

**15
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**SOFITEL
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SM **ANAGEMENT
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Risk Management & EHSS Services

18 SAFETY GALA

The Int'l ESG Conference

Zero Rate: Anatomy of Greece's 4 January 2026 Airspace Shutdown

**A systems safety anatomy of a communications crisis
and why the human element kept aircraft well clear**

Dr. Stathis Malakis | Air Traffic Controller | Head of ATC SMS Section, Hellenic Aviation Service Provider

Safety Gala 2026 - Session IV: Integrating Technology into Health & Safety

**Day 2 | Delphi
Interactive Workshops**

The shutdown was the barrier

ZERO RATE

accepting no new traffic into
affected volumes

What happened

A wide communications
degradation affected VHF,
emergency frequency and
ground-ground links.

What did not happen

No reported loss of
published separation
minima. No reported
TCAS RA.

What made the difference

Controllers, pilots and
network partners
reduced demand and
managed conflicts early.

**Safety was not compromised. Risk rose during the acute phase -
then was actively driven down.**

The aircraft were kept separated and well clear.

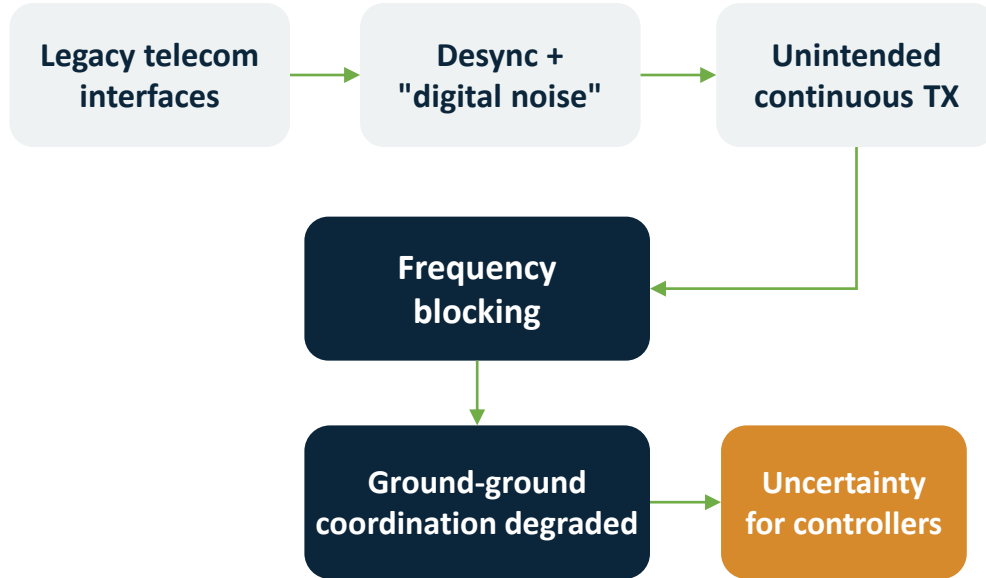
Operating picture at the onset



The system did not lose the traffic picture.
The radio-telephone layer became unreliable and hard to diagnose.

Not a single-point failure - a coupled communications disturbance across air-ground and ground-ground layers.

Anatomy of the technical degradation



Systems safety lens: the harmful state was not only "equipment failed". It was degraded observability, degraded communication and rising coordination workload at the same time.



Critical timeline: from noise to controlled recovery

1. Contain uncertainty

diagnose while still controlling traffic

2. Stop new demand

reroute, hold, prevent further loading

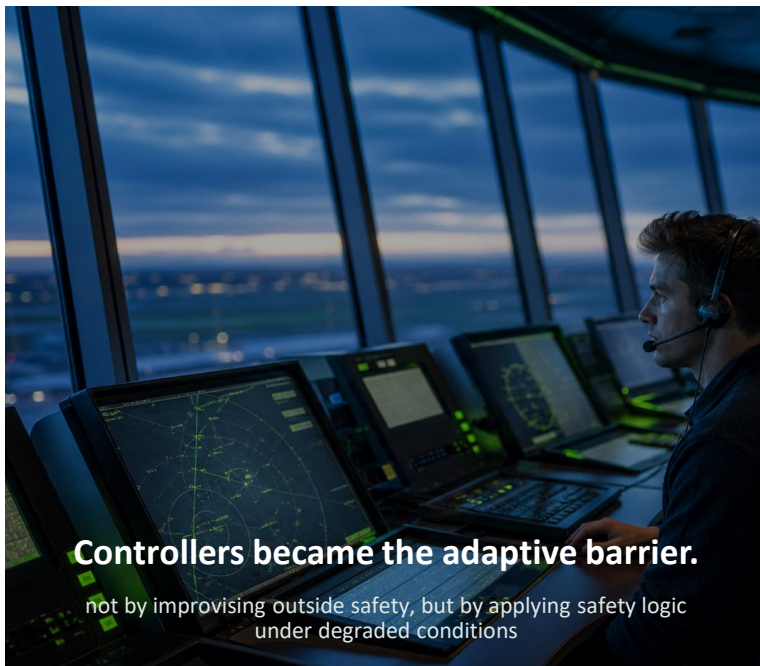
3. Restore cautiously

limited rates, sectoring, gradual capacity ramp



The decisive move was not speed alone - it was conservative sequencing under uncertainty.

How the human element kept aircraft well clear



Predictive conflict management

potential convergences solved early, often minutes before CPA

Communication workarounds

blind transmissions, 121.5 when usable, relays via aircraft and other units

Network cooperation

adjacent ACCs held, rerouted or retained aircraft as practicable

Flow control

zero rate removed new demand and bought time for safe recovery

Reported outcome: no SMI and no TCAS RA

Safety preserved; risk elevated and controlled

SAFETY OUTCOME

No reported separation-minima
infringement
No reported TCAS RA

RISK EXPOSURE

Unreliable communications
Incomplete technical diagnosis
High cognitive and coordination
workload

controlled by conservative decisions

Risk rose at the same time that safety margins were being defended.

That is the difference between a dangerous state and a managed degraded mode.

Systems safety lessons: move resilience upstream

Sense & diagnose

Decide & coordinate

Recover & learn

1

2

3

End-to-end telemetry
Logs and fault tracing
Remote diagnostics

Early NM involvement
NOTAM template
Joint HASP-COM provider
playbook

Staged capacity return
VoIP/VCS/RCS modernization
CISM and refresher training

The incident showed strong operational resilience at the front line.
The improvement task is to make the system observability, governance and recovery support
equally strong.

What we should remember

**Zero rate bought time.
Controllers used it.
The system must learn from it.**

1. Conservative capacity controls are a safety feature.
2. The human element was the active barrier, not the weak link.
3. Modernisation and rehearsed crisis governance reduce future dependence on heroics.

Zero rate is safety refusing to gamble.

