



# INFORMAZIONI AERONAUTICHE È SAFETY

*Un confronto per un chiaro e accessibile utilizzo dei NOTAM*

**Maurizio SALVESTRINI** – ENAV Safety Manager



**IFSC - Italian Flight Safety Committee**  
**Webinar 14 Ottobre 2021**



- Partiamo da un caso concreto
- Cosa dicono i dati ENAV
- Il nocciolo della questione
- Gli strumenti a nostra disposizione
- Uno sguardo al futuro



# INFORMAZIONI AERONAUTICHE

**È** SAFETY

Un confronto per un chiaro  
e accessibile utilizzo dei NOTAM

**GIOVEDÌ, 14 OTTOBRE 2021**

ORE 9:15 - 13:30

Il webinar si terrà sulla piattaforma ZOOM  
Non è necessaria la registrazione per partecipare.

CON IL PATROCINIO DI:

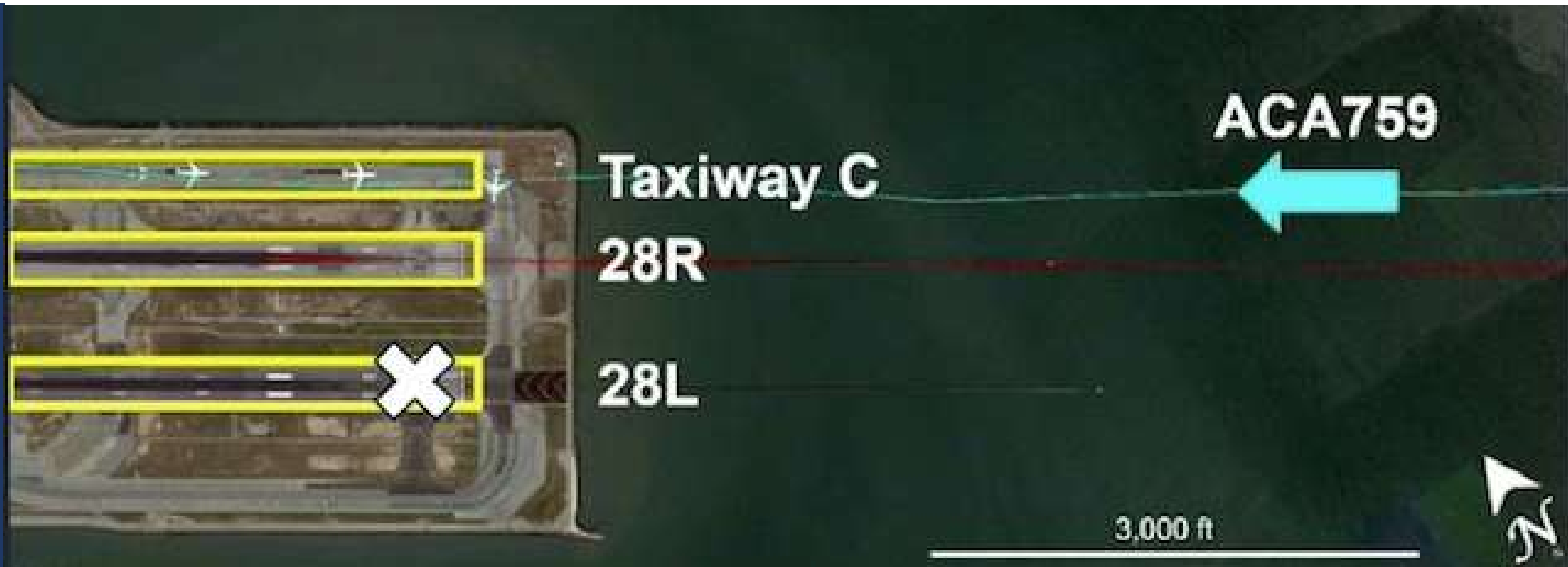


Italian Flight Safety Committee

IN COLLABORAZIONE CON:







**6.1 SFO Runway Information**

SFO had four paved runways designated as 10L/28R, 10R/28L, 1R/19L, 1L,19R. Runway 10L/28R was 11,870 feet long and 200 feet wide and was an asphalt/grooved runway. Runway 10R/28L was 11,381 feet long and 200 feet wide and was an asphalt/grooved runway. Runway 1L/19R was 7,650 feet long and 200 feet wide and was an asphalt/grooved runway. Runway 1R/19L was 8,650 feet long and 200 feet wide, and was an asphalt/grooved runway. At the time of the incident runway 1R/19L and 10R/28L were NOTAM closed for construction, and all the runway and approach lights to those runways were not illuminated. Runway 28R was equipped with centerline lights, touchdown zone lights, and an approach lighting system with centerline sequenced flashers (ALS F2 see example, figure 5). Runway 28R was also equipped with a 4-light precision approach path indicator (PAPI, see example, figure 4) located on the left side of the runway with a 3.00-degree glide path.

**E. FACTUAL INFORMATION**

**1.0 History of Flight**

AC flight 759 was a scheduled flight from YYZ to SFO. The first officer reported that he obtained the dispatch release while at his residence, before leaving for the airport. Once at the airport, the first officer was notified by the flight's dispatcher that there was a new version of the release out, after which he acquired the new release via his iPad and a hard copy from the airline's printers in the briefing room. The crew met at the gate and noted that the inbound flight's arrival delayed their departure. AC flight 759 had an original scheduled departure time of 2055 eastern daylight time (EDT) (0055Z) and an original arrival time of 2303 PDT (0603Z); however, it departed 30 minutes late. The crew discussed the weather expected enroute and reviewed their dispatch paperwork, which included NOTAMs for SFO. Both crewmembers indicated that they were aware of the closure of runway 28L, which was NOTAMed to occur at 2300 PDT (0600Z).

Taxiway Overflight  
Air Canada Flight 759  
Airbus A320-211, C-FKCK  
San Francisco, California  
July 7, 2017



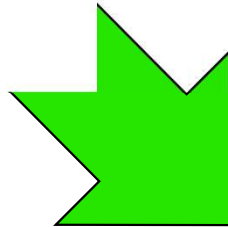
Incident Report  
NTSB/AIR-18/01  
PB2018-101561



### Recommendation A-18-24 to the FAA on Preflight Information:

From a human factors perspective, the preflight briefing system is archaic and poorly designed. This Air Canada crew missed two warnings about the closed runway in SFO, first in pre-departure and secondly, via ACARS before landing. Concerns about legal liability rather than operational necessity, drive the current system to list every possible Notice to Airmen (Notam) that could, even under the most unlikely circumstance, affect a flight.

The current system prioritizes protecting the regulatory authorities and airports. It lays an impossibly heavy burden on individual pilots, crews and dispatchers to sort through literally dozens of irrelevant items to find the critical or merely important ones. When one is invariably missed, and a violation or incident occurs, the pilot is blamed for not finding the needle in the haystack!



The problem of hard-to-read codes and irrelevant information has been pointed out to the FAA for more than 15 years. In 2012 it was even put into Public Law 112-153 (Pilot's Bill of Rights) and FAA was given one year to address. This incident makes it clear that there is much more work to be done. This is a safety issue that calls for urgent action.

Bruce Landsberg - Vice Chairman NTSB



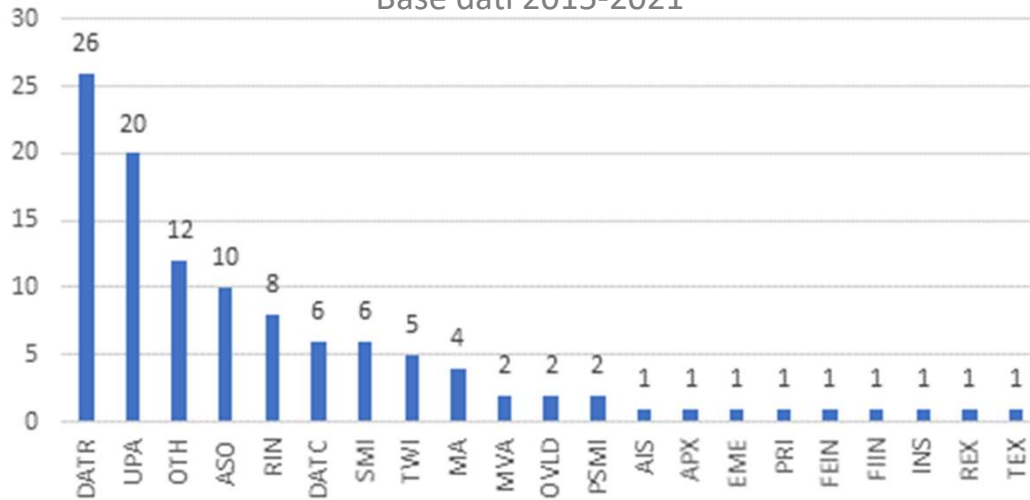
“NOTAMs contain dozens of notices of varying importance [...]

From a human factor's perspective, we found that the presentation of information in the NOTAM the crew received **did not effectively convey the information** about the runway closure.

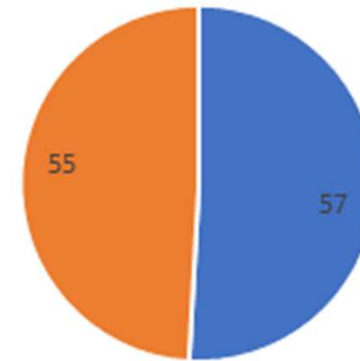
Had they been aware of the closure, the pilots almost certainly **would've suspected an unusual airport configuration with changed lighting patterns.**

The incident at SFO makes it clear that there is still much more work to be done on NOTAMs. **This is a safety issue that calls for urgent action.”**

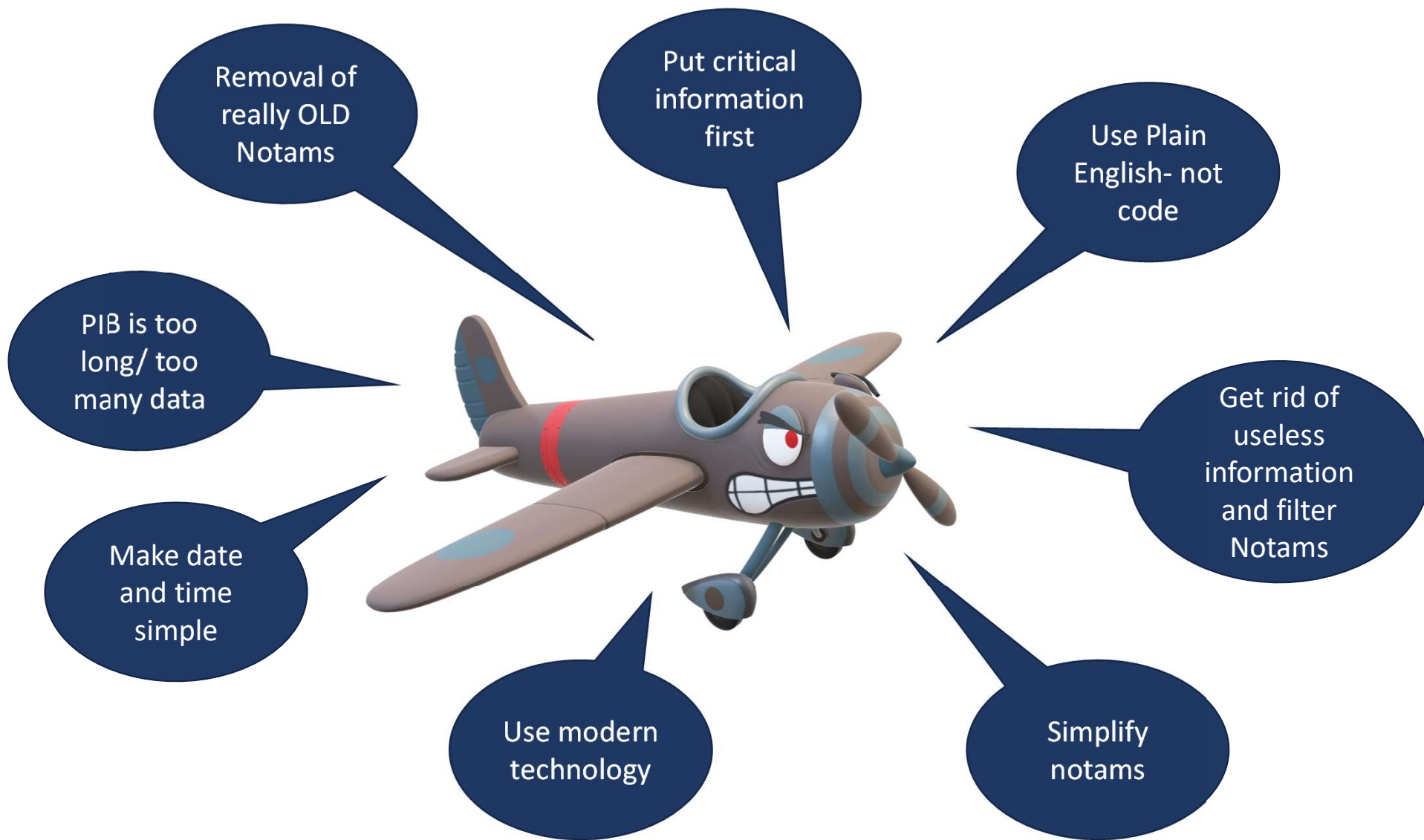
Eventi "NOTAM"  
(suddivisione per tipologie)  
Base dati 2015-2021



Eventi "NOTAM"  
(suddivisione per contributo ATM)



■ ATM contribution NO ■ ATM contribution YES

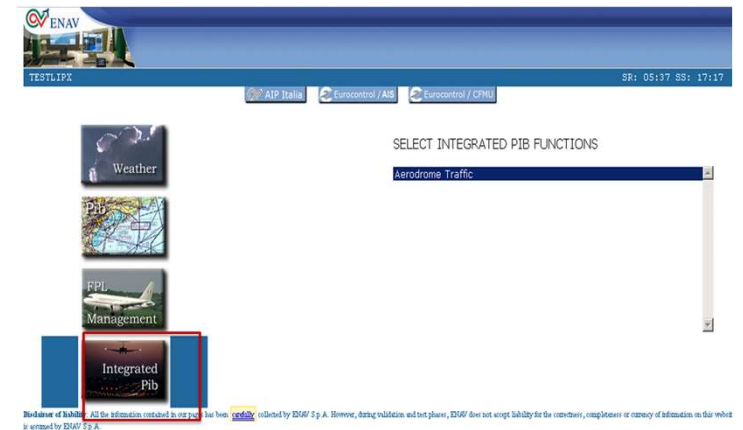




## ENAV Self Briefing - Il Presente

Self-Briefing (SB), un sistema di browser web automatico, disponibile con menu self-driven per consentire il briefing integrato, la fornitura flessibile e la presentazione dei dati, che sono necessari durante la fase di pre-volo per la preparazione e l'esecuzione di un volo;

Permette il processo di briefing generico migliorando l'accesso e la fornitura di varie fonti di dati/informazioni come NOTAM, SNOWTAM, messaggi MET, per eseguire un volo sicuro con invio FPL senza stress e comprensivo dei relativi messaggi di follow-up;



PIB/PRE FLIGHT INFORMATION BULLETIN  
ROUTE BULLETIN FOR FLIGHT: RYR2ZN  
AD DEP: LIRN AD DES: LIPZ DOP: Mon, 11 Oct 2021

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ACFT ID.....: RYR2ZN
DATE OF FLIGHT.....: 2021-10-11
EOBT.....: 1750
ENCODED FOR FLIGHT RULES.....: IFR/VFR
DEPARTURE AD.....: LIRN (NAPOLI/CAPODICHINO)
ARRIVAL AD.....: LIPZ (VENEZIA/TESSERA)
FLIGHT LEVEL.....: 300
ALTERNATE AD (s).....: LIPE
EN-ROUTE ALTERNATE (s) (RALT)...:
FIR (s).....: LIRR LIMM
ROUTE.....: TEA ALAXI INSOX OKDEB PEMAR TIBER GIKIN SOVAN AMTEL
NUKNI BIKTU OGAPU GOXIN NIMUM SOVUB OTGIG
REMARKS.....: NOTAM INCLUDED:
- MISCELLANEOUS ENCODED

PIB IS BASED ON NOTAM RECEIVED UNTIL 11 Oct 2021 14:35
UTC

PIB INCLUDES ONLY INFORMATION CONCERNING ADEP,
ADES AND SIGNIFICANT POINTS (FIX OR COORDINATES)

PIB INCLUDES ONLY INFORMATION AFFECTING PERIODS
BETWEEN 03 HOURS BEFORE EOBT TO 16 HOURS AFTER
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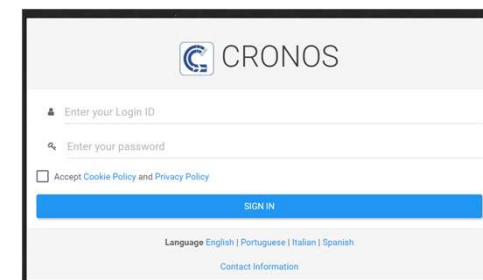
## CRONOS - Complete Reliable NOTAM System – Il Futuro

CRONOS è un sistema modulare per la gestione dinamica dei dati aeronautici che risponde ai requisiti ICAO

Il sistema permetterà di migliorare i processi di produzione per l'erogazione dei servizi di pertinenza del NOF Italia e ARO/CBO Roma/Milano, supportando la produzione di:

- ❑ NOTAM con richieste elettronicamente gestite da parte dell'originatore ;
- ❑ creazione dei bollettini informazioni pre-volo (PIB), integrati con la parte OPMET per la produzione documentale meteorologica;
- ❑ Messaggi di piani di volo (FPL) e messagistica associata.

La natura modulare ed estensibile di CRONOS consente di soddisfare i requisiti di gestione dei dati aeronautici dinamici, che sono raccolti e resi disponibili in uno specifico database, dinamico ad alte prestazioni, utile per la condivisione, all'interno dell'infrastruttura SWIM, con applicazioni di terze parti, supportando anche la fruibilità da dispositivi mobili



### AERONAUTICAL INFORMATION SERVICES

#### Pre-Flight Information Bulletin

13 OCT 2021 10:01 UTC

IDS

ICD Aeronautical Information Services  
Via del Corallo, 100000 Roma  
www.aism.it  
ids@ism.it

#### LATEST PUBLICATIONS:

AIP AIRAC AMDT 011/2020 EFFECTIVE DATE 03 DEC 20

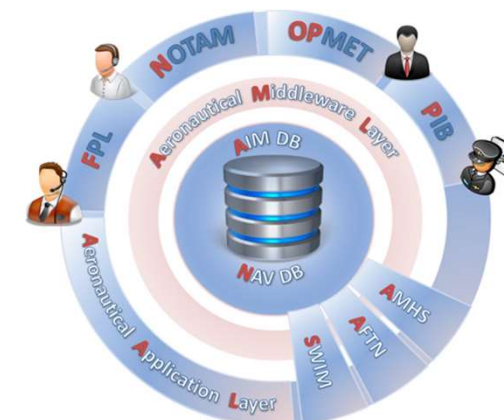
AIC 010/2019 EFFECTIVE DATE 21 NOV 19

#### AIC CHECKLIST

AIP

A014/2007 A001/2008 A014/2008 A005/2010 A012/2010 A004/2012

A006/2017 A010/2017 A017/2017 A008/2013 A011/2013 A017/2013





Originatore  
del dato

Utilizzatore  
del dato

Regolatore

AISP



**Grazie**

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[enav.it](http://enav.it)