S1.2

The new concept

ADG, OFS and OES — how the pieces fit together

From a single system to two families

BEFORE

A single set of surfaces, of fixed dimensions, the same for all aerodromes.

OFS

Clear Surfaces

- Close to the runway
- Strict protection
- Obstacle-free space

OES

Evaluation Surfaces

- Further from the runway
- Impact is evaluated
- An aeronautical study is trigger

The main distinction of the workshop: some protect, the other evaluate.

Basis: Annex 14, Vol. I, Ch. 4 (Amendment 18).

ADG — Aircraft Design Group

The classification always depends on the critical aircraft operating at the aerodrome. ARC and ADG are two distinct keys:

– Clave de referencia de aeródromo

Tabla 1-1. Clave de referencia de aeródromo
(véanse 1.6.2 a 1.6.4)

Elementos de la clave 1	
Núm. de clave	Longitud de campo de referencia del avión
1	Menos de 800 m
2	Desde 800 m hasta 1 200 m (exclusive)
3	Desde 1 200 m hasta 1 800 m (exclusive)
4	Desde 1 800 m en adelante
Elementos de la clave 2	
Letra de clave	Envergadura
A	Hasta 15 m (exclusive)
B	Desde 15 m hasta 24 m (exclusive)
C	Desde 24 m hasta 36 m (exclusive)
D	Desde 36 m hasta 52 m (exclusive)
E	Desde 52 m hasta 65 m (exclusive)
F	Desde 65 m hasta 80 m (exclusive)

ADG — Grupo de diseño de aviones

Tabla 1-2. Grupo de diseño de aviones
(véase 1.8.2)
Aplicable a partir del 21 de noviembre de 2030

Grupo de diseño de aviones	Velocidad aerodinámica indicada en el umbral		Envergadura
I	Menos de 169 km/h (91 kt)	y	Hasta 24 m (exclusive)
IIA	Menos de 169 km/h (91 kt)	y	Desde 24 m hasta 36 m (exclusive)
IIB	169 km/h (91 kt) o más, pero menos de 224 km/h (121 kt)	y	Hasta 36 m (exclusive)
IIC	224 km/h (121 kt) o más, pero menos de 307 km/h (166 kt)	y	Hasta 36 m (exclusive)
III	Menos de 307 km/h (166 kt)	y	Desde 36 m hasta 52 m (exclusive)
IV	Menos de 307 km/h (166 kt)	y	Desde 52 m hasta 65 m (exclusive)
V	Menos de 307 km/h (166 kt)	y	Desde 65 m hasta 80 m (exclusive)

ARC

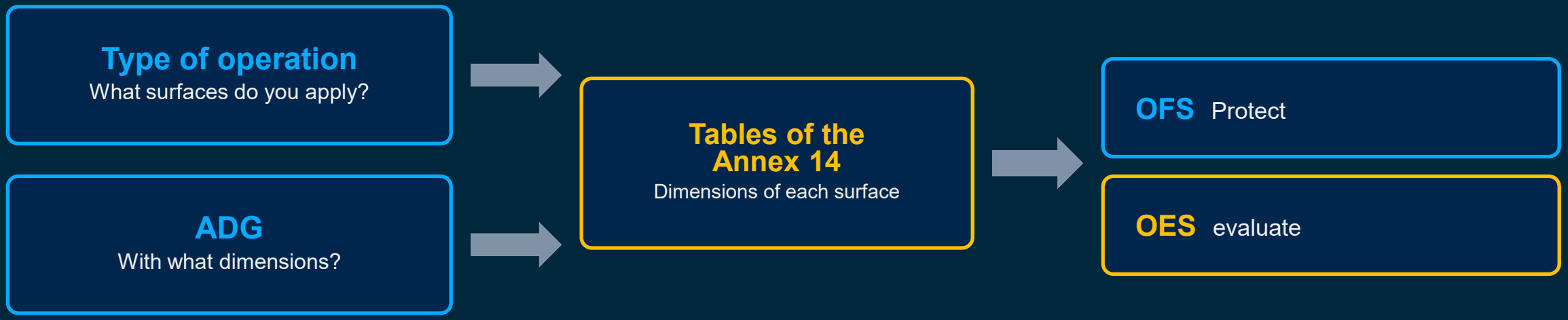
- Considers field length (+ wingspan)
- It serves for the INFRASTRUCTURE of the aerodrome

ADG

- Consider approach speed (+ wingspan)
- Serves ONLY for OLS

Tables: Annex 14, Vol. I, Ch. 4 (Table 1-1 ARC and Table 1-2 ADG).

How the pieces fit together



Two questions in parallel: the type of aerodrome operation defines WHICH surfaces apply; the ADG defines WITH WHAT dimensions. Both are consulted together in the tables in Annex 14.

Base: Annex 14, Vol. I, Chapter 4.

Flight Procedures (PANS-OPS) and OLS

What are PANS-OPS?

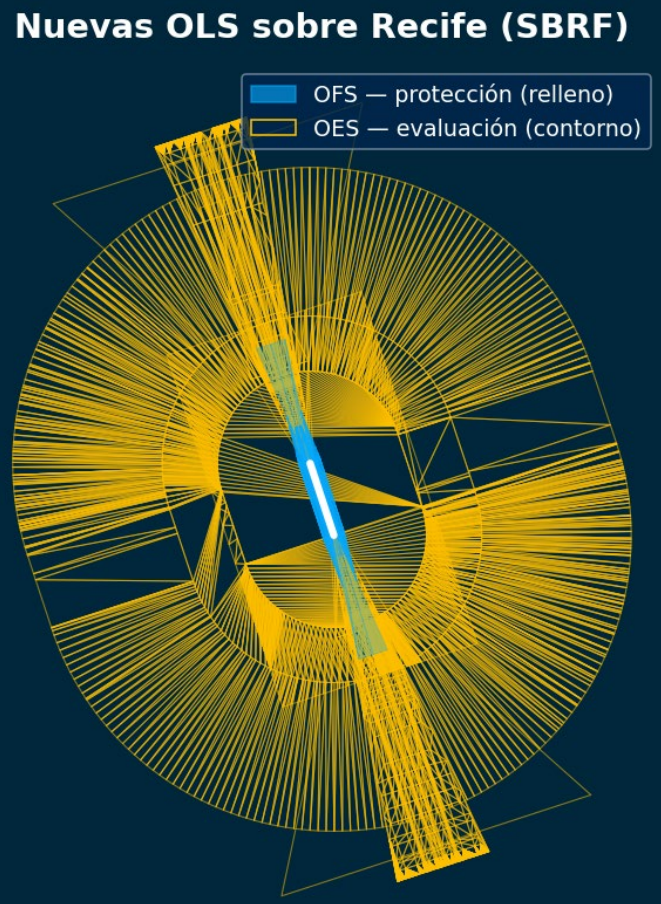
It's flight procedures — how aircraft exit, approach, and land by instruments. They are governed by ICAO Doc 8168 (PANS-OPS).

Their relationship with OLS:

The procedure defines the operation	The type of procedure (precision, non-precision, non-instrument) determines which OLS surfaces apply.
They share criteria	OES and aeronautical studies use criteria consistent with the design of Doc 8168 procedures.
They are designed together	OLS and procedures should be developed in a coordinated manner, not separately.

Base: PANS-OPS (Doc 8168); Annex 14, Vol. I, Chapter 4.

What it all looks like together — a real case



OFS en azul (relleno); OES en ámbar (contorno) — así se distinguen

Recife (SBRF): OFS (protection, in blue) wrapped by OES (assessment, in amber).

TO DISCUSS

At your main airport, What would they protect and what would they evaluate?

Let's think about it out loud: where would they put OFS and where would they put OES?