de la Capacidad de Pista	EPTA-GR	EPTA-GR	

KPI's
EFICIENCIA

GRU – Comparación entre ENE – 24 Mar 2018 e ENE – 24 Mar 2019

- Retrasos ≥ 15 min y < 180 min
- Fuente: ANAC – MONITORACIÓN SLOTS

	ENE – 24 Mar 2018	ENE – 24 Mar 2019	Variation
DEP + ARR	63391	65703	+3.64%

	ENE – 24 Mar 2018	ENE – 24 Mar 2019	Variation
RETRASOS DEP + ARR			
DEP + ARR	12866	15666	+21.76%
Minutos (total)	476564	665489	+39.64%
Media	37	42	+13.51%

	ENE – 24 Mar 2018	ENE – 24 Mar 2019	Variation
RETRASOS - DEP			
DEP	6590	8032	+21.88%
Minutos (total)	233970	337468	+44.24%
Media	36	42	+16.67%

	ENE – 24 Mar 2018	ENE – 24 Mar 2019	Variation
RETRASOS - ARR			
ARR	6276	7634	+21.64%
Minutos (total)	242594	328021	+35.21%
Media	39	43	+10.26%

Lluvia - GRU (mm)

	ENE/2018	Feb/2018	Mar/2018	ENE/2019	Feb/2019	Mar/2019
TOTAL	131.5	144.7	38.7	97.1	407.9	318.8
Total General	304.8			956.1 (+213.68%)		
Dias > 10 mm	10			28		
Dias > 50 mm	0			5		
Dias > 100 mm	0			1		

CGH – Comparação entre ENE – 28 Feb 2018 e ENE – 28 Feb 2019

- RETRASOS \geq 15 min e $<$ 180 min
- Fonte: ANAC – MONITORAÇÃO SLOTS

	ENE – 28 Feb 2018	ENE – 28 Feb 2019	Variation
DEP + ARR	28930	28888	-0.15%

	ENE – 28 Feb 2018	ENE – 28 Feb 2019	Variation
RETRASOS DEP + ARR			
DEP + ARR	3543	6254	+76.52%
Minutos (total)	118144	230057	+94.73%
Media	33	37	+12.12%

ENE – 28 Feb 2018
ENE – 28 Feb 2019
Variation
RETRASOS - DEP
DEP

1641

3336

+103.29%

Minutos (total)

51153

118375

+131.41%

Media

31

35

+12.90%

ENE – 28 Feb 2018
ENE – 28 Feb 2019
Variation
RETRASOS - ARR
ARR

1902

2918

+53.42%

Minutos (total)

66991

111682

+66.71%

Media

35

38

+8.57%

Comparación entre GRU y CGH

GRU - ENE – 24 Mar 2018 e ENE – 24 Mar 2019

CGH - ENE – 28 Feb 2018 e ENE – 28 Feb 2019

	GRU	CGH
Total ARR + DEP		
Movimientos	+3.64%	-0.15%
Vuelos Retrasados	+21.76%	+76.52%
Minutos	+39.64%	+94.73%

	GRU	CGH
DEP		
Voos Retrasados	+21.88%	+103.29%
Minutos	+44.24%	+131.41%

	GRU	CGH
ARR		
Voos Retrasados	+21.64%	+53.42%
Minutos	+35.21%	+66.71%

Aproximación Frustrada/ Arremetida

Aerolínea A

	2018	1T 2019
Total	97	43
Arremetidas/1000 ciclos)	2.96/1000	5.48/1000
Total /Met	21	11
Arremetidas MET/1000 ciclos)	0.64/1000	1.40/1000

GANP KPIs em GRU

Informações preliminares

09-Abr-2019



Associação
Brasileira
das
Empresas
Aéreas



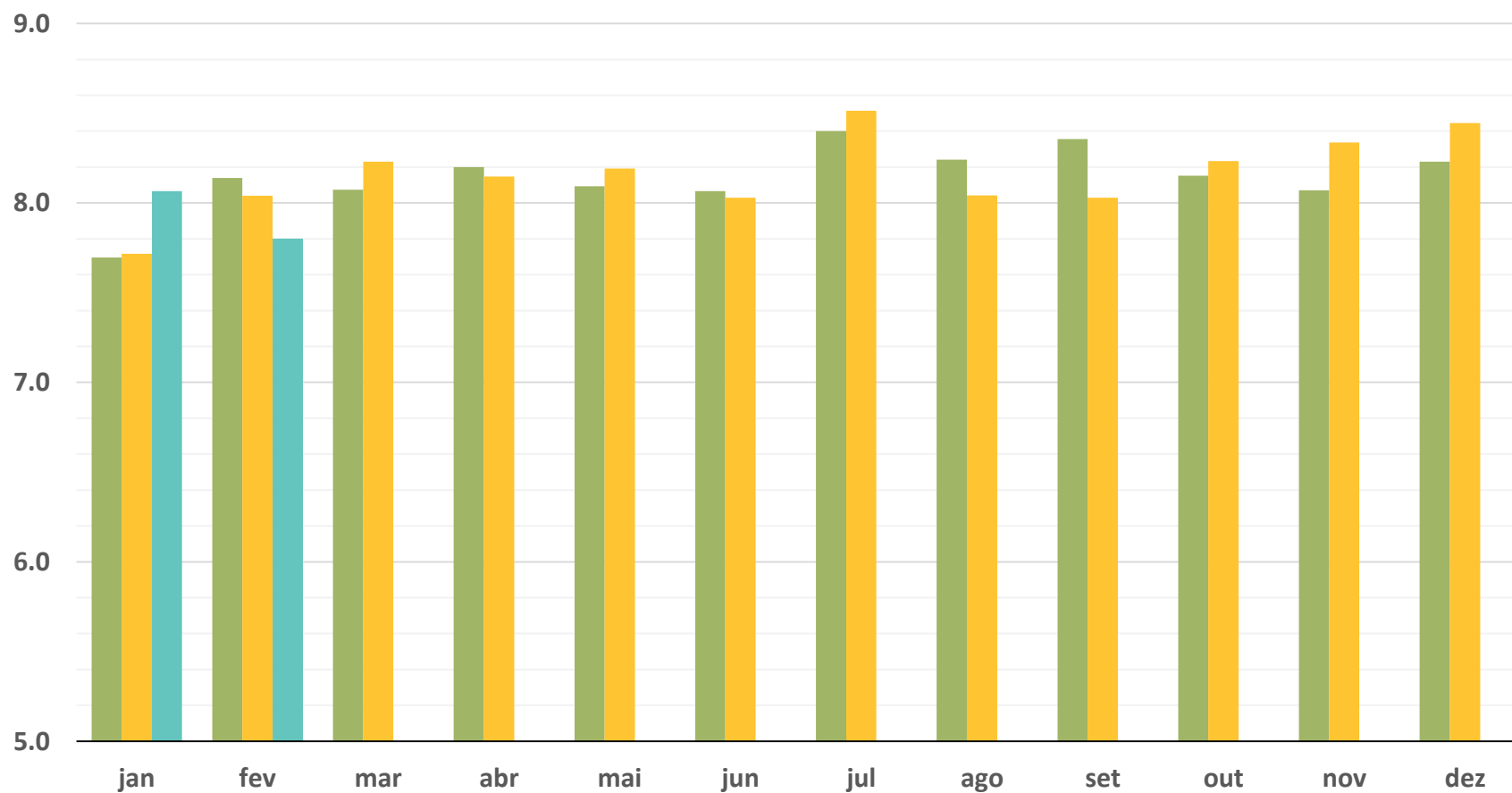
KPI 02: taxi out (min)

■ 2017 ■ 2018 ■ 2019



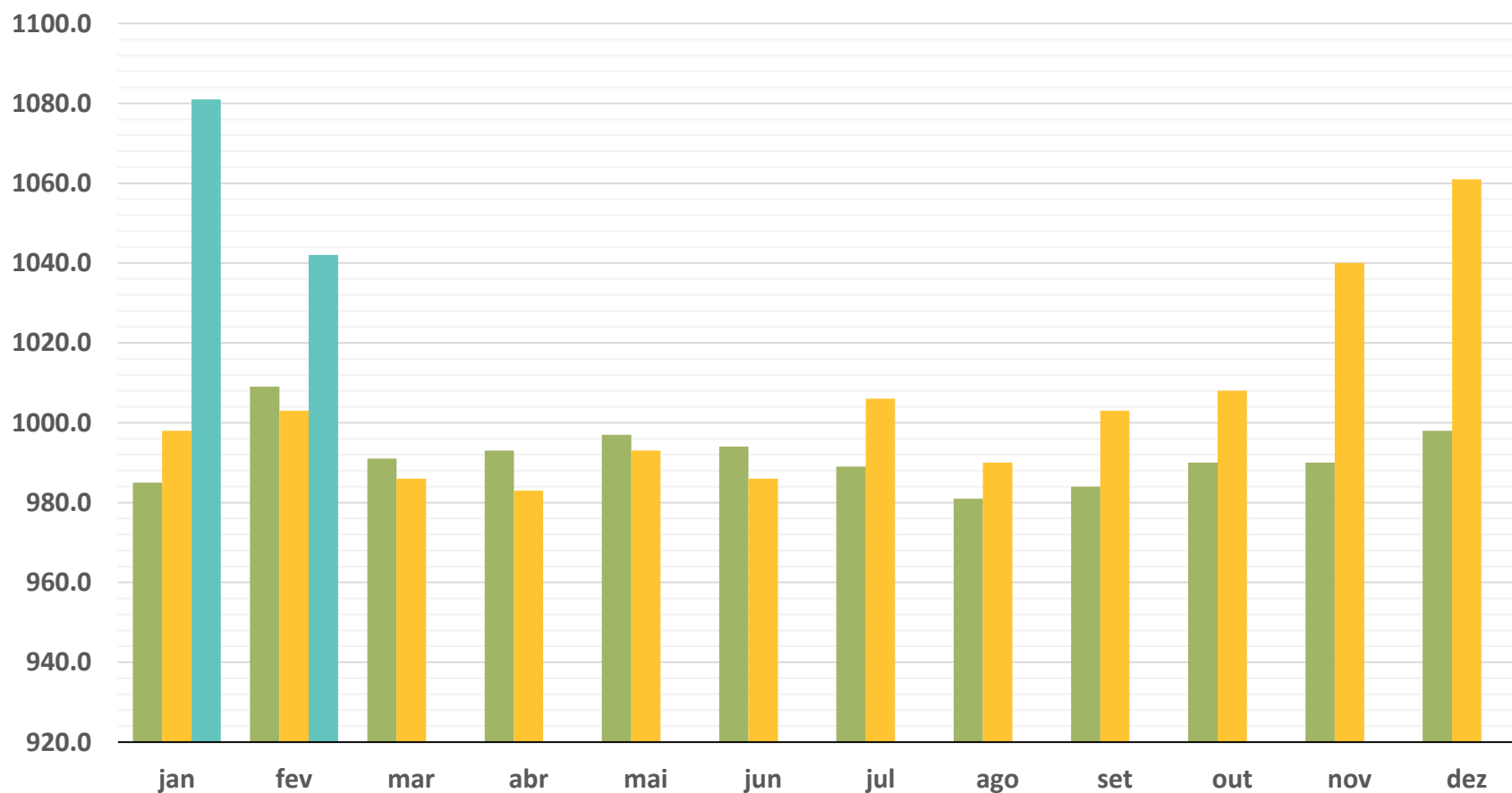
KPI 13: taxi in (min)

■ 2017 ■ 2018 ■ 2019



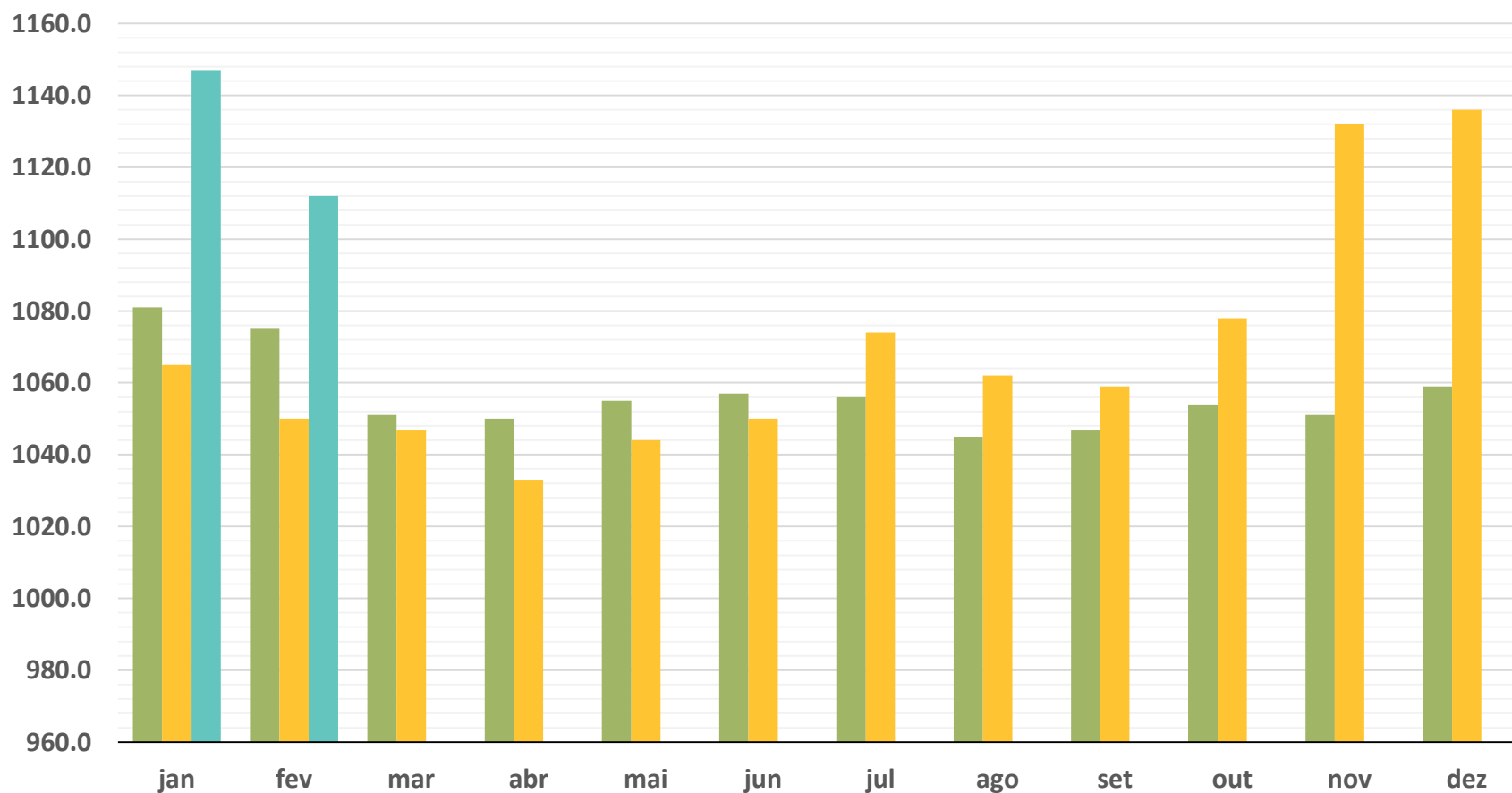
KPI 05: distância voada (km) GRU-POA

■ 2017 ■ 2018 ■ 2019



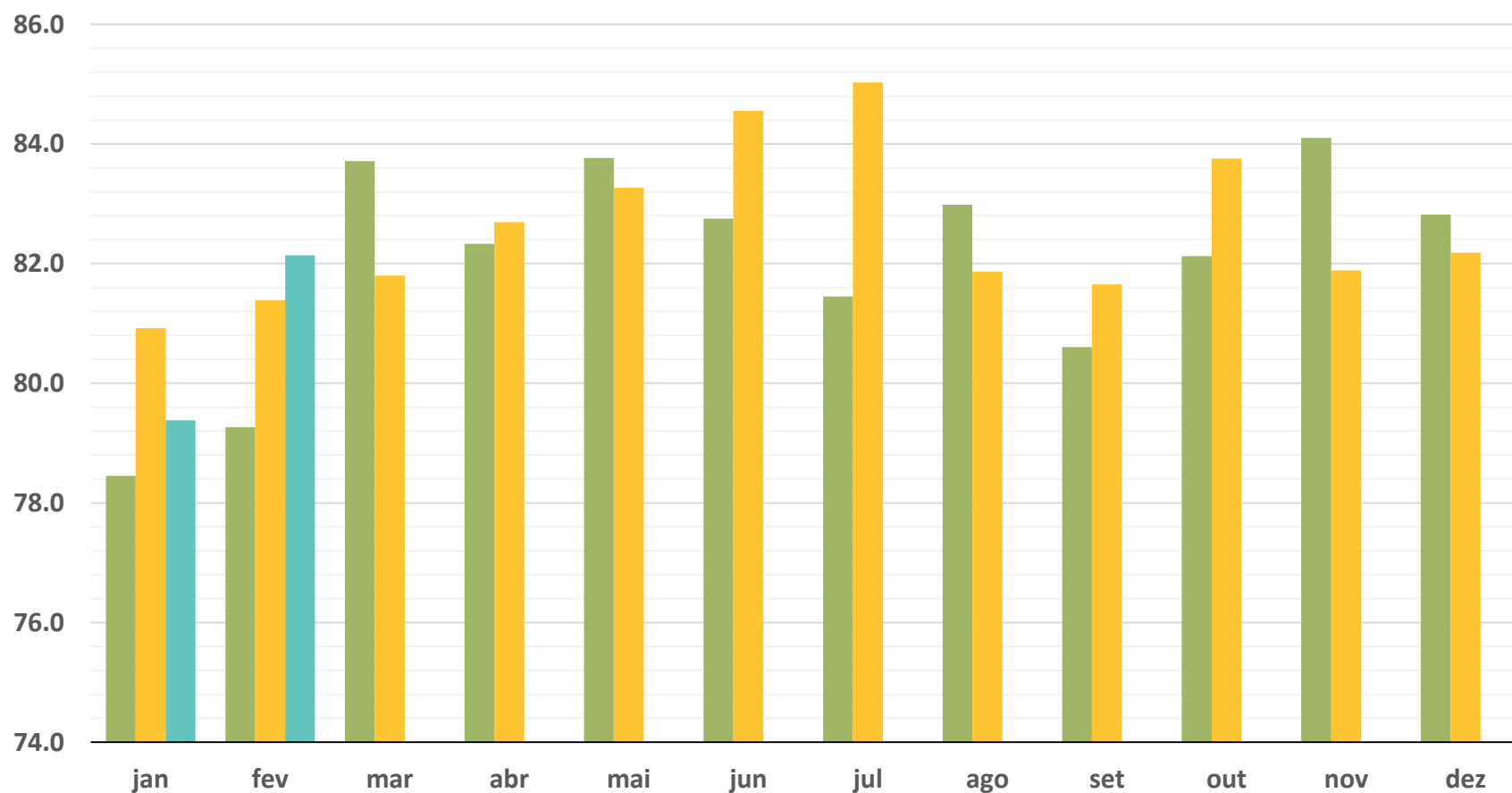
KPI 05: distância voada (km) POA-GRU

■ 2017 ■ 2018 ■ 2019



KPI 15: tempo de voo (min) GRU-POA

2017 2018 2019



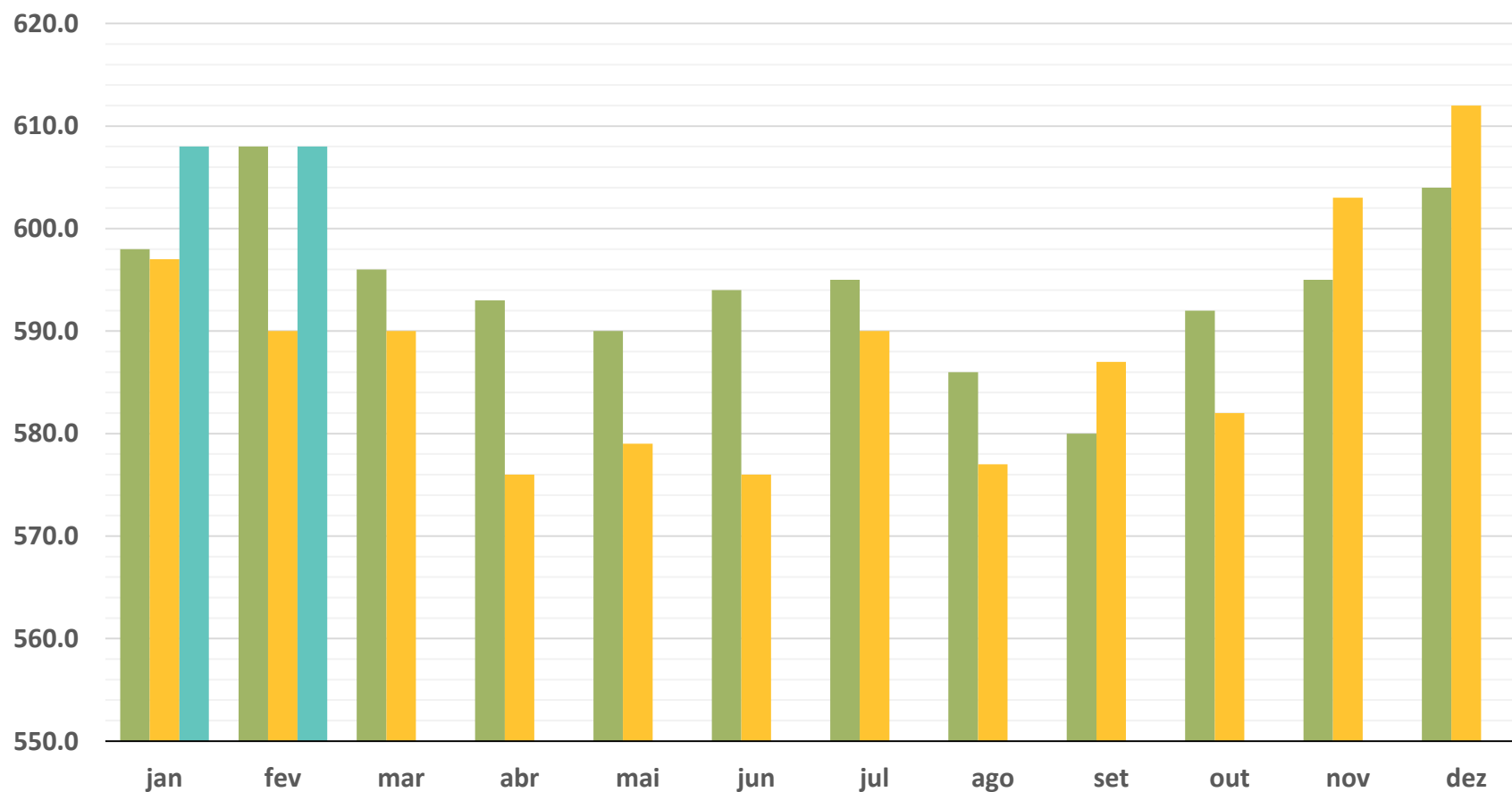
KPI 15: tempo de voo (min) POA-GRU

■ 2017 ■ 2018 ■ 2019



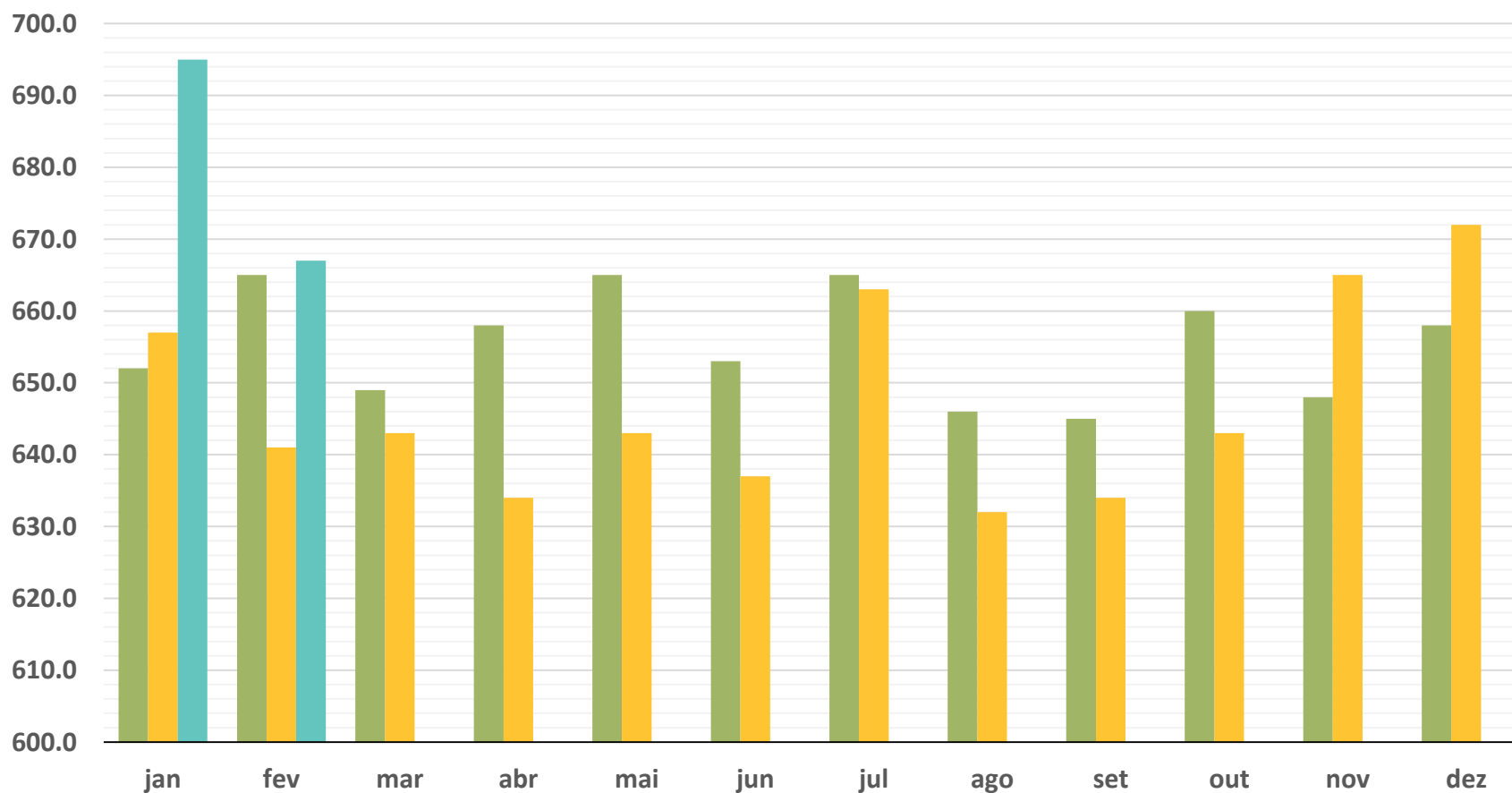
KPI 05: distância voada (km) GRU-CNF

■ 2017 ■ 2018 ■ 2019



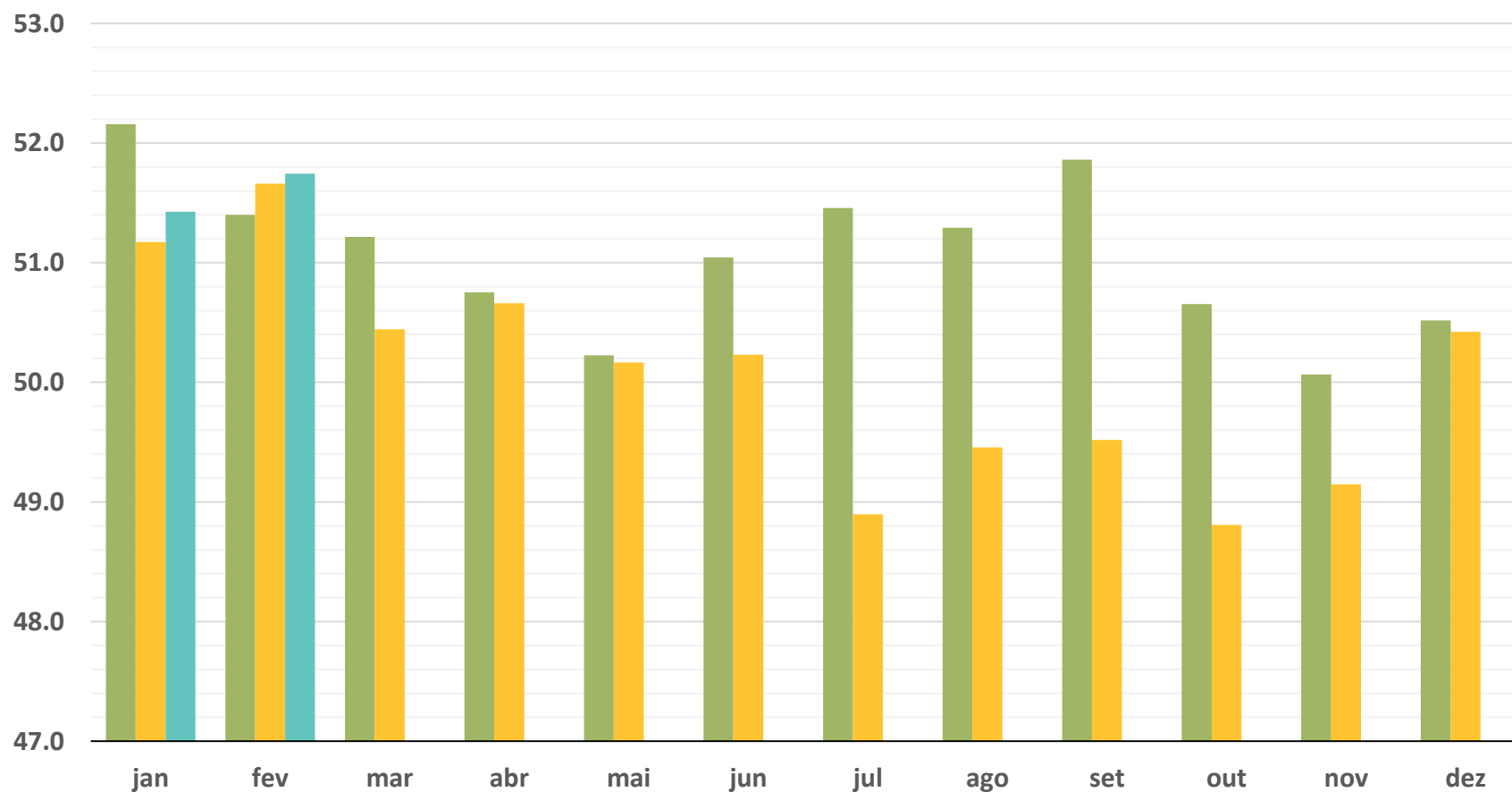
KPI 05: distância voada (km) CNF-GRU

■ 2017 ■ 2018 ■ 2019



KPI 15: tempo de voo (min) GRU-CNF

■ 2017 ■ 2018 ■ 2019



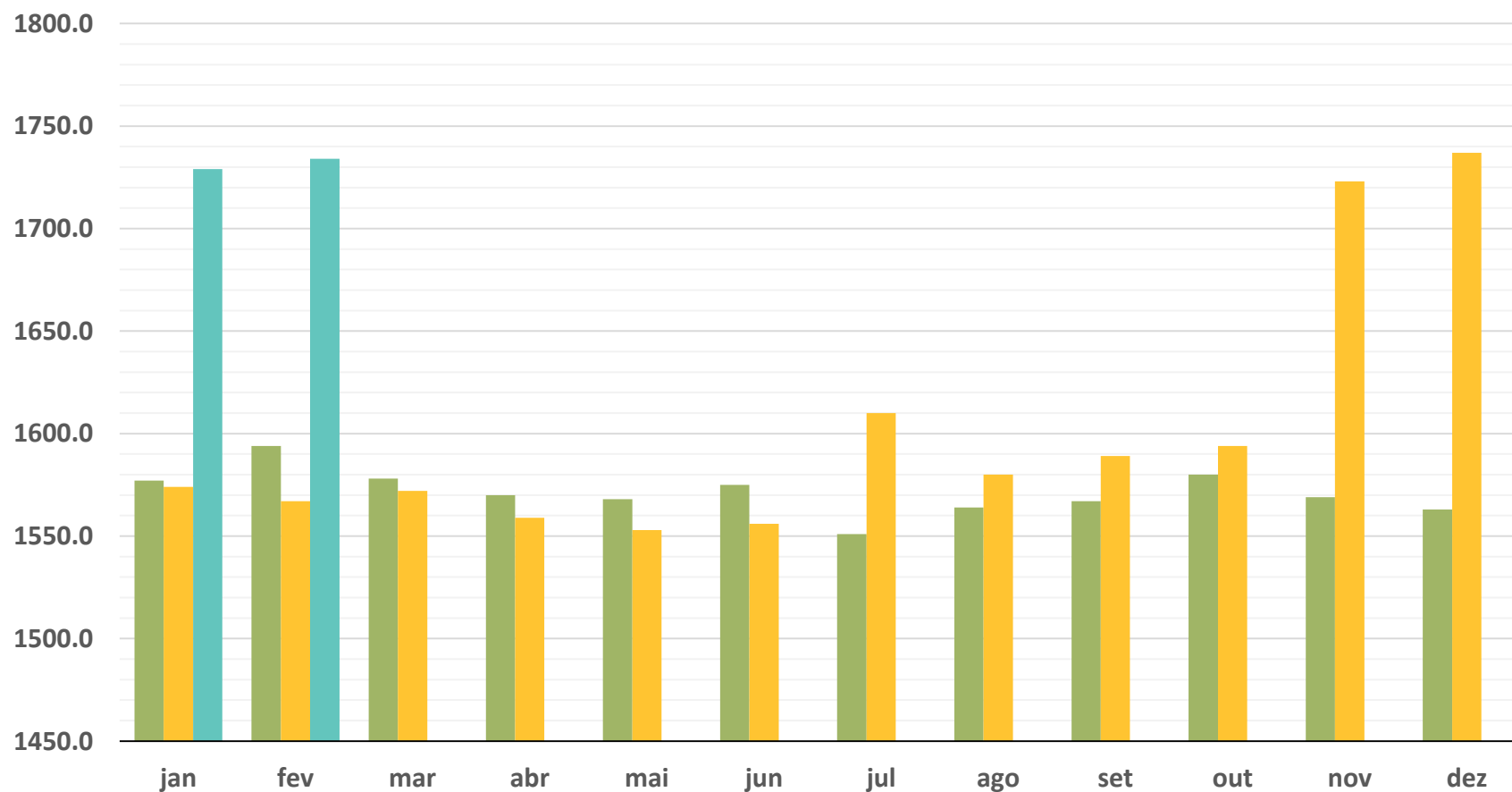
KPI 15: tempo de voo (min) CNF-GRU

■ 2017 ■ 2018 ■ 2019



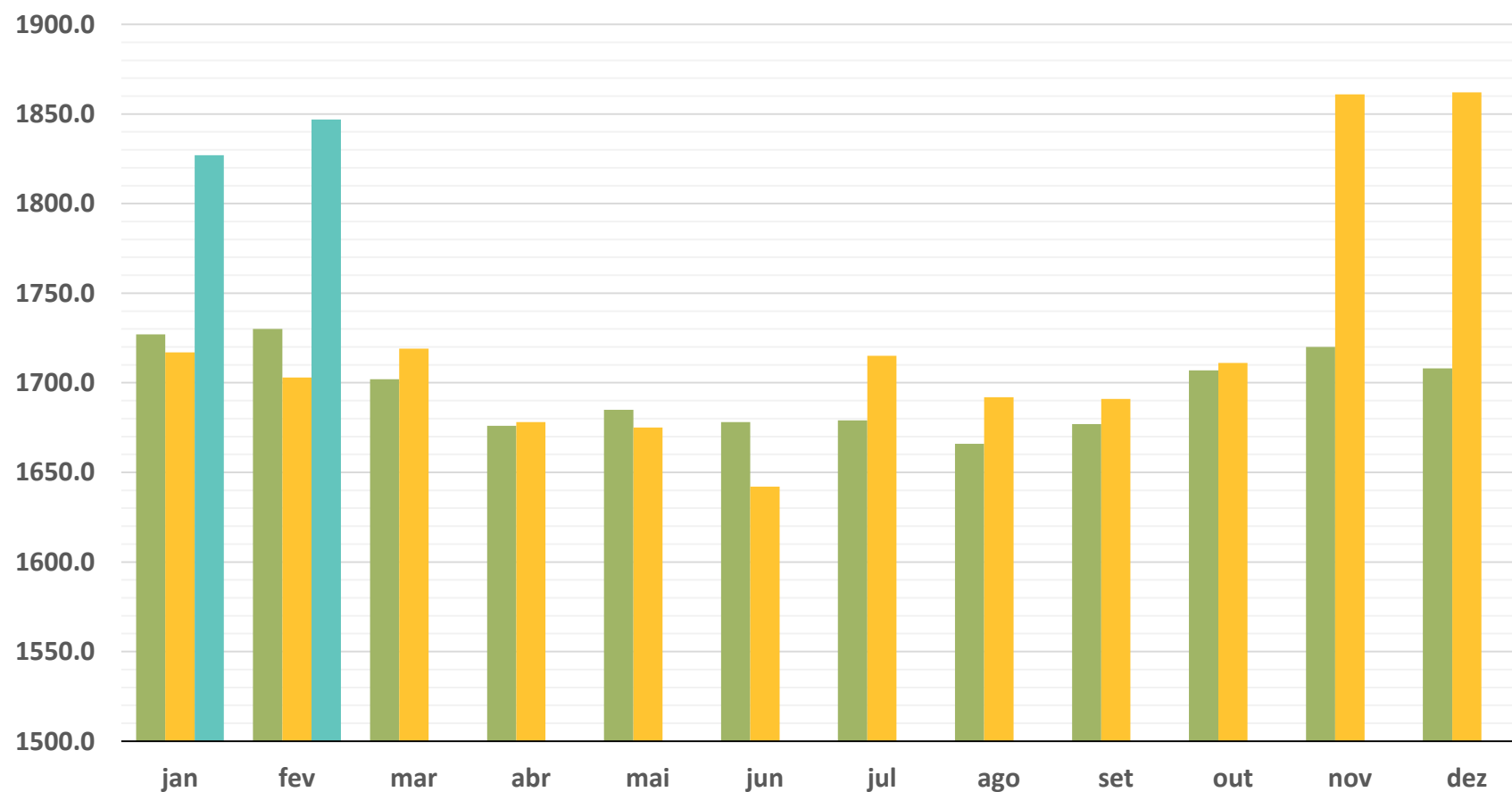
KPI 05: distância voada (km) GRU-SSA

■ 2017 ■ 2018 ■ 2019



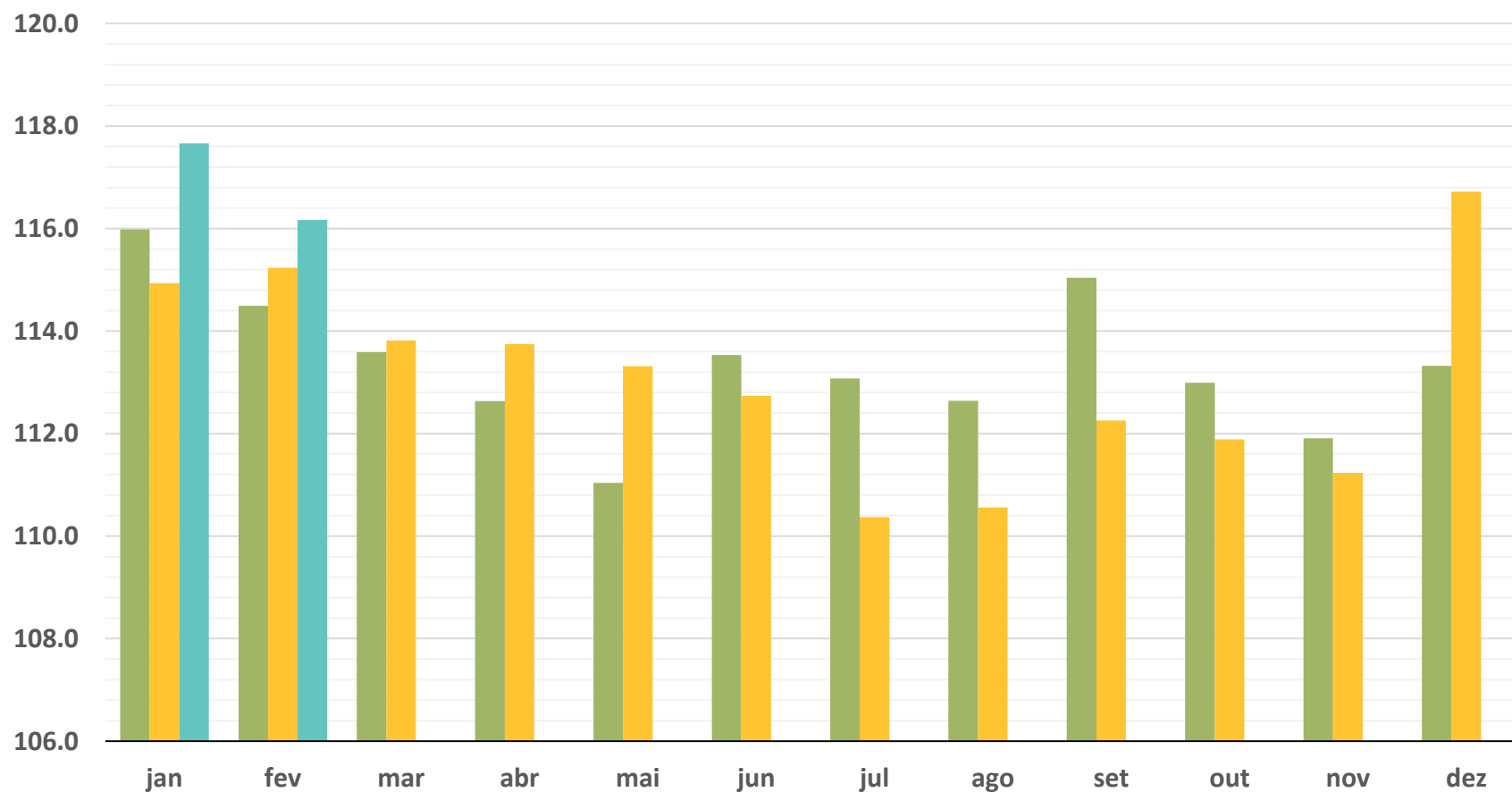
KPI 05: distância voada (km) SSA-GRU

■ 2017 ■ 2018 ■ 2019



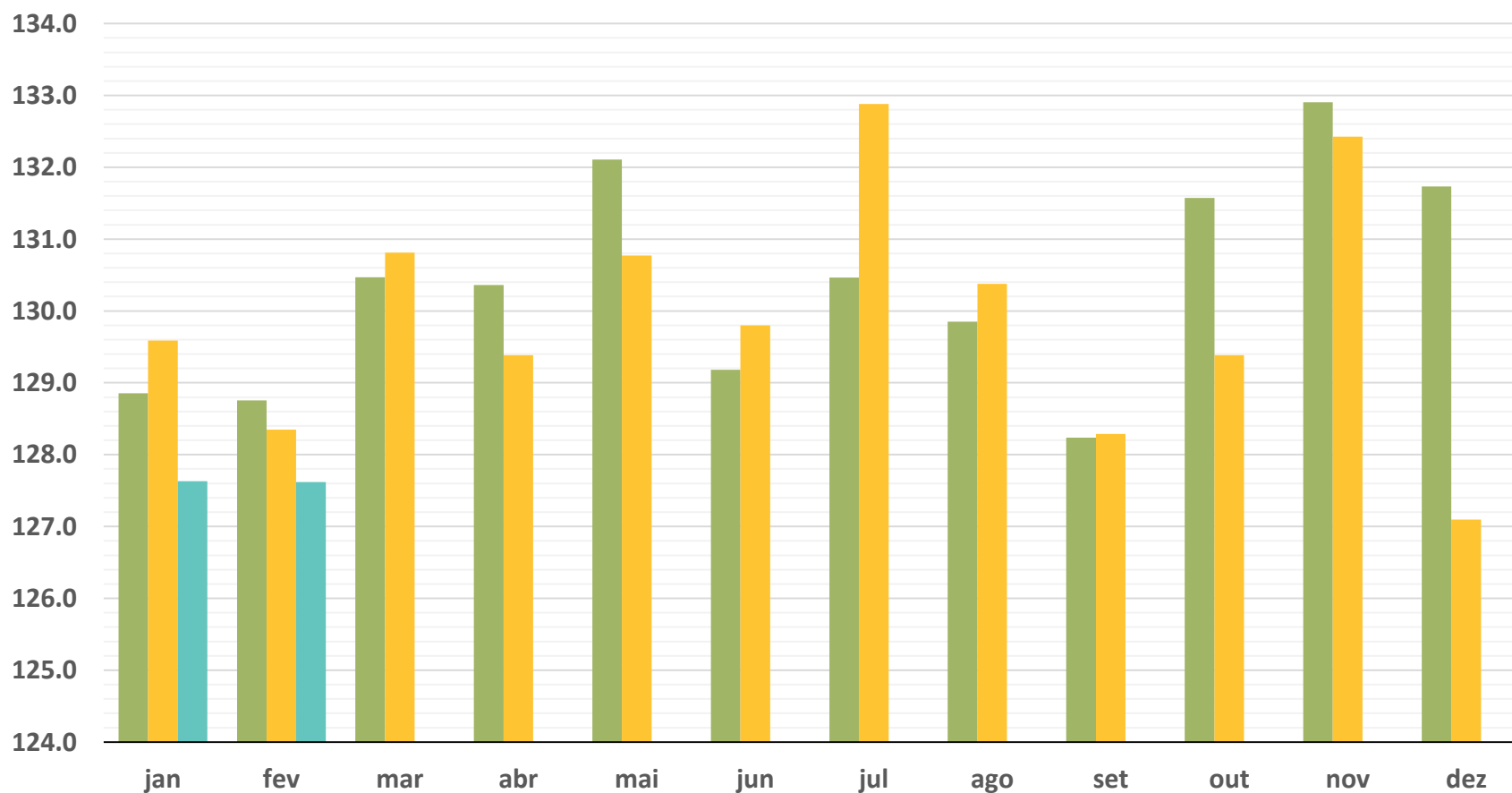
KPI 15: tempo de voo (min) GRU-SSA

■ 2017 ■ 2018 ■ 2019

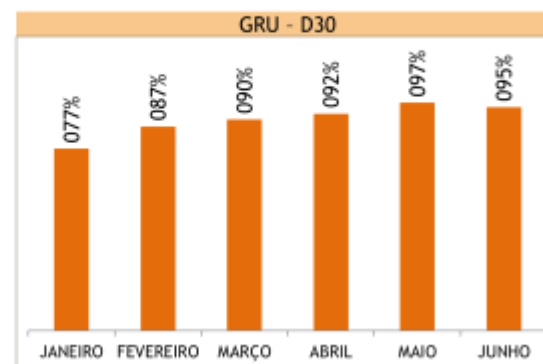
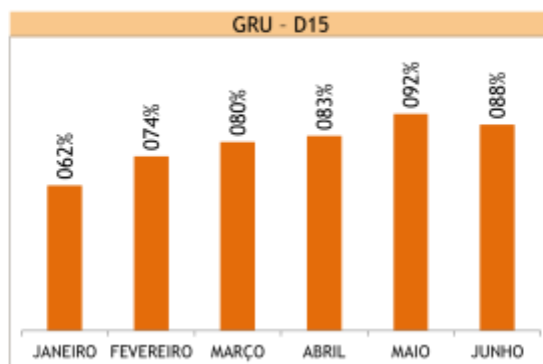
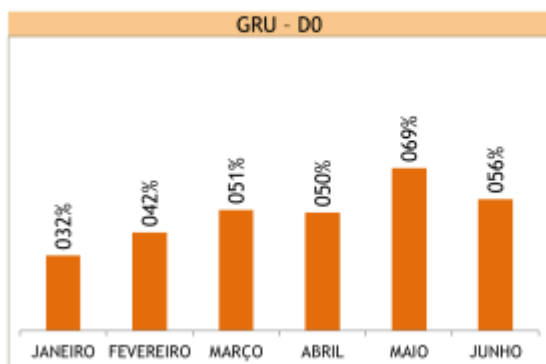
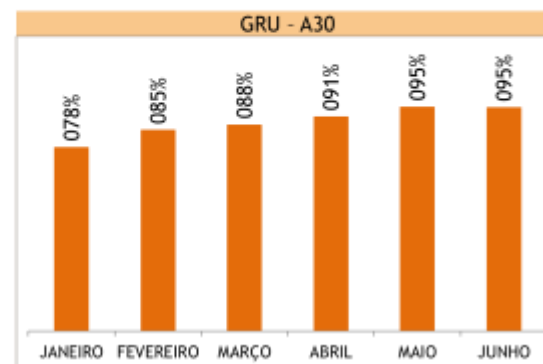
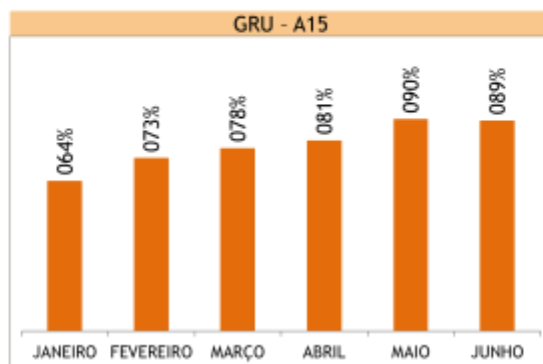
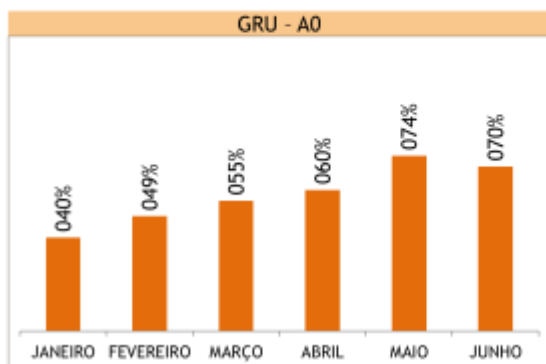


KPI 15: tempo de voo (min) SSA-GRU

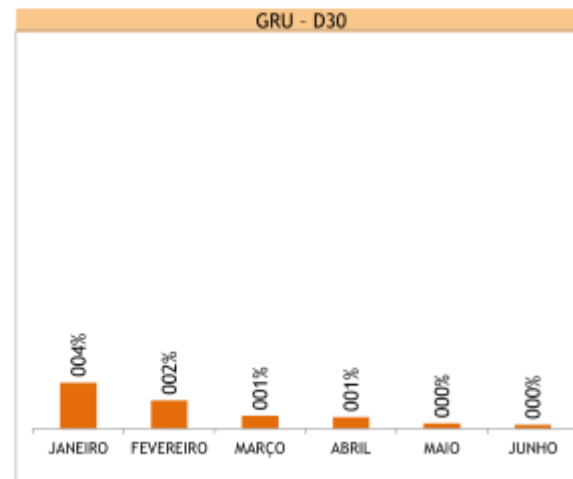
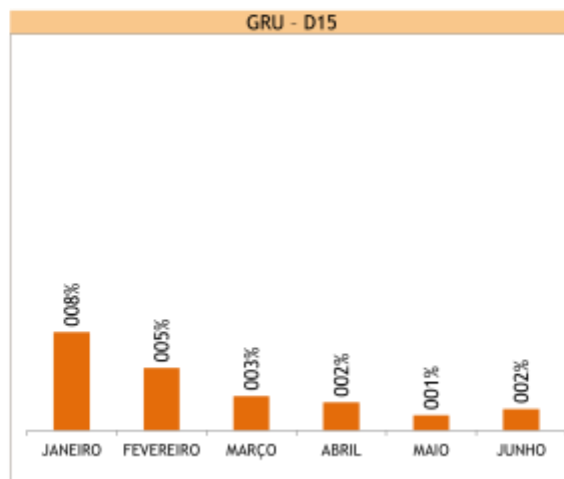
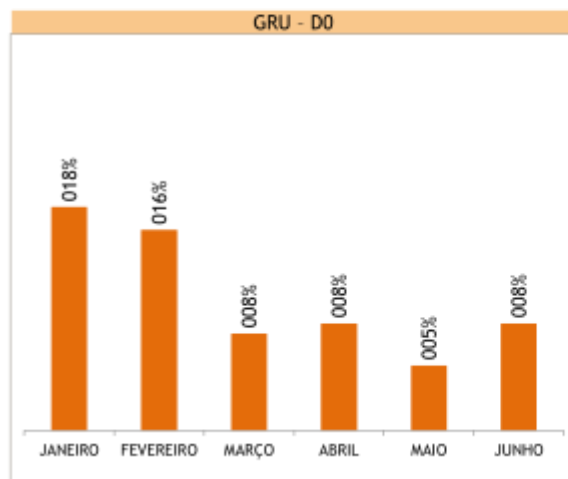
■ 2017 ■ 2018 ■ 2019



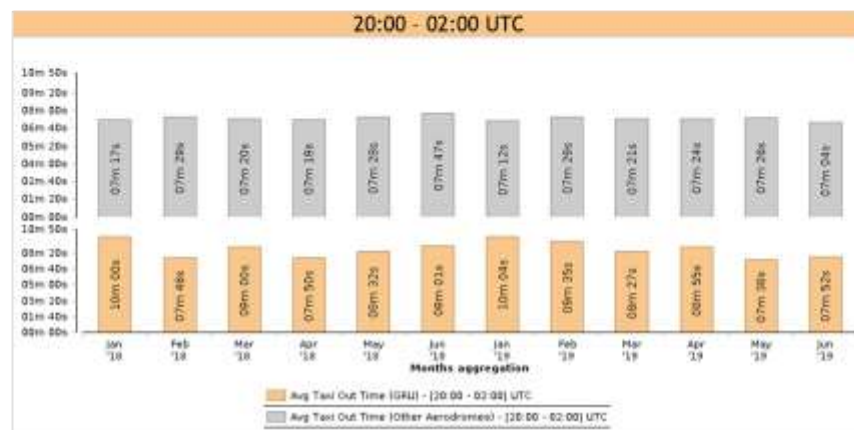
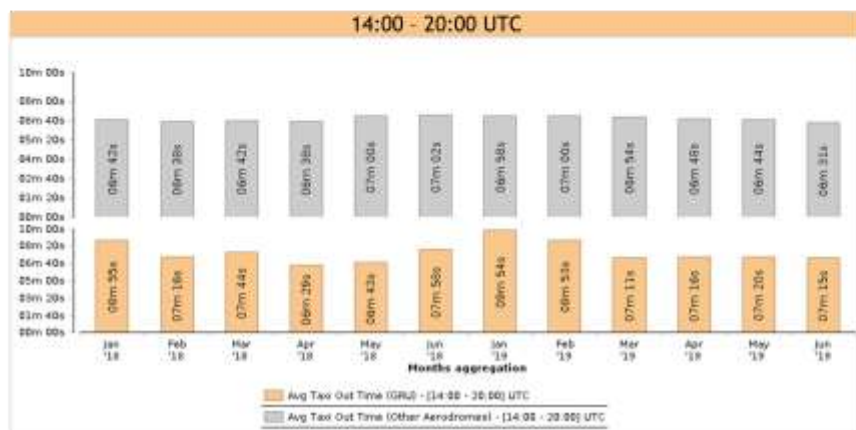
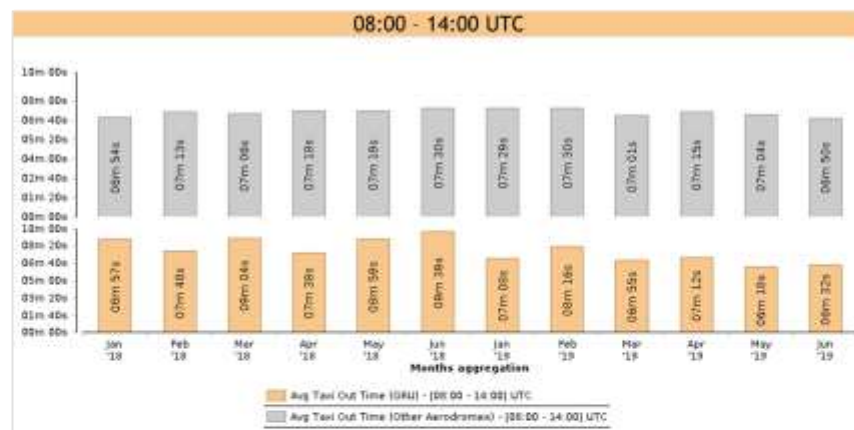
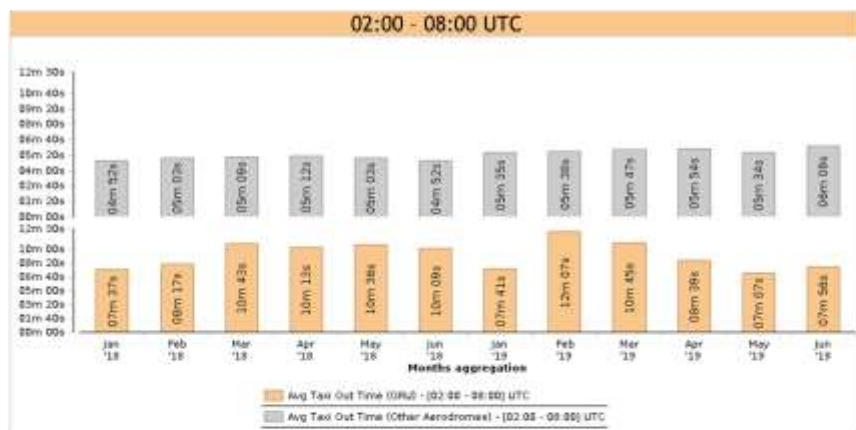
ON TIME PERFORMANCE (GRU)



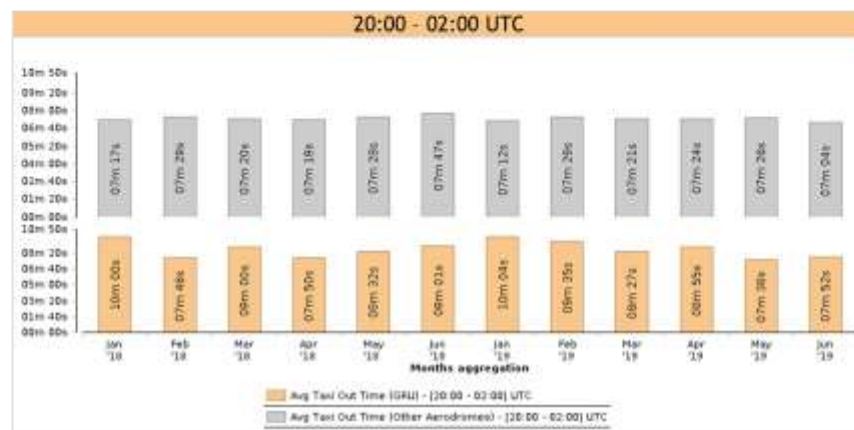
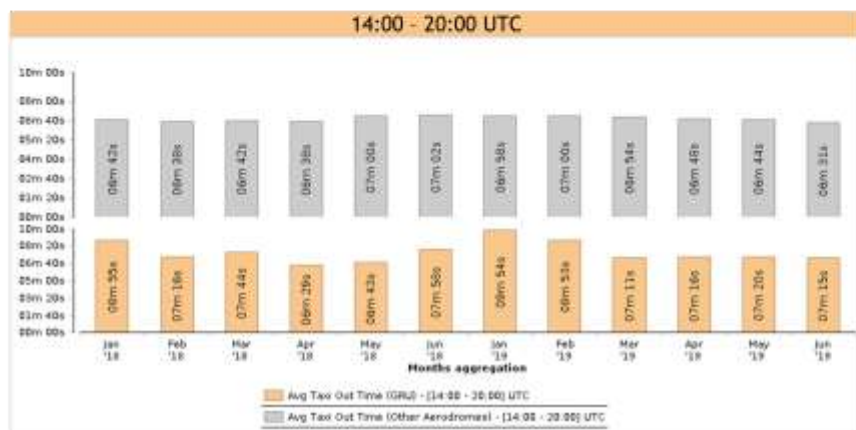
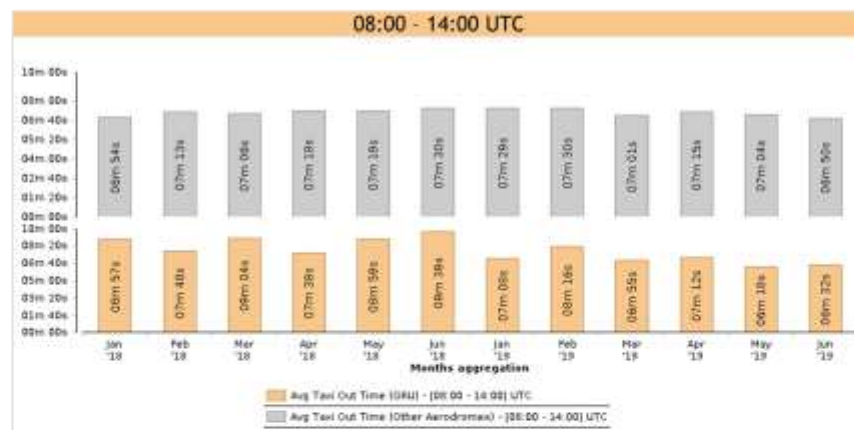
PERCENTAGE OF DELAYED FLIGHTS FROM GRU DUE TO ATC



TAXI TIME (TAXI-OUT IN GRU)

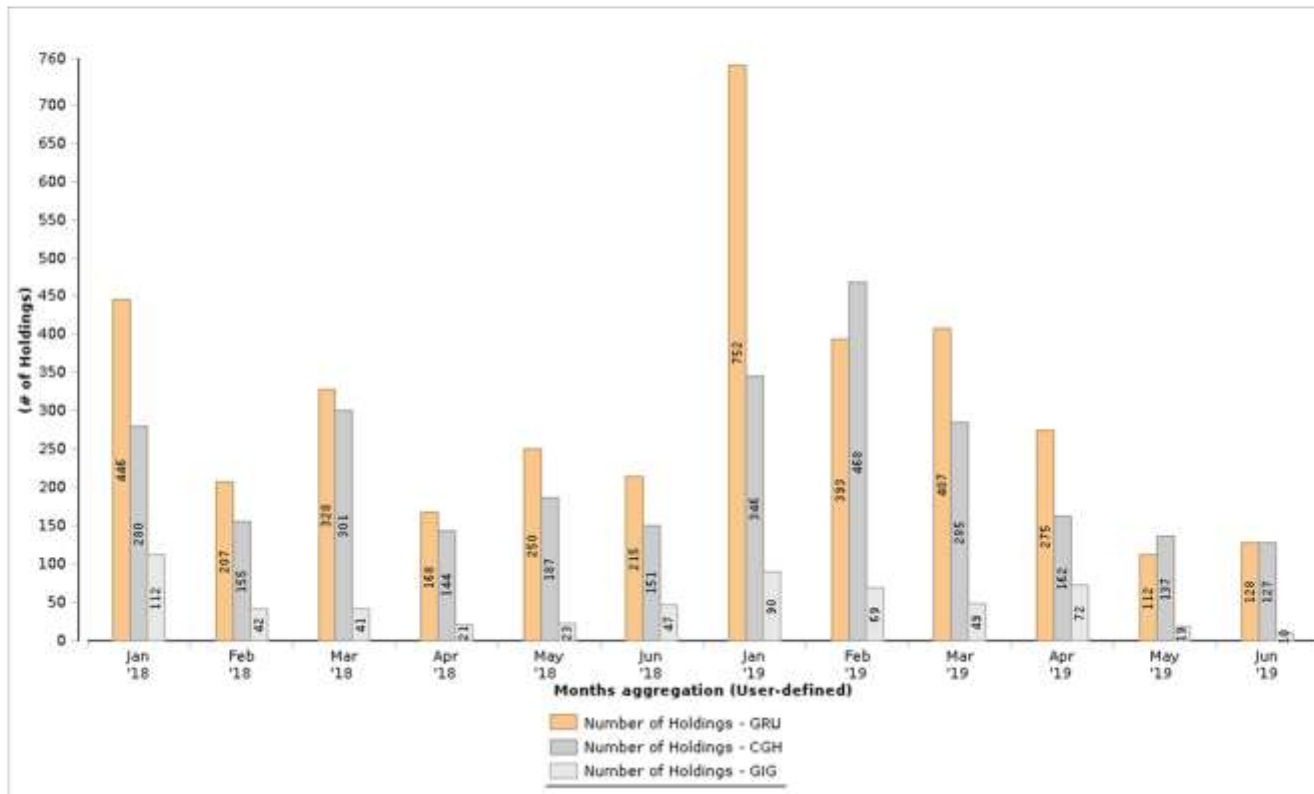


TAXI TIME (TAXI-OUT IN GRU)



HOLDINGS

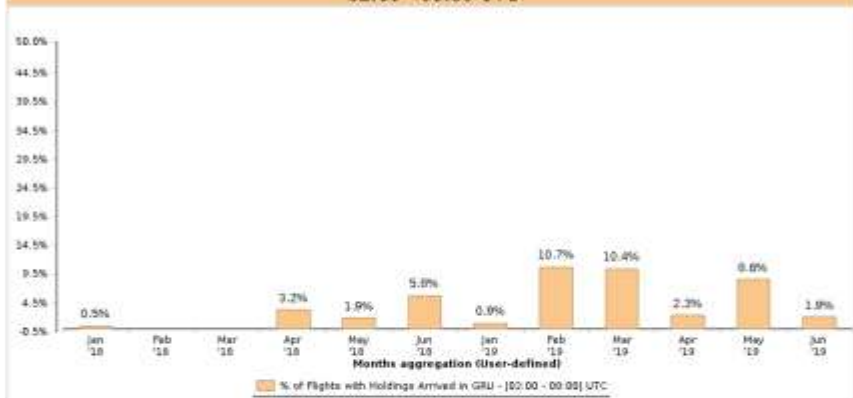
Number of holdings (Top 3 Airports)



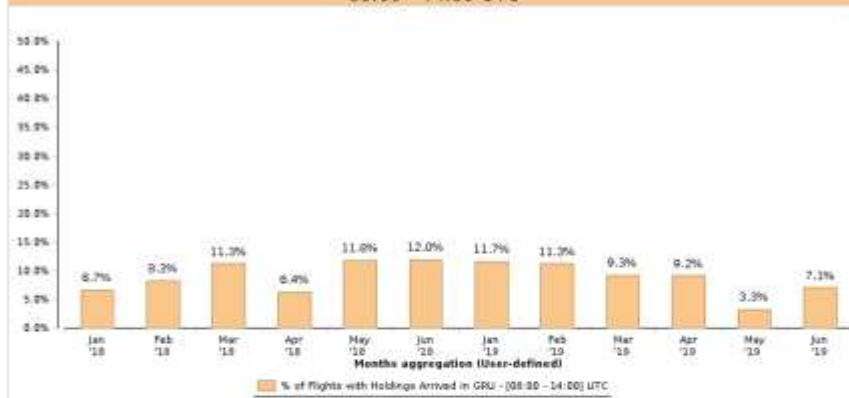
HOLDINGS

Percentage of flights with at least 1 holding arriving in GRU

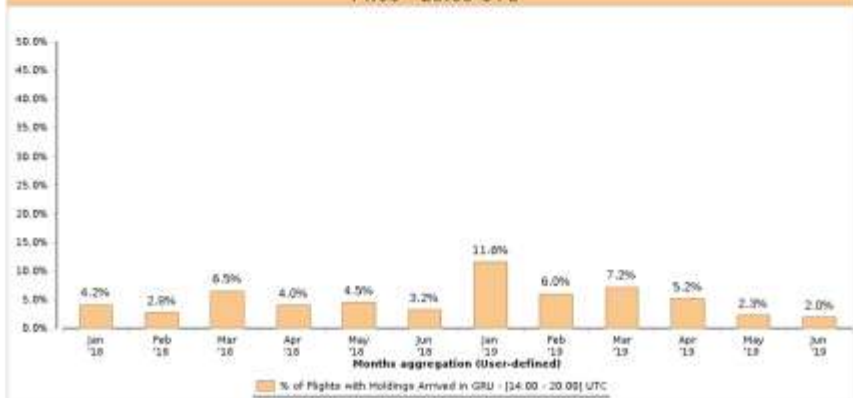
02:00 - 08:00 UTC



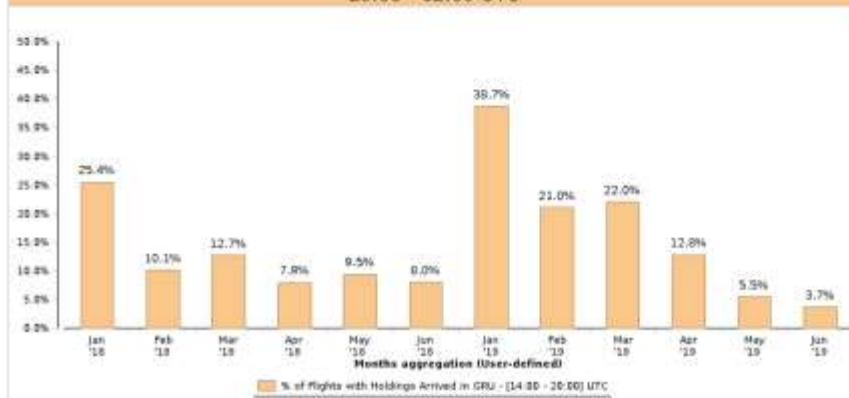
08:00 - 14:00 UTC



14:00 - 20:00 UTC



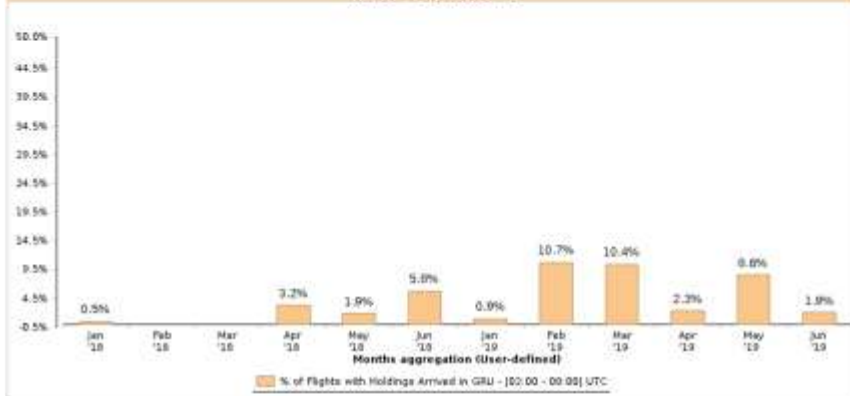
20:00 - 02:00 UTC



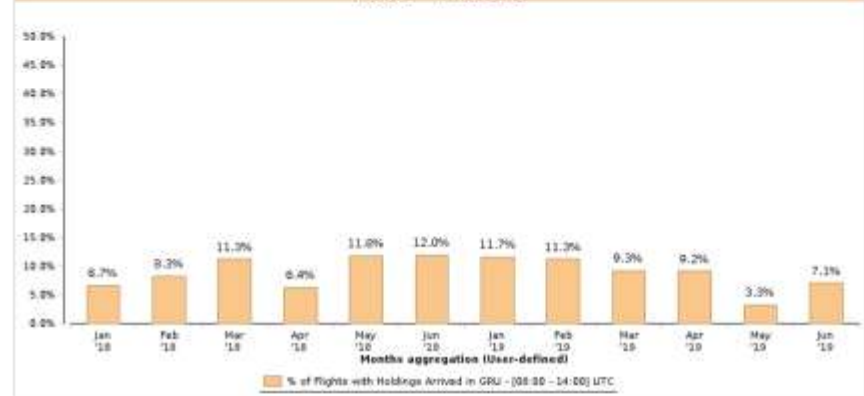
HOLDINGS

Percentage of flights with at least 1 holding arriving in GRU

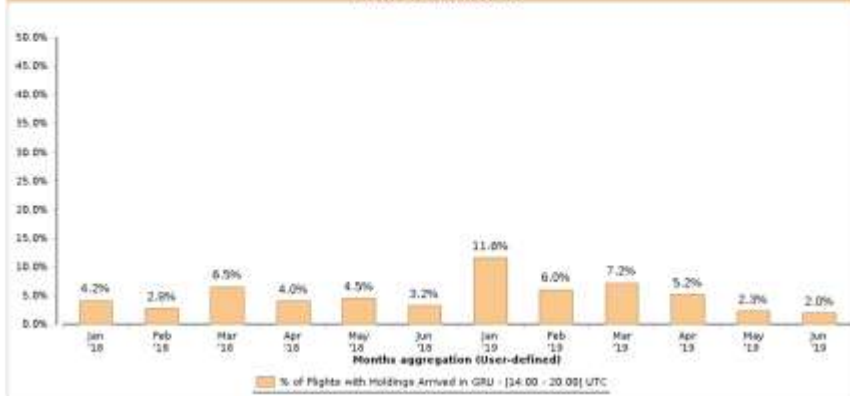
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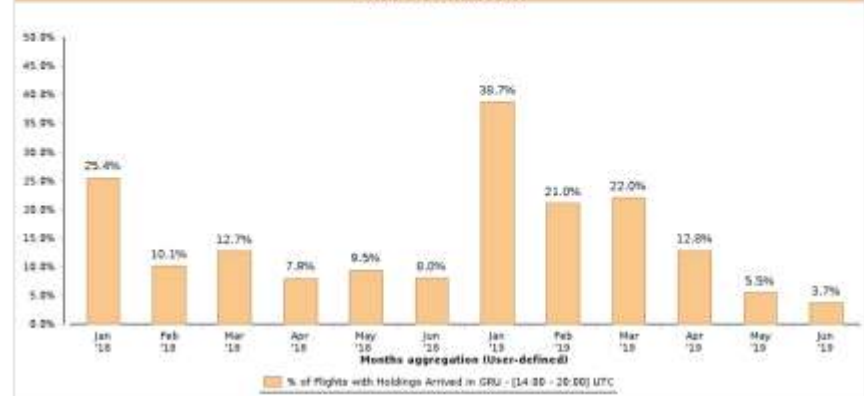
08:00 - 14:00 UTC



14:00 - 20:00 UTC



20:00 - 02:00 UTC



**SEGURIDAD
OPERACIONAL**

Riesgo Crítico			
2018		2019	
Ene	0	Ene	0
Feb	0	Feb	0
Mar	0	Mar	0
Abr	0	Abr	0
Mayo	0	Mayo	0

Incidente (Riesgo Potencial) EPTA-GR

Número de Riesgo Potencial			
2018		2019	
Ene	0	Ene	0
Feb	0	Feb	0
Mar	0	Mar	0
Abr	0	Abr	0
Mayo	0	Mayo	0

Número de TCAS/RA			
2018		2019	
Ene	0	Ene	0
Feb	0	Feb	0
Mar	0	Mar	0
Abr	0	Abr	0
Mayo	0	Mayo	0

Incurción en Pista EPTA-GR

Número de Incurciones en Pista

2018		2019	
Ene	0	Ene	2
Feb	1	Feb	0
Mar	0	Mar	1
Abr	0	Abr	1
Mayo	1	Mayo	0

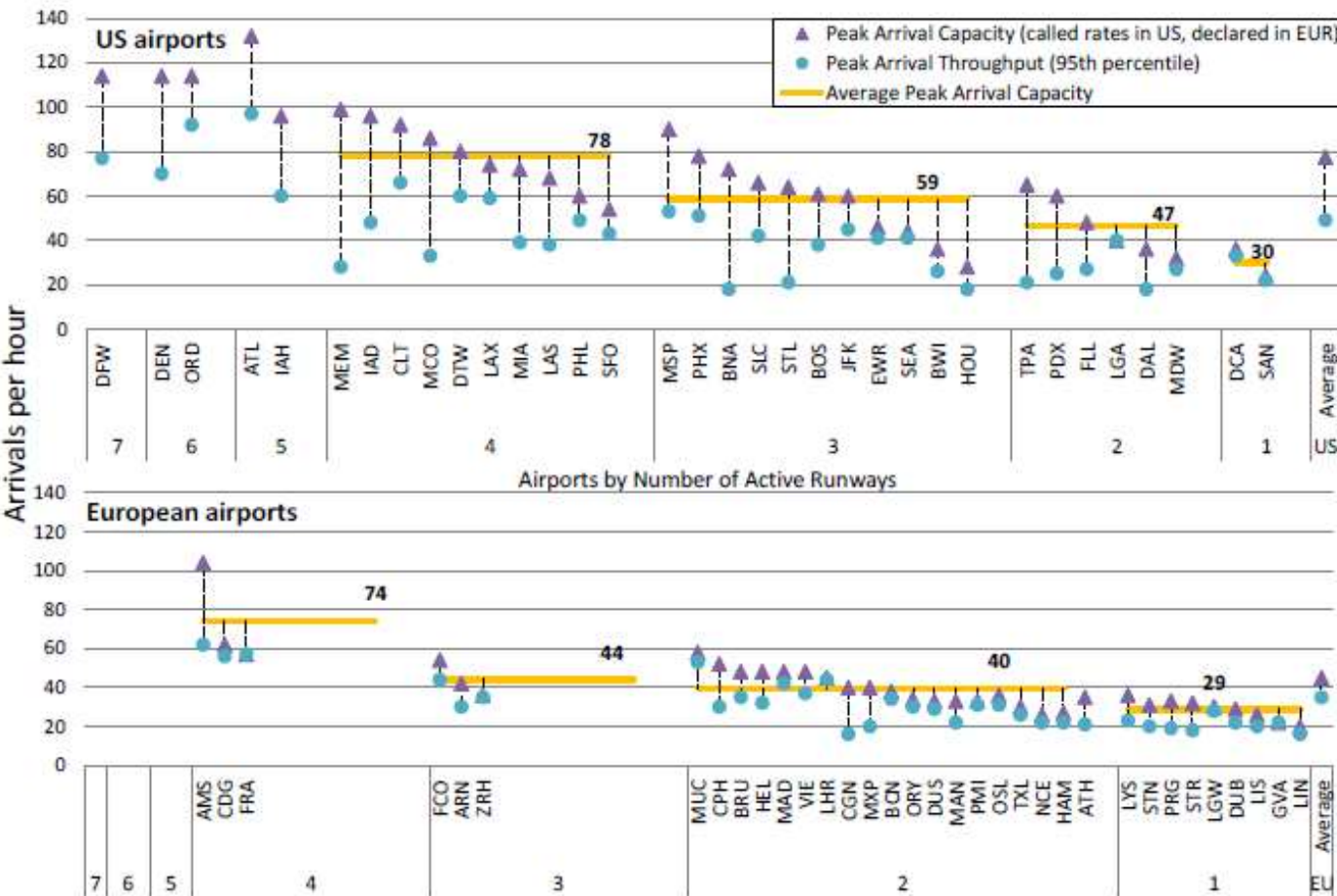
CAPACIDAD

Utilización de la Capacidad de Pista – GRU Airport

2018		2019	
Utilización Capacidad de Pista			
Ene	57	Ene	59
Feb	57	Feb	57
Mar	62	Mar	57
Abr	54	Abr	55
Mayo	56	Mayo	57

Utilización de la Capacidad de Pista – GRU Airport

Actual airport throughput vs. declared capacity (2015)



95th percentile airport peak arrival throughput

The peak arrival throughput is an approximation of the operational airport capacity in ideal conditions. It is the 95th percentile of the number of aircraft in the "rolling" hours sorted from the least busy to the busiest hour.

The indicator has, however, limitations when the peak throughput is lower than the peak declared capacity, in which case it is necessary to determine whether a variation in peak arrival throughput is driven by a change in demand or by a change in operational airport capacity.

Figure 3-10: Actual airport throughput vs. declared capacity (2015)

Indicadores de desempeño de los sistemas de navegación aérea en la Región SAM



13 August 2019