



# ***MODULAR HOSPITAL***

*April 2020*



## WHO WE ARE?

Considering the full integrated healthcare services in the markets, Moneta Global US was founded in 2011 by a dynamic and innovative team who has an international experience in the healthcare markets in order to:

- enhance our clients' position as top healthcare corporations by offering effective and tailor-made solutions,
- provide the healthcare services based on a commitment to the patient safety by observing the diseases,
- serve tirelessly,

Our team members are the former industry senior level executives who designs, implements and manages strategies, plans and executions in different countries.

- Globally specializes in B2B and B2C market assessments to give integrated healthcare services to healthcare organizations, healthcare investors and insurance companies,
- Evaluates, develops and executes tailor made solutions in order to protect businesses value,
- Performs effective solutions while creating sustainable results, prevents unmeasured risks for corporations and assist patients as their ambassador in the healthcare centers,
- Finds out the optimal solutions in multidisciplinary structure by identifying ideal strategies and methods as looking at healthcare business sector as integrated from different sights; as investor, economists, physicians, scientists or engineers, managers as well as patients and the clients of insurance,
- Proud of working with well-known international innovative corporations, gives us confidence and high-tech working environment,

We produce;

- profitable,
- individualized and tailor-made solutions to build more productive, unique and healthy structure without compromising service quality, and willing to share our know-how in the value-added healthcare projects.

## Vasconi Architects Services

Member



58, Rue Monsieur le Prince - 75006 PARIS  
SIRET (company registration n°): 34965575300011  
Represented by its Director, Thomas Schinko  
Web site: <http://www.vasconi.fr>

For forty years VASCONI ARCHITECTS has been producing reputable large-scale urban and master plan designs. The firm is recognized for its evidence based design approach to building that meets users' needs for an efficient layout, while also constructing a sustainable environment by employing innovative green technologies, eco -friendly materials and an energy efficient design.

The studio applies this practice to the entirety of its projects, ranging from luxury office buildings, cutting-edge hospitality-retail design, high-end residences, and interior design to industrial buildings, infrastructural projects, waste-treatment facilities and healthcare facilities.

Over time, VASCONI ARCHITECTS has developed strong relationships with renowned international engineering companies with whom they collaborate to create revolutionary high-impact ecological designs. This process driven design approach has garnered VASCONI ARCHITECTS several international awards including a Green Building Merit Award, FIABCI Prix d' Excellence Award and a Grand Prix d' Architecture Midi-Pyrenees Award.

VASCONI ARCHITECTS is a leading design firm that combines a history of excellence in architecture with a modern design approach that prizes innovation, sustainability and progress.

## Vasconi Architects Références



### NEW CIVIL HOSPITAL OF STRASBOURG - FRANCE 2009

Client: University Hospitals of Strasbourg

Delivery: 2009

OTE: Structure Engineering- OTH: MEP

Cost: 151 000 000 € HT

Surface Area: 91 000m<sup>2</sup>

700 beds / 15 operation blocks

### VALENCE HOSPITAL COMPLEX FRANCE- 2015

Client: Valence Hospital Complex Center

Cost: 50 000 000 €

Surface Area: 30 000m<sup>2</sup> - 215 Beds - 21 Rooms

Delivery: 2015



**NEW HOSPITAL CENTER OF LUXEMBOURG – 2016**

Client : Centre Hospitalier Luxembourg  
Cost: 230 M€  
Surface Area: 47 984 m<sup>2</sup>  
International Competition

**NEW HOSPITAL IBN SINA RABAT - MOROCCO - 2014**

Client: Morocco - Ministry of Health  
Cost: 114 000 000 €  
Surface Area: 101 260 m<sup>2</sup>  
International Competition

**UNIVERSITARY HOSPITAL CENTER OF TANGER - MOROCCO - 2014**

Client: Morocco - Ministry of Health  
Cost: 98 000 000 €  
Surface Area: 87 000 m<sup>2</sup>  
International Competition

**UNIVERSITARY HOSPITAL CENTER OF AGADIR - MOROCCO - 2014**

Client: Morocco - Ministry of Health  
Cost: 103 000 000 €  
Surface Area: 93 000 m<sup>2</sup>  
International Competition

**HOPITAL MODULAIRE DOHA - QUATAR - 2014****YOUTH DIABETES CENTER - HONG KONG - 2014**

Client: Youth Diabetes Center  
Surface AREA: 400m<sup>2</sup>  
Study: 2014

**VALENCE HOSPITAL COMPLEX - FRANCE - 2013**

Client: Valence Hospital Complex  
Cost: 50 000 000 €  
Surface AREA: 30 000m<sup>2</sup> - 215 Beds - 21 Rooms  
Delivery: Phase 1: 2013 - Phase 2: 2015

**CENTER OF EXCELENCE IN PAEDIATRICS - HONG KONG - 2012**

Client: CEP Hong Kong  
Cost: 22 000 000 € HT  
Surface Area: 11 000m<sup>2</sup>  
International Competition

**KARLSRUHE HOSPITAL - GERMANY - 2011**

Client: Karlsruhe Public Hospitals  
Cost: 130 000 000 €  
Surface Area: 24 000m<sup>2</sup>  
International Competition

**BETTENHAUS TROPENKLINIK TÜBINGEN - GERMANY - 2011**

Client: Neubau Bettenhaus Tropenlinik  
Cost: 28 000 000 €  
Surface Area: 5 000m<sup>2</sup>

**NEW CIVIL HOSPITAL OF STRASBOURG - FRANCE - 2008**

Client: University Hospitals of Strasbourg  
JP Gilch et C Bucher associated architects / OTE: Ingenierie Structure - OTH Bâtiments (fluides)  
Cost: 151 000 000 €HT  
Surface Area: 91 000m<sup>2</sup> - 700 beds / 15 operation blocks  
Delivery: 2008

**PRINCESS GRACE - MONACO - 2007**

Client: Principality of Monaco  
Patrick Raymond Partner Architect  
INGEROP - IOSIS BET  
Cost: 300 000 000 €  
Surface Area: 80 000m<sup>2</sup> - 1200 Parking Places  
Winning Project: 2007

**NEUROIMAGING RESEARCH ZABOROTRIES NEUROSPIN - FRANCE - 2006**

Client: Commissariat à l'Energie Atomique (CEA)  
Green: Structure - SODEG: MEP - ATEC: Economy  
Cost: 22 000 000 € HT  
Surface Area: 11 000m<sup>2</sup>  
Delivery: 2006

**UNIVERSITÄTSKLINIKUM - HAMBURG-EPPENDORF - GERMANY - 2003**

Client: Universitätsklinikum Hamburg Eppendorf  
Surface Area: 100 000m<sup>2</sup>  
International Competition

**SERVICE FOR THE RECONSTRUCTION OF PSYCHIATRY ADULT ON THE OF COLOMBIÈRE - MONTPELLIER - FRANCE - 2002**

Client: Hospital Center of Montpellier  
Team: COMETEC  
Surface Area: 22 000m<sup>2</sup>  
Competition

**NEW HOSPITAL OF TOULON - TOULON - FRANCE - 2001**

Client: Hospital Center of Toulon-la-Seyne  
Team: OTH Méditerranée  
Surface Area: 50 000m<sup>2</sup>  
Competition

**HÔPITAL CENTRAL MIRABEAU - BAAR - SWITZERLAND - 2001**

Client: Baudirektion des Kantons Zug  
Team: Henauer et Gugler AG Zurich (structure) / Getec Zurich AG (fluids)  
Surface Area: 62 000m<sup>2</sup> - 200 parking places  
Competition

**HÔPITAL CLINIQUE - ULM - GERMANY - 2001**

Client: Liegenschaften Bezirksbau Universitätsbau

Surface Area: 30 000m<sup>2</sup>

**HÔPITAL LA PITIE - SALPÊTRIÈRE - FRANCE - 2000**

Client: Assistance Publique - Hôpitaux de Paris  
Team: OTH Bâtiments  
Surface Area: 23 000m<sup>2</sup>  
Competition

**NOUVEL HÔPITAL DE BERGAMO - BERGAMO - ITALIE - 2000**

Client: Ville de Bergamo  
Team: Prof. Ing. Gianni Plicchi (Bologne)  
Surface Area: 100 000m<sup>2</sup>  
Competition

**HÔPITAL DE LA CROIX-ROUSSE - LYON - FRANCE - 1999**

Client: Hospices Civils de Lyon  
BET: Jacobs Serete  
Surface Area: 47 000m<sup>2</sup> - 8 780m<sup>2</sup> parking  
Competition

**NEW HOSPITAL OF SAINT MARTIN - GUADELOUPE - 1997**

Client: Hospital Center of Marigot  
Team: OTH Développement-OTH Bâtiments  
Surface Area: 7 150m<sup>2</sup>  
Competition

**HELIOS KLINIK - GOTHA - ALLEMAGNE - 1997**

Client: Helios Klinik - Thüringer Ministerium für Soziales und Gesundheit & Partner Architekten  
Team: Ebert Ingenieure  
Surface Area: 13 000m<sup>2</sup>  
International Competition

**ANNECY NEW HOSPITAL - METZ-TESSY - FRANCE - 1996**

Client: Hospital Center of the Annecienne Region  
Team: Séchaud & Bossuyt  
Surface Area: 72 703m<sup>2</sup> - 1 100 parking places  
Competition

**HOSPITAL PÔLE COEUR-POUMON - STRASBOURG - 1993**

Client: Hôpitaux Universitaires de Strasbourg  
Team: OTH Bâtiments, OTE Ingénierie  
Surface Area: 45 000m<sup>2</sup>  
Competition - Winning Project

**HOSPITAL PAUL BROUSSE - VILLEJUIF - 1993**

Client: Assistance Publique Hôpitaux de Paris  
Team: OTH Bâtiments  
Cost: 16 800 000 €  
Surface Area: 16 000m<sup>2</sup>  
Delivery: 1993

Moneta Global and Vasconi Healthcare created a taskforce to provide hospitals turn-key solutions face pandemic emergencies:

IS-12 is a fully equipped ICU isolation station offering all equipment you need to create a dedicated isolation station for 12 beds within your hospital compound as a mobile interior or exterior unit. IS-48 is a basic stand-alone isolation station for treatment offering an efficient layout for a 48 bed fully equipped ICU.



The modular system is based on a module 606x244x275 cm corresponding to dimensions of a ISO ISO 668:2020 (Series 1 freight containers — Classification, dimensions and ratings) allowing an easy transport without special permissions and logistical preparation. This way the modules can be quickly shifted to their point of service and quickly installed. Once the isolation unit is not

needed any more, the containers can be quickly dismantled and moved in another place or even adapted to new functions, like testing and diagnosis center or post covid pulmonary rehab center.

The modular system allows practically any adaptation to specific needs and proposes hospitals an efficient way following UIA-PHG recommendations that is: immediate establishment of triage/intake/testing sites away from hospitals and the development of rapid response treatment/recovery campuses away from hospital in order to preserve the health care staff and system.

The containers are prefabricated and preinstalled with all fixed furniture. Assembling on site will be very quick and do not need any massif site preparation.

The IS-12 provides a fully equipped isolation-station with air lock, changing rooms for PPE (personal protection equipment) ,staff toilets and all auxiliary rooms needed for storage and waste collection. The main ICU unit is a controlled environment with negative pressure and an easy maintainable air conditioning system providing HEPA filtered air treatment and accessible from outside.

The IS-48 provides an autonomous 48 bed ICU facility for treatment of patients with all needed infrastructure for staff, like changing rooms, meeting rooms, toilets and admission office.



Figure 01: IS-12 modular isolation station can be installed close to any hospital on parking lots, garden spaces or even inside any stadium, gymnasium or exhibition hall. The standardized containers need little site preparation and are fully equipped to follow an easy plug & play approach.



Figure 02 : IS-48 modular isolation station is an autonomous ICU station including all facilities to provide an independent safe recovery campus away from the hospital to protect staff and patients within the hospital from any virus contamination.

The modular approach based on the independent IS-12 standard unit allows an unlimited extension and adaptation of the facility to meet client's requests for treatment, laboratory tracts, diagnosis and testing etc.



The patient room can be configured following client's specifications as open space ICU with limited privacy or as fully separated isolated one-bed ICU rooms. All configurations provide patients a personal full height window allowing their relatives to have a direct and safe communication from outside. The relation to the outside provides patients and caring staff members to enjoy a friendly, peaceful and relaxing ICU environment promoting a salutogenic design approach to enhance wellbeing and reduce stress. Wellbeing. The LED based lighting system is provided with daylight sensors and adjusts to the needed light level, while providing the possibility to adjust the lighting level allows to balance the body's circadian rhythm, which determines sleeping and eating patterns, cognitive activity, heart rate, hormone level's – in fact, virtually all physiological and behavioral parame

## MODULAR HOSPITAL TECHNICAL SPECIFICATIONS

PRODUCT DIMENSION	Mention dimensions of the containers in the contract, All dimensions may vary aprox $\pm 50\text{mm}$ (external dimension = $2.44 \times 6.06 \times 3.00$ meters)
METAL PARTS AND CONNECTION ELEMENTS	St.37 (electrostatic painted sheets and structural steel tubes). Two pieces of modular containers' connection is made by a bolting system with 0,50 mm RAL 9002 electrostatic painted sheets specially shaped according to the junction of the containers.
CEMENT BOARD	TSE 634-2
<b>TECHNICAL DATA</b>	
EARTHQUAKE CONDITIONS	1st Degree
CLIMATE CONDITIONS	3rd Climate Zone
SNOW LOAD	3rd Climate Zone
WIND SPEED	80 Km/h (The product must be fixed to the ground)
POLIURETAN (PUR)	TS EN 13165
TRANSMISSION COEFFICIENT OF EXTERNAL WALL	TS EN 14509 / 0,67 – 0,11 W/m <sup>2</sup> K
ROOF TRANSMISSION COEFFICIENT	TS EN 14509 / 0,67 – 0,11 W/m <sup>2</sup> K
FLOOR HEAT TRANSFER COEFFICIENT	1,24 W/m <sup>2</sup> K
CHASSIS LOADING CAPACITY	250 Kg/m <sup>2</sup>
<b>FLOOR</b>	
	The parts of the base coming into the cavity will be covered with a 1.2 mm metal sheet. Antibacterial Heavy traffic PVC is used on 16 mm thick cement board. In addition, insulation will be made with EPS foam of 40 mm thickness at the base.
<b>WALL</b>	
SYSTEM	Specially shaped 50 mm thick Polyurethane (PUR) filled sandwich panel
OUTER SURFACE COVERING	Ral 9002 electrostatic painted steel sheet.
INNER SURFACE COVERING	Ral 9002 electrostatic painted steel sheet.
WALL INSULATION	With 50 mm thickness, 38-42 kg / m <sup>3</sup> polyurethane foam (PUR) fire class B-s2; made with full, healthy and safe materials with heat insulation.



<b>ROOF</b>	
SYSTEM	Special shaped clamped (grooved seam) sandwich panels. Rain water will be drained through special clamping system.
ROOF INSULATION	Produced with 40 mm thick, 38-42 kg/m <sup>3</sup> polyurethane (PUR) B2 fire class fire resistant, full thermal insulation, healthy and safe materials.
OUTER SURFACE COVERING	Ral 9002 electrostatic painted steel sheet.
INNER SURFACE COVERING	Ral 9002 electrostatic painted steel sheet.
<b>DOORS</b>	
EXTERNAL DOOR	Made of Metal 1.5 mm door frame and 50 mm polyurethane (PUR) sandwich panel that is additionally reinforced with metal and leakproof gasket and PVC joints.
INTERNAL DOOR	Wet zones doors will be PVC. Intensive care unit pass door will be an automatic door with photocell.
<b>WINDOWS</b>	
	600 x 1250 mm , fixed openingless windows.
GLASS	Thermopane with 4 + 12 + 4 mm thickness.
<b>PAINTS</b>	
EXTERIOR AND INTERIOR	Ral 9002 electrostatic painted steel sheet.
<b>ELECTRIC INSTALLATIONS</b>	
SYSTEM	On the plaster
CABLE	For plugs 3x2,5 and for lighting 2x1,5 NYM TSE certified cables in use.
LIGHTING	TSE certified 60X60 Led Panel.
PLUGS AND SWITCHES	Located in every room.
<b>SANITARY INSTALLATIONS</b>	
SYSTEM	On the plaster
CLOSET	TSE certified ceramic in used.
SINK	TSE certified ceramic materials in use.
FRESH WATER PIPING	PPRC featured material in use with TSE certification.
WASTE WATER PIPING	PVC featured materials in use with TSE certification.
ACCESORIES	Mirror, toilet paper holder and soap holders etc are TSE certified materials.
P.S.	Lifting is made with specially designed brackets and columns.