

every flight



ACADEMY

ENAV's Academy is an international centre of research and training in the field of air navigation for ENAV's operational and administrative staff, ANSP (Air National Service Provider) and other companies operating in the aeronautical sector.

The Academy's activities are carried out in accordance with national and international standards and regulations. They are carried out in two locations: the Training Centre in Roma offers specialised technical, managerial and ongoing professional development courses for ENAV personnel whilst the Forli Centre mainly focuses on courses for *ab initio* training of Air Traffic Controllers and hosts other activities for external personnel.

ENAV's Academy educational activities are carried out by specially trained technical, operational and administrative personnel to teach and to use state of the art equipment in order to guarantee that training accurately reflects a realistic work environment.



The Training Centre of Forli, founded in 2005, occupies an area of over 8,000 m² and utilises the most technologically advanced equipment: 2 radar simulators using 12 suites for 24 positions, one procedural simulator using 4 suites for 8 positions, 8 tower simulators 270° 3D, one CRJ certified flight simulator and 26 radar and tower simulator stations for self-learning (part task trainer).

The Centre is located in the heart of an important aeronautical centre, with Forli's Ridolfi Airport, the F. Baracca Aeronautical technical Institute and the second Aerospace Engineering Faculty of the University of Bologna located in the immediate vicinity, with whom ENAV has integrated its professional and technical resources to cooperate in aeronautical projects.



TERRITORIAL ORGANIZATION

○ ACC: AREA CONTROL CENTRE
BRINDISI - MILANO - PADOVA - ROMA

— Controlled airspace border



APP - APPROACH CONTROL
TWR - CONTROL TOWER
AFIS - AERODROME FLIGHT INFORMATION SERVICE

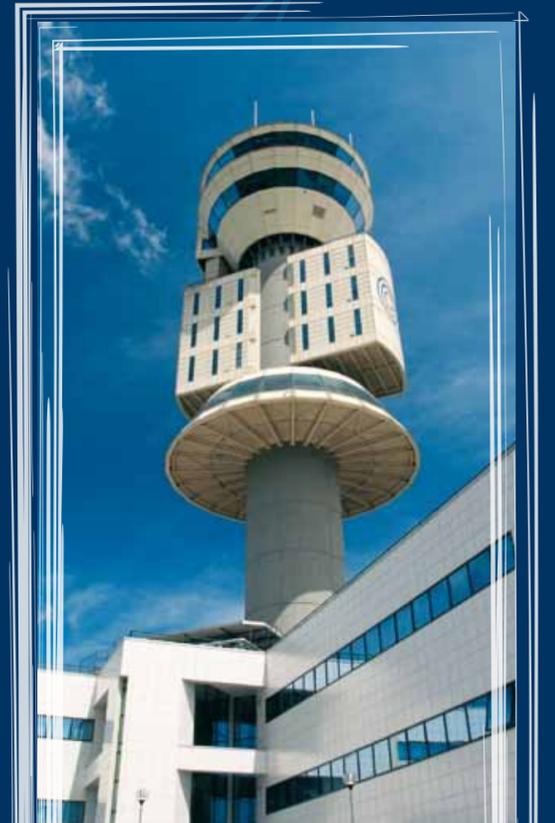
- | | |
|--|--|
| LIGURIA
GENOVA TWR e RADAR/APP
ALBENGA AFIS | MARCHE
ANCONA TWR e APP
UMBRIA
PERUGIA TWR e APP |
| PIEMONTE
TORINO CASELLE TWR e RADAR/APP
TORINO AERITALIA AFIS
CUNEO AFIS e TWR | LAZIO
RIETI AFIS
ROMA URBE TWR
ROMA FIUMICINO RADAR TWR |
| LOMBARDIA
MILANO MALPENSA RADAR TWR
MILANO LINATE RADAR TWR
BERGAMO RADAR TWR
BRESCIA TWR | ABRUZZO
PESCARA TWR e APP |
| TRENTINO ALTO ADIGE
BOLZANO AFIS | CAMPANIA
NAPOLI TWR e RADAR/APP
SALERNO AFIS |
| FRIULI VENEZIA GIULIA
RONCHI DEI LEGIONARI TWR e RADAR/APP | PUGLIA
FOGGIA AFIS
BARI TWR e RADAR/APP
GROTTAGLIE TWR e APP |
| VENETO
VENEZIA TESSERA TWR e RADAR/APP
VENEZIA S. NICOLO AFIS
VERONA RADAR/APP
PADOVA AFIS | CALABRIA
CROTONE AFIS
LAMEZIA TERME TWR e RADAR/APP
REGGIO CALABRIA TWR e APP |
| EMILIA ROMAGNA
PARMA TWR e APP
BOLOGNA TWR e RADAR/APP
FORLI TWR | SICILIA
PALERMO TWR e RADAR/APP
CATANIA RADAR TWR
PANTELLERIA TWR
LAMPEDUSA AFIS/TWR |
| TOSCANA
FIRENZE TWR e RADAR/APP | SARDEGNA
OLBIA TWR e RADAR/APP
ALGHERO TWR e APP
CAGLIARI TWR |

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Behind every flight

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Behind every flight

ENAV is the Italian company which offers services for air traffic control and other essential air navigation services in Italian skies and national airports. Airspace is a precious and limited resource that must be managed punctually, safely and in operational continuity and which must be in line with the growth of the aeronautical sector.

ENAV provides a safe flight environment to thousand of aircrafts in our skies and harmonious traffic conditions on a daily basis.

These services are guaranteed thanks to the efforts and the competence of the company's highly qualified professional staff.



INVESTMENTS

Between 2003 and 2010 ENAV has launched a new policy aimed at raising investments. These have reached 1,500 million Euros, 70% of which have been assigned to the Safety of air traffic control.

SERVICES

ENAV's personnel provides air traffic control services and all other assistance services during take off, landing and crossing, operating from 40 national airports. Each phase of the process is managed by ACCs (Area Control Centres), located in Brindisi, Milano, Padova and Roma. ENAV carries out these and many other navigation activities which are fundamental for air traffic safety 24 hours a day.

RESEARCH & DEVELOPMENT

ENAV is actively involved in the main European R&D initiatives aimed at defining and validating new operational concepts in order to increase the efficiency, competence and safety of flight assistance services.

TECHNOLOGICAL EQUIPMENT AND APPARATUS

Area Control Centres (ACCs) and the company's Control Towers are equipped with cutting edge technologies. These operate through a number of important systems, also owned

by ENAV, which are necessary for communication, navigation and surveillance. They are located throughout the national territory and in airports. Air Traffic Controllers (ATCOs) oversee the management of the aircrafts and guide them using the data coming from 62 primary and secondary radars and 11 ground radars. ENAV also owns 2 met radars, 126 VORs and DMEs, more than 33 ILSs, 57 NDBs and 30 VDFs. Furthermore, ENAV manages air/ground communications and radio repeaters which are necessary for aeronautical telecommunications.

FLIGHT INSPECTION

ENAV carries out the Flight Inspection service to verify the reliability of radio electric guidance and positioning signals emitted by instrumental navigation equipment. The activity takes place with a fleet of Piaggio Aero P180 Avanti II and CESSNA Citation II aircrafts which have been equipped for this purpose. The Flight Inspection service carries out checks during the flight without back up ground equipment and obtains real time results.

INTERNATIONAL ACTIVITY

Efforts carried out over the past years in international activities have enabled ENAV to reach a leadership position in Europe and internationally.

Coordinated and continuous involvement in different projects, programmes and meetings, has contributed to the positioning of Italy in the European air assistance system.

More than 200 ENAV experts participate in various international programmes and projects focusing on the modernisation of the European ATM system based on two Single Sky pillars:

- the creation of Functional Airspace Blocks - BLUE MED project;
- the modernisation of the ATM technological system with the SESAR programme and linked implementation projects such as 4-Flight and Coflight.

ENAV is actively involved in projects run by the European Commission, EUROCONTROL, ICAO and CANSO, ensuring a contribution to the pursuit of the company's objectives and the support of other Italian institutions operating at an international level.

Furthermore, ENAV is a shareholder of the Service Providers' consortium (ESSP) in the provision of EGNOS satellite services.

AERONAUTICAL INFORMATION

ENAV's AOIS (Aeronautical Operational Information System) receives, processes and distributes operational aeronautical information relating to flight notices, NOTAM, met information and Air Traffic Flow Management messages, through technological platforms and integrated ATM on-line data, distributed to internal and external users. Thanks to the use of SOA (Services-Oriented Architecture) and web-based applications, the aeronautical community's users can access information that is updated in real time through a simple internet connection.

The aeronautical information issued by ENAV is also accessible via the AIP Italia publication and ENAV's website.

FLIGHT PROCEDURES AND AERONAUTICAL CARTOGRAPHY

ENAV's professionals study and produce all the flight procedures for air navigation and cartographic instruments for civil aviation that are made available to the aeronautical community. The service entails the preparation of aeronautical maps that contain the description of operational flight procedures and ATS geography, as well as the preparation of obstacle maps for planning purposes for operators involved in air navigation.

AIRPORT MET SERVICE

ENAV's met service produces about 3,000 observation and 500 forecast messages daily. Specialised units operate in Milano Linate and Roma Fiumicino providing continuous met conditions updates. ENAV's plants have weather semi-automatic data diffusion sensors, necessary for safe take off and landing of aircrafts.

ENAV NUMBERS*

Flights managed in one year	roughly 2 million
Peak of flights managed in one day	6,064
Control Towers (TWRs)	39
Area Control Centres (ACCs)	4
Total sq km of airspace for which ENAV is responsible	752,832
Air/ground contacts per year	31 million
Employees (two thirds of whom with operational tasks)	3,251
Hours of training imparted in 2010	248,000
Investments 2003-2010	1,500 million Euros

*Last update: January 2011

Techno Sky is the ENAV company that deals with the operational management, assistance and maintenance of plants and systems used for air traffic control.

It ensures complete and continuous availability and operational efficiency. It supplies technical, operational and management services to 41 radar systems, 95 telecommunications centres, 76 meteorological systems, 5 visual aid systems, 198 navigation aid systems and 71 software systems for air traffic control in units run by ENAV.

These activities are integrated with instruments calibration, logistic support, engineering and "mission critical" system integration.

