

S1.4

Obstacle Evaluation Surfaces(OES)

Purpose: determine the acceptability of obstacles by assessing their impact on operations. They don't ban: they trigger a study.

Why additional surfaces are needed

Away from the runway, operations change from one airfield to another. A single hard rule doesn't fit all.

- 1 Each aerodrome operates differently** Types of approaches, departures, procedures, and traffic vary from site to site.
- 2 OFSs are not enough alone** They protect the core near the runway, but they do not cover everything that can affect an operation.
- 3 Evaluation surfaces are needed** The OES cover a wider volume and assess the real impact, rather than prohibiting it outright.

That is why Amendment 18 adds a second family: the OES, which evaluate where OFSs do not reach.

The concept: three levels of flexibility

Standard

Predefined dimensions for the most common types of operation.

Modified

Adaptations of the standard to meet local particularities.

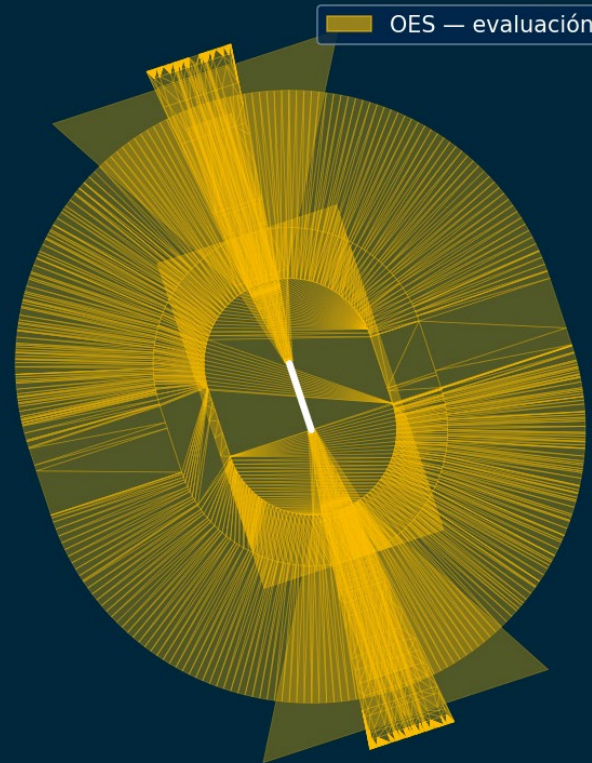
Specific

Custom designed for special operations.

From least to most personalization. Most aerodromes use standard ones.

What they look like — OES over a real airfield

OES sobre Recife (SBRF)



Superficies de Evaluación de Obstáculos — evaluación en zona amplia

Recife (SBRF): OES cover a wide volume around the runway, much larger than OFS.

The 5 OES surfaces

Las 5 superficies OES (estándar)

Ascenso en el despegue



Salida por instrumentos



Horizontal



Aprox. directa por inst.



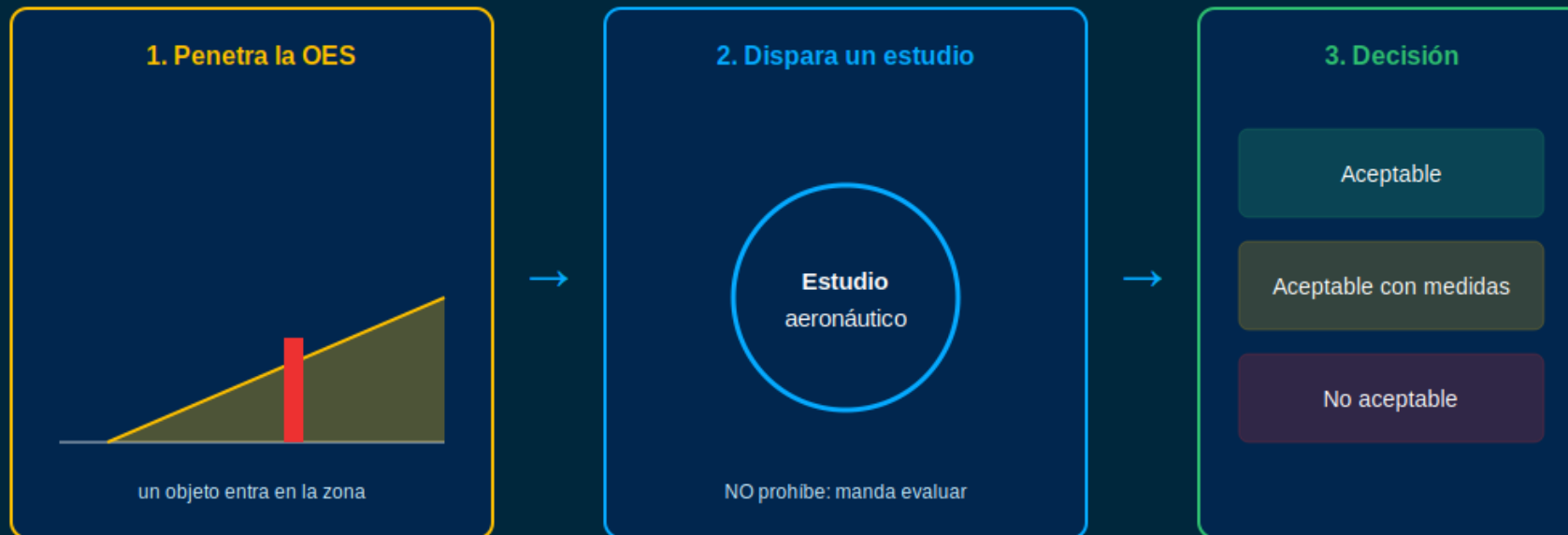
Aprox. de precisión



5 standard surfaces were developed to facilitate the implementation of the concept. They are closely linked to the development of flight procedures (PANS-OPS, Doc 8168): they are applied according to the operation of the aerodrome.

The key concept: surface-trigger

La OES es una superficie-gatillo



El obstáculo no queda prohibido de entrada: entra en un proceso de evaluación.

How they are applied — the right method

Step 1 — the operation

Does the aerodrome operation require standard OES? That defines WHAT surfaces they apply.

Step 2 — the ADG

If applicable, look at the ADG to read the dimensions in the tables in Annex 14.

A key detail: not all of them depend on ADG.

Vary with ADG

- Horizontal
- Take-off climb surface

Same for all ADGs

- Instrument departure surface
- Surface for straight-in instrument approaches
- Surface for precision approaches

Modified and specific OES

Modified

Adaptations of the standard:

- Increased heights or slopes
- Reduction of areas
- Requires stakeholder participation

Specific

Custom designed:

- For special operations
- When no standard will work
- Maximum technical and coordination effort

Include procedures designers (PANS-OPS). Any specific modification or design of an OES must be made with the participation of the person who develops the air navigation procedures. Their criteria and those of the surfaces have to be coherent.

TO DISCUSS

**Would your airport operation require standard OES,
or some adjustment?**

Precision approach, instrument outputs, complex terrain... Each operation changes the picture.