

Official Inauguration of the New Pordenone Hospital: Innovation, Sustainability, and Efficiency at the Service of Health and the Community in Western Friuli

Pordenone, December 16 2024 – The New Pordenone Hospital was officially inaugurated today by ASFO – the Western Friuli Health Authority. Following the final inspections, the hospital, spanning 82,500 square meters and offering a capacity of 475 beds, is set to become the main healthcare facility in the region. The project, with a total value of €276 million, was funded by the Regional Government, the State, and the POR FESR 2014/2020 fund for energy efficiency. It was designed and built by a team of designers led by **Politecnica Building for Humans**, in collaboration with **Pinearq**, **Manens**, and **Cooprogetti from Pordenone**.

The ceremony was opened by the **General Director of ASFO, Dr. Giuseppe Tonutti**, who, while thanking everyone who contributed in various capacities to ensuring the activation of the new facility, highlighted the hospital's features and strengths. *"The new hospital"* – he stated – *"was conceived, designed, and built with the aim of alleviating the suffering of patients and their families, as well as providing healthcare workers and professionals with the best possible conditions to perform at their best. With this facility, we are offering citizens a building complex where operators find a safer and better work environment, and patients and their loved ones a more comfortable place for care."*

"The hospital reflects a new approach to regional and national healthcare and serves as a model of engineering innovation, environmental sustainability, and functional quality – stated Paolo Muratori, an engineer at Politecnica, project manager, and director of works – It is a project that integrates highly productive teamwork, where designers pooled their diverse experiences in the healthcare sector, supported by a client driven by strong conviction, who effectively recognized and promoted these contributions. It was also a dynamic project that, throughout the various phases of the pandemic, identified and addressed emerging healthcare needs, such as the necessity of increasing intensive care beds, which is now a standard in the design of new hospitals."

The New Pordenone Hospital, located in the heart of the city, serves as a **key hub for the entire Western Friuli region**. Sustainable and energy-efficient, it has been designed to enhance the patient experience by offering functional spaces and a comfortable, welcoming environment. The spatial layout has been carefully planned to optimize operational efficiency, facilitate the work of medical and healthcare staff, and reduce waiting times, establishing itself as a model for the future of healthcare – capable of addressing community needs effectively and practically.

On the design guidance and integration with the city and residential context, **Albert de Pineda, founder of PINEARQ**, stated: *"The new building is based on the idea of urban integration, conceived not only as a functional space but as architecture in dialogue with the urban fabric."*

The project features a horizontal base that harmonizes with the surrounding buildings through its heights, colors, and permeability, creating visual and social continuity. Above it rise the patient ward towers, designed to ensure privacy and natural light. The portico, a distinctive element of Pordenone's traditional architecture, is reinterpreted, integrating the hospital with the arcades of Corso Vittorio Emanuele and Via Montereale. The architecture aims to be a welcoming, open space, fully integrated into the life of the community."

*"Proud to have contributed to the design and construction of this important project for our city," said **Engineer Matteo Bordugo, President of Cooprogetti s.c.r.l.** and Structural Design Lead for the hospital.*

*"Participating in the realization of the New Pordenone Hospital has been a stimulating experience," concluded **Prof. Mauro Strada of Manens**, responsible for the hospital's plumbing and HVAC system design. "This facility is designed to meet emerging healthcare needs and anticipate future challenges, focusing on the requirements of staff and patients. Every design choice was driven by the desire to balance energy efficiency, functionality, and performance, making the hospital a virtuous and cutting-edge model for Italian healthcare."*

The Context

Located within the boundaries of the old hospital grounds, the project for the New Pordenone Hospital addressed the challenges of a historical urban environment characterized by buildings from various periods with structural and functional issues.

This intervention resolved these difficulties organically, introducing a large new structure that integrates all healthcare functions, from inpatient care to diagnostic and therapeutic activities, meeting the demands of modern and sustainable healthcare. The hospital provides services for the diagnosis, treatment, and rehabilitation of acute conditions, establishing itself as a reference point for other healthcare facilities in the broader area.

The Project

The integration of the new hospital into the urban context was achieved through an architecture that is both understated and iconic, inspired by tradition and deeply connected to the surrounding nature and greenery. Internal courtyards and atriums in the various building sections ensure optimal natural lighting, while green, accessible roofs offer economic and energy benefits and enhance the surrounding environmental quality.

The design is notable for its clear separation of flows and a simple, functional spatial layout that optimizes space use in line with international best practices. A regular base supports the four patient ward blocks, which are separated by large green internal courtyards and connected via a transverse structure. Along the street-facing side, a two-story building for outpatient services has been designed.

A large entrance area oriented toward the parking facilities ensures convenient and logical access. The project adheres to the principles of Lean Healthcare, optimizing spaces, flows, and energy consumption.



Photo credits: Gabriele Melloni, Studio Cento29 Modena

Flexibility and adaptability were ensured through transversal design solutions, regular distribution of seismic-resistant elements, and a modular layout, enabling rapid reconfiguration for future needs. The adoption of an anti-seismic strategy, including the reduction of structural masses and the introduction of floor diaphragms, enhanced stability while minimizing material usage.

Sustainability and Innovation

The structure incorporates cutting-edge technologies for energy management and sustainability.

Thermal Efficiency: A trigeneration system and multi-purpose heat pumps have been installed to reduce energy consumption. Green roofs contribute to sensory well-being, thermal insulation, and stormwater management, with rainwater reused for irrigation and the

operation of the internal dual network. High-performance materials were selected for durability, ease of maintenance, and sanitization, reducing both construction and operational costs.

Energy Efficiency: In addition to proper insulation, photovoltaic panels and solar thermal systems were implemented for renewable energy production, significantly reducing the environmental impact. The DALI-BMS automation system controls lighting and energy consumption, ensuring efficient resource management.

Waste Management: Two critical aspects of the project are waste management and the reuse of excavated soil, which was repurposed to avoid landfill disposal, thereby reducing the environmental footprint of the construction site. The hospital's design ensures a clear separation of flows: the pathway layout was planned to guarantee efficient logistics, minimize contamination risks, and streamline processes. Separate pathways for patients, medical staff, and visitors ensure safety and efficiency.

BIM Technology: The project also stands out for its flexibility and its ability to adapt to future advancements in healthcare technology. The use of Building Information Modeling (BIM) from the earliest design phases allowed for optimized planning and construction of the building. BIM also enabled the creation of a Digital Twin, which will support future monitoring and predictive maintenance.

Innovation does not stop here: the New Pordenone Hospital was designed to continually integrate new technologies, making the structure adaptable and modular to future needs, whether in terms of space or infrastructure systems.

POLITECNICA

Politecnica Building for Humans is one of Italy's leading integrated design firms, specializing in architecture, engineering, and urban planning. As an independent entity, it is owned by 46 partners – engineers and architects – who have completed projects in over 60 countries worldwide, with an annual revenue of approximately €29 million (2023). The company has four offices in Italy (Modena, Milan, Florence, and Rome) and an international presence in 10 countries across three continents (Angola, Belize, Denmark, Jamaica, Saint Vincent and the Grenadines, Guyana, Kenya, Romania, Sierra Leone, and Equatorial Guinea).

Politecnica develops projects for both public and private sectors, including education, healthcare, industry, services, and infrastructure. Through its international division, the firm has delivered civil and infrastructure works in numerous developing countries, funded by international donors.

With over 300 professionals, including designers, planners, engineers, consultants, and specialized technicians, Politecnica integrates diverse expertise – from systems engineering to urban planning, structural to architectural design – thanks to teamwork and the complementarity of skills.

Politecnica places the well-being of communities and individuals at the center of its initiatives, contributing to the achievement of the Sustainable Development Goals (SDGs) outlined in the UN's 2030 Agenda, ratified by 193 countries. Politecnica is committed to creating infrastructure that connects people and communities more easily, enabling exchanges and relationships; inclusive and safe public buildings that foster social interaction; technologically advanced healthcare facilities for patients; and educational and learning-oriented buildings that promote sociability and exchange.

www.politecnica.it

Press Office:

Weber Shandwick | Advisory

lplatero@advisorywebershandwick.it - +39 3357357146

sprevite@webershandwickitalia.it - +39 3357434776

mzanelli@webershandwickitalia.it - +39 3461490150

PINEARQ

www.pinearq.es

italia@pinearq.com

press@pinearq.com

T. +34 93 210 68 19

Manens

Manens S.p.A., an architecture and engineering firm with over 50 years of experience, is a leader in the integrated design of large-scale projects in both the public and private sectors. With a team of 400 highly specialized professionals across offices in Padua, Verona, Bari, and three international branches (Saudi Arabia, Romania, and Serbia), the company operates in fields ranging from hospital infrastructure to airports, research centers, universities, commercial spaces, and cultural and sports facilities.

Manens stands out for its multidisciplinary approach that combines technological innovation, sustainability, and design expertise. Using an integrated method that considers engineering, architectural, and structural aspects as part of a unified system, the company provides support across all project phases, offering solutions designed to optimize content, quality, and efficiency throughout the life cycle of the project.

With this approach, we tackle work challenges by developing tailored solutions that reflect our ideals without compromise, creating well-being, efficiency, and functionality tailored to both people and the environment. Likewise, we are committed to passing on these values to everyone who collaborates with us, promoting ethics, a culture of work, design knowledge, and sharing ambitions and professional and personal success, with a focus on continuous growth and improvement.

Corso Stati Uniti, 56 - 35127 Padova
Italia T. +39 049 8705110

www.manens.com

info@manens.com

COOPROGETTI

Cooprogetti s.c.r.l., founded in 1974 as a cooperative of professionals, became an engineering cooperative on June 29, 2022. The company specializes in design and project management, technical-economic feasibility assessments, environmental impact studies, architecture and engineering services (including integrated projects), urban planning and landscaping, as well as related scientific and technical consultancy, technical experimentation and analysis, and management consulting and research services.

For over fifty years, Cooprogetti has been developing public projects in the fields of school construction, healthcare, social and welfare facilities, as well as in the tertiary, industrial, and infrastructure sectors.

The distinctive characteristic of the company lies in its ability to balance a lean human resource structure – adequate for addressing all architectural and engineering aspects – with the professionalism necessary to deliver high-quality results that meet performance expectations. This is achieved through a careful and calibrated selection of skilled professionals and a high level of technical specialization in each area of expertise. The integration of these professional figures ensures a final product that meets the Client's needs, even in the case of particularly complex and multifaceted assignments.

Credits

Location Pordenone, Italy

Client Azienda Sanitaria Friuli Occidentale (AS FO)

Team Politecnica Ingegneria ed Architettura Soc. Coop. (Lead), Pinearq s.l.p., Manens S.p.A., Cooprogetti s.c.r.l., Dott. Geol. Giorgio Contratti

Assignment Preliminary and final design, construction management, and safety coordination during the design and execution phases

Project Timeline February 18, 2015 – December 30, 2015

Construction Timeline April 27, 2017 – October 31, 2024

Inauguration December 16, 2024

Project Areas 25,900 m²

Gross Usable Area 82,500 m²

Total Volume 363,890 m³

Above-Ground Floors 7

Total Beds 475

Departments Endoscopy, Vascular Center, Imaging Diagnostics, Emergency Department (divided into general, pediatric, and orthopedic areas), Intensive Care, Emergency Medicine, Operating Theaters, Surgical and Medical Day Hospital, Maternity Unit, Pediatrics and Pediatric Day Hospital, Inpatient Wards

Additional Features Technology Hub, Underground Parking, Surface Parking

Photo credit Gabriele Melloni, Studio Cento29 Modena

PROJECT TEAM

Project Coordination: Engineer Paolo Muratori (Politecnica)

Specialized Disciplines Integration Lead Engineer Giuseppe Preziosi (Politecnica)

Architectural and Construction Project Lead Architect Albert De Pineda (Pinearq)

Architectural Design Architect Giuseppe Cacoza (Politecnica), Architect Claudia Romero (Politecnica), Engineer Barbara Frascari (Politecnica), Engineer Claudio Pongolini (Politecnica)

Plumbing and HVAC Systems Lead Prof. Engineer Mauro Strada (Manens)

Electrical Systems Lead Engineer David Babetto (Manens)

Systems Design Engineer Alessandro Barberio (Manens), Technical Expert Andrea Crivellaro (Manens), Engineer Marco Balestrazzi (Politecnica)

Environmental Sustainability Lead Engineer Giuseppe Romano (Manens)

Structural Design Lead Engineer Matteo Bordugo (Cooprogetti)

Structural Design Engineer Tiberio Altinier (Cooprogetti), Engineer Fabio Camorani (Politecnica)

Fire Safety Project Lead Engineer Massimo Cavazzuti (Politecnica)

Fire Safety Design Engineer Claudio Pongolini (Politecnica)

Urban Planning Analysis Lead Architect Massimo Fadel (Cooprogetti)

Environmental and Urban Integration Prof. Engineer Edino Valcovich (Cooprogetti), Engineer Marco Giordani (Cooprogetti), Engineer Giuseppe Ligammari (Cooprogetti)

Geology Lead Geologist Giorgio Contratti

Safety Coordination (Design Phase) Engineer Claudio Pongolini (Politecnica)

Clinical-Managerial and Healthcare Planning Dr. Maurizio Mauri, Dr. Anna Gullotti

Healthcare Organization Lead Dr. Maurizio Mauri

Radioprotection Design Lead Dr. Roberto Fabbris

BIM Manager Engineer Barbara Frascari (Politecnica)

BIM Specialist Architect Stefano Ametta (Politecnica)

CONSTRUCTION MANAGEMENT TEAM

Project Director Engineer Paolo Muratori (Politecnica)

Safety Coordinator (Execution Phase) Architect Pier Nicola Carnier (Cooprogetti)

Artistic Director Architect Albert De Pineda (Pinearq)

Operations Director Civil Works Engineer Barbara Frascari (Politecnica)

Operations Director Structural Works Engineer Matteo Bordugo (Cooprogetti)

Operations Director Network and Infrastructure Works Engineer Giuseppe Ligammari (Cooprogetti)

Operations Director Mechanical Systems Engineer Felice Giuffrè (Manens)

Operations Director Electrical Systems Engineer Jonnhy Niero (Manens)

Site Inspector Civil Works Engineer Marco Giordani (Cooprogetti)

Site Inspector Structural Works Engineer Tiberio Altinier (Cooprogetti)

Site Inspector Mechanical Systems Engineer Felice Giuffrè (Manens)

Site Inspectors Electrical Systems Engineer Jonnhy Niero (Manens) – Engineer Antonio Pozzato (Manens)

Assistant to the Project Director Engineer Silvia Miglioli (Politecnica)
Documentation Archiving and Project Portal Manager Engineer Silvia Miglioli (Politecnica)
Work Accounting Manager Surveyor Alessandro Rettighieri (Politecnica)

CONSTRUCTION EXECUTION

Lead Contractor CMB Cooperativa Muratori e Braccianti di Carpi
Subcontractor Impresa Polese S.r.l.
Technical Director Engineer Simone Bonauguro (CMB) / Engineer Mauro Talamona
Project Manager Engineer Alessio Baldoni (CMB) / Surveyor Carmine Lombardi
Safety Officers Surveyor Mirco Casarini (CMB)

SUPPLIERS

Insulation System Gruppo IVAS S.r.l.
External Facade Cladding Flexbrick S.L., Novowood by Iperwood S.r.l.
Hall, Conference Room, and Liturgical Hall Cladding Soft Sound S.r.l.
External Windows and Doors IALC Serramenti, Schuco S.r.l.
Internal Sliding Doors, RX and Vision Doors Ponzio S.r.l.
Hinged Internal Doors IALC Serramenti, Novoferm Schievano S.r.l.
Fire Doors Novoferm Schievano S.r.l.
Patient Lift System V. Guldmann A/S
Elevators KONE S.p.a.
Radiant Ceilings Under Tree S.r.l.
Internal Glass Walls Quadrifoglio Group S.p.A.
RX Glass Walls Quadrifoglio Group S.p.A.
Flooring and Cladding Casalgrande Padana S.p.a., Mirage Granito Ceramico S.p.a., Laminam S.p.a., Ceramica Vogue
PVC and Linoleum Flooring and Cladding Tarkett S.r.l.
Raised Modular Flooring Giussani Group S.r.l.
Acrovyn Cladding Styla S.r.l.
Fire Expansion Joints Tecno K Giunti S.r.l.
Prefabricated Bathrooms Martini Prefabbricati S.r.l.
Faucets Ideal Standard S.p.a., Dolomite S.p.a.
Sanitary Ware Goman S.r.l.
Green Roof Impernovi S.r.l.
Air Handling Units SAMP S.p.A.
Lighting Fixtures Zumtobel S.p.A., Athenalux S.p.A., Fosnova Disano S.p.A.
Smoke and Fire Detection Zettler S.p.A.
Emergency Lighting Zumtobel S.p.A., Athenalux S.p.A., Fosnova Disano S.p.A.
Pneumatic Mail System Sitrat S.r.l.
Medical Gas System DS Medica S.r.l.
Water Treatment Systems Culligan S.p.a.
Cogeneration and Absorption Units ATR Biobrent S.p.a.
Pumps KSB S.r.l.