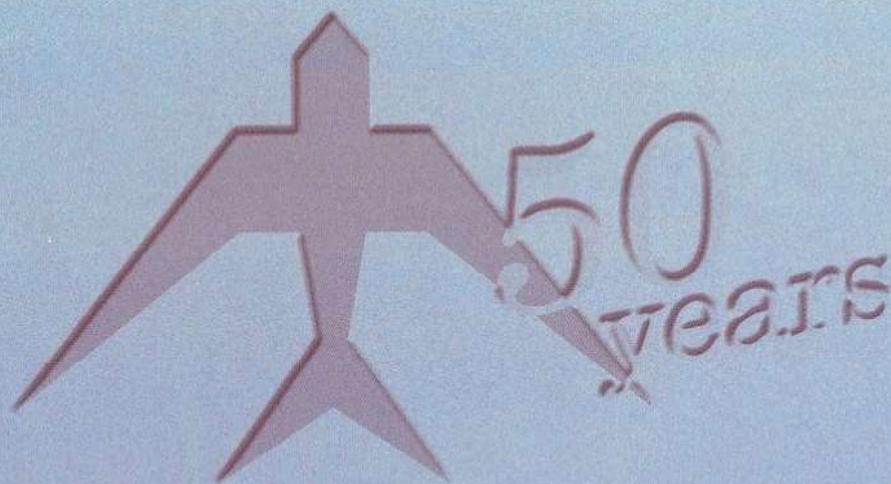


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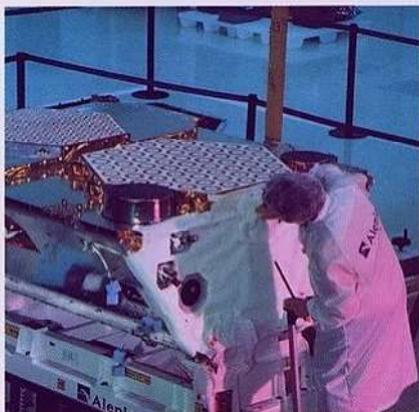


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**Alenia Aerospazio is the Italian leader in aeronautics and space. Alenia Aerospazio is a Company of Finmeccanica, Italy's world class high-tech engineering group which is among the leading players in the global aerospace, defense systems, energy, transportation, automation markets.**

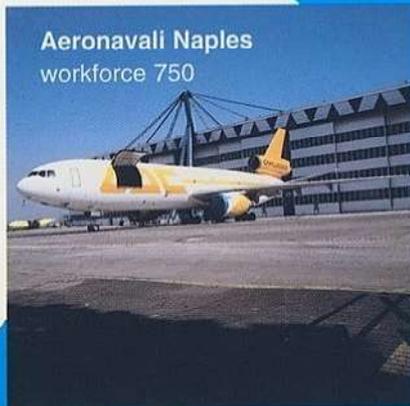
In the aeronautical field, the activities are managed by the Aeronautics Division, and include the design and production of commercial and military transport aircraft, defense aircraft and aerostructures.

The aircraft modification and overhaul activities are performed by its coordinated company, Aeronavali Venezia.

Among the most important programs are the Eurofighter air superiority aircraft for European defense; the

AMX light tactical fighter; the Tornado multirole aircraft; the new C-27J twin-turboprop tactical transport aircraft, the ATR family of commuter aircraft; the A400 M, large tactical airlifter, the overhaul and conversion of large commercial aircraft such as the B707, the DC8, DC10 and MD11; the participation in major international programs for commercial aircraft, such as B717-200, B767, B777, the MD11 and the MD80/90, the A321, and A330/340, the Falcon 2000 and 900 EX.

## The plants



## The Activities

Passenger to freighter modifications

Large and small aircraft maintenance

Large and small aircraft structural modifications

Large and small interior modifications

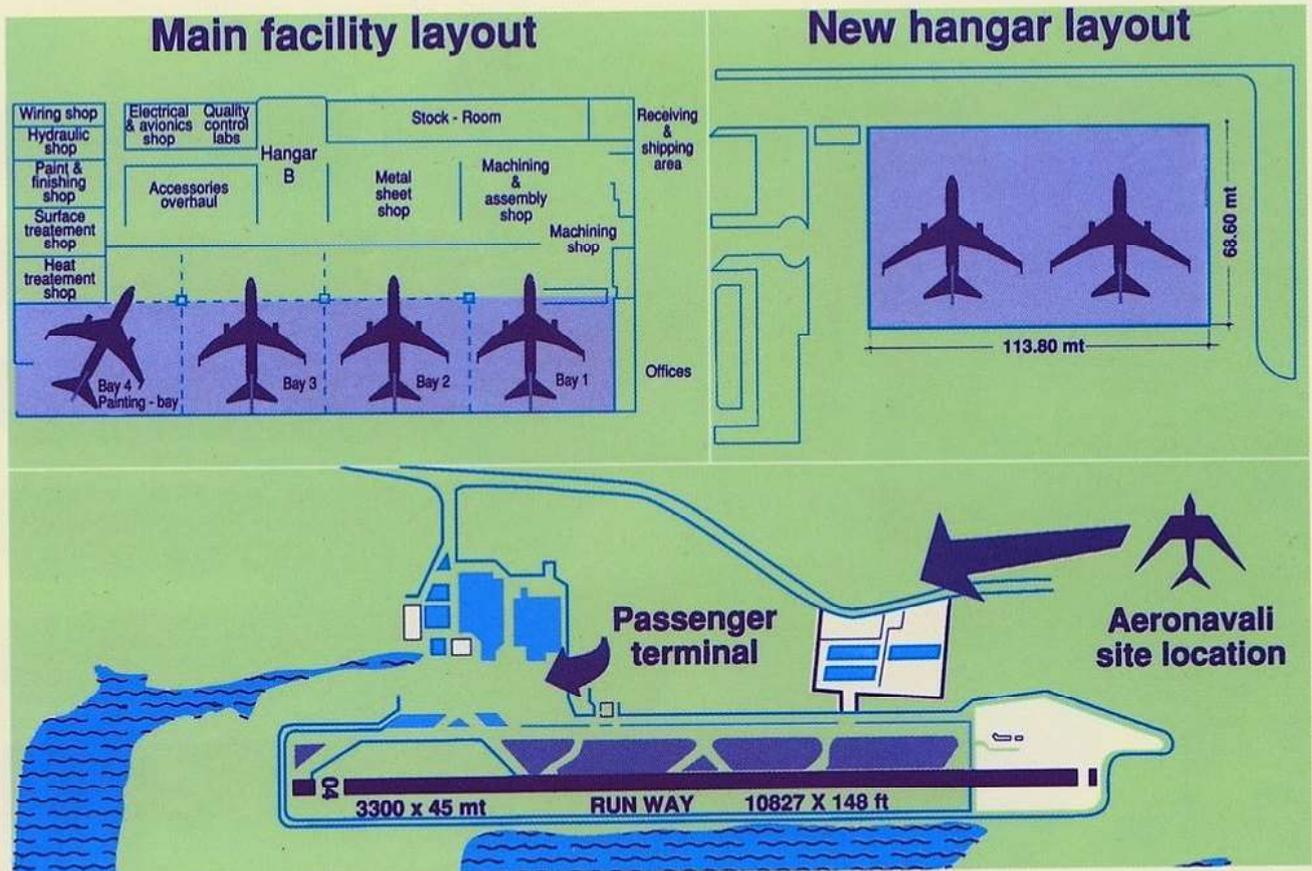
Design of customized avionics packages

Re-engining programs

Product support / technical services



## Facilities and capability

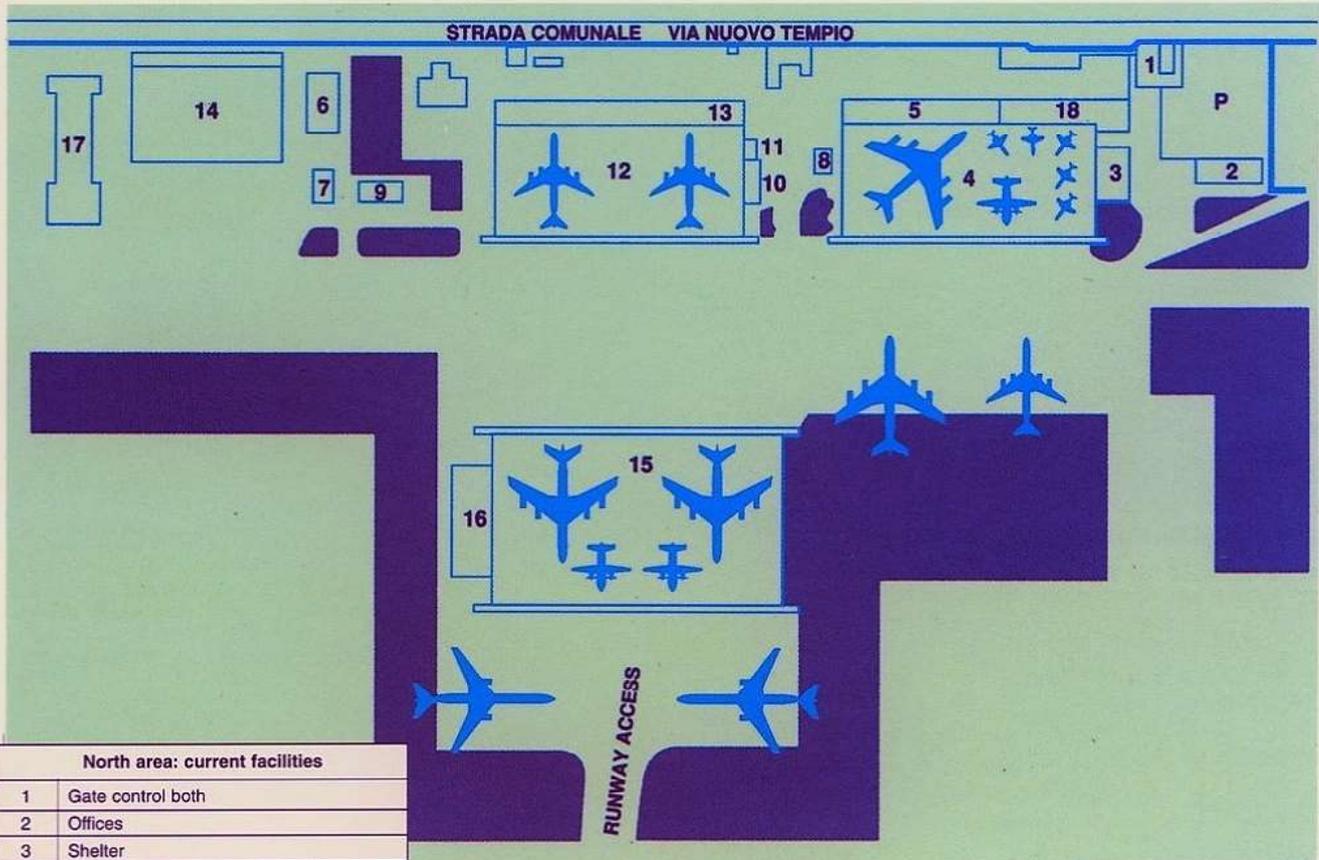


Venice layout

**Aeronavali industrial capabilities have been enforced in March 1994 with the acquisition of Capodichino-Naples plant from the mother company Alenia Aerospazio. Both plants provide over 600,000 sq.ft. of hangars and workshops.**

The company's headquarters and relevant plant, located at Venice Intl. Airport, consist of 52.5 acres and over 385,000 sq.ft. of hangars and workshops.

The two facilities employ highly skilled workforce of more than 1,400 people which average over 16 years experience working on aircraft structures, systems and support services.



Capodichino (Naples) layout

North area: current facilities	
1	Gate control both
2	Offices
3	Shelter
4	Hangar
5	Hangar
6	Fire-fighting vehicles
7	Offices
8	Maintenance office
9	Offices
10	Compressed air station
11	Power station
12	Hangar
13	Hangar
14	Scraps area
15	Hangar
16	Offices
17	Painting shop
18	Engine workshop

Hangar			
Hangar	sq.ft.	Doors	Entrance
4	64,022	38'x334'	1
12	64,022	38'x334'	1
15	91,460	67'x402'	2

The facilities, which include three high bay hangars (two in Venice and one in Naples), can accommodate up to 6 wide-body and 10 narrow-body aircraft simultaneously.

Aeronavali provides the entire spectrum of aeronautical activities to face all the Customer requirements in terms of aircraft Modification, Maintenance and Upgrading Dedicated Painting Bay, to accommodate up to wide-body

platforms, backshops and treatment capabilities to fabricate the parts needed to sustain all the Modification and Maintenance tasks, skilled Engineering, Planning, Quality Assurance and Technical Services to support and resolve any technical issue with constant direct interface with OEMs, Contracts, Purchasing and Administrative Staff to coordinate, manage and assist any Customer's need.



## Aircraft maintenance and overhaul



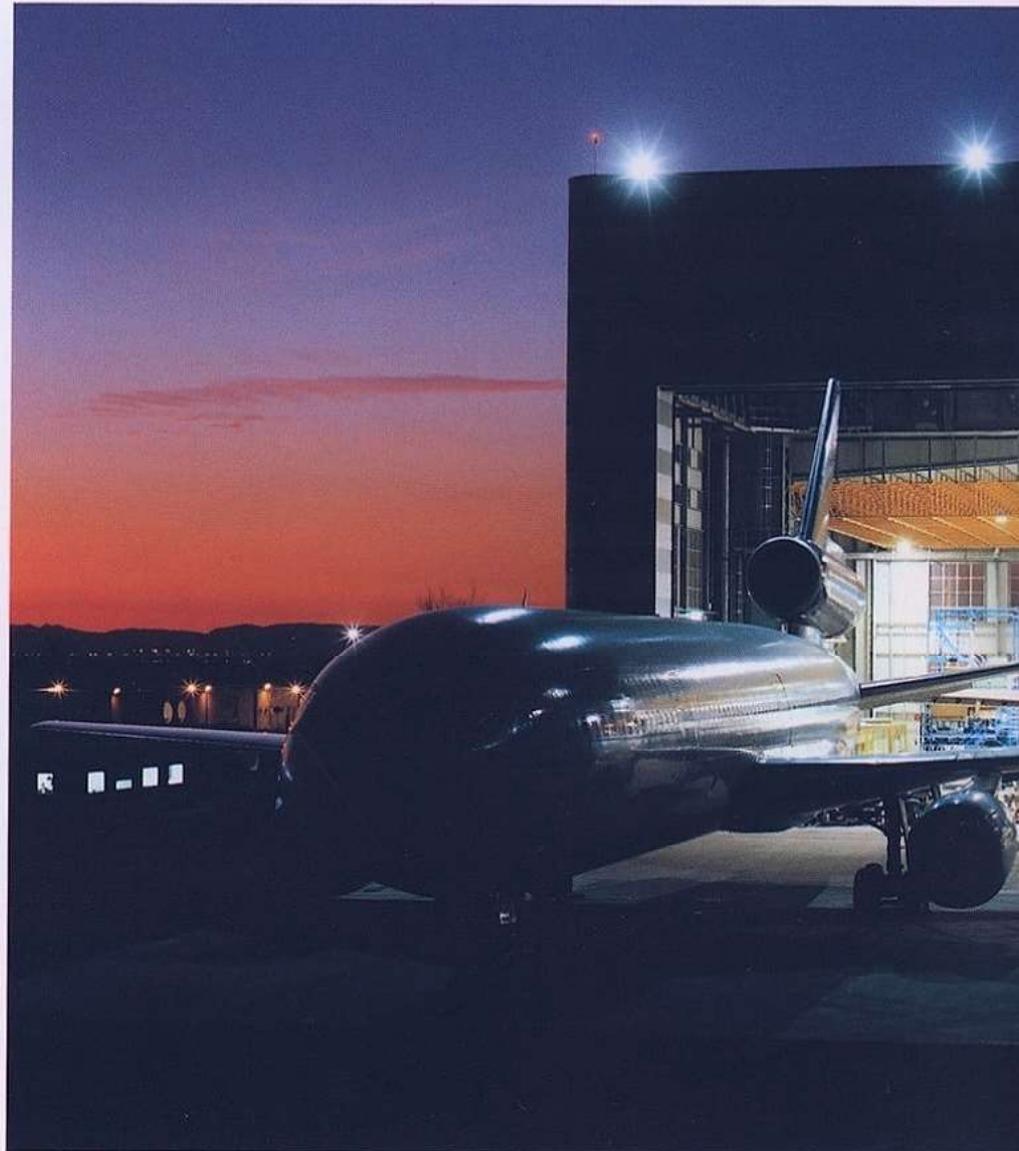
DC-10 Maintenance

**Aeronavali has extensive experience over the entire spectrum of airframe maintenance and overhaul.**

Aeronavali provides services on narrow and wide body aircraft which include light and heavy checks, corrosion treatment and control, cabin configuration conversions, fuel tank resealing and complete aircraft stripping and painting.

Taking advantage of the long experience matured, since the years of the World War II, in the field of aircraft maintenance and structural repair, at the beginning of 1994 Aeronavali has taken its step into the 3rd party maintenance arena.

The driving factor was the acquisition of a second industrial site, the Naples Capodichino Plant, thus enabling Aeronavali a great deal of flexibility. After years of promotion of its heavy maintenance services, especially on Boeing/Long Beach Division (formerly McDonnell Douglas) products such as DC8, DC10 and MD80 aircraft, Aeronavali has logged important DC10 maintenance contracts. Aeronavali experience on DC10 checks



Wide bodies servicing in Aeronavali Venice

is worth of Heavy Maintenance Visits according to different Maintenance Standards (KSSU, OAMP, ATLAS) including also the latest version as per MSG3.

The services of Aeronavali are completed by the maintenance support offered to ATR 42/72 operators in European and African regions. More than 50 ATR aircraft are returned into services every year for operations from A-Check thru 8Yr-Check up to 24,000 Flight Cycles.

Heavy Maintenance is also performed by Aeronavali on military aircraft. Namely, Italian Air Force G222, Breguet Atlantic BR-1150 and B707 Tanker/Transport fleet are also supported by Aeronavali for all the Heavy Maintenance requirements; engineering, logistics and spare parts supply are among those activities provided in the frame of annual comprehensive contracts.



E-3A Awacs maintenance



ATR 42, MD80, G222 and DC-10 at Aeronavali Naples hangar.

In particular the four B707 T/T aircraft are supported at the main base of Pratica di Mare (Rome) by Aeronavali personnel.

As a NATO Source of Repair, Aeronavali has been tasked with the responsibility of carrying out the DLM (Depot Level Maintenance) of NATO's E-3A AWACS and B707 TCA (Trainer Cargo Aircraft).

The Company is also providing field service in the emergency

maintenance support, on an "around-the-clock" basis.

Aeronavali has been also designated by the major aircraft manufacturing companies as an important center for maintenance and modification of aging aircraft.

In order to assure total aircraft support, Aeronavali offers a variety of ancillary services.

Facilities are available for the inspection, disassembly and rebuild of

powerplants and propellers.

Field teams can be organized for special assignments such as salvage and recovery of crash damaged aircraft.

Aeronavali field teams have been performing on-site and shipboard emergency repairs to aircraft and helicopters assigned to the US Navy since 1977.

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## Engineering - Quality - Certification



**Aeronavali's Quality Assurance program conforms to the manufacturer specifications and to the standards of the airworthiness authorities.**

Stringent controls ensure the highest possible quality for the products and services being performed.

Non-destructive testing of the structures, components and engines is performed by using the most advanced techniques available in the market.

Aeronavali is an FAA certified repair station since 1963 for the Venice plant (FAA certificate no. C01Y067K) and for the Naples plant (FAA certificate no. C012067K) and is also certified by the Italian Ministry of Defense (certificate no. 313 AQAP-110 and UNI EN 29001/ISO 9001

standards/publications) and the RAI, Italian airworthiness authority.

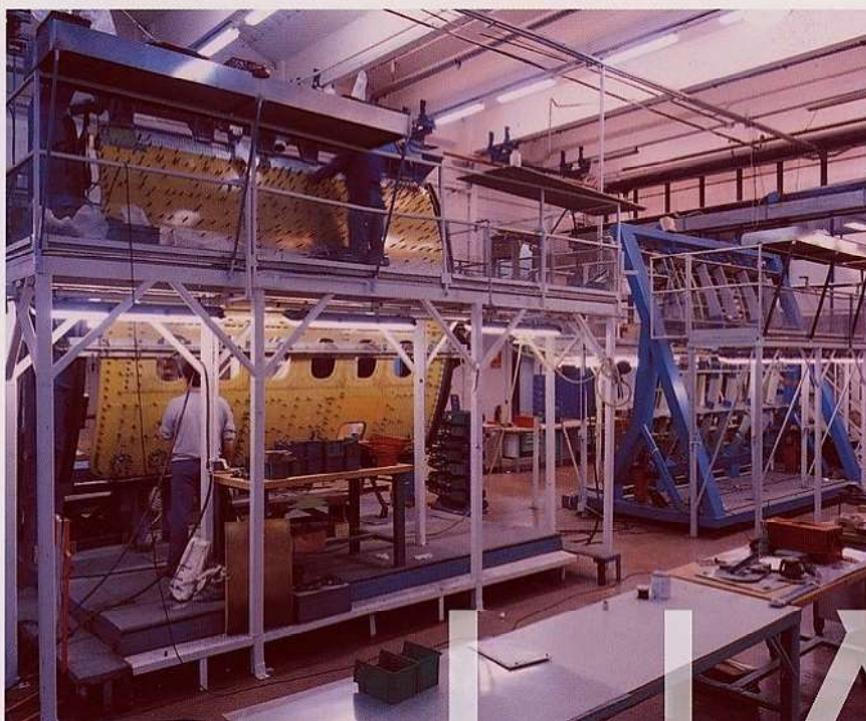
Since 1986, Aeronavali is also certified by NATO Airborne Early Warning Force Command as an E-3A Source of Repair.

In 1994 Aeronavali has been approved by JAA Maintenance Organization (certificate no. RAI.142).

In 1998 Aeronavali has been also approved by RAI/JAA as Production Organization, in accordance with JAR 21 Subpart G (certificate no. RAI.G.003).



G222



DC10/MD11 cargo door production line

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DC-10-40 after the conversion to freighter at Naples plant



Italian Air Force B707 Tanker



Italian Air Force BR-1150 Atlantic

## Passenger to Freighter and Aircraft Modifications Programs



MD11 after cargo modification

**The technical resources of Aeronavali have been used to accomplish activities on aircraft ranging from simple kit installation, Airworthiness Directive and Service Bulletins embodiment to the total rebuilding of entire fuselage sections.**

The Aeronavali's Passenger to Freighter Programs started in 1985 with the first DC8 converted into full freighter configuration.

The DC8 program, with a total of 47 aircraft converted, was so successful that McDonnell Douglas (today Boeing) and Alenia Aerospazio signed an Exclusive License for the Freighter Conversion of DC10 aircraft. At the time the license was executed, in 1990, the outside market didn't have yet the perception of the potential associated with this program. Aeronavali and Alenia Aerospazio believed on this new product and invested to create a complete manufacturing capability for the large kit of parts required to convert the DC10 and to support the concurrent heavy maintenance activity.

This means that the customers that buy a DC10 converted at Aeronavali are



DC10 modification lines at Venice plant

acquiring not only a first-class product, but also the devotion of an entire organization that will grant each conversion with the recognition of the Original Aircraft Manufacturer, that will acknowledge the airplane to the new full freighter role for its entire life.

As a matter of fact, in the last years Aeronavali made a massive effort to the development of a Passenger to Freighter Conversion Program for the DC10 series aircraft and today is ready to offer a very extensive industrial support with qualified personnel, granting a deep and outstanding knowledge in such a work. This project is supported by a dedicated organization, an oriented management and a flexible industrial system perfectly

tuned with the best quality and efficiency.

The reached level of experience, in the specific field of the cargo conversion market, has grown through a lot of betterment in the different milestones that make up the final product.

With the number of DC10s and MD11s already redelivered to various customers, Aeronavali is the undisputed worldwide leader for Boeing/Long Beach Division Tri-Jets Cargo Conversions.

Another significant activity of Aeronavali is the avionics and mission system installation and upgrades for both commercial and military aircraft, as well as extensive modifications for special mission applications.

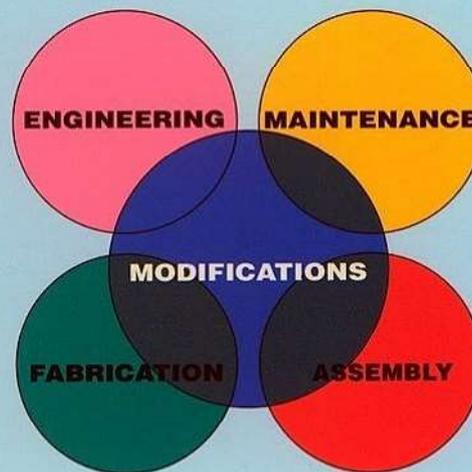


Cockpit standardization programs have been conducted on DC8 and B727 airplanes, together with ESM installation of the ATL1 fleet of the Italian Air Force.

Based on such experience in avionics and systems upgrading, Aeronavali has been contracted by Alitalia/Atitech for the MD80 retrofit program named "AREANAV".

This modification consists of the enhancement of the existing aircraft cockpit through the installation of a new generation navigation equipment. Aeronavali is also responsible for the preparation of the wire harnesses needed to supply power to the new systems.

## Technology Matrix



Another major modification program, converting B707 into "Tanker/Combi" version was conducted at the Naples-Capodichino facility. The final product is a "tanker" with the capability of refuelling 3 aircraft simultaneously.

Moreover, Aeronavali performs the conversion of the newly acquired German Air Force B707-307 to NATO Training Cargo Aircraft standards. A further significant activity of Aeronavali is the aircraft re-engining. Today Aeronavali, after pursuing the research and developmental phase using the BAC 1-11 and the B727 aircraft at the former sister company The Dee Howard Co. at San Antonio, TX, has gained the required experience to complete the re-engining program of any aircraft.

Several B727-100 aircraft, operated by United Parcel Service, were re-engined with Rolls Royce TAY 650 power plants at Aeronavali-Naples facility. Aeronavali manufacturing department is unique in its ability to respond to a broad spectrum of requirements.

Originally developed to produce parts and assemblies to be used in the different Aeronavali's projects, the large manufacturing department's reputation for quality and on-time performance has led to additional work committed by airframe manufacturers and modification centers.

In addition to the on-going parts manufacturing projects, Aeronavali is supporting Boeing/Long Beach Division with its MD11 and MD10 Passenger to Freighter Conversion Program.

Given the undisputed leadership in the Conversion Kits manufacturing, Aeronavali is providing Boeing/LBD with most of the parts necessary for the aircraft modifications accomplished in the U.S.

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**AERONAVALI**

## Aeronavali: 50 years of success

Fifty years have elapsed since the technicians of the newly born Aeronavali moved their first steps in the aircraft conversion and maintenance markets.

During these years the company has completely changed its standards and aligned them to the evolution of aviation technologies.

The ability to adapt to the requirements of a market which is always looking for new challenges, has contributed to create the spirit of Aeronavali.

Every employee at Aeronavali is today proud to preserve this attitude, seeking the achievement of an ever increasing success.

The first airlines in Italy were created during the post World War I years, among these, Transadriatica was founded in Venice.

In 1931 Transadriatica merged into Società Aerea Mediterranea.

In 1934, all Italian airlines were concentrated into Ala Littoria, based in Rome-Ostia, with Venice as second operating airport.

The Ala Littoria workshop at the Lido had been constantly increasing their equipment and their staff had gained a remarkable experience in metallic aircraft.

When Italy got involved in the Second World War in 1940, the Lido workshop had 550 employees, who rose up to 1,200 during the conflict. In 1947 the Italian government decided to dismiss certain organizations, such as Ala Italiana - descendent of Ala Littoria - that owned the Lido workshop. Meanwhile, some of the workers had founded a cooperative and contacted Commander Umberto Klinger, trying to convince him to open an aviation facility at the Lido of Venice.



Umberto Klinger was born in 1900 and had volunteered in World War I when he was only 17. A close friend of Italo Balbo, he had founded SAM in the period between the two world conflicts and had been appointed President of the Ala Littoria.

Accepting the invitation, Klinger founded the company called "Officine già dell'Ala Italiana - Venezia Spa" with a registered capital of 5 million Lire and 191 employees.

The date was September 16, 1947. The first activities performed by the company were most diverse: repair and reconstruction of war surplus aircraft, of motorboats, gas cylinders, vehicles and trucks.

The reconstruction of the Lido plant was completed in 1949.

The newly incorporated Aeronavali had in that year 278 employees.

The beginnings were not easy, however: in 1951 there were only 46 employees and a trusteeship was ordered, subsequently withdrawn in 1952. By that year, employees were 123.

During those years, Aeronavali's core

business was the recovery of old C-46 military aircraft in Egypt.

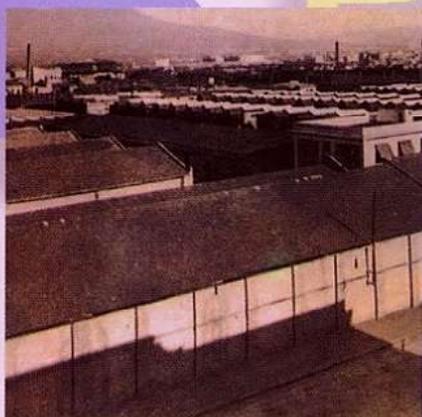
Under an agreement between the Egyptian government and the Brazilian Varig these aircraft were transferred to the Lido and rendered operative. The years from 1955 and 1960 may be regarded as a period of consolidation for Officine Aeronavali.

Commander Umberto Klinger, aided by his brother Luigi, a General well acquainted in the civil and military aviation entourage, proposed new opportunities for the company. In particular he kept contacts with LAI and Alitalia, two airlines that by the end of the 1950's merged into Alitalia, an entirely state-owned corporation.

The aircraft overhauled, converted or equipped with new engines in Venice were C-45, C-47, T-6 military aircraft and the entire range of Douglas airliners.

With the advent of modern jet-planes the facilities at the Lido "Nicelli" airport ceased to be employed.

On April 1, 1961, the new Venice "Marco Polo" International Airport



located at Tessera was inaugurated. In the summer of 1965 Officine Aeronavali moved to the new hangars located near the new runways. During 1960's a general change occurred: in fact, aircraft overhaul and conversion activities were flanked by the construction and assembly of aircraft components and of Martin Baker ejectable seats.

On June 27, 1963 Aeronavali reached an important goal: the Federal Aviation Administration's certification as Repair station, a certificate which has been always renewed uninterruptedly since then.

The 1970's were a tougher period for Aeronavali, which was purchased by GEPI in 1972.

During the following decade the company struggled mostly its survival, without renewing its equipment and without being able to make valid and farsighted plans.

On September 15, 1981 Officine Aeronavali was acquired by Aeritalia (presently Alenia Aerospazio), a Finmeccanica company with a leading position in the Italian aerospace industry.

Aeritalia policies envisaged the re-launching of Venetian company and its re-qualification in three basic fields: traditional maintenance and

overhauling activities; introduction of the overhaul and conversion programs of Awacs and TCA aircraft, within the broader framework of international cooperation; a careful market analysis suggested to avoid the field of civil aircraft overhaul and to dedicate all efforts to the field of modification, availing themselves of the experience acquired.

In 1985, began a strategic alliance which has lasted to present days: the agreement with McDonnell Douglas of Long Beach, CA.

Aeritalia/Aeronavali and the Californian aircraft manufacturer entered into an exclusive license agreement for the conversion of DC8s from passenger to freighter aircraft.

The first order came from Air Canada, from which the modification of 2 DC8-63 aircraft was contracted.

Then United Parcel Service, a giant among air forwarders, ordered the conversion of 16 DC8-73 aircraft to be carried out in Venice.

GPA, a leasing company, converted its entire United Airlines DC8-71 fleet (29 aircraft in total) into cargo aircraft.

The merger of maintenance activities into Aeritalia continued when the overhaul of the Atlantic antisubmarine aircraft, commissioned by the Italian Air Force, was moved to Venice.

The aircraft components manufacturing was further re-launched with the production of parts for the Tornado program and of segments for the G222 program. The kit needed to convert the DC8s yesterday and the DC10s today is also manufactured and assembled by Aeronavali. The cargo doors for the new MD11F aircraft are also built in

Venice. The rest is recent history. Strengthened by the experience gained with DC8s, in 1990 Alenia/Aeronavali signed an exclusive license agreement with McDonnell Douglas for the Passenger to Freighter Conversion of DC10 aircraft.

In 1990 a new hangar with two wide-body positions was built. It was inaugurated by the first 2 DC10s, to be modified for Federal Express, the world leading forwarder.

In 1994 Aeronavali doubled its industrial capabilities by purchasing from Alenia Aerospazio the Naples plant, located by the Capodichino International Airport.

The industrial growth allowed the company to expand its market share and to propose itself as a maintenance station for wide-body, narrow-body and commuter aircraft.

The largest ATR operators in the Mediterranean have chosen Aeronavali as maintenance center for their fleets. AOM French Airlines has its DC10-30 heavy maintenance checks accomplished in the Capodichino plant. Alitalia/Atitech chose to have the modification called "Aereanav" - upgrading of the avionics of its MD80 fleet - performed by Aeronavali in Naples.

Again, another two relevant conversion programs are being carried out at Capodichino: the Passenger to Tanker Conversion of B707 aircraft for the Italian Air Force and reconfiguration to Trainer Cargo Aircraft of B707 for the NATO.

The growing demand for DC10 Cargo aircraft has led to the set-up of two additional modification lines also in the Naples plant.

The DC10 conversion is by now the Aeronavali's most distinctive activity.



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