GIS DESIGN

Design – Surveys – Investigations

COMPANY PROFILE

VISION - MISSION - VALUES

MISSION

PRESENT

To contribute significantly to the engineering world, continuously pursuing sustainable growth for our organization, while maintaining the perfect balance between resource quality and innovation.

VISION

FUTURE

To make a difference in the world by delivering reliable solutions and high-quality engineering services through a qualified team.

VALUES

PAST, PRESENT, FUTURE

Our primary goal is to meet the objectives of our clients, both public and private, as well as those of everyone who joins our project, believes in us, and contributes to our daily growth with responsibility, enthusiasm, and passion.

GIS DESIGN
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COMPANY STORY

1948
Impresa di Costruzioni Colombrita dei Fratelli Ing. Filippo e Paolo

1962
Impresa di Costruzioni Ing. Filippo e Paolo Colombrita s.n.c.

1984
Colnisa Costruzioni s.r.l.

2002
Colnisa Costruzioni s.r.l.

2002-2004
Impresa di Costruzioni Ing. Filippo Colombrita & C. s.r.l

2004
Gis Design s.r.l.

2014
Studio 4C

2017
Ingegneria Costruzioni Colombrita s.r.l.

2020
Fusione di Studio 4C a Gis Design s.r.l.

GIS DESIGN S.R.L.

GIS DESIGN
Progettazione · Rilievi · Indagini

In **2002**, driven by the initiative of the brothers **Filippo and Fabio Colombrita**, "**GIS Design srl**" was born, a company providing engineering services. **GIS Design** specializes in **design and construction management using BIM methodology** for building, infrastructure, and plant engineering projects. Additionally, the company offers support for **participating in tenders and project financing, aerophotogrammetric and LiDAR surveys, topographic surveys, geognostic and structural investigations, production of digital and thematic cartography**, development and commercialization of specialized software in the field of road and airport safety, specialist technical training, design, implementation, and development of Centers for planning, programming, management, and monitoring of road safety (**CMSS**), and interventions aimed at reducing road accidents, transport safety analysis, preparation of urban road safety plans (**PSSU**) and mobility plans (**PUM**), manual and automated traffic surveys, creation of territorial information systems (**SIT**), and **research projects**.

In particular, **GIS Design srl is an SIT laboratory** supporting companies and operators in the sector, thanks to Filippo's expertise in GIS and road, rail, and airport infrastructures, and the skills developed by Fabio. The collaboration with professors and researchers from the Department of Civil and Environmental Engineering at the University of Catania further demonstrates the company's **innovative spirit and commitment to continuous improvement**.

INGEGNERIA COSTRUZIONI COLOMBRITA S.R.L.

INGEGNERIA COSTRUZIONI COLOMBRITA

In **2017**, **Prof. Rosario Colombrita, together with his sons Filippo and Fabio, founded "Ingegneria Costruzioni Colombrita s.r.l."** This new company amalgamated both the family's longstanding construction business and the engineering services activities developed by Filippo and Fabio under GIS Design. The defining characteristic of the company is the commitment to **continuous improvement in the scientific and technological fields**, a behavior stemming from Engineer Rosario Colombrita's academic experience as a university professor.

The experiences conducted by the three partners and the numerous collaborators, both in the private and public sectors, combined with the flexible and efficient organization upon which the company is built, **have allowed for the completion of significant projects with excellent results and the achievement of the main objective: customer satisfaction.**

40%
Women on staff

40
Average age of staff

+75
Years of activity

+10
Research projects

CERTIFICATES, QUALITY AND SUSTAINABILITY

At **GIS Design**, our quality policy is oriented towards the **continuous improvement** of our organizational capabilities and the **professional development** of our staff and collaborators. We believe that our Quality Management System enables us to achieve established objectives, with the utmost respect for the requirements and requests of all involved parties (clients, employees, consultants, partners, etc.), applicable mandatory requirements, and **the sustainability of our business decisions**.

GIS Design is committed to:

- Seeking the **effective contribution of all stakeholders** to improve business performance.

- Striving for the **optimization of business processes** to achieve the highest level of effectiveness and efficiency, compatible with the state of the art.

- Considering **health, safety, and environmental protection** as corporate objectives to be achieved and continually improved by defining specific goals for various functions and levels.

- **Minimizing risks to workers and environmental impact** in products/services and intervening promptly to correct our operating procedures at every stage of the production cycle.

- **Adapting the functionality of our information systems to the evolution of technologies**, while ensuring the adoption of appropriate and preventive security measures to minimize the risks of loss, unauthorized access, or processing of personal and confidential data.

At **GIS Design**, "**quality**" is defined as the ability to meet customer requirements, consistently deliver expected results, and get things right the first time. For this reason, GIS Design srl is proud to hold certification no. **ISO 9001:2015**.

CERTIFICATO N. 36148/18/S
CERTIFICATE No.

SI CERTIFICA CHE IL SISTEMA DI GESTIONE PER LA QUALITÀ DI
IT IS HEREBY CERTIFIED THAT THE QUALITY MANAGEMENT SYSTEM OF

GIS DESIGN S.R.L.

VIA SANTISSIMO CROCIFISSO, 19 95037 San Giovanni La Punta (CT) ITA
NELLE SEGUENTI UNITÀ OPERATIVE / IN THE FOLLOWING OPERATIONAL UNITS

VIA GELATUSI SNC 95037 San Giovanni La Punta (CT) ITALIA E CANTIERI OPERATIVI

È CONFORME ALLA NORMA / IS IN COMPLIANCE WITH THE STANDARD

ISO 9001:2015

PER I SEGUENTI CAMPI DI ATTIVITÀ / FOR THE FOLLOWING FIELD(S) OF ACTIVITIES

REALIZZAZIONE DI SOFTWARE IN AMBITO INGEGNERISTICO, SERVIZI DI INGEGNERIA E PROGETTAZIONE. RILIEVI E SISTEMI INFORMATIVI TERRITORIALI. CONSULENZA E ASSISTENZA OPERATIVA ALLE IMPRESE DEL SETTORE AEROPORTUALE E STRADALE.COSTRUZIONE E MANUTENZIONE DI EDIFICI CIVILI.

IAF 33
IAF 28
IAF 34
IAF 35

REALIZATION OF SOFTWARE BASED ON ENGINEERING DUTY, ENGINEERING AND DESIGN SERVICES. LAND SURVEY AND TERRITORIAL INFORMATION SYSTEMS. CONSULTANCY AND OPERATIONAL ASSISTANCE TO COMPANIES IN THE AIRPORT AND ROAD SECTOR. CONSTRUCTION AND MAINTENANCE OF CIVIL BUILDINGS.

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Data revisione / Revision date 07.12.2023

Maurizio Mazzapicchi
Catania & Palermo Management System Certification, Head

SQQ N° 002 A

RINA Services S.p.A.
Via Corsica 12 - 16128 Genova Italy

Gender equality is a cornerstone goal of sustainable development strategies pursued globally (United Nations Agenda 2030) and at the European level (EU Gender Equality Strategy). For this reason, **GIS Design srl** considers it both necessary and of fundamental importance to invest in ideas, resources, and skills aimed at achieving this objective. For the aforementioned reasons, GIS Design srl takes pride in holding certification no. **UNI/PdR 125:2022**.

CERTIFICATO N. UNI/PdR 125:2022-34/23
CERTIFICATE No.

SI CERTIFICA CHE IL SISTEMA DI GESTIONE PER LA PARITÀ DI GENERE DI
IT IS HEREBY CERTIFIED THAT THE GENDER EQUALITY MANAGEMENT SYSTEM OF

GIS DESIGN S.R.L.

VIA SANTISSIMO CROCIFISSO, 19 95037 SAN GIOVANNI LA PUNTA (CT) ITALIA

NELLE SEGUENTI SEDI OPERATIVE / IN THE FOLLOWING OPERATIONAL UNITS

VIA SANTISSIMO CROCIFISSO, 19 95037 San Giovanni La Punta (CT) ITALIA

È CONFORME ALLA NORMA / IS IN COMPLIANCE WITH THE STANDARD

UNI/PdR 125:2022

PER I SEGUENTI CAMPI DI ATTIVITÀ / FOR THE FOLLOWING FIELD(S) OF ACTIVITIES

REALIZZAZIONE DI SOFTWARE IN AMBITO INGEGNERISTICO, SERVIZI DI INGEGNERIA E PROGETTAZIONE. RILIEVI E SISTEMI INFORMATIVI TERRITORIALI. CONSULENZA IN MATERIA DI SICUREZZA STRADALE E AEROPORTUALE. COSTRUZIONE E MANUTENZIONE DI EDIFICI CIVILI.

REALIZATION OF SOFTWARE BASED ON ENGINEERING DUTY, ENGINEERING AND DESIGN SERVICES. LAND SURVEY AND TERRITORIAL INFORMATION SYSTEMS. ROAD SAFETY AND AIRPORT SAFETY. CONSTRUCTION AND MAINTENANCE OF CIVIL BUILDINGS.

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Data revisione / Revision date 24.01.2023

Maurizio Mazzapicchi
Catania & Palermo Management System Certification, Head

SQQ N° 002 A

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Via Corsica 12 - 16128 Genova Italy

TOPOGRAPHIC SURVEYS AND MAPPING

The expertise developed in the topographic sector and the availability of a **wide range of traditional and high-performance instrumentation** allow the company to position itself among the industry leaders. We ensure customer satisfaction through the adherence to deadlines and the high standards of precision and reliability of the collected data. Main activities:

INFRASTRUCTURE SURVEYS

We conduct **surveys of road and railway routes** using **Mobile Mapping Scanners**, **GNSS** in differential kinematic and/or fast-static mode, integrated where necessary with Total Station. We also provide **geometric surveying of railway tracks using trolleys on both railways and trams**, **three-dimensional numerical terrain surveys** (DTM), resolution of topographic calculations, production of leveled plans and contour lines, and the generation of sections and profiles using dedicated software. We track infrastructures, technological systems, civil and industrial works, and perform calculations for earthworks movements.

GIS Design boasts collaborations with prestigious clients such as **ANAS, RFI, Ferrovia Circumetnea, Ente Volturno, and ATAC**, for whom we have completed numerous projects.

NETWORK INFRASTRUCTURE SURVEYS (WATER, SEWER, GAS, ETC.) AND SUBSURFACE MAPPING

GIS Design specializes in conducting surveys of network infrastructures, including water, sewer, electricity, and gas, both geometrically and topographically. We utilize innovative instrumentation for manhole opening, network mapping, surveying, and GIS digitalization. Our equipment includes: Manhole opening tools with magnets and screws; GNSS instrumentation.; Compact laser scanners for 3D surveying of chambers; Robots for video inspection of conduits; Tablets with remote cloud connection to the GIS database.

Main clients include CAP Holding spa, Publiacqua spa, and Acquevenete spa.

AEROPHOTOGRAMMETRIC AND LIDAR SURVEYS - CARTOGRAPHY PRODUCTION

GIS Design specializes in conducting aerophotogrammetric surveys, both with aircraft and drones, incorporating LiDAR sensors. We offer the production of orthophotos, Digital Terrain Models (DTM), Digital Surface Models (DSM), as well as digital cartography, GIS, and thematic maps.

GIS DESIGN
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GEOGNOSTIC, GEOPHYSICAL AND STRUCTURAL INVESTIGATIONS

GIS Design boasts a team of **geologists, structural engineers, geotechnical engineers,** and geophysicists capable of providing high-level technical services for **geognostic, geophysical, and geostructural investigations.** Our technicians specialize in drafting investigation plans for the design activities and for the study of existing structures for their requalification and structural seismic adaptation.

Main activities:
investigations, tests, on-site and laboratory checks aimed at designing and verifying seismic vulnerability; monitoring, geological and geotechnical characterization and structural diagnosis for the conservation of real estate assets; ground penetrating radar surveys to search for underground services; geological and geognostic investigations.

The main customers include **ANAS, RFI, Civil Protection, Navy, ADSP.**

INFRASTRUCTURE DESIGN

Unlocking the long-term value of new roads, bridges, and structures means providing superior projects to address many of the sustainability and resilience challenges facing today's cities. At **GIS Design**, we specialize in offering paramount services in the design of roads, railways, and airports. **The transportation sector plays a pivotal role within our company, boasting significant collaborations and clientele**.

At **GIS Design**, we place particular emphasis on **sustainability** and the **environment**. We have spearheaded significant projects aimed at restoring natural and human ecosystems, which have been encroached upon by urbanization, through the creation of cycle paths, pedestrian areas, and related traffic studies (see dedicated sheet). Our infrastructure projects encompass the entire spectrum: from structural and plant design to hydraulic design and finishing works.

The project of an infrastructure concerns the work in its entirety: from the structural design, to the plant and hydraulic design to the finishing works.

At **GIS Design, we adopt a proven methodology that begins with the survey phase for the reconstruction of the existing state, including underground services, using GNSS surveys, laser scanners, and georadar**. We then proceed with BIM methodology for design, which enables effective communication, cooperation, simulation, and optimal project enhancement throughout the entire life cycle of the built structure (design phase, implementation phase, utilization phase, and maintenance phase). **With the aim of achieving complete control over the design, the company has focused on integrating GIS and BIM**. **GIS Design** boasts several certified BIM experts in accordance with **UNI 11337 standards**, ensuring comprehensive project management.

ROADS

GIS Design is renowned for its **integrated design solutions**, whether for new roads, upgrades, or the modernization of existing ones. Our designs are always conducted in compliance with national regulations, with particular attention to D.M. 2001 for road construction, D.M. 2006 for intersection design, and ANAS Circulars and Guidelines.

In the infrastructure sector, **GIS Design** also excels in the design of underground, surface, and multi-story parking facilities. Among our prestigious clients are **ANAS, Consorzio Autostrade Siciliane, as well as numerous Provinces and Municipalities nationwide**.

RAILWAYS AND SUBWAYS

GIS Design has an impressive track record in both metro and railway infrastructure projects, consistently adhering to UNI 7836 standards for metros and RFI (Italian Railway Network) design manuals for railways. Among our prestigious clients are RFI, Ferrovia Circumetnea, and Ente Autonomo Volturno.

PORTS

For years, **GIS Design** has been providing steadfast support to the Port System Authorities (ADSP) in various Italian ports, designing several significant projects, including: Electrification of berths (cold ironing); Electrical systems upgrades; Design of new buildings; Functional reorganization of internal roadways.

BUILDING DESIGN AND RESTORATION

In a rapidly developing urban landscape, where cities are becoming increasingly populated and are set to have a profound impact on the quality of urban spaces, **GIS Design** places a special emphasis on **designing sustainable buildings** that can enhance the livability of cities. Our corporate ethos is deeply rooted in innovative processes and products, making technological innovation and scientific research the true backbone of our business. We are committed to the construction sector with the aim of promoting environmentally friendly construction practices and addressing the challenges related to the current "*multi-crisis*" scenario in the country: **energy, environmental, and climate crises**.

Drawing from these principles, **GIS Design** has spearheaded several important projects leading to the design and construction of **hotels, shopping centers, private buildings, medical centers, barracks, and schools. In the realm of existing buildings, such as schools, we have conducted seismic vulnerability checks**. Moreover, in order to meet the challenges mentioned above, we pay particular attention to "**built structure design**". In recent years, we have been involved in the demolition and reconstruction of existing buildings, as well as in renovations and energy requalifications of the existing built heritage, respecting all the minimum requirements set by the Law and implementing innovative technologies that make renewable energy the main energy source.

From the perspective of "**built structure design,**" **GIS Design** boasts several conservative restoration projects. **The underlying idea is that every restoration intervention aims at preserving historical evidence, tangible signs of a particular artistic and philosophical period that must be preserved and conveyed to future generations**. We have been involved in significant restoration projects concerning the recovery and/or restoration of plastered surfaces and stone materials. For the drafting of these projects, the company always follows a precise process, starting from the historical analysis of the artifact and then proceeding to the survey using high-performance instrumentation, direct observation, and the creation of photographic documentation. This wealth of knowledge allows for a thorough understanding of the work and leads to the definition of the crack pattern, an important phase for the restoration project, in which all forms of alteration and degradation of the stone material are identified based on the Lexicon identified by the Normal 1/88 (Regulations for Stone Artefacts), now contained in UNI 11182:2006.

Innovation is the beating heart of our company. As a support for building design, we have adopted the **BIM methodology.** The BIM procedure allows for effective communication, cooperation, simulation, and optimal project enhancement throughout the entire life cycle of the built structure (design phase, implementation phase, utilization phase, and maintenance phase).

At **GIS Design** **communication** is another crucial element in the construction sector. In this regard, we pay particular attention to 3D architectural design and the creation of professional renderings and photomontages. Renderings allow for clear and captivating communication of the project to the client.

INTEGRATION BETWEEN GIS AND BIM

Our corporate group is strongly characterized by innovative process and product aspects, making technological innovation and scientific research the **true core business of our company.**

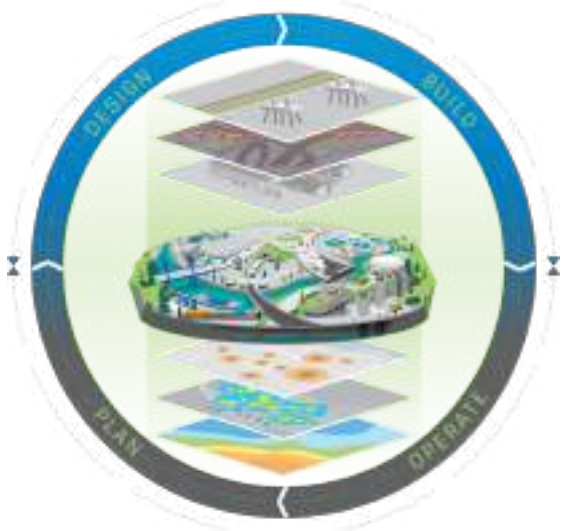
The expertise developed by the group in the GIS sector, combined with the meticulous pursuit of **maximum customer satisfaction** and the development of products of high technical quality, represent the strengths of the group. We are capable of directly performing the majority of the functions required within the scope of integrated management systems: topographic and environmental surveys, data and information collection, supply and implementation of management software, data loading and mapping, GIS system design with the possible development of specific applications for the client's needs, training of staff in usage, and provision of GIS assistance and support services.

Our corporate group now represents an equipped laboratory for the design, implementation, and development of GIS (Geographic Information System). We have highly qualified personnel in the topographic, engineering, and environmental sectors, utilizing high-performance surveying tools such as the **LASER SCANNER, and specialized hardware and software** for data acquisition and processing, infrastructure design and management, and transportation safety analysis. To summarize the group's strengths in the field of Geographic Information Systems (GIS):

- Vast experience in GIS and web-GIS design and implementation.
- Former commercial partners with major GIS software houses.
- Highly skilled personnel in the open-source GIS sector.
- Key Clients: ANAS, airport management companies, Sicily Region, BBCCAA Superintendency, University of Catania, numerous municipalities, and other entities in Italy.

Since its inception, **GIS Design** has been at the forefront of innovation by introducing the Building Information Modeling (BIM) methodology in the design area. The BIM procedure enables effective communication, cooperation, simulation, and optimal project enhancement throughout the entire life cycle of the built structure (design phase, implementation phase, utilization phase, and maintenance phase).

The integration between GIS and BIM involves a comprehensive understanding of the complex interaction of factors in the built and natural environment, contributing to guiding the planning, design, construction, and operation of more sustainable and resilient infrastructure. GIS data introduces a geospatial element into BIM design: GIS information is necessary for the planning and management of roads, bridges, airports, railway networks, and other infrastructure in the surrounding context, while BIM information is essential for the design and construction of such structures. Furthermore, GIS information can provide an urban, regional, and national representation, while BIM data applies to the design and construction of a specific form or structure. Therefore, with the addition of GIS, the structure is managed within the context of a broader and smarter landscape. Maximizing the long-term value of new roads, bridges, and structures means providing better projects to solve many of the sustainability and resilience problems that afflict today's cities. This requires the optimization of the dynamic exchange of data between BIM, CAD (computer-aided design), and geospatial information provided by GIS.



INSPECTION OF BRIDGES, VIADUCTS AND TUNNELS

GIS Design specializes in the **inspection of bridges, viaducts, and tunnels,** conducted with the support of qualified inspectors holding **RINA Level 2 certification**, and utilizing state-of-the-art innovative tools such as **Drones, Laser Scanners, MMS, GNSS, and Total Stations**.

For several years, **GIS Design** has been conducting inspections in compliance with the Guidelines for risk classification and management, safety assessment, and monitoring of existing bridges, as well as the Guidelines for investigation activities, inspections, maintenance, and safety measures for existing road tunnels.

This activity has been carried out for major highway and railway authorities, such as **ANAS, RFI, Autostrade per l'Italia, and the Consorzio Autostrade Siciliane**.

DRONE

LASER SCANNER

GNSS

TOTAL STATION

Our inspections gather valuable data, seamlessly integrated into a **GIS project** and enriched with additional information, including **Web Map Service** (WMS) such as road layouts, transportation systems, constraints, cadastre, 1:10,000 mapping, orthophotos, to obtain a comprehensive view of each investigated element.

Within the GIS project, **all structural surveys can be uploaded and georeferenced,** easily accessible with just a click on the map. This enables us to create a tool capable of scheduling routine checks and regular maintenance, supporting decisions for new infrastructure, expansions, or modifications.

Notably, dedicated cards are developed within the **GIS project**, allowing for simple, intuitive, and effective data visualization, modification, and implementation, such as: identification; constructive geometric survey; historical data; maintenance; inspections; surveys; PDF reports. These cards are drafted in compliance with the Guidelines for risk classification and management, safety assessment, and monitoring of existing bridges.

The described database can be exported in formats easily readable by the most common **GIS software (QGIS, ArcGIS) and in KMZ format.**

ROAD SAFETY AND TRAFFIC STUDIES

The ICC group, especially through the activity of **GIS Design**, has contributed to spreading the culture of road safety throughout the national territory for **over 20 years,** through a series of coordinated actions, which act on the main components which, interacting between of them, determine road accidents and the related consequences (man, vehicle, environment, road).

The company has developed considerable experience in integrated systems for improving road safety conditions, in **support of road management bodies** (Ministry of Infrastructure and Transport, Anas, various Regions, Provinces and Municipalities), also covering for a short period the role of Technical Secretariat of the National Road Safety Council.
The company staff includes several Professors and Researchers from the Department of Civil and Environmental Engineering of the University of Catania, who contribute to giving the company activity technological innovation and maximum reliability in the analyzes and studies conducted.
The main interventions implemented since 2002 to reduce the risk of road accidents and the severity of their consequences are:

Road safety planning, design, management and monitoring centers at regional, provincial or municipal level; Urban road safety plans; Safety studies safety audit and safety review; Mobility and traffic studies on a regional, provincial or municipal scale; other specific traffic, mobility and road safety studies; Design and implementation of interventions to reduce the risk of accidents.

In recent years, **GIS Design** has successfully supported the presentation of projects relating to the renewal of the concession and/or authorization of service areas on extra-urban roads managed by ANAS, through specific analyzes demonstrating sufficient road safety standards, in all those cases in which, due to the presence of unavoidable constraints, a complete correspondence between the geometric and operational characteristics of the service area and the requirements reported in the current ANAS Circular was not possible.

The group also provides services and carries out **research in the areas of transport and land use policies.**
In particular, the company deals with developing and implementing project ideas in the field of research and innovation in favor of **sustainable mobility** aimed at improving the liveability of metropolitan areas.
In particular, it provides specialized studies and consultancy in the following areas:

Integrated and strategic transport-territory planning at urban, regional and interregional levels; **Design and implementation of urban distribution services for city logistics goods**; Design of ride-hailing systems (DRT); **Design of cycle-pedestrian transport for vulnerable users**; Design, implementation of car sharing, car pooling and bike sharing systems; Development of marketing policies for transport companies; Implementation of fleet monitoring systems; Economic and financial evaluation of transport projects and policies; Territorial and transport impact assessments of residential, commercial, tertiary and industrial locations; Design of integrated e-ticketing pricing systems; Development of **Mobility Management policies**; Design of integrated transport systems (modal, tariff and technological integration); Networking on different scales, regional, national and European; **ITS (Intelligent Transport System) systems design.**

GIS Design boasts various application experiences in:

Traffic and circulation surveys; Urban Traffic Plans (PUT); Urban Mobility Plans (PUM); Urban Road Safety Plans (PSSU); Simulation models of traffic and mobility scenarios.

AIRPORT SAFETY

11 Civil Airports

16 Military Airports

Rome Airport Fiumicino - Ciampino

Catania Airport

Palermo Airport

Napoli Airport

Rimini Airport

Cagliari Airport

Genova Airport

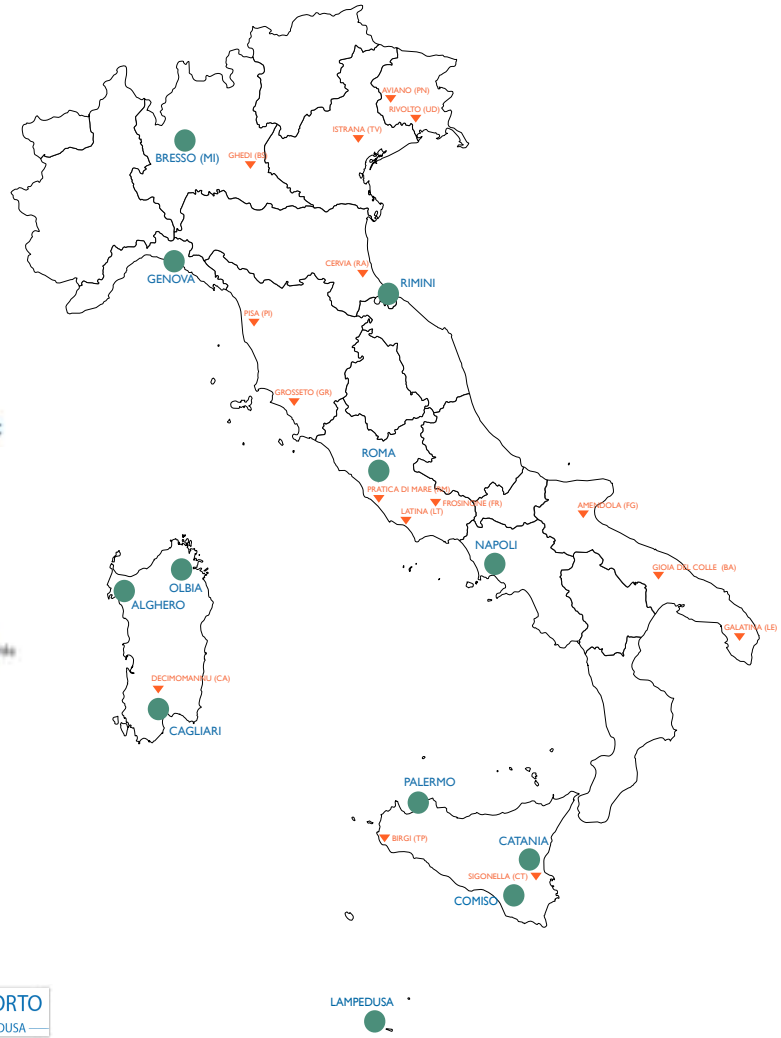
Olbia Airport Costa Smeralda

Alghero Airport

Italian Civil Aviation Authority

Lampedusa Airport

Comiso Airport



Gis Design is a well-established company that has **over 20 years of experience** in supporting airport authorities in matters concerning airfield safety, ensuring compliance with international applicable standards, high-quality certification (ISO 9001:2015) and technological innovation. The core competencies of Gis Design regard aerodrome and obstacles mapping. The company provides a wide range of specialized services, such as potential air navigation obstacles identification, aerodrome chart type "A" and "B" elaboration, and specific operating procedures preparation using **3D Geographic Information System.**

Generation of Obstacle Limitation and Identification Surfaces (OLS and OIS, compliant with ICAO annex 14&15 and EASA CS-ADR-DSN).

Implementation of the Electronic Terrain and Obstacles Data eTOD, (as per ICAO Annex 15, EASA Decision AMC & GM for Aerodromes and Eurocontrol TOD Data Manual), through the 3D Geographic Information System.

Aerodrome chart type "A" and "B", constraint and obstacles limitation maps elaboration.

Monitoring of aerodrome surroundings, as required by Regulation (UE) n. 139/2014 (EASA ADR.OPS.B.075): obstacles and the possibility of induced turbulence; use of hazardous lights; dazzling caused by large and highly reflective surfaces; sources of non-visible radiation; non-aeronautical ground lights nearby an aerodrome, which may endanger the aircrafts' safety, etc.

Air navigation obstacles census within the areas under the jurisdiction of the airport manager (in compliance with ICAO annex 14&15 and EASA Decision AMC & GM for Aerodromes) and obstacles monographs preparation.

Monitoring obstacles marking and lighting system (Reg. UE 139/2014 Surroundings), even in real-time with fault detection automatic systems.

Potential air navigation obstacles identification with high-precision GPS surveys, satellite images, aerial photogrammetry and numerical cartography, LiDAR mapping campaign and DTM and DSM digital models creation.

Monitoring Wildlife strike hazard (EASA ADR. OPS.B.020) through the use of satellite images and GIS implementation.

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