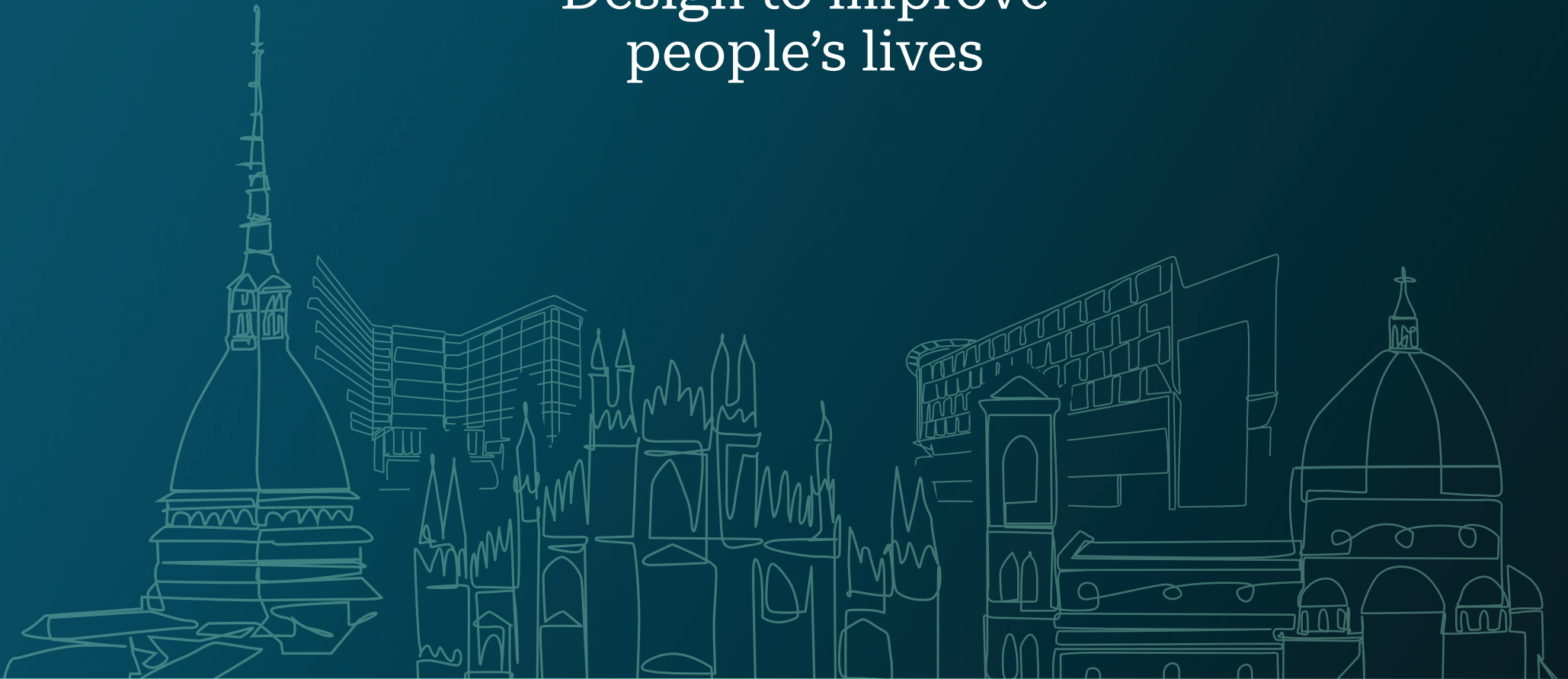




TECNICAER
Human Experiences Builders

Design to improve
people's lives





Design to improve people's lives

We believe that design means taking **responsibility**. Responsibility toward the **people** who will live, work, and care for others in the spaces we create; toward the **communities** and **institutions** that make them possible; and toward the collective **resources** entrusted to us.

Each project is a choice with a long-term impact, and as such it requires **awareness, rigor, and vision**.

We approach **design as an analytical process that precedes form**. Before drawings come **listening, understanding needs, and studying data, flows, and operational contexts**. Working in highly complex environments, particularly in healthcare facilities and large public works, we know there is no room for

improvisation: structures must first be understood, analyzed, and calculated in order to respond concretely to the needs of those who use them and those who manage them.

Our **method** integrates **expertise, models, and advanced tools**, in order to guide design decisions and reduce margins of error, steering innovation toward effective and durable solutions. For *Tecnicaer*, putting **people at the center** is not a statement of principle but the natural consequence of a **responsible approach** to design: spaces that work over time, support those who inhabit them, and contribute to improving the quality of the built environment and everyday life.



01 Who We Are

Tecnicaer is an **integrated architecture and engineering company** specializing in the design of **complex systems with a high degree of public responsibility**.

Our multidisciplinary structure is designed to manage **complex design processes** in which architecture, engineering, and organization must converge into a **unified, coherent, and verifiable vision**. We operate as a single point of contact in contexts where the quality of the project requires strong coordination capabilities, process control, and the integration of diverse expertise.

Healthcare design represents our core area of specialization. The experience gained in traditional and pediatric hospital facilities has enabled us to develop a **method** capable of



addressing systems defined by high functional, organizational, and technological complexity, where every design choice directly affects **service efficiency** and the **experience** of those who use the spaces. This approach has naturally extended our scope of activity to **large-scale public works** and **complex infrastructures**, including highly technology-intensive sectors such as **data centers**, where reliability, control, and a systemic vision are key factors.

Tecnicaer acts as a **design leader**, a **strategic partner** to its client, and a **coordinator of complex systems**, supporting the decision-making process throughout the entire life cycle of the project.

We design **systems conceived to evolve over time**, capable of adapting to future needs while maintaining high functional, environmental, and economic performance. In this way, architecture and engineering become tools for creating lasting value in service of institutions, communities, and the people who inhabit the spaces we design.

Group and Partnerships

Tecnicaer acts in a structured system of corporate relationships and strategic collaborations that strengthen the ability to manage complex projects at national and international level.

Tecnicaer is part of **Mythos**, a multidisciplinary consortium that integrates architectural and engineering skills into a coordinated organizational model, oriented toward advanced project development and a BIM-based approach.

In the field of research and innovation, *Tecnicaer* participates in the **Joint Research Partnership (JRP) – Healthcare Infrastructures** promoted by Politecnico di Milano and Fondazione Politecnico di Milano, as a **Platinum Partner**, contributing to programs dedicated to the evolution of healthcare infrastructures and complex organizational models. In the healthcare sector, *Tecnicaer* designs facilities in line with **Joint Commission International (JCI)** standards, integrating their requirements for quality, safety, and clinical organization into the design process through pre-verification activities developed in partnership with **Progea Servizi**.



ASL TO5 Hospital – Cambiano

Simulation of organizational and healthcare models in accordance with **Joint Commission International (JCI)** standards.



02 Evolution

Tecnicaer was founded in **2004** in **Aosta** by **Fabio Inzani**, an engineer specialized in hospital design, and **Stefano Bonfante**, an electrical engineer, as the expression of a professional vision focused on **the quality of design** and on the responsibility that architecture and engineering carry in contexts of public interest.

From the very beginning, the company developed around a **strong technical culture** and a **structured approach to design**, based on the analysis of needs, the ability to interpret complex systems, and the awareness of the long-term impact that every intervention generates. This orientation guided the company's early experiences and defined the methodological foundations on which *Tecnicaer* has built its path.

Over the years, the **company's growth** has been driven by a progressive **strengthening of its organizational and multidisciplinary structure**, accompanied by the acquisition of increasingly complex assignments.

The opening of the **first office** in **Turin** marked a significant step toward a more structured organization capable of operating in complex contexts, consolidating expertise, operational models, and coordination capabilities.

Subsequently, the **opening of the offices** in **Milan** and **Florence** represented a natural evolution of this growth path, aimed at ensuring operational proximity, continuity of relationships, and a stable presence in the main areas of activity.

Today, *Tecnicaer* stands as a structured organization capable of combining the **experience** developed over time with a **forward-looking vision** and an **approach to innovation** understood as the continuous **evolution** of methods and expertise.

This development has progressively expanded the company's scope at the **international level** as well, while maintaining the same methodological approach that has defined its identity since the beginning.

The history of *Tecnicaer* is not a sequence of stages, but a coherent evolution in the way design is conceived: as a tool to manage complexity, support change, and build lasting value for institutions and communities.

03 Values

Design Approach

People are at the heart of the spaces and infrastructure we design. Around them we build everyday elements that we integrate with **advanced technological systems** to allow them a better experience of the areas.

Innovation

For *Tecnicaer*, every project is the result of research driven by **innovation** and the **integration of highly specialized technologies** and **know-how**. Each activity is studied and analyzed with the aim of introducing innovative elements that make every project unique.

Experience

For more than twenty years, the *Tecnicaer* team has combined diverse **technical and educational experience**. The founding partners, together with the entire team, ensure the delivery of projects that integrate **aesthetic quality** with **functional requirements**.

Sustainability

For *Tecnicaer*, the **ecological transition** is an integral part of the company's vision. Every project incorporates **environmental and energy sustainability** criteria, through technical solutions aimed at **reducing consumption**, optimizing **resources**, and ensuring long-term **durability**.

People Value

Every team member is an active part of the project. **People are our added value**. *Tecnicaer* places great emphasis on **corporate welfare**, providing tools and initiatives that support personal well-being and the quality of the workplaces.

Training

Tecnicaer supports the professional growth of its team through highly qualified training paths. The company funds **advanced Master's programs** and **specialized courses**, and regularly organizes internal training sessions focused on **design** and **project management**.





04 Design Approach

In contexts characterized by high complexity and public responsibility, *Tecnicaer* acts as a **reliable partner** for the design and implementation of new works and interventions on existing ones. **The approach is focused on governing the entire process**, from the definition of objectives to the concrete implementation of the project, with particular attention to projects of collective interest and complex infrastructures.

The work is based on a **structured organization** and **interdisciplinary teams** that operate in a coordinated manner throughout all phases of the project. The **integration** of expertise, careful **planning** of activities, and an effective **Project Management system** allow us to **control time, costs, and quality**, ensuring consistency between the design vision, technical requirements, and implementation.

This method allows us to manage complex projects while maintaining a high level of reliability and decision-making control. *Tecnicaer's* approach seeks a conscious balance between **engineering, architectural quality**, and the **functionality** of spaces, with particular attention to the **long-term impact** of each intervention. Each project is conceived as an **integrated system**, capable of responding to the operational needs while adapting to future transformations, in line with a project lifecycle-oriented vision.

05 Services

✓ Feasibility Studies

Our approach **optimizes the decision-making process** related to the implementation of a project through a **systematic evaluation** (economic and multi-criteria) of its strategic aspects. A **circular methodological process** provides feedback to designers and stakeholders to define the project's characteristics, resources, and the model for its realization and management.

✓ Construction Management and Safety

Tecnicaer has a **Construction Management** and **Safety Coordination** office with **professionals** experienced in public works sites of national importance, operating in compliance with the roles and obligations set out in current **safety legislation** (Legislative Decree 81/2019).

🔗 Comprehensive and Coordinated Design

Professionals with experience in managing complex projects work at *Tecnicaer*. **The team is organized for each discipline** and deals with all phases of the design, involving figures of high academic profile. Method and processes are based on **interdisciplinarity** and **synergy** between professionals.

🔗 Project Management

Tecnicaer has a highly qualified **Project Management** structure. The Client interacts with it, in order to ensure **transparency of the process** and **full achievement of the project targets**, ensuring the achievement of the final goal while **respecting time and budget**.

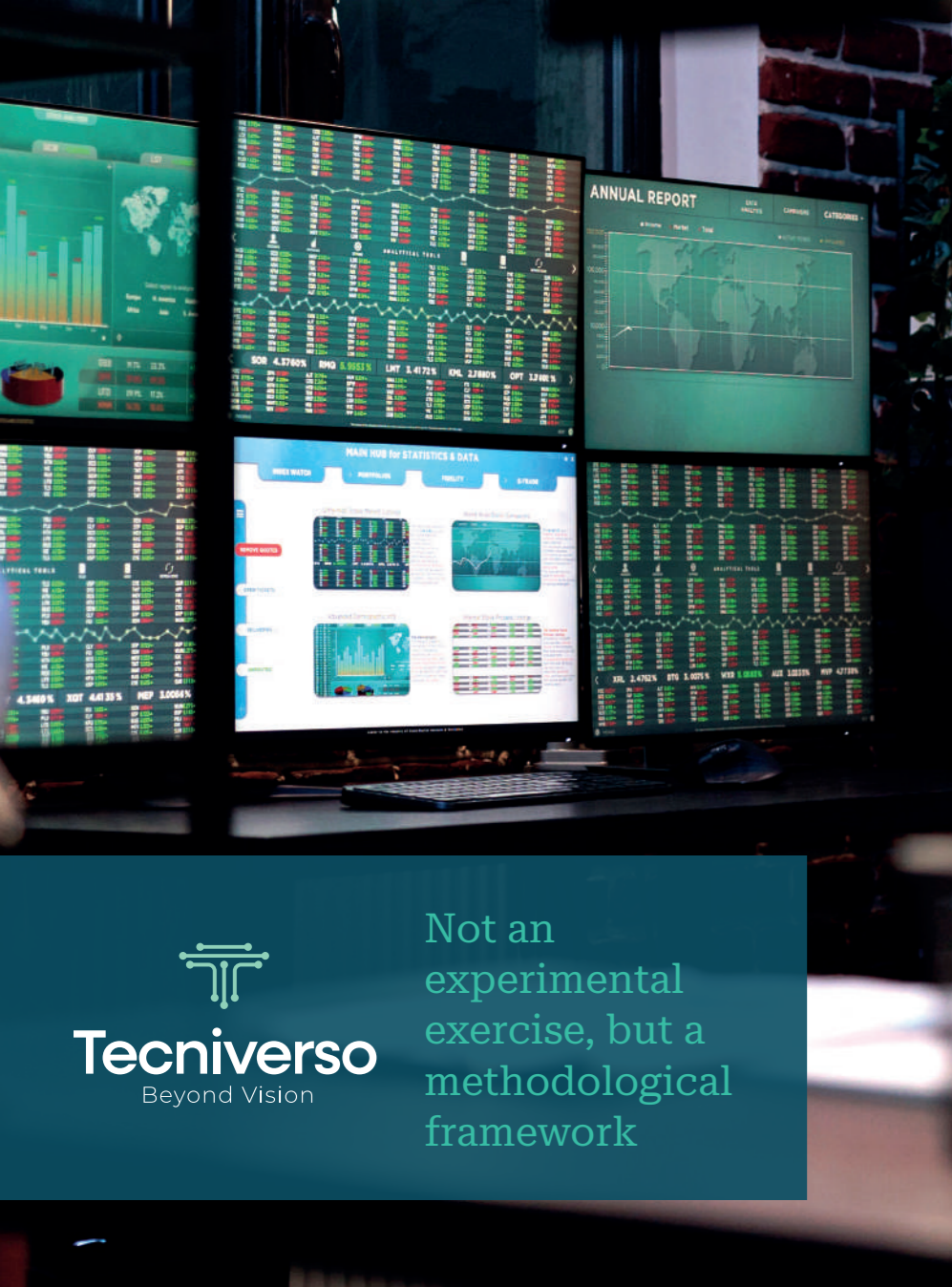
📄 Assistance in Tendering and Project Financing

Tecnicaer's Tender Office provides **consultancy** and **assistance** to companies in preparing tenders for **Technical and Economic Feasibility Projects (PFTE)**, **Project Financing**, and **Integrated Contracts**. From the preliminary feasibility and suitability check we handle administrative documentation and technical and economic offers through to final proposal optimization.

📄 Framework Agreement Management

Provision of services for the management of real estate assets, through planning, coordination, and control of activities consistent with the client's demanding framework, defined through a detailed analysis and synthesis of the multisectoral contributions that characterize the intervention.





06 BIM, AI and Tecniverso

BIM – Building Information Modeling

All design activities, from the early architectural concept to construction site management, are carried out in a **BIM** environment, simultaneously developing disciplinary models (**ARC/STR/MEP**) typically in a **REVIT** environment, with levels of detail defined by the UNI 11337 part 4 standard, and consistent with the expected level of design.

The activity is not limited to the 3D design; it manages all aspects of a project: geographical location, geometry, properties of materials and technical elements, construction phases, maintenance interventions and demolition and decommissioning operations of a built work. It deals with everything that is part of the life cycle of an artifact, reaching the management of the seventh dimension (the management of the asset).

The developed models become **large databases**, from which **any information can be consulted**: the model is a virtual object that displays, through various simulations, what the building will be once built, with the possibility of verifying the technical and performance characteristics, right from design phase. They are digital environments capable of storing everything you need to know about a project, the specifications of the products used, logistics, the sequences of construction work, and the costs related to construction, management and maintenance of the work.

The project's internal verification activity, both from the point of view of **regulatory compliance (Code Checking)** and the **accuracy of the identified technical solutions**, is also carried out by using the **BIM Oriented** methodology, through an analysis of the models exported in **IFC** format, using specific software for **Model Checking**. The verification reports, produced by the **Project Information Manager**, are transmitted to the discipline **BIM Coordinators**, in this way the correction phase of any critical issues is optimized.

AI and Tecniverso

The evolution towards **AI** was born as a natural extension of the BIM method and the design experience gained by *Tecnicaer*, with particular application to hospital design and the management of complex systems. Through generative and analytical tools, **AI is used to simulate organizational scenarios, optimize functional layouts, analyze healthcare flows and support Directorates in evaluating design and economic choices**, while maintaining the central role of the designer and client.

Tecniverso, *Tecnicaer's* research and development laboratory dedicated to **transforming design knowledge into applicable intelligent models, fits into this context**. By integrating data, regulations, state of affairs, and design, Tecniverso develops solutions capable of generating **operational simulations** and assessing the **impact on management costs, energy consumption, and healthcare organization**, helping to make the project a tool for managing the project's performance over time.



07 People

At *Tecnicaer*, the value of the project is linked to the **people** who make it possible. **Professional skills, experience** and **responsibilities** are the central element of the organization and also an **integral part of the design method**.

Operating in complex areas with high public responsibility requires solid professionalism and a structure capable of guaranteeing continuity and reliability over time.

The work is managed by structured **interdisciplinary teams**, composed of highly experienced professionals who operate in a coordinated way along all the phases of the project.

The integration of architecture, engineering and specialist disciplines allows to manage complexity coherently and to maintain the control of design processes.

The centrality of people is also reflected in *Tecnicaer's* organizational choices. The focus on **professional growth** and **employee well-being** translates into **welfare policies**, in order to support **stability, motivation, and job quality**, contributing to the value of projects over time.

08 Certifications and Management Systems

Tecnicaer operates according to **certified** management systems and **nationally and internationally recognized standards**, ensuring the quality of processes, operational safety, and reliability of the activities performed.

Certifications represent a **control** and **verification** tool, integrated into the working method and oriented towards improvement.



Quality, Safety and Process Management

Tecnicaer is certified according to **UNI/PdR 74**, **UNI EN ISO 9001**, **UNI EN ISO 14001**, **OHSAS 18001 – UNI EN ISO 45001** and **ISO/IEC 27001:2022** standards, demonstrating a structured approach to process management, environmental protection, people's safety and information protection.

The organization also obtained the **Legality Rating** with the maximum score, confirming reliability, transparency and fairness in its relationships with institutions and partners.



Environmental and Social Sustainability

Sustainability is an integral part of *Tecnicaer's* design and organizational approach.

The company is a member of the **Green Building Council** and operates in accordance with the main environmental sustainability protocols, including **LEED**, **ITACA**, **WELL** and **BREEAM**.

Tecnicaer also obtained **ESG** certification, certifying compliance with environmental, social, and governance criteria for design, construction management, safety, testing, and consulting activities in the civil, industrial, and infrastructure sectors.



Gender Equality and Social Responsibility

Tecnicaer adopts management systems oriented towards social responsibility and the valorization of people, in accordance with **PAS 24000** and **UNI/PdR 125** on gender equality.

These standards support the creation of a fair and inclusive workspace, where equal opportunities, respect, and transparency are structural elements of our business functioning.



Tecnicaer invests in the **qualification of professional skills**, to support the management systems and certifications adopted.

Specialized training and **continuous updating** are structural elements of the organization, essential to ensure technical reliability, regulatory compliance, and the ability to work in complex and constantly evolving contexts.

09 Sectors



Healthcare



Public Buildings & HQ



Urban Regeneration



Historical & Artistic Buildings



Education & Research



Energy & Sustainability



Military & Defence



Infrastructures



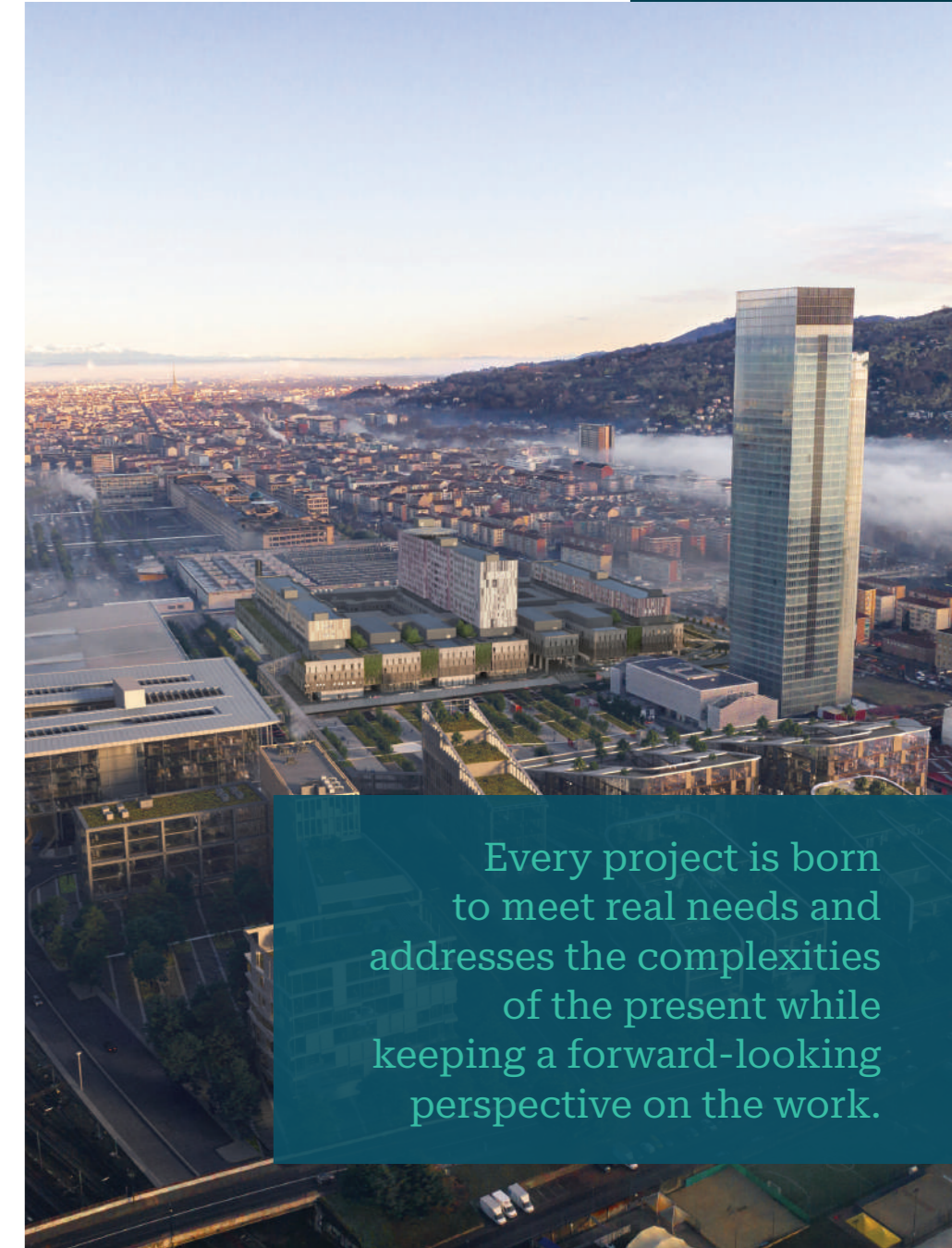
Construction Management



10 Projects

The **projects** represent the synthesis of *Tecnicaer's* **method**, **skills** and **experience**. We are proud of the design path built over time and the works that are an expression of it. Each work was developed with care, rigor and responsibility.

The experience gained in the healthcare sector forms the founding core of our project path. This has helped to consolidate a capacity for governance of complexity applicable to other areas of high public responsibility. Hospitals, large works and complex infrastructures all need reliability, control and systemic vision, elements that are fully expressed in the projects already completed.



Every project is born to meet real needs and addresses the complexities of the present while keeping a forward-looking perspective on the work.



New Health and Innovation Park of Turin

- Healthcare
- Energy & Sustainability



The intervention concerns the definition of the development Masterplan for ZUT 12.32 in the Municipality of Turin, within which the new Health and Clinical Training Hub, the Research Hub, the Teaching Hub and the Residential Hub have been located. The project draws on the positive elements that drove the **transformation of the Lingotto area**, re-establishing a broken thread with the past and enhancing – through a process of urban stitching – the system of relationships with the key institutions that characterize this specific urban environment in Turin, between the Po river and the railway. One of the project’s core objectives is the harmonization of the new volumes with the existing context by enhancing the whole complex from an aesthetic-formal point of view. A hospital designed to be expandable and capable of adapting to any type of emergency, with over 2,000 m² of “buffer” spaces and the possibility of **expanding its footprint** by a further 22,000 m². A building designed in accordance with the main environmental sustainability protocols – **LEED, ITACA and BREEAM** – energy self-sufficient, exploiting **60% of energy produced from renewable sources**, drawing largely on the primary resource present in the subsoil of the Millefonti district of Turin: water. A hospital that looks to the future, making extensive use of robotics and the most innovative technologies.



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| Typology: | Healthcare architecture |
| Commissioning body: | SIS S.c.p.a. for the University Hospital Città della Salute of Turin |
| Provided services and scope: | Technical and Economic Feasibility Study, Detailed Design |
| Key project numbers: | Beds: 1,040 Masterplan: 313,725 m ² Healthcare area: 160,000 m ² Built area: 240,000 m ² Project value: 495,000,000 € |



ASL TO5 Cambiano Hospital

- Healthcare
- Energy & Sustainability



The New ASL TO5 Hospital represents a cutting-edge model of healthcare architecture. Located in Cambiano (Turin), the facility will offer a total of 470 beds, distributed across general inpatient care, post-acute care, and technical units, addressing the needs of a modern and inclusive healthcare system.

Covering approximately 80,000 m², the project stands out for its strong focus on **environmental care** and **well-being**, featuring green roofs, therapeutic gardens, and a modular architectural design that ensures both flexibility and sustainability. Technological innovations such as **IoT** systems and **adaptive façades** will reduce energy consumption by up to 63%, establishing the hospital as a benchmark for the future of local healthcare—particularly serving the cities of Chieri, Carmagnola, Moncalieri, and Nichelino.

Every detail is designed to enhance the experience of patients, staff, and visitors, with spaces that blend advanced **technology** and **comfort**. The new hospital will be a symbol of innovation and a significant step forward for the Piedmont region.



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| Typology: | Healthcare architecture |
| Commissioning body: | ASL TO5 Piedmont Region (Local Health Authority) |
| Provided services and scope: | Technical and Economic Feasibility Study |
| Key project numbers: | Beds: 470 Parking spaces: 1,200 Total area: 80,300 m ² Future expansion area: 14,540 m ² Project value: 302,000,000 € |



New Felettino Hospital La Spezia



- Healthcare
- Energy & Sustainability

The New La Spezia Hospital represents an innovative and sustainable healthcare model, based on the organization of homogeneous functional platforms. The project involves the construction of a **new regional hospital** (506 beds), classified as a **Level I Emergency Department (DEA)**, and will include key specialist services. It's designed as an acute care facility, offering high-level assistance and advanced technology, fully aligned with **environmental sustainability** principles.

The hospital stands out for its exceptional flexibility, applied to all structural components. This allows for **internal space expansion**, long-term adaptability, and ease of replacement of technical elements, **minimizing operational risks**. It's engineered to significantly reduce environmental impact through the use of advanced technologies, renewable energy sources, and maximum energy efficiency in production systems. The new building consists of a single fragmented volume, organized into four "combs" radiating from a central spine in a fan-shaped layout. This structure is seamlessly integrated into the existing landscape through the design of both interior and exterior green areas, fully respecting the site's environmental and landscape constraints.

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| Typology: | Healthcare architecture |
| Commissioning body: | Guerrato S.p.A. for ASL 5 "Spezzino" |
| Provided services and scope: | Detailed Design, Executive Design, Safety Coordination during the Design Phase |
| Key project numbers: | Beds: 506 Healthcare area: 60,000 m ² Outdoor area: 46,000 m ² Project value: 225,000,000 € |



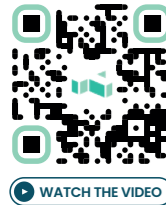
New Gaslini Hospital Genoa

- Healthcare
- Energy & Sustainability



The project, developed through a public-private partnership, aims to transform the IRCCS Giannina Gaslini into a cutting-edge pediatric hospital increasingly centered on children and their families. The Masterplan includes the construction of the **new Padiglione Zero**, dedicated to high-intensity emergency and surgical care, as well as the renovation of **pavilions 6, 15, 16, 17, and 18**. It also involves the **reconfiguration of pavilions 1, 2, 3, 12, and 13** for social-health services, educational activities, and hospitality. The project ensures safety and quality of care through a new spatial layout based on care platforms, ergonomic environments, and a healing environment, with attention to air quality, natural light, and acoustic and thermal comfort. The hospital will be equipped with a **modular island-based system**, built for efficiency and durability, and supported by **integrated digital management**, including cloud infrastructure, machine learning, microgrid systems, BIM, and digital twin technologies. Among the advanced systems included are: Hydrogen Ready engines, multi-purpose heat pumps, plug & play solar cooling, free cooling, photovoltaic systems, and provisions for fuel cells. The new Gaslini will be an intelligent, autonomous, secure, and fully digital hospital, designed to optimize consumption, ensure operational continuity, and achieve **LEED GOLD** certification.

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| Typology: | Healthcare architecture |
| Commissioning body: | CMB for IRCCS Giannina Gaslini |
| Provided services and scope: | Technical and Economic Feasibility Study, Detailed Design, Executive Design, Safety Coordination during the Design Phase |
| Key project numbers: | Beds: 460 Area of newly constructed pavilion: 35,000 m ² Area to be redeveloped: 30,000 m ² Project value: 137,112,528.88 € |



San Paolo Hospital Hub Milan

Healthcare



The project envisions a **radical transformation** of the San Paolo Hospital Hub in Milan, with a **new internal layout**: outpatient clinics and day hospitals will be located on the lower floors, while inpatient wards—featuring single, convertible rooms with private bathrooms—will be on the upper levels. These spaces will offer hotel-level standards, thermal and acoustic comfort thanks to radiant ceilings and dynamic lighting. Architectural beauty will play a therapeutic role: the design incorporates **neuroaesthetic** principles, engaging the senses with calming sounds and scents, natural plants, and soundproofing systems to create a serene, healing environment. Interactive areas, sensory games, and musical instruments will support cognitive and motor stimulation—particularly beneficial for patients with neurological conditions. The new facility will be highly **digitalized**, featuring real-time monitoring, wearable devices, and infrastructure ready for artificial intelligence integration. From an environmental standpoint, the project will use eco-friendly materials, low-impact construction techniques, and energy-efficient solutions, making San Paolo a model **green hospital** aligned with the most advanced European standards.



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| Typology: | Healthcare architecture |
| Commissioning body: | ASL (Local Health Authority) |
| Provided services and scope: | Technical and Economic Feasibility Study, Executive Design |
| Key project numbers: | Beds: 470 Project value: 105,000,000 € |

A.O.U. Bologna S. Orsola Malpighi Polyclinic Bologna

Healthcare

Construction Management



The redevelopment project involves the **renovation** of several key pediatric services located in **Pavilions 16 and 13**, including Imaging Diagnostics, the Operating Block, Pediatric Intensive Care, and daytime outpatient services. All functions related to childbirth will be consolidated in the historic Obstetrics and Gynecology Clinic (**Pavilion 4, Wings A and C**), which will be connected to a new building dedicated to **high-care** activities such as the Emergency Department, Surgical Block and Delivery Suite, and Neonatal Intensive Care Unit. The new volume stands out for its modern design, emphasizing seamless integration between interior and exterior spaces.

The architectural project is harmoniously integrated with the surrounding greenery, aiming to preserve and enhance the existing tree heritage while reestablishing a balance between the new built environment and the regeneration of the hospital's valued green landscape—historically one of its defining features.



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| Typology: | Healthcare architecture |
| Commissioning body: | A.O.U. Bologna S. Orsola Malpighi Polyclinic |
| Provided services and scope: | Preliminary Design, Detailed Design, Executive Design, Safety Coordination, Construction Supervision |
| Key project numbers: | Built area: 12,500 m ² Renovated area: 11,750 m ² Outdoor area: 2,500 m ² Project value: 30,330,806.73 € |

New ASL TO4 Ivrea Hospital Ivrea (Turin)



The new Ivrea Hospital, part of the Ivrea–Cuorgnè Healthcare Complex, is designed to accommodate 276 inpatient beds and 30 day-hospital beds, positioning itself as a modern, functional, and sustainable facility. The design concept stems from the idea of a compact and efficient building, capable of optimizing space use, reducing land consumption, and minimizing the building footprint. This approach led to a careful rationalization of circulation routes and functional areas, with a layout based on operational efficiency and optimal use of healthcare personnel. A key element of the internal organization is the **hospital's Main Street**, a central distribution axis that separates daytime functions from high-intensity care areas. This configuration clearly **differentiates the flows** of patients, staff, and visitors, and arranges spaces vertically according to a principle of decreasing care intensity toward the upper floors. The top level houses medical offices and is equipped for the implementation of **telemedicine** services, enabling remote patient monitoring and expanding the range of healthcare services available in the region. Finally, the presence of a **centrally located technical floor** optimizes the distribution of building systems and ensures greater operational flexibility, allowing for future expansions or functional reconfigurations without disrupting the hospital's activities.

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| Typology: | Healthcare architecture |
| Commissioning body: | ASL TO4 (Local Health Authority) |
| Provided services and scope: | Technical and Economic Feasibility Study |
| Key project numbers: | Beds: 276 Project value: 165,000,000 € |

New Galliera Hospital Genoa



The project involves the **construction** of a total of 70,230 m², including parking facilities and technical service areas, distributed across eight levels, and providing a total of 404 beds. The most specialized functions—Emergency Department, Diagnostic Imaging, Laboratories, Operating Theaters, Intensive Care, Interventional Radiology, and Ultrasound—are concentrated on the lower floors (Levels 0 and 1).

The upper mid-levels (Levels 2 and 3) will host the high-traffic public services, such as Outpatient Clinics and Day Hospital, while the inpatient wards and the Maternity Unit, located near the obstetrics ward, will be positioned on the upper floors.

The basement level will serve as a parking area for both staff and visitors, with the eastern section dedicated to a rainwater harvesting tank for reuse. The ground floor will be complemented by an underground service yard for the Waste Management Hub (Isola Ecologica) and the volume of the Technology Center.

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| Typology: | Healthcare architecture |
| Commissioning body: | Galliera Hospitals Healthcare Institution - Genova |
| Provided services and scope: | Detailed Design, Safety Coordination during the Design Phase, Construction Supervision |
| Key project numbers: | Beds: 404 Built area: 70.230 m ² Outdoor area: 23.500 m ² Project value: 120,000,000 € |

A.O.U. Sassari Sassari



The **reorganization** project of the University Hospital Complex of Sassari includes the expansion, upgrading, completion, and connection to the existing structures, covering a total area of over 85,000 m² and providing 900 hospital beds.

The intervention area involves the entire urban sector, which is redesigned to host new and modern healthcare services, underground parking facilities, and a large public square accessible from the main avenue, which will be pedestrianized. On the eastern side of the hospital area, the demolition of the Palazzo Rosso will make space for the **New Maternal and Childcare Center**: a true urban landmark, acting as a hinge between Viale San Pietro and Via delle Croci.

The iconic circular building will feature a double-height central courtyard and rise over seven levels. It will be connected to the hospital's main entrance via an aerial walkway and an underground tunnel, seamlessly integrating into the wider hospital infrastructure.

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| Typology: | Healthcare architecture |
| Commissioning body: | University Hospital of Sassari |
| Provided services and scope: | Detailed Design, Executive Design, Safety Coordination during the Design Phase |
| Key project numbers: | Beds: 900 Built area: 85,000 m ² Outdoor area: 29,500 m ² Project value: 96,000,000 € |

Presidio Ospedaliero del Mugello Florence



The project, initially driven by the urgent need for **structural reinforcement**, goes beyond major **structural upgrades** to include a wide range of improvements aimed at securing, optimizing, and making functional services technically and clinically autonomous. The redevelopment of the Mugello Hospital will restore the facility—after many years of anticipation—to its role as a key healthcare hub for the region and beyond.

Our proposal includes extensive works in the architectural, MEP (mechanical, electrical, plumbing), and clinical domains, involving renovations, modernization, and expansions. Through careful planning of spatial layouts and the physical and functional connections between processes, the project will significantly enhance safety conditions and minimize clinical risk—an increasingly crucial need, whose fulfillment will greatly improve the well-being of all users.

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| Typology: | Healthcare architecture |
| Commissioning body: | USL Toscana Centro (Local Health Authority) |
| Provided services and scope: | Detailed Design, Executive Design, Safety Coordination during the Design and Execution Phases, Construction Supervision |
| Key project numbers: | Built area: 15,000 m ² Project value: 51,000,000 € |



New Laboratory National Institute for Nuclear Physics (INFN) Frascati (Rome)

- Public Buildings & HQ
- Education & Research
- Construction Management



The construction of the new **EuSPARC** complex will significantly strengthen the Frascati National Laboratories, already recognized as a center of international excellence.

The facility will house an **Advanced Research Laboratory** focused on emerging technologies for particle acceleration, becoming a key reference point for future users of coherent FEL radiation. The architectural layout is shaped by the **LINAC** accelerator, the central spatial element around which all ancillary spaces are organized – including laboratories, modulator and experimental rooms, shared research and relaxation areas, offices, and service spaces.

The parallelepiped volume is sculpted by two significant cuts, creating terraces designed to house the air handling units (UTA). These are complemented by large green basins that create a seamless transition between the building's rooftop and the surrounding hillside landscape.



| | |
|------------------------------|---|
| Typology: | Advanced research laboratories |
| Commissioning body: | National Institute for Nuclear Physics (INFN) |
| Provided services and scope: | Preliminary Design, Detailed Design, Executive Design, Safety Coordination during the Design and Execution Phases, Construction Supervision |
| Key project numbers: | Total area: 5,800 m ² Project value: 43,000,000 € |

Gerbido Waste-to-Energy Plant Turin



The Gerbido plant was designed with the goal of establishing a **rail terminal for waste delivery** within a relatively compact area. The project aimed to position major noise sources away from the neighboring cemetery, minimize visibility of the waste and reagent loading and unloading zones, optimize road access, harmonize with surrounding infrastructure, and simultaneously enhance the architectural value of the facility.

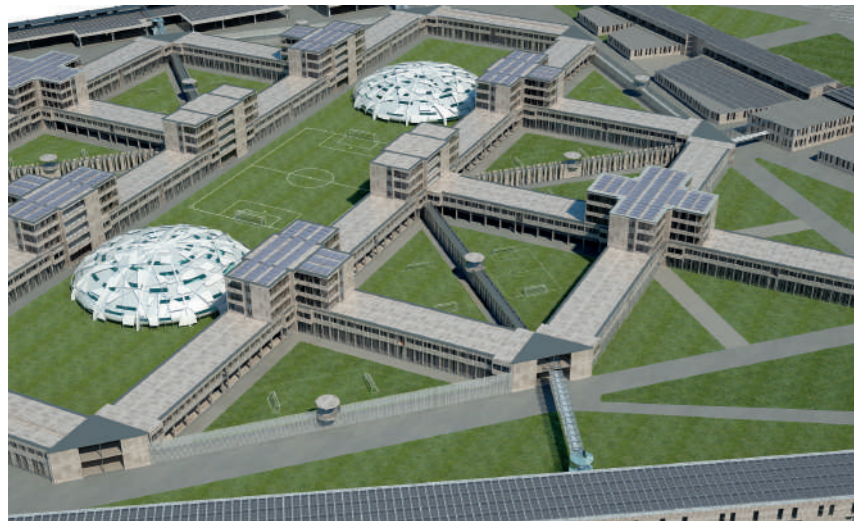
Alongside meticulous plant engineering, significant attention was paid to **architectural design**, both to redevelop the intervention area and to assign strong aesthetic value to the entire complex. The project encompassed all buildings on site, including the administrative services building, the plant staff facility, the gatehouse, the warehouse and workshop, the fire protection and demineralized water station, the district heating building, the changing room building for external contractors, the HV/MV substation, as well as the main waste-to-energy plant and the flue gas stack.

Additionally, systems were designed for air conditioning to control indoor climate during both summer and winter, heating, hot water distribution across all buildings, wastewater treatment, fire protection, and electrical installations.



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| Commissioning body: | Cover Industrial |
| Provided services and scope: | Executive Design of technological systems |
| Key project numbers: | Project value: 251,000,000 € |

New Penitentiary Institute of Nola Nola (Naples)

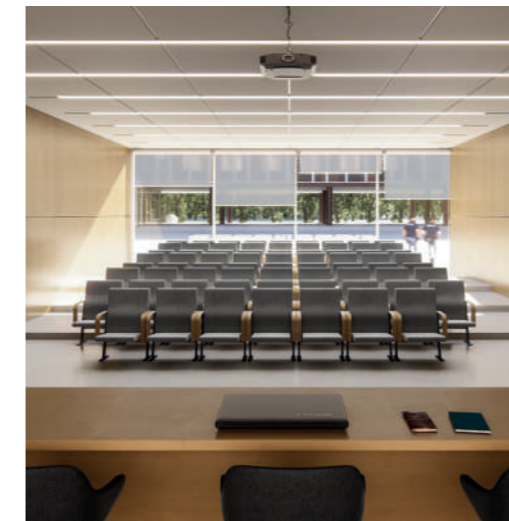


The extensive area designated for the new Penitentiary Institute in Nola, within the Territorial Coordination Plan of the City of Naples, is strategically located near major roadways. The project is deeply rooted in the belief that the process of rehabilitation and reintegration of inmates into civil society also relies on the **humanization of the environment** and the **flexibility of spaces**, which must be reconfigurable to adapt to possible future developments.

Given the significant building volumes and surface areas involved, particular attention has been paid to the **quality** — including the **aesthetic** value — of the complex, as well as to **environmental compatibility and sustainability**, which have become increasingly important values. To meet this set of requirements, specific prefabricated construction systems have been selected, capable of reducing construction time while ensuring high-quality standards.

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| Typology: | Prison infrastructure |
| Commissioning body: | Ministry of Infrastructure and Transport |
| Provided services and scope: | Preliminary Design |
| Key project numbers: | Beds: 1,224 Project value: 262,830,318.57 € |

Police Academy Alessandria



The project entails a complete **redevelopment** of the police barracks in Alessandria, transforming it into **the largest police training school in Italy**. The new structure, designed to accommodate 30 classrooms and 500 dormitory rooms, features a tiered form with increasing heights toward the exterior.

The glazed base ensures visual permeability with the two internal courtyards, while the upper part—housing the dormitories—displays a rigorous architectural language aligned with the interior layout. The height of the lower section corresponds to the surrounding buildings on the square and the new porticoed structure (two floors above ground).

The **flow and access management** has been conceived to replicate a university campus experience, ensuring integration between service spaces and the educational areas of the new building. The combination of technological solutions will result in the construction of new **nZEB** (Nearly Zero Energy Buildings): eliminating fossil fuel consumption and achieving zero local emissions (**CarbonZero** Building).

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| Typology: | Military infrastructure |
| Commissioning body: | Ministry of Infrastructure and Transport |
| Provided services and scope: | Preliminary Design, Detailed Design, Executive Design, Safety Coordination during the Design and Execution Phases |
| Key project numbers: | Beds: 1,000 Project value: 63,568,984.73 € |

Verziano Prison Verziano (Brescia)



Adaptation of the Penitentiary Institute to Local needs through the **modernization** and **compliance** of existing buildings and the construction of new detention facilities.

The aesthetic and functional characteristics of the project result from a rationalized design approach aimed at fostering a path of re-education and reintegration of detainees into civil society.

To achieve the best thermal and acoustic performance, targeted interventions are planned on the building envelope to optimize the energy efficiency of both opaque and transparent elements, improving the internal functionality of the spaces. The design choices will ensure optimal living conditions while maintaining security and minimizing operational costs of the facility.

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| Typology: | Penitentiary architecture |
| Commissioning body: | Ministry of Infrastructure and Transport |
| Provided services and scope: | Technical and Economic Feasibility Study, Detailed Design, Executive Design, Safety Coordination during the Design Phase |
| Key project numbers: | Beds: 500 Project value: 42,426,154 € |

Piave Complex – Institute for Police Inspectors of Nettuno Nettuno (Rome)



The project involves the **redevelopment** and **expansion** of the “Piave” complex in Nettuno (Rome), home to the State Police Inspectors’ Training Institute, within the broader reorganization plan of the national training facilities.

The main intervention consists in the construction of a **new accommodation building** with 504 beds, replacing the current “Centro Radio” building. The new facility, with a gross floor area of approximately 10,630 m², is developed over six levels (underground parking garage plus five above-ground floors), predominantly for residential use for trainees. The complex covers an area of 15 hectares and includes twenty-two buildings, as well as facilities such as the National Specialization Shooting Center, the Crowd Control and Public Order Training Center, a K9 unit, and Fiamme Oro courses.

Functional and structural upgrades are also planned on the existing buildings, aimed at improving the quality of spaces and increasing accommodation capacity. The complex will play an increasingly central role in supporting the training, continuing education, and international cooperation activities of the State Police.

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| Typology: | Military infrastructure |
| Commissioning body: | Interregional Public Works Authority for Lazio, Abruzzo and Sardinia |
| Provided services and scope: | Technical and Economic Feasibility Study, Detailed Design, Safety Coordination during the Design Phase |
| Key project numbers: | Beds: 504 Project value: 41,020,733.70 € |

New Penitentiary Institute of Forlì Forlì



The criteria adopted for the design choices—given that this was an **executive update project** aimed at the re-tendering of a work already under construction—were focused on maintaining the previously established design forecasts, both in terms of building and plant works, except for necessary adjustments due to updated regulatory and/or normative provisions, where applicable.

In particular, the proposed design included the adoption of a prefabricated structural system with reinforced concrete walls and pre-stressed slabs, new infill walls, insulation of cold slabs with rigid polyurethane foam, replacement and surface extension of the solar thermal collection system, replacement of the thermal vector fluid production system with groundwater heat pumps, and a cogeneration plant consisting of a containerized unit (201 kWe - 255 kWt).

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| Typology: | Penitentiary architecture |
| Commissioning body: | Ministry of Infrastructure and Transport |
| Provided services and scope: | Executive Design, Safety Coordination during the Design Phase, Construction Supervision |
| Key project numbers: | Beds: 230 Project value: 34,615,295.04 € |

GBTS – Marshals School of the Italian Air Force Viterbo



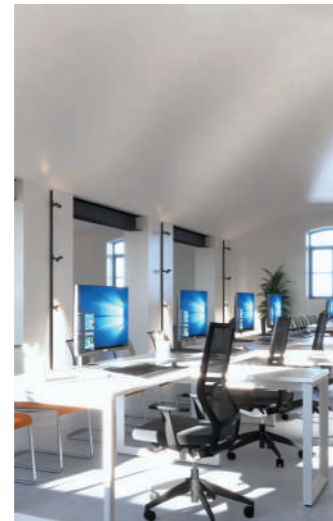
The project involves the construction of a **new building** within the Air Force Non-Commissioned Officers School at the Viterbo Air Base Command, intended to host a new training system called the GROUND BASED TRAINING SYSTEM (GBTS).

The initiative concerns the implementation of a land-based training system used for the education of pilots and aeronautical operators through the use of simulators. The intervention is divided into two main phases: an initial investigation stage and a second phase focused on engineering services related to the detailed and executive design.

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| Typology: | Military infrastructure |
| Commissioning body: | Leonardo Global Solutions S.p.a. |
| Provided services and scope: | Detailed Design, Executive Design, Safety Coordination during the Design and Execution Phases |
| Key project numbers: | Total area: 10,000 m ² Project value: 25,000,000 € |

Former Cavalli Barracks

Novara



Military & Defence

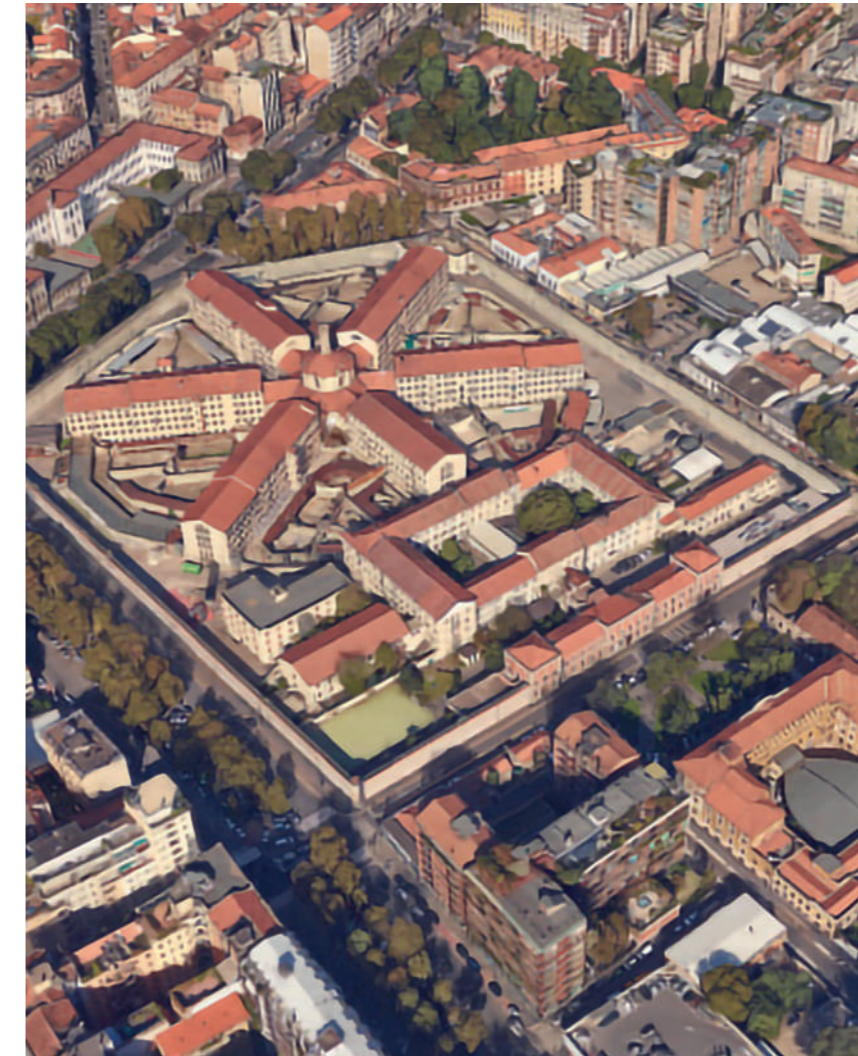
Construction Management

The project concerned the **repurposing** of the former Cavalli Barracks in Novara, decommissioned by the Army in 2014 and designated to become the seat of public administrations, with the aim of enhancing a **listed asset**, reducing rental costs, and improving accessibility to services. The intervention involved **historic buildings** in a state of decay, with **conservative restoration** works, internal reorganization, and MEP upgrades, carried out in compliance with the original architectural features. New raised floors, structural reinforcements, replacement of windows and doors, and reconstruction of roofs were implemented. Each building was equipped with new stairwells and elevators to ensure full accessibility. From the structural standpoint, targeted consolidation and seismic improvement works were performed, while preserving original geometries and storey heights. The MEP systems include heat pumps, controlled mechanical ventilation, integrated photovoltaic systems, and fire protection systems. Rainwater is collected and reused. The outdoor areas were redeveloped with accessible paths, landscaped areas, and new utilities. All buildings achieve energy class A4 and comply with **nZEB** requirements, with materials and solutions in line with the Minimum Environmental Criteria (**CAM**). The project was entirely developed in **BIM**, ensuring coordination, control, and sustainability.

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| Typology: | Military infrastructure |
| Commissioning body: | State Property Agency - Regional Directorate for Piedmont and Aosta Valley |
| Provided services and scope: | Technical and Economic Feasibility Study, Detailed Design, Executive Design, Safety Coordination during Design and Execution Phases, Construction Supervision |
| Key project numbers: | Total area: 12,000 m ² Project value: 24,057,382.20 € |

San Vittore Prison

Milan



Military & Defence

The set of interventions is aimed at "addressing the emergency situation resulting from the excessive overcrowding of penitentiary institutions across the national territory." Wings II and IV, which are the subject of structural renovations and seismic upgrades, are currently uninhabitable. Both wings consist of a basement level, a raised ground floor, and three upper floors.

In particular, Wing II has undergone structural consolidation through the injection of expanding resins into the foundation level and external shoring works. The proposed solution includes the construction of one bathroom for every two cells (each cell accommodating two inmates), located on the interior side facing the corridor, and a shared area designated as a hallway/ lounge facing outward.

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| Typology: | Correctional facilities construction |
| Commissioning body: | Ministry of Infrastructure and Transport |
| Provided services and scope: | Technical and Economic Feasibility Study, Detailed Design, Executive Design, Safety Coordination during the Design Phase |
| Key project numbers: | Beds: 285 Project value: 16,799,012 € |

Milan Courthouse

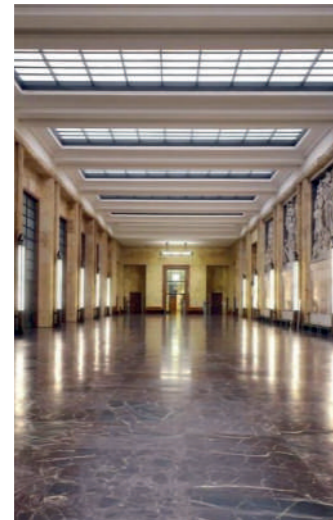
Milan

Public Buildings & HQ



The building involved in the intervention is the Milan Courthouse, located in the block bordered by Via Freguglia, Via San Barnaba, Via Manara, and Corso di Porta Vittoria, designed by the renowned rationalist architect Marcello Piacentini. The project includes energy and systems **upgrades**, **restoration** of the internal façades, and **conservation** of the architectural heritage elements of the courthouse.

The design focused on identifying innovative solutions capable of upgrading the building's technical features while fully respecting the original architecture of the site.



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| Typology: | Restoration of historic buildings, public representative offices |
| Commissioning body: | Interregional Public Works Authority for Lombardy and Emilia-Romagna |
| Provided services and scope: | Enhanced Technical and Economic Feasibility Study according to PNRR Guidelines |
| Key project numbers: | Total area: 30,000 m ² Project value: 52,000,000 € |

The National Emergency Management Center

Rome

Public Buildings & HQ

Military & Defence

Energy & Sustainability



The project addresses the needs of the National Fire and Rescue Service (V.V.F.), which seeks to equip itself with a facility for coordinating national emergency management activities—efficient, technologically advanced, and equipped with suitable spaces for personnel on 24-hour duty. The goal is to ensure integrated response capabilities involving all technical and administrative staff engaged in the organization, management, and coordination of emergency scenarios.

In this context, the **new building complex** has been designed to meet safety (both **safety and security**), **seismic resistance**, and **technological functionality** requirements.

The design includes a basement level, a ground floor, and two upper floors, structured to accommodate crisis rooms, an auditorium, lodging facilities, offices, training classrooms, meeting rooms, and the Data Center (CED).



| | |
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| Typology: | Representative architecture, offices |
| Commissioning body: | Ministry of the Interior – Department of Firefighters, Public Rescue and Civil Protection |
| Provided services and scope: | Detailed Design, Executive Design, Coordination during the Design Phase |
| Key project numbers: | Total area: 6,000 m ² Project value: 26,342,793.26 € |

Pepicelli Barracks

Benevento



-  Military & Defence
-  Historical & Artistic Buildings

The project involved the building **refurbishment** of the state-owned complex “Scuola Allievi Carabinieri Viale Atlantici”, known as Pepicelli Barracks, located in Benevento, with the aim of transforming it into a new Federal Building, namely an administrative hub intended to host multiple public authorities. The intervention primarily concerned buildings 1 to 8, included in Lot 1, and building 12, the former gym, included in Lot 2. The complex is developed within an articulated site comprising a total of **thirteen buildings**.

The design approach was focused on **functional recovery, regulatory compliance, and structural and MEP upgrading** of the buildings, with particular attention to the enhancement of the existing heritage and compatibility with the **historical constraints** affecting some of the structures. Specifically, for the protected buildings (buildings 1 and 8), interventions were designed according to the principle of minimal impact, prioritizing extraordinary maintenance and restoration works to preserve their original morphological features.

Commissioning body: Italian State Property Agency – Campania Regional Directorate

Provided services and scope: Executive Design

Key project numbers: Project value: **34,387,535.99 €**

Umberto I Polyclinic

Rome



-  Historical & Artistic Buildings

The **redevelopment** project of the **historic pavilions** of the Umberto I University Hospital in Rome represents a strategic intervention for the **upgrading and modernization** of one of the largest and most important hospital complexes in Italy. The objective is to restore full functionality to buildings of significant architectural value through a coordinated plan of structural, MEP, and technological upgrades, while preserving the historical identity of the complex. The interventions include seismic structural strengthening, energy refurbishment, the installation of new high-efficiency mechanical and electrical systems, and the functional reconfiguration of spaces to ensure optimized pathways between diagnostics, inpatient wards, and operating blocks.

The design, entirely developed in a **BIM** environment, enabled the integration of architecture, systems, and structures, optimizing time and costs while ensuring compatibility between existing healthcare functions and the upgraded ones. Through this intervention, the Umberto I University Hospital is undergoing a profound transformation, combining **technological innovation** with the **preservation of historical heritage**, toward a model of a modern, **sustainable**, and fully efficient hospital.

Commissioning body: Lazio Region – Umberto I University Hospital of Rome

Provided services and scope: Technical and Economic Feasibility Study, Detailed Design, Executive Design, Safety Coordination during the Design Phase

Key project numbers: Built area: 33,985 m²
Pavilions: 01, 08, 26, 28, 35
Project value: **78,106,870.33 €**

A. Bernocchi Institute Milan

Historical & Artistic
Buildings



The historic complex of the A. Bernocchi Institute, completed in 1925, is characterized by decorative elements in the Art Nouveau style. The building is developed over two above-ground floors and a semi-basement level, with an L-shaped layout featuring a linear façade along Via Bernocchi and a more articulated elevation facing the internal courtyard. From the courtyard, access is provided to the laboratory wing, an industrial-style single-storey structure whose opposite façade overlooks the present-day Via Catini. The project for ISIS-IPSIA Bernocchi involves the **conservation restoration** of the existing school building, combined with compliance upgrades to fire safety **regulations** and the removal of architectural barriers, while maintaining the current functions of the different floors. The semi-basement level will undergo functional reorganization, including the reconstruction of the floor slab and the adjustment of natural lighting and ventilation ratios through the creation of external cavities along Via Bernocchi, ensuring compliance with current health and hygiene regulations.

The overall intervention also includes the refurbishment of sanitary facilities, structural upgrading, and improvement of the existing construction system, with the aim of enhancing the building's architectural and technical quality. The project seeks to return the Bernocchi Institute to a safer, more accessible, and more functional condition, capable of providing modern, comfortable educational spaces that meet current standards of efficiency and safety.

Commissioning body: Metropolitan City of Milan

Provided services and scope: Detailed Design, Executive Design

Key project numbers: Total area: 9,000 m²
Project value: **5,839,285.15 €**

Italian Embassy Headquarters Vienna

Public Buildings
& HQ



The **new architecture** is defined by a compact volume, designed to ensure visual continuity and dialogue with the existing Palazzo Metternich building, reflecting its aesthetic and harmonizing with the colors of the surrounding context.

Aligned with the city's development guidelines, the new structure is conceived as a contemporary addition that fits seamlessly among the existing buildings: occupying the space vacated by the previous construction, it redefines—and innovates—the entire block.

The building has been designed by blending the Italian tradition of architectural composition with the technological innovation of materials, emphasizing **eco-sustainability** and the highest **safety** standards. This is all done while respecting the character of the local urban fabric and aligning with existing urban planning and environmental directives.

Typology: Representative buildings, offices

Commissioning body: Italian Embassy in Vienna

Provided services and scope: Detailed Design, Executive Design, Safety Coordination during the Design Phase

Key project numbers: Total area: 3,000 m²
Project value: **11,500,000 €**

New Department of Biology and Educational Hub Pisa

- Education & Research
- Construction Management



The project involves the **construction of a new educational hub** with over 2,200 classroom seats and teaching laboratories, allowing the consolidation of biological and chemical disciplines into a single area. The new development is designed as a four-story building above ground, featuring an open courtyard layout.

Functions have been grouped into clusters of related activities, distributed across the various levels of the building based on access points, orientation, and the specific quality and requirements of each space. The intervention aims to create a **Campus 4.0**, with social and gathering spaces both inside and outside the building volumes.

The design follows environmental certification protocols (**LEED** and **ITACA**) to achieve a Nearly Zero Energy Building (**nZEB**). The theme of environmental sustainability is reflected in the adoption of smart passive solutions that embody a vision of architectural quality and ethics.

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| Typology: | School architecture |
| Commissioning body: | University of Pisa |
| Provided services and scope: | Preliminary Design, Detailed Design, Executive Design, Safety Coordination during the Design and Execution Phases, On-site Construction Supervision |
| Key project numbers: | Students: 2,200 Built area: 18,000 m ² Project value: 57,500,000 € |

Vimercate Hospital Vimercate (Monza and Brianza)

- Healthcare



The Vimercate Hospital project was carried out between 2006 and 2007. The building consists of three main structures: reception, diagnostics and treatment, and inpatient wards.

The building houses several specialized departments, including anesthesia and intensive care, general surgery, endoscopy, pharmacy, ophthalmology, oncology, and obstetrics. A key feature of the hospital is its **trigeneration plant**, which produces thermal, cooling, and electrical energy. Additionally, the facility is equipped with a **dual-fuel cogeneration plant**. Special attention has been given to the management and operation of the systems through the use of advanced control technologies designed to optimize energy consumption.

The project took **sustainable development** into account by using well-water condensate heat pumps, as well as rainwater and groundwater for technological purposes and fire prevention.

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| Typology: | Healthcare architecture |
| Commissioning body: | ASST Brianza (Local Health Authority) |
| Provided services and scope: | Executive Design |
| Key project numbers: | Beds: 500 Total area: 113,000 m ² Project value: 360,903,489 € |

Mangiagalli and Regina Elena Polyclinic

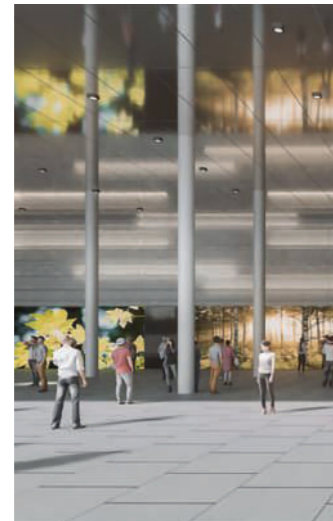
Milan



The design of the new Mangiagalli Polyclinic features the **construction of a single hospital block** composed of three interconnected structures, aimed at unifying surgical and inpatient functions and moving beyond the former pavilion-based layout.

The building is notable for its compact volume, which allows for the expansion of public green areas and the creation of an urban park in continuity with Guastalla Park. The ground floor, free from clinical functions, is envisioned as a space for social and civic interaction, enhancing integration with the surrounding urban fabric.

Tecnicaer was responsible for the engineering development of the project, proposing and implementing over two hundred technical improvements across all design disciplines, aimed at enhancing overall **technical quality, operational and energy efficiency**, the **humanization** of spaces, and the **safety** of the new healthcare facility, ensuring a hospital that is **innovative** and state-of-the-art from both a technological and functional perspective.



| | |
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| Typology: | Healthcare architecture |
| Commissioning body: | Foundation Ospedale Maggiore Policlinico Mangiagalli e Regina Elena |
| Provided services and scope: | Enhanced Design |
| Key project numbers: | Beds: 798 Total area: 67,542 m ² Green area: 7,127 m ² Project value: 168,000,000 € |

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