

MULTIPURPOSE
HOSPITAL
MODULE
INTENSIVE CARE UNIT

ITA



MODULAR INTENSIVE CARE UNIT
MULTI-FUNCTIONAL HOSPITAL MODULE

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THE WORK TEAM

THE COMPANIES



An industrial business in Verona with over 75 years of history that promotes innovation in processing and in using steel in its wide range of applications: from prefabricated steel systems to insulating metal panels.



A Forli-based company that, for 38 years, has been operating in the Healthcare construction sector, with consolidated experience in dry building systems.



Leading company in plant engineering, with over 40 years of experience in the hospital sector.

THE PROFESSIONALS

Arch. Andrea Ragazzini –
General Project and coordination of specialised designs

Ing. Massimiliano Finotti
Mechanical System Project

STELG Ing. Cenni P.I. Berardi
Electrical and Special System Project

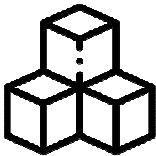
**A POOL OF COMPANIES AND
SPECIALISED PROFESSIONALS FOR
AN INTEGRATED PROJECT**

THE CONCEPT

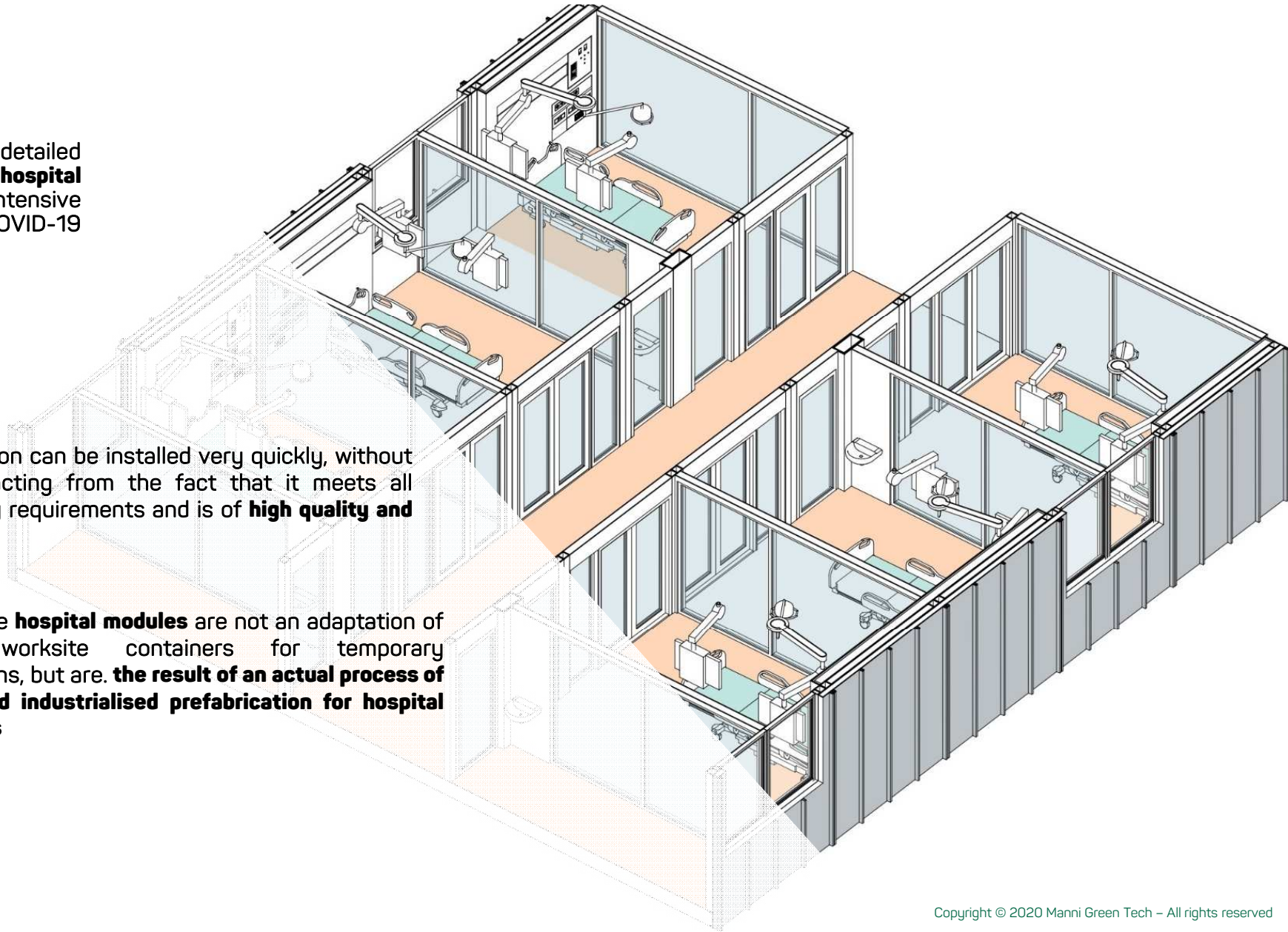
This project contains a detailed study for **multi-functional hospital modules**, with focus on intensive care, specifically for the COVID-19 crisis.



The solution can be installed very quickly, without this detracting from the fact that it meets all regulatory requirements and is of **high quality and durability**.



In fact, the **hospital modules** are not an adaptation of typical worksite containers for temporary installations, but are **the result of an actual process of design and industrialised prefabrication for hospital structures**



THE PROJECT'S FIGURES

43

SQM PER BED

125

UTILITY ROOMS SQM

2

ISOLATION BEDS

16

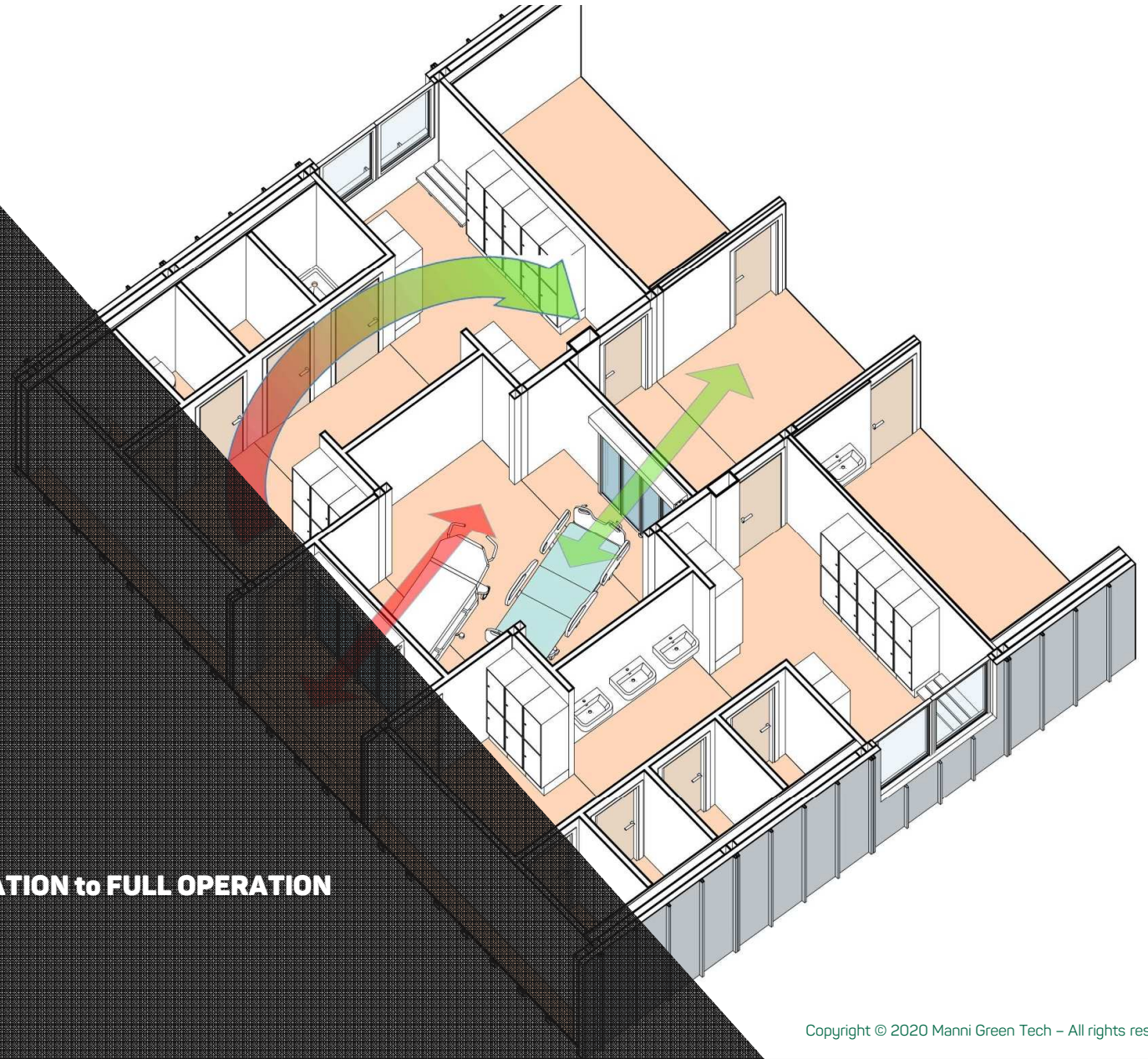
ICU BEDS

770

SURFACE AREA SQM

69

DAYS from ORDER CONFIRMATION to FULL OPERATION





THE MODULAR SYSTEM

THE ADVANTAGES OF THE MODULAR SYSTEM



QUICK INSTALLATION



SERIALITY



FLEXIBILITY ADAPTABILITY



MODULARITY



RELIABILITY DURABILITY



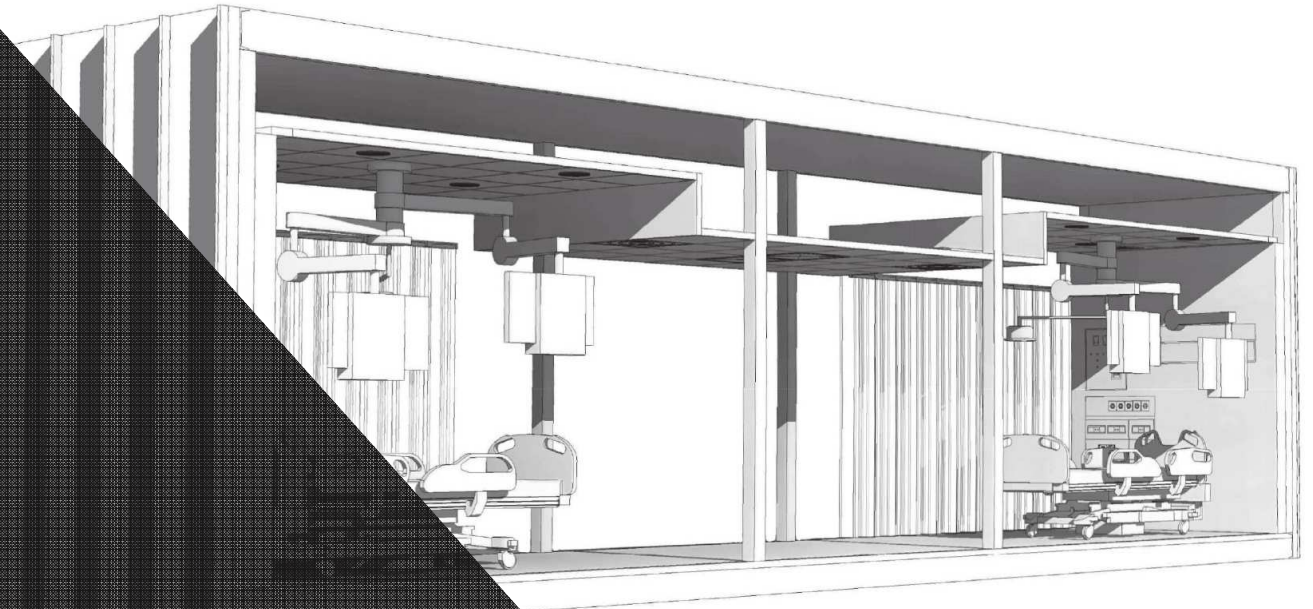
SYSTEMS APPARATUS



COMPLIANCE WITH THE REGULATORY FRAMEWORK



ERGONOMICAL STUDY OPERATIONAL EFFICIENCY



THE 5 POINTS OF THE SYSTEM

MODULARITY AND SERIALITY

- 1 The space allocation and functional plan is conceived based on a single, easily transportable structural module. The number of beds per functional unit may range from 8 to 20.

FLEXIBILITY AND SPEED

- 2 The base module and its annexes can adapt to multiple functional and healthcare-related requirements. The modules are pre-assembled at 90%, complete with primary and secondary system distribution.

RELIABILITY AND DURABILITY

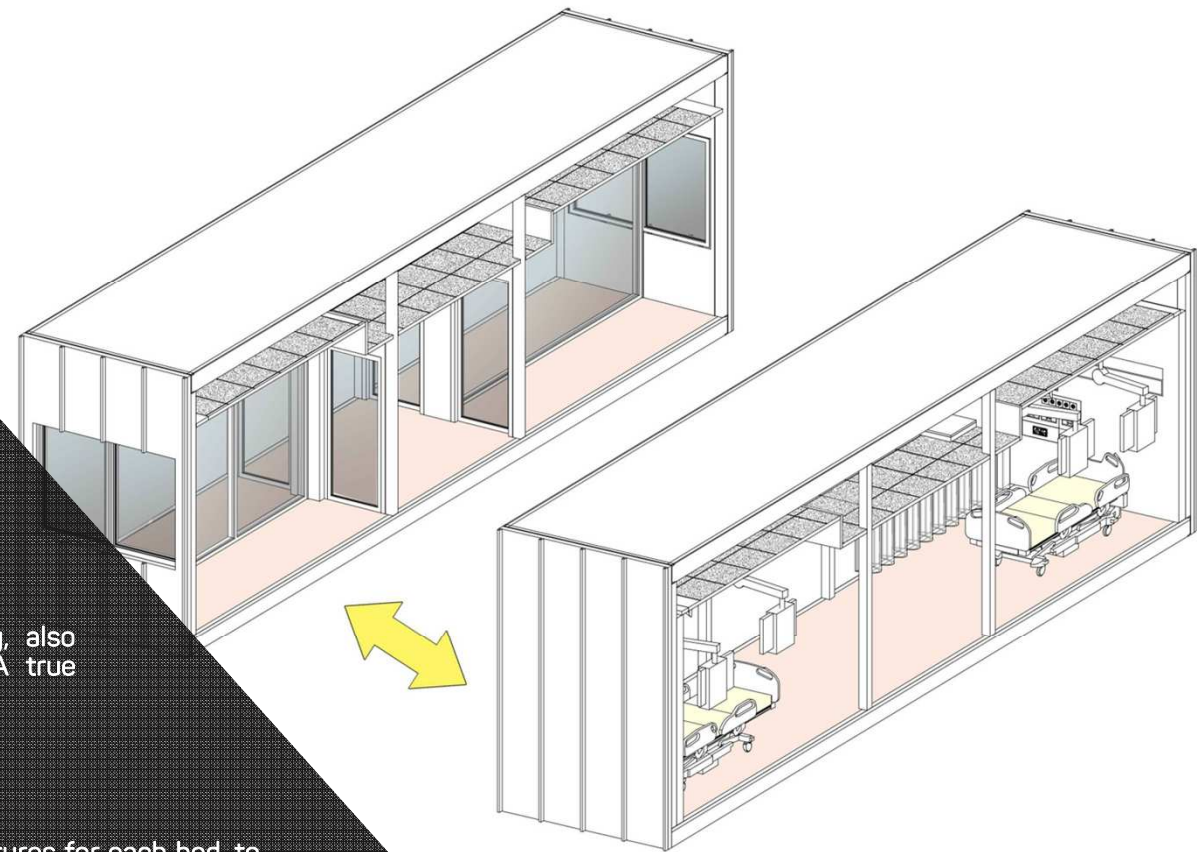
- 3 The materials used guarantee durability and long-term efficiency, also beyond the response times related to the current emergency. A true process of industrialised prefabrication for hospital facilities.

SYSTEMS AND EQUIPMENT

- 4 The functional unit comes with all its components, with standard features for each bed, to be implemented with equipment such as (suspended) bed head units with resuscitation devices.

COMPLIANCE WITH THE REGULATORY FRAMEWORK

- 5 The functional unit is designed with the aim of complying with the national standards and guidelines and with the specific requirements for Healthcare Unit Accreditation, fire safety, and health and hygiene rules.





**THE CONSTRUCTION
TECHNOLOGY**

THE CONSTRUCTION TECHNOLOGY

The system has been conceived with a steel bearing structure that requires no foundations. This structure adapts perfectly to dry lining systems: insulating sandwich panels on the outside and walls with slab cladding on the inside. The whole guaranteeing quality, durability and quick installation.

It is known, in fact, that the materials that make up dry systems are light and thus easily transportable, minimise worksite waste, and are reusable and recyclable.

STEEL



100% RECYCLABLE



EARTHQUAKE-PROOF



PRECISE ESTIMATE OF TIME AND COSTS

THE CONSTRUCTION TECHNOLOGY

The metal insulating panels are a customisable solution that guarantees high performance in terms of thermal insulation, soundproofing, air tightness, and reaction to fire, to meet the most varied needs. They are light, versatile and easy to assemble.

SANDWICH PANELS



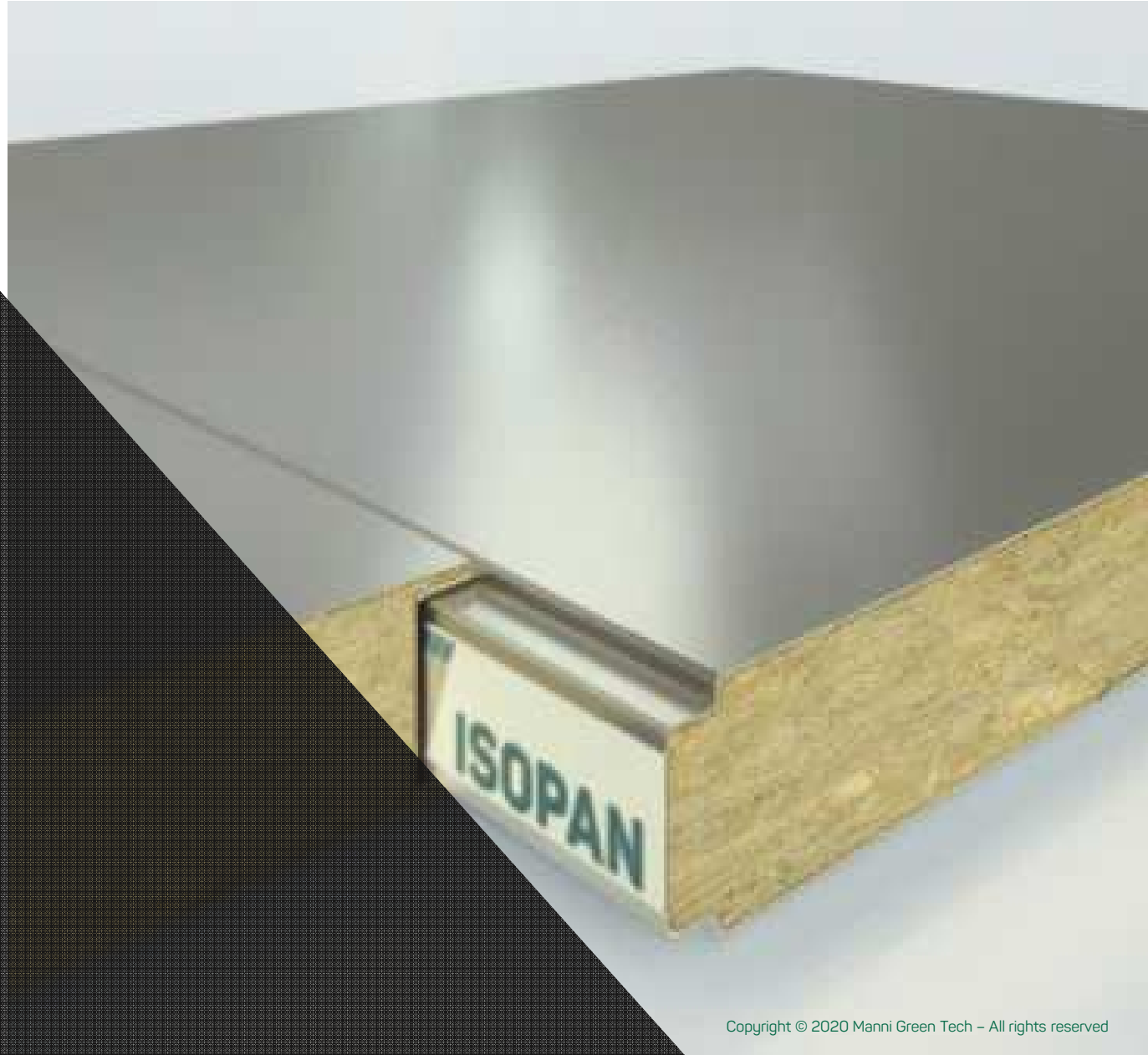
EASY TO ASSEMBLE



THERMAL AND ACOUSTIC PERFORMANCE



REDUCED THICKNESS





**SYSTEMS AND
EQUIPMENT**

SYSTEMS CONSIDERED



**ELECTRICAL SYSTEM; TELEPHONY; DATA;
FIRE DETECTION; HOSPITAL CALL
SYSTEM**



MEDICAL GAS SYSTEM



PLUMBING AND SANITATION SYSTEM



FIRE EXTINGUISHING SYSTEM



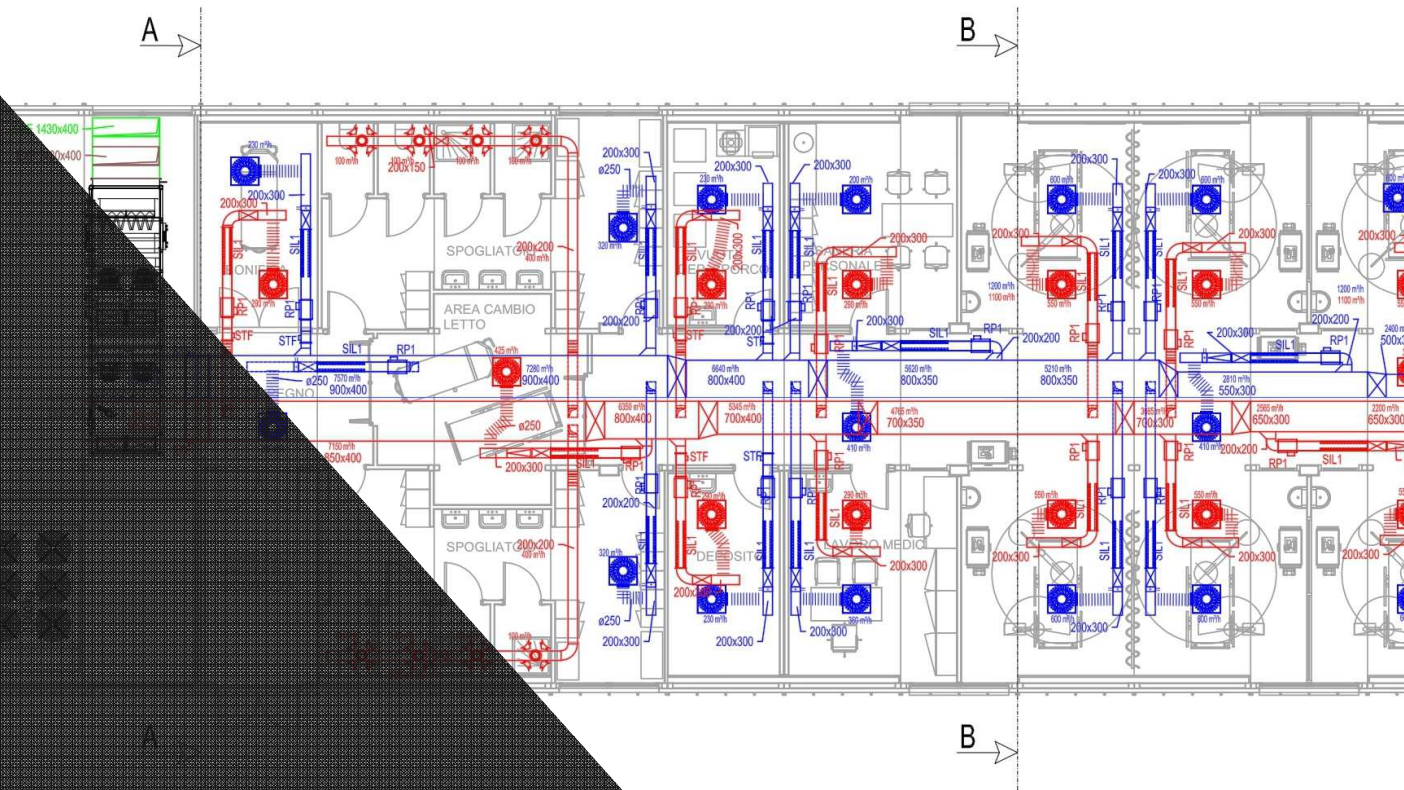
**AIR CONDITIONING AND AIR
MANAGEMENT SYSTEM**

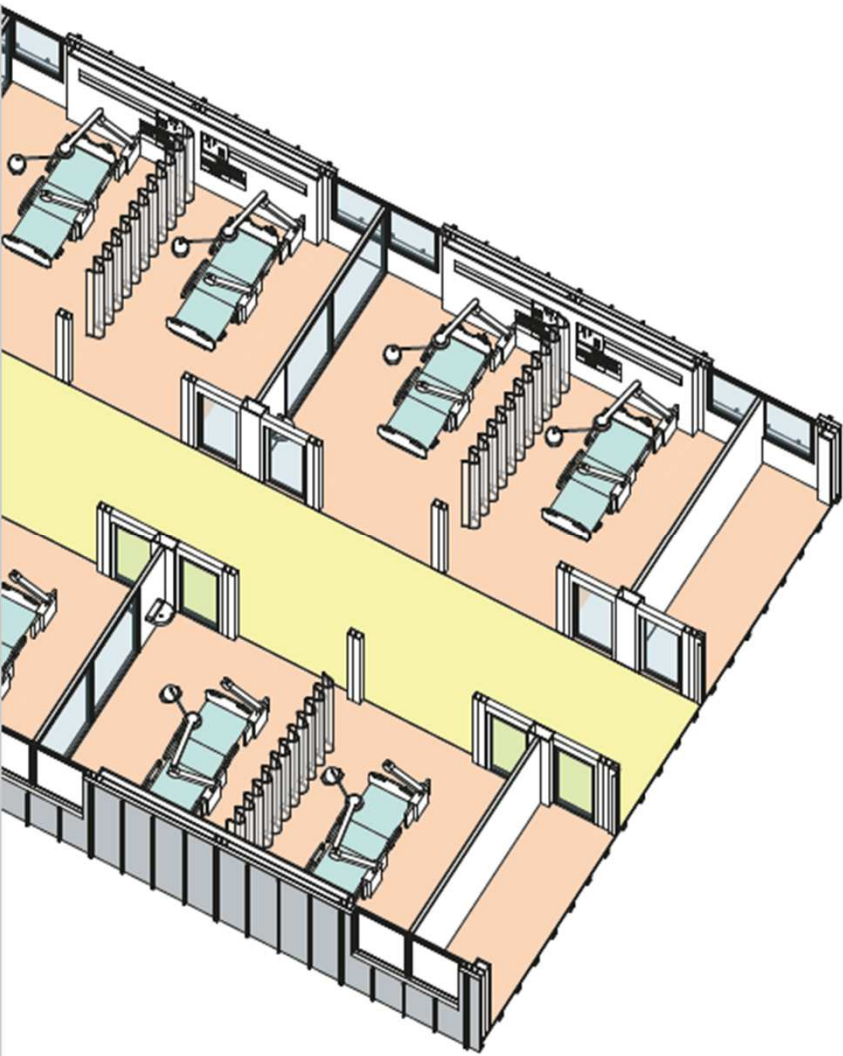
SYSTEM ORGANISATION

The systems are designed to only require connection to the electricity mains, the sewer and the water pipelines.

Two central units, located at the two sides of each module, guarantee the best distribution of space, containing the bulk of the systems of the functional modules.

- 1** The **central units** guarantee the management of heating and cooling, the production of domestic hot water, and the air handling systems.
- 2** Each structural module is conceived to be **independent** in terms of systems and is conditioned with an **electronically monitored air system**, that can also manage the pressurisation and depressurisation of each bed cubicle, helping to contain contagion..
- 3** Each structural module is also equipped with a three-gas **MEDICAL GAS** system (oxygen, compressed air and vacuum); each bed is equipped with sockets and stand, if required.
- 4** All systems have been studied in accordance with the **applicable rules on hospitals**, from the electrical systems to fire extinguishing and plumbing/sanitation systems.





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DESIGN TEAM



Arch. Andrea Ragazzini

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