

# AIIC2023

FORTEZZA DA BASSO

Firenze 10-13 maggio 2023



Convegno Nazionale  
Associazione Italiana Ingegneri Clinici

Innovazione e accessibilità:  
il governo delle tecnologie sanitarie come sfida sociale

AIIC  
Associazione  
Italiana  
Ingegneri Clinici



## OSPEDALE VERTICALE E OSPEDALE ORIZZONTALE:

### IL NUOVO GALEAZZI IN AREA MIND MILANO

### IL NUOVO OSPEDALE DI ANDRIA BAT

**ING. TIZIANO BININI**  
PRESIDENTE DI BININI PARTNERS



# Tiziano Binini

Founder & CEO



Hello!



bininipartners

# THE GALEAZZI HOSPITAL

THE FIRST ITALIAN EXAMPLE OF VERTICAL HOSPITAL

Tiziano Binini

Founder & CEO of Binini Partners

  
bininipartners



Firenze AICC 2023 - 11.05.2023



# THE NEW **GALEAZZI** HOSPITAL

**The Hospital  
for the Health  
of the XXI Century**







AREA

EX **EXPO** 2015

Today called **MIND**:  
One of the cornerstones  
of the future ecosystem  
of research, innovation & care.



*The IRCCS Galeazzi is the  
first intervention of MIND*

MOTORWAY

A52

NEW  
GALEAZZI



← DECUMANO →

MIND  
MILANO INNOVATION DISTRICT





Height: **90 m**

N.° Floors: **16**

Total Surface:

**180.000 m<sup>2</sup>**

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Customer:

**GSD Real Estate**



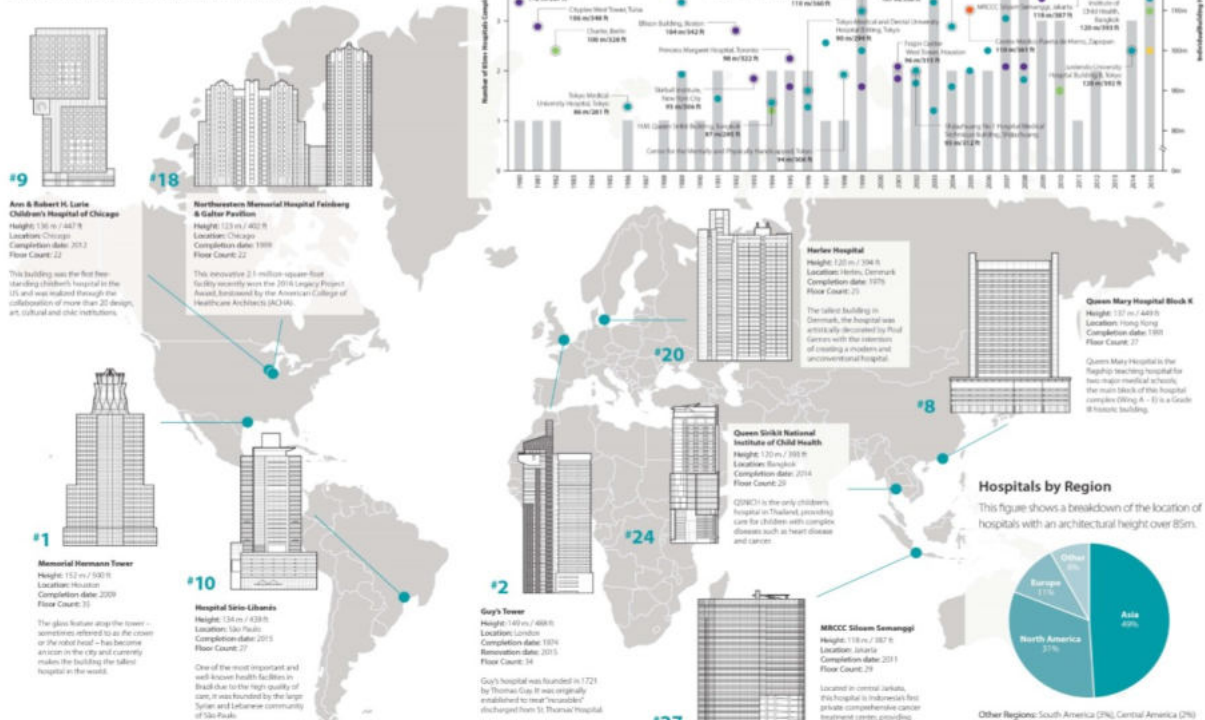
GRUPPO OSPEDALIERO  
SAN DONATO



# The World's 75 Tallest Hospitals

No.	Building	City	Country	Height (m)	Completion
1	Memorial Hermann Tower	Houston	USA	152	2009
2	Guo's Tower	London	UK	149	2011
3	Peking Union Medical Hospital Library	Beijing	China	148	2008
4	Bay Plaza	San Francisco	USA	146	1986
5	North America (21)				
6	St. Elizabeth's Hospital	Houston	USA	142	2014
7	North America (21)				
8	North America (21)				
9	Ann & Robert H. Lurie Children's Hospital of Chicago	Chicago	USA	136	2013
10	North America (21)				
11	North America (21)				
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72	North America (21)				
73	North America (21)				
74	North America (21)				
75	North America (21)				

While hospitals are not frequently featured among tall building studies, the buildings highlighted below have uniquely shaped the world of hospital architecture and perhaps laid the way for future tall hospitals. Ranked by architectural height, the table to the left lists the location and height of the current 75 tallest hospitals in the world that are either complete (unshaded) or are currently under construction (shaded).

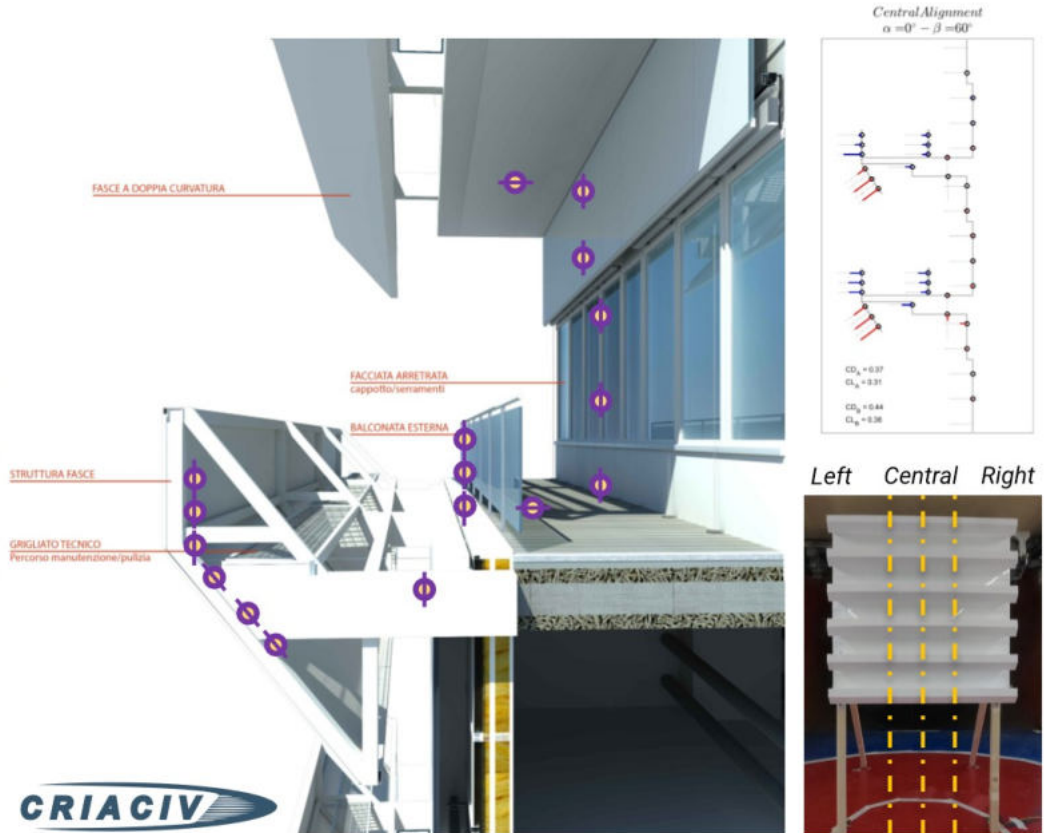


THE NEW  
**GALEAZZI**  
 HOSPITAL  
 WILL BE  
 THE **FIRST**  
 EXAMPLE  
 OF A  
**MODERN**  
 VERTICAL  
 HOSPITAL  
 IN ITALY





# WIND TUNNEL TEST

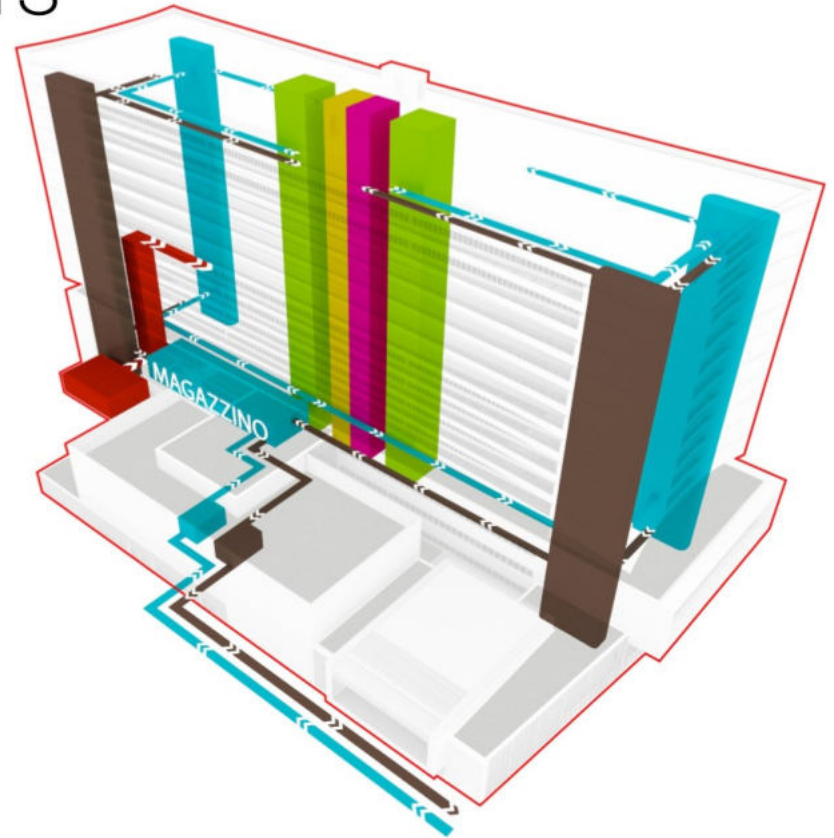


WIND PRESSURES

# RATIONALIZATION OF PATHWAYS

-  **emergency**
-  **personal path**
-  **public path**
-  **patients path**
-  **dirty material**
-  **clean material**

total elevators: 52



*sustainability*



*efficiency*

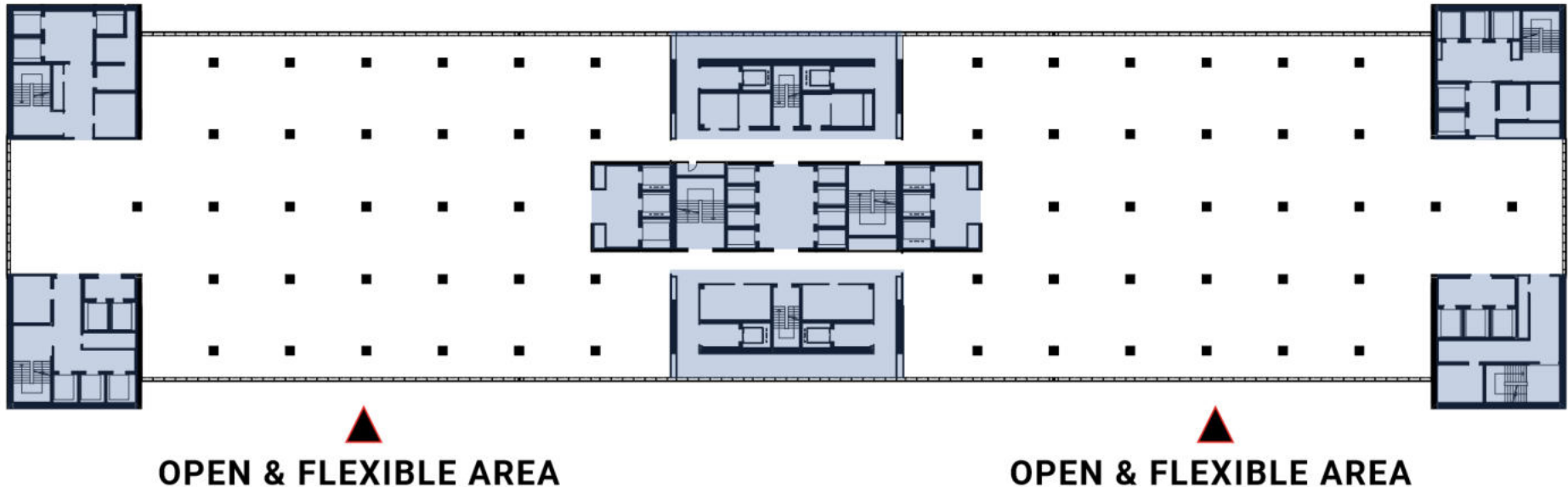


*maximum hygiene*

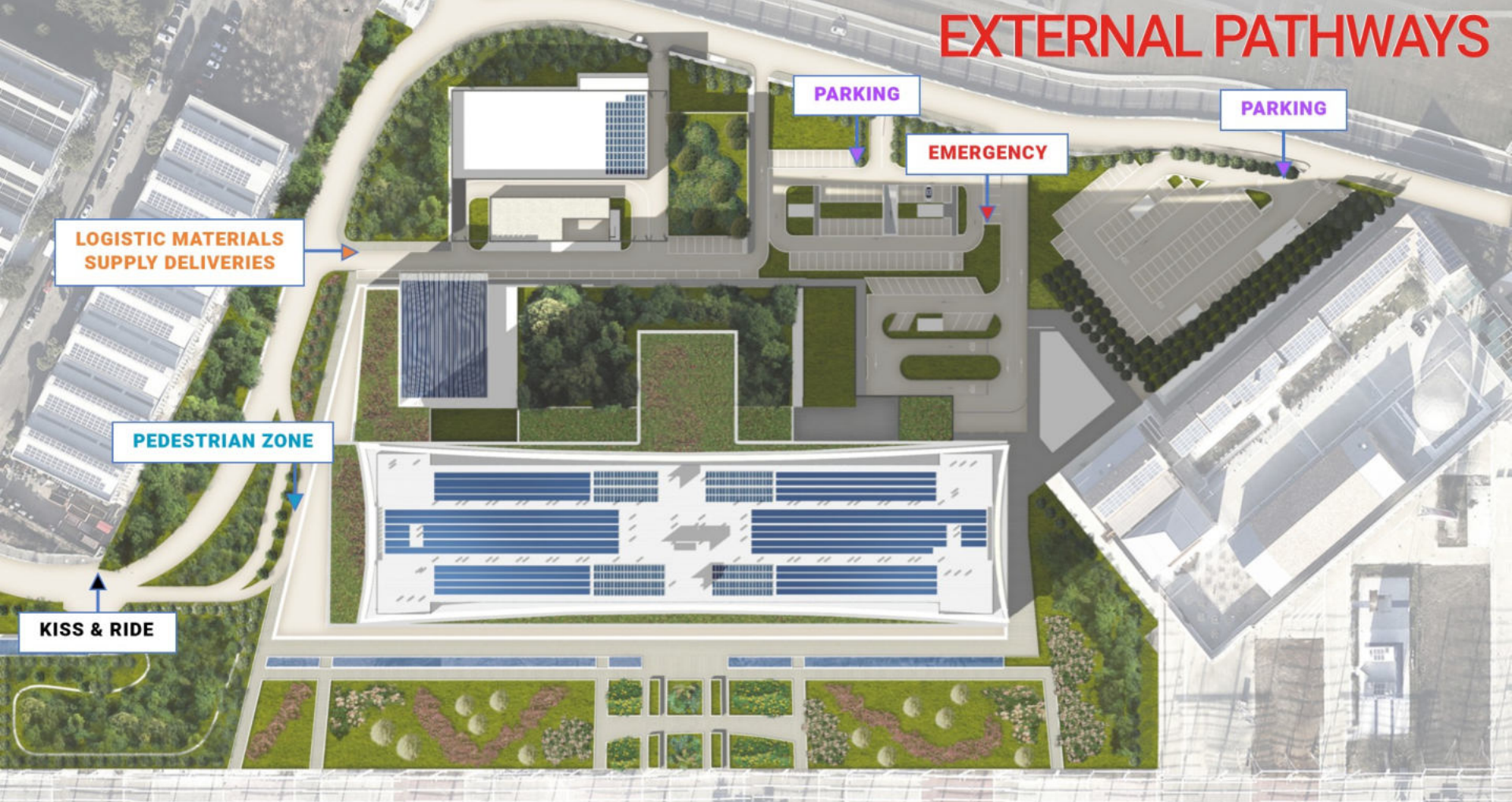


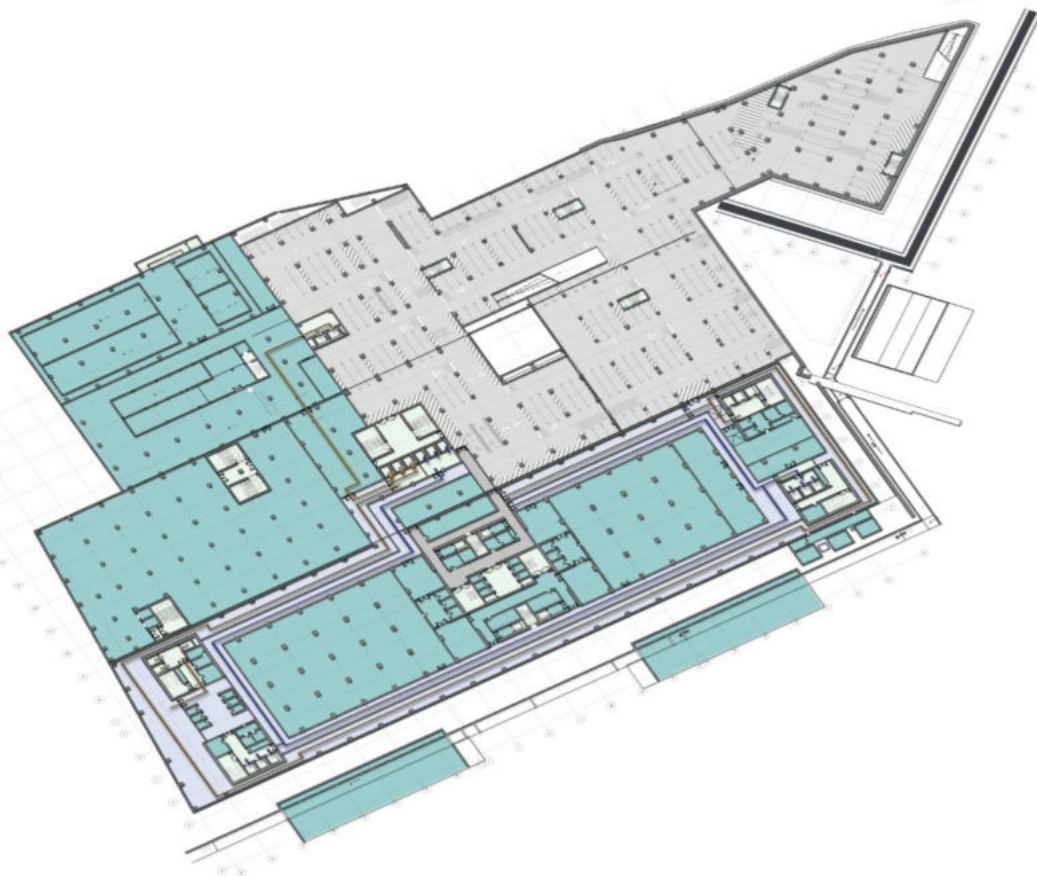
# FLEXIBLE STRUCTURE PERMITTING FUTURE MODIFICATIONS

**LIFTS - STAIRS - TECHNICAL ASCENTS**



# EXTERNAL PATHWAYS





Mechanical Plants  
Logistics  
Parking

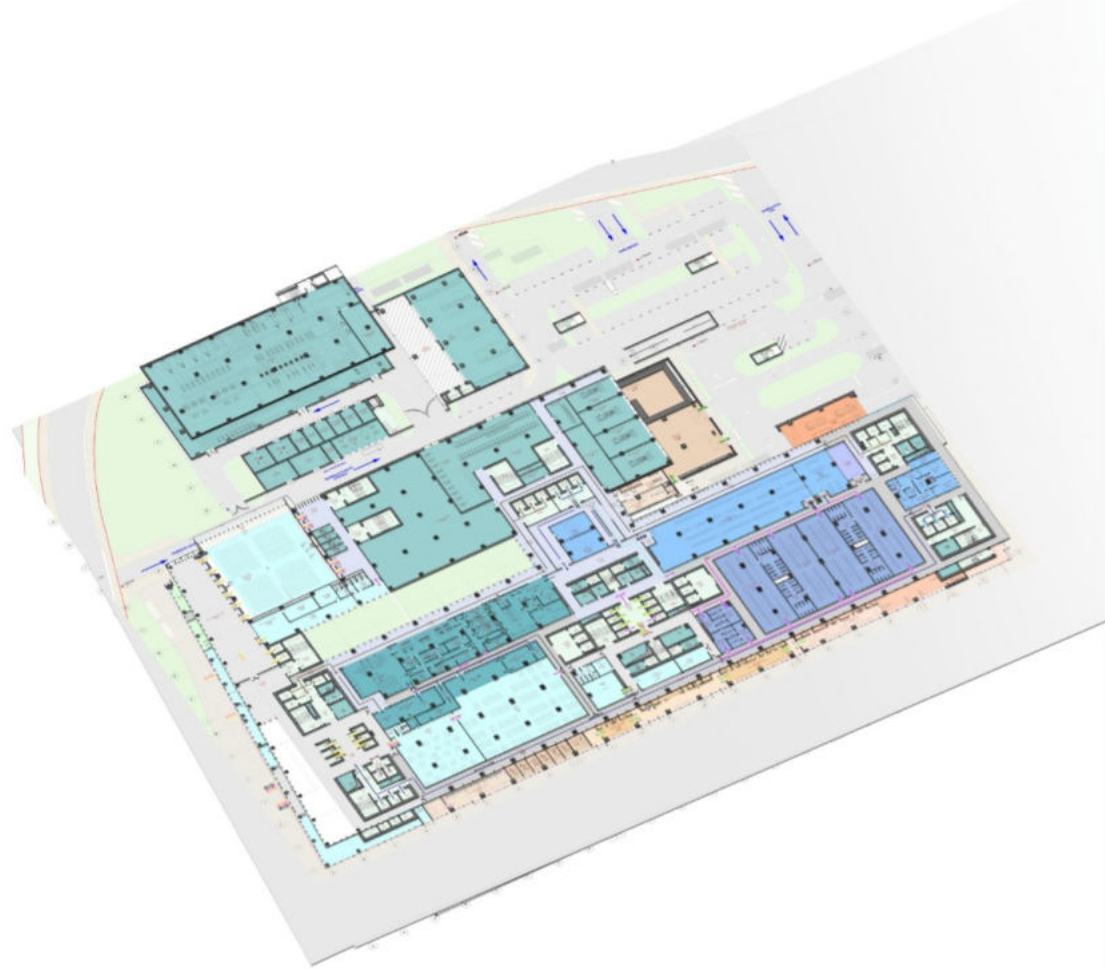
**FLOOR -1**





Reception  
Diagnostics  
Emergency Department  
University

**GROUND FLOOR**



Conference Area  
General Services

Canteen

Chapel

Pharmacy

Centralized Staff Changing Room

Kitchen

**FLOOR 1**



Analytical &  
Research  
Laboratories

**FLOOR 2**





Outpatients Department  
Endoscopy Area



**FLOOR 3**



Outpatients Surgery  
Operating Theaters  
Inpatients Rooms

**FLOOR 4**



Operating Theaters  
Hemodynamic  
Intensive Care



**FLOOR 5**

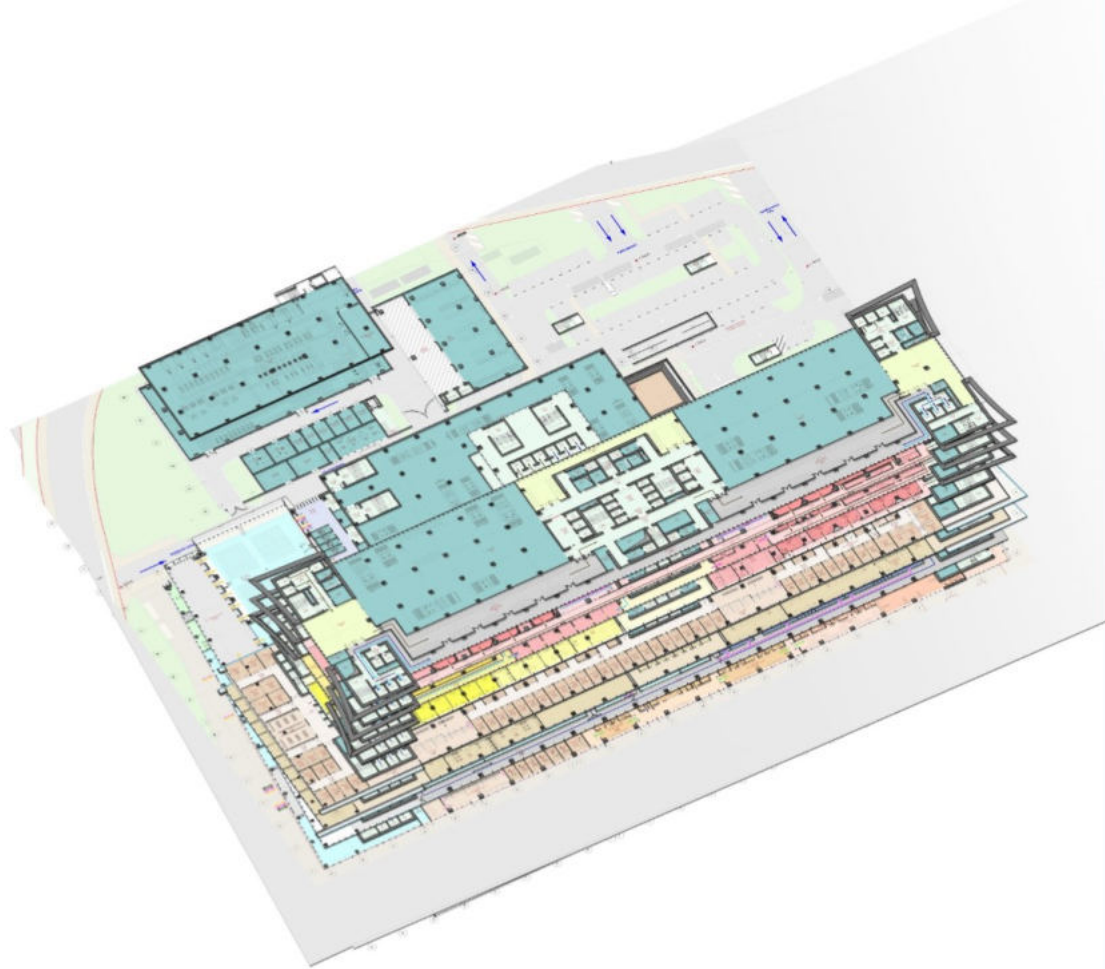


Operating Theaters



**FLOOR 6**

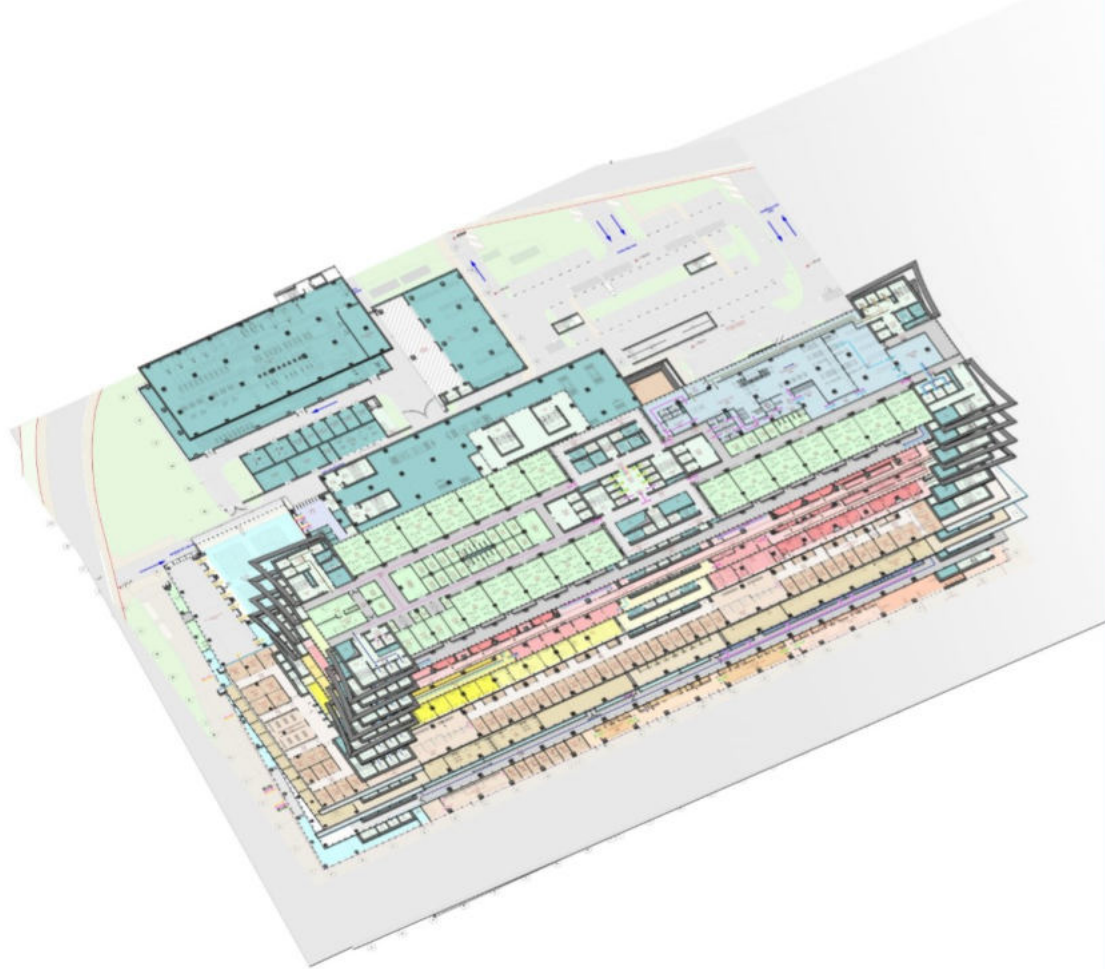




“Calm Floor”



**FLOOR 7**

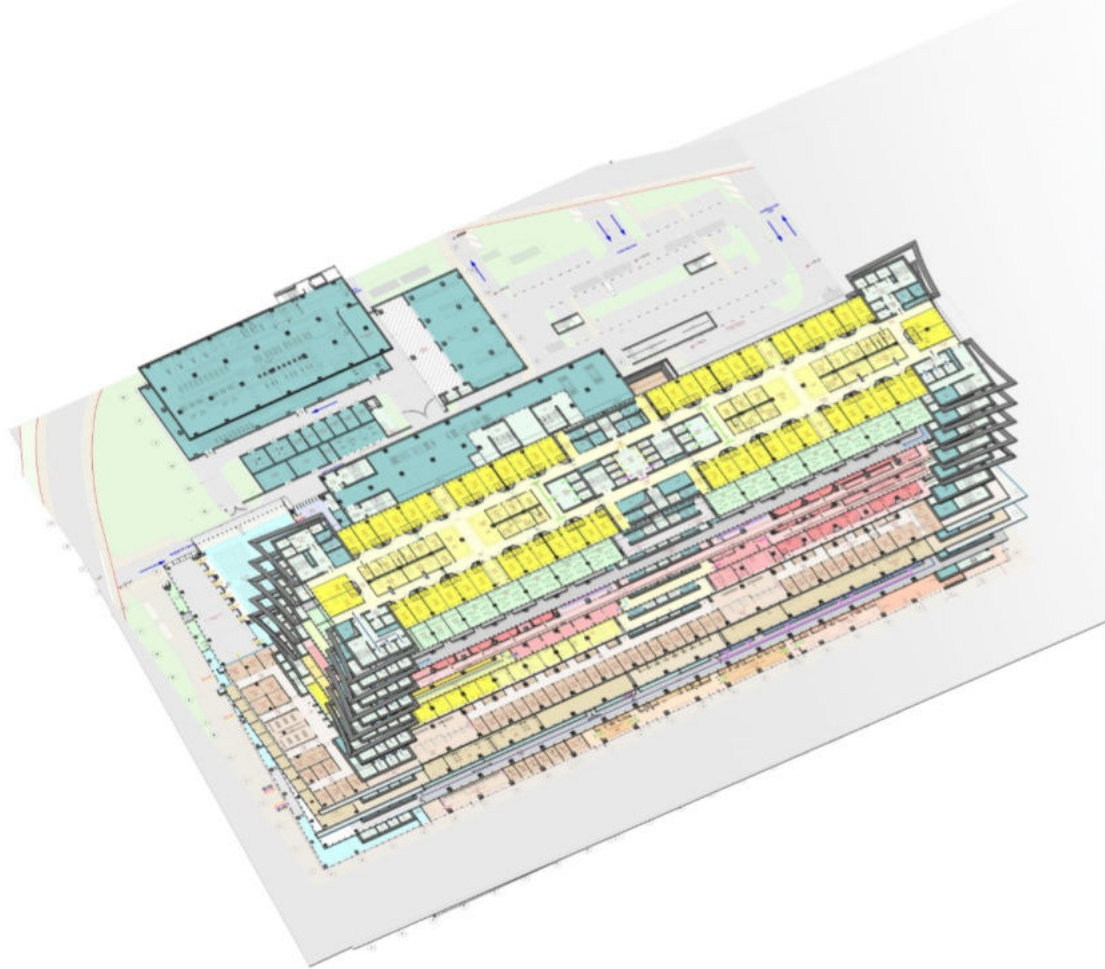


Offices  
Sterilization Central



**FLOOR 8**

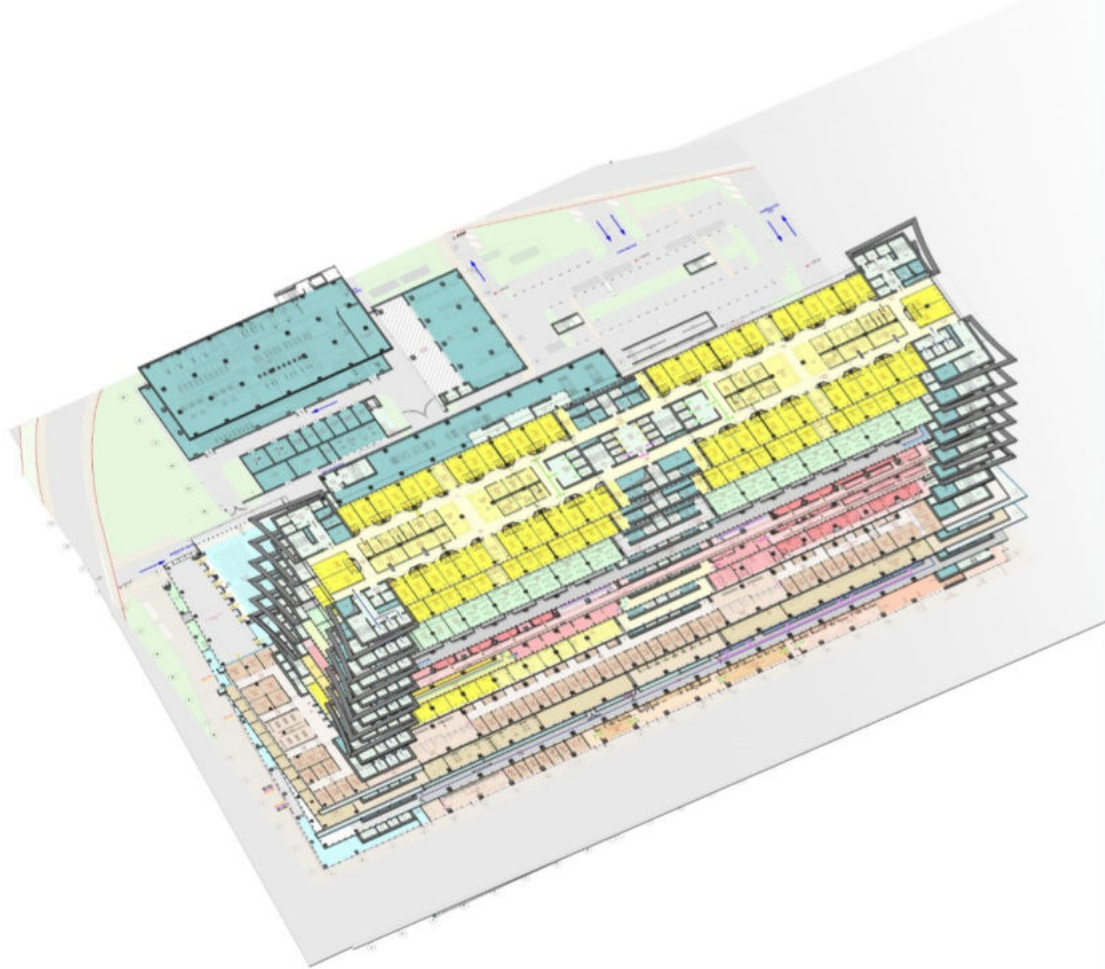




Wards



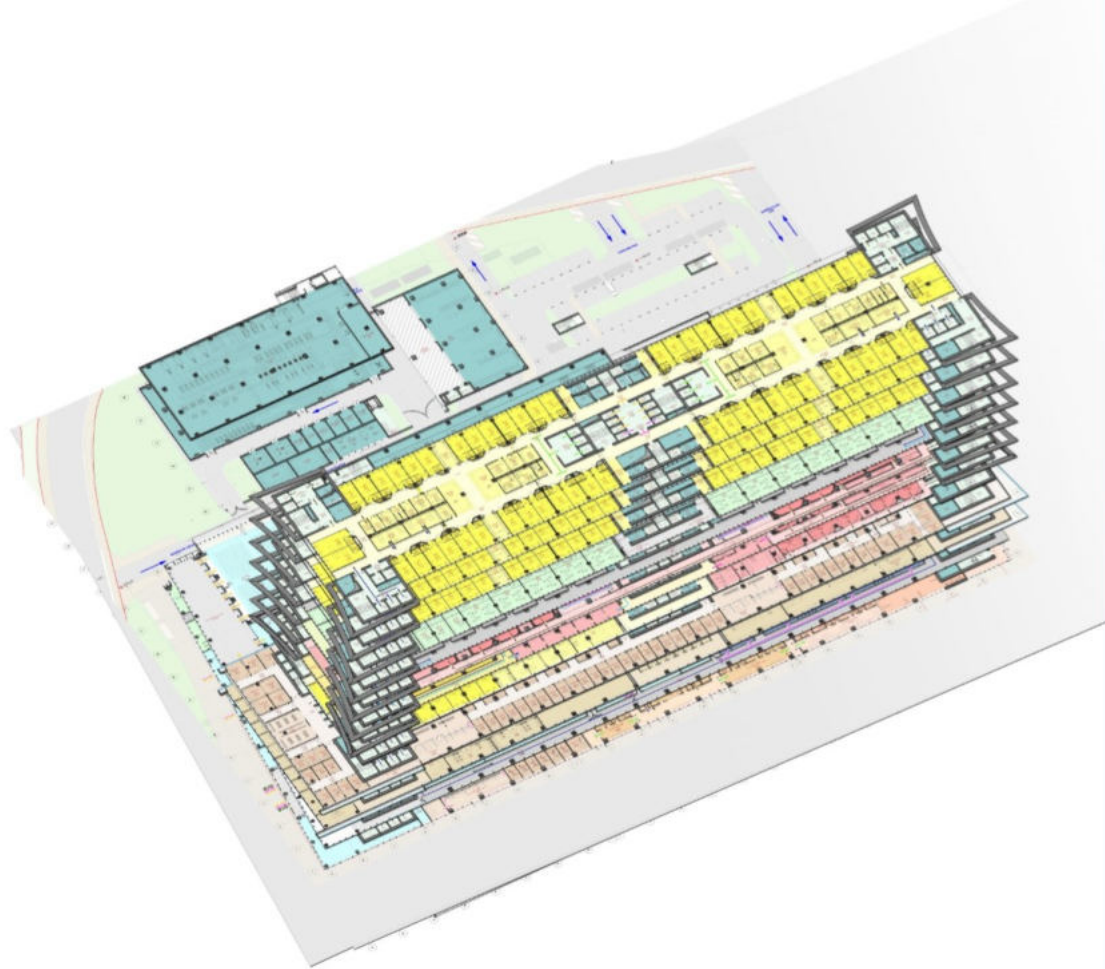
**FLOOR 9**



Wards



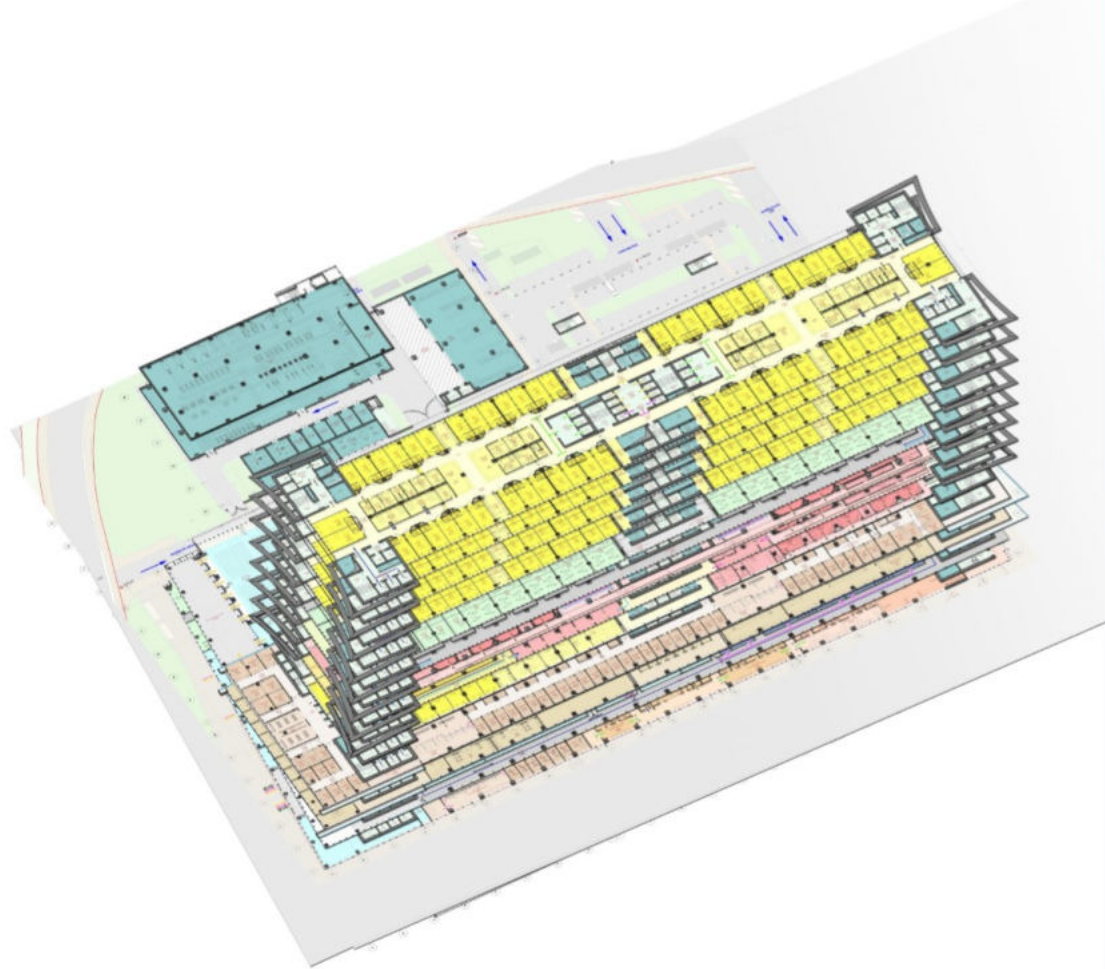
**FLOOR 10**



Wards



**FLOOR 11**

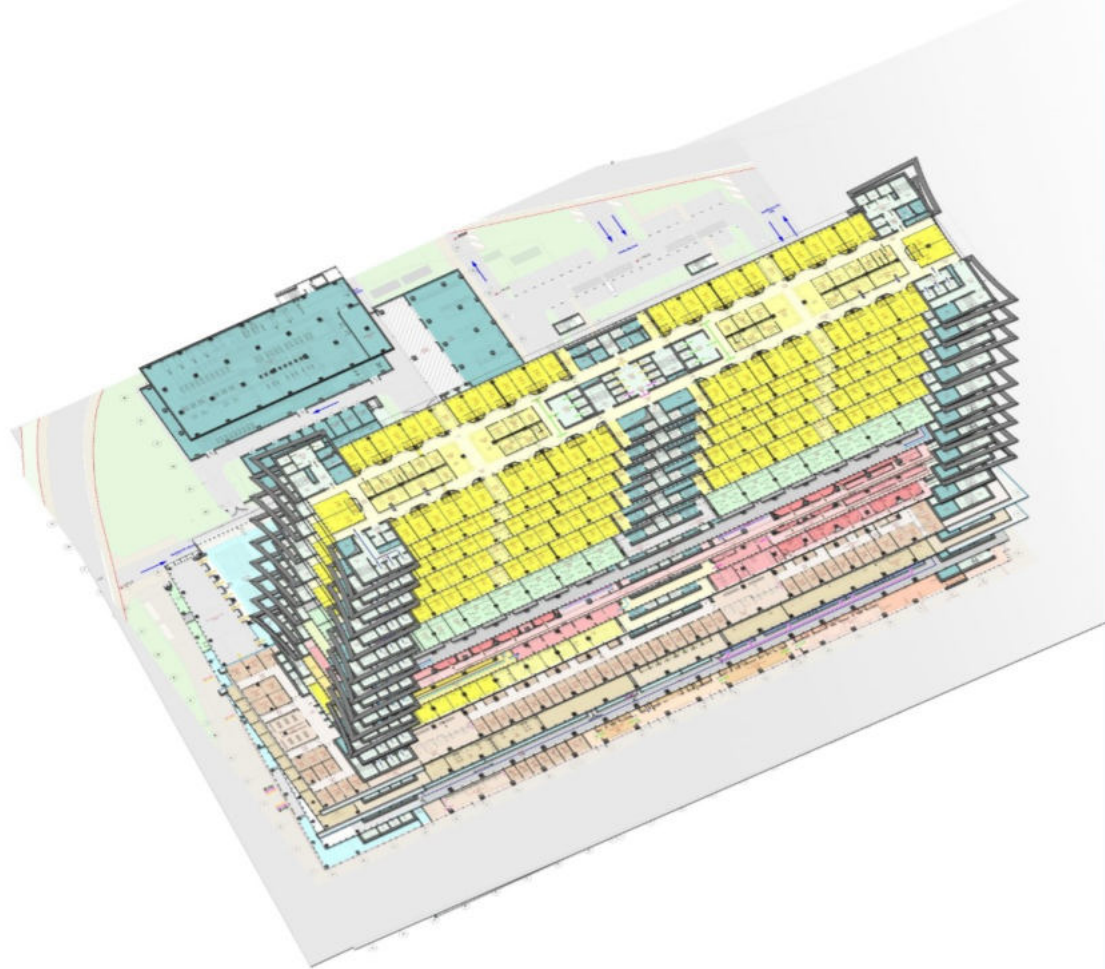


Wards



**FLOOR 12**

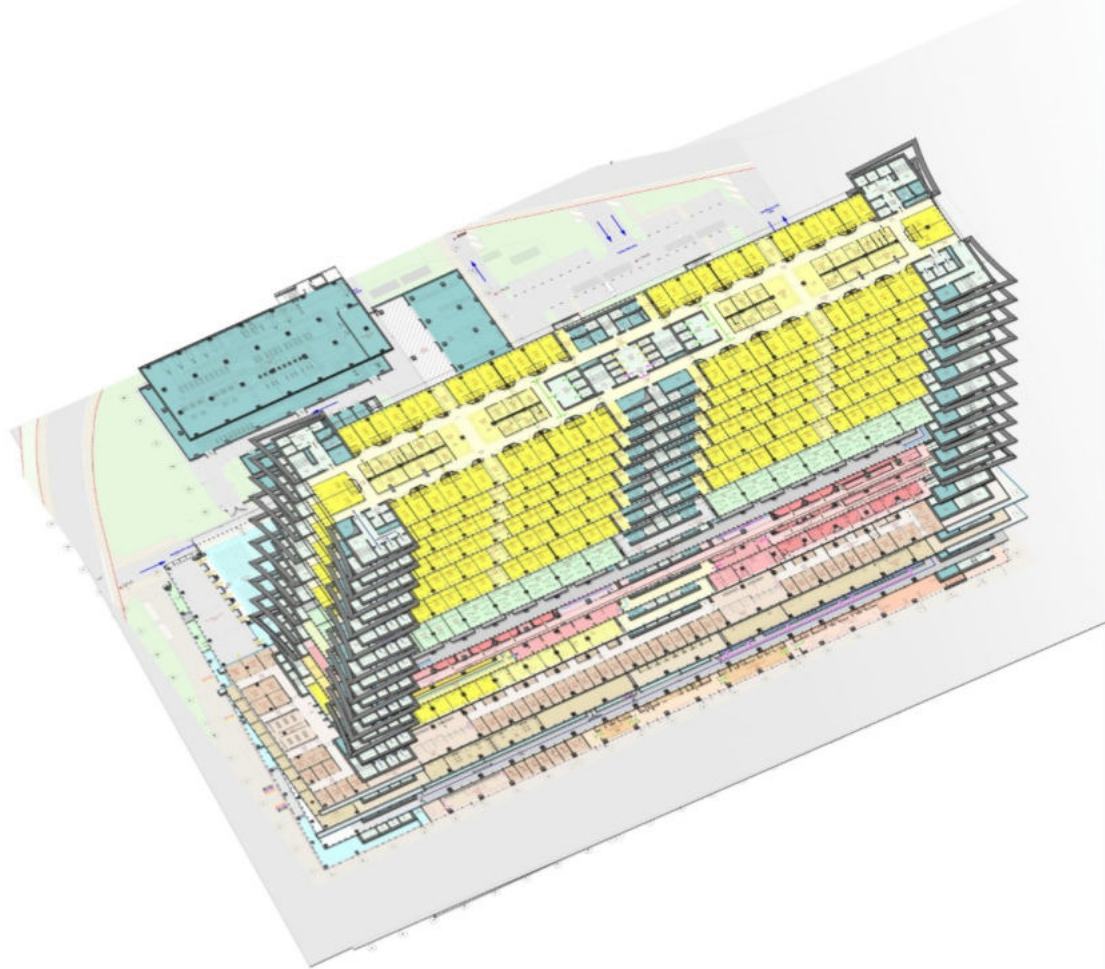




Wards



**FLOOR 13**

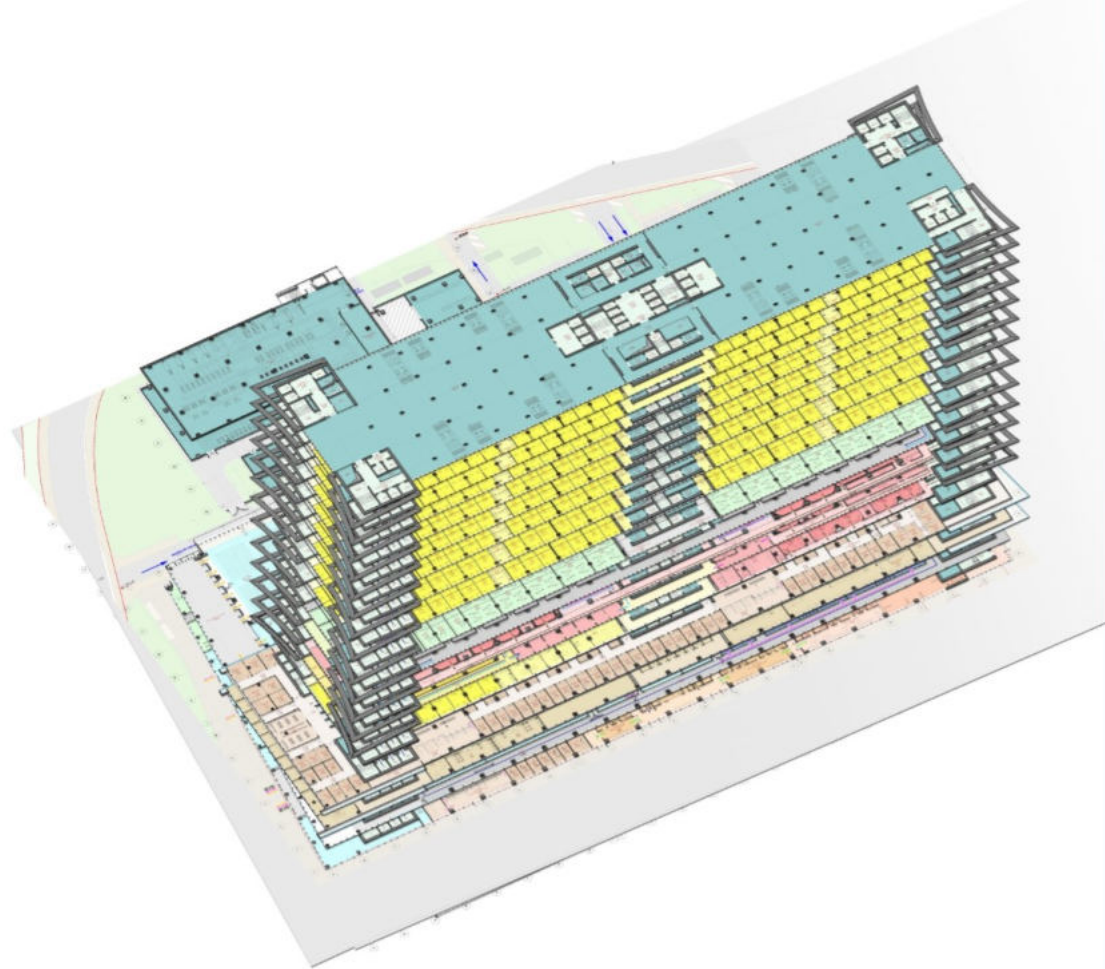


Wards



**FLOOR 14**

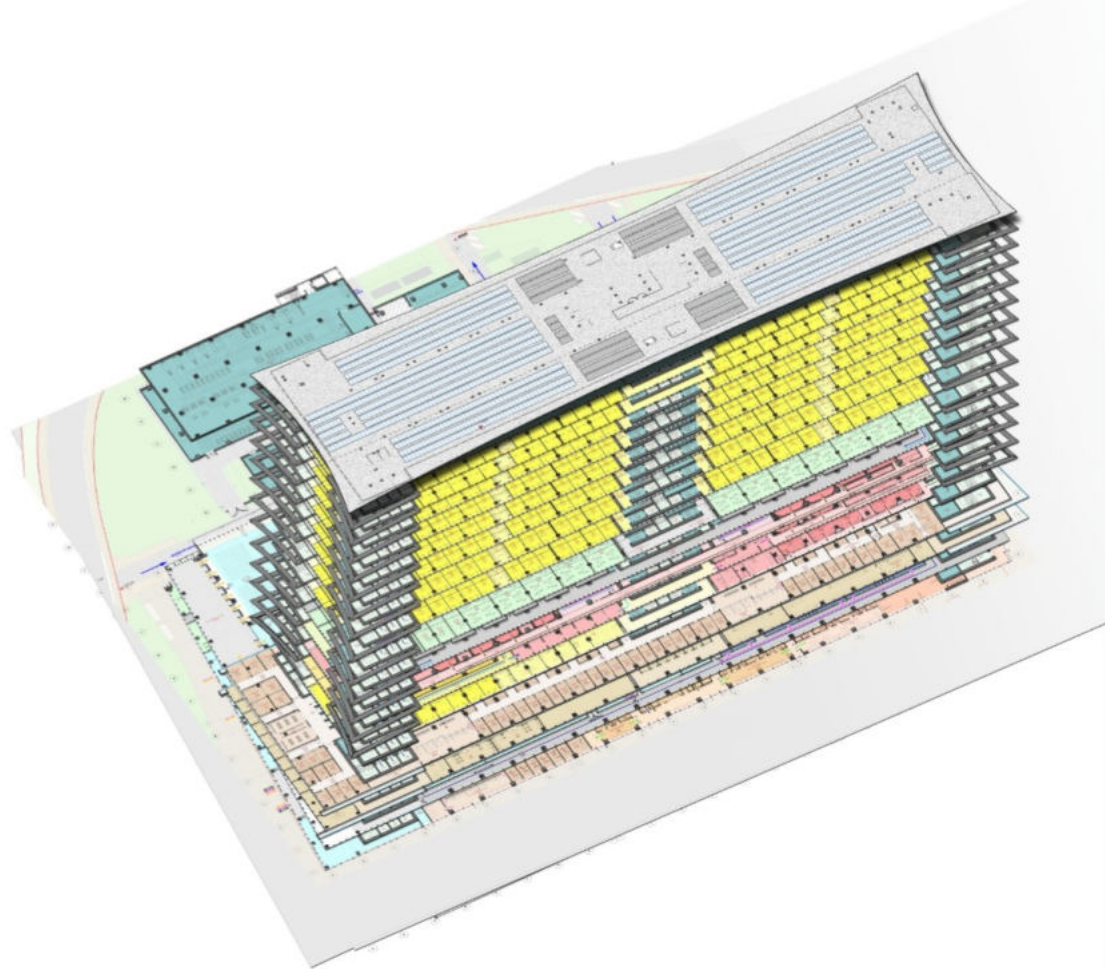




Mechanical Implants  
Air Treatment Unit



**TECH. FLOOR**



Solar &  
Thermal System



**ROOF FLOOR**











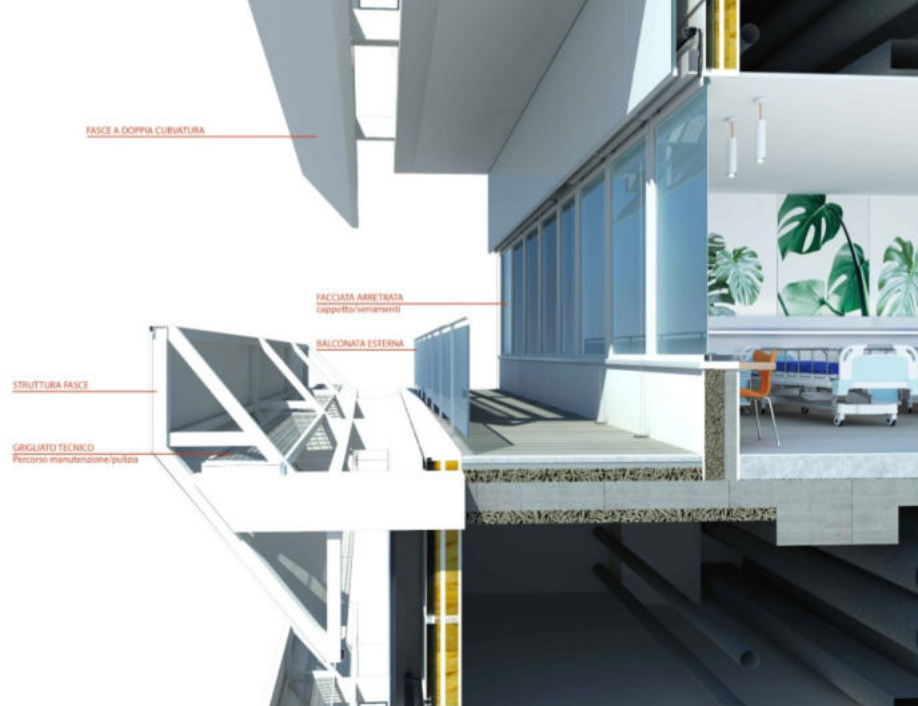






AN **EXAMPLE** OF  
HEALTHCARE  
LOOKING AFTER  
THE **PATIENTS**  
RESPECTING  
THEIR **PRIVACY**,  
**EMOTIONS**,  
**SENSIBILITY**





HORIZONTAL ELEMENTS OF **FACADE** RUN ALL AROUND THE WARD LEVELS, GIVING **PATIENTS PRIVACY** & DEPTH TO THE AMBIENT & RENDERING IT **PLEASANT & COZY**



**HIGHLY**  
TECHNOLOGICAL  
VERY WELCOMING  
FOCUSED ON **PATIENT**  
**EFFICIENT**





**INNOVATIVE**  
STANDARDS  
OF **SUSTAINABILITY**  
& **FUNCTIONALITY**







INTEGRATION  
BETWEEN  
**RESEARCH,  
UNIVERSITY,  
CARE**





**MODERN & EFFICIENT SOLUTIONS** IN TERMS OF **ENERGY SAVING** &  
**SUSTAINABILITY** MINIMIZING CONSUMPTION, NOISE & POLLUTANT EMISSIONS



## URBAN ECOSYSTEM

**GREEN** INFRASTRUCTURE  
PROVIDES BENEFITS FOR  
**HUMAN HEALTH**



THE NEW **GALEAZZI** IS A CANDIDATE FOR THE **LEED GOLD V4**  
THE MOST INNOVATIVE AND DESIRED CERTIFICATION



Green  
Building  
Council  
Italia



































I.R.C.C.S. Ospedale  
Galeazzi - Sant'Ambrogio  
Grande Sala Operativa



I.R.C.C.S. Ospedale  
Galeazzi - Sant' Ambrogio  
Gruppo San Donato



# NUOVO OSPEDALE DI ANDRIA

## RTP

### capogruppo mandataria:

Binini Partners

### mandanti:

CZA Cino Zucchi Architetti

Ing. Damiano Tinelli

BMS Progetti

BMZ Impianti

Paisa' Architettura del Paesaggio-Stignani Associati

Systematica

T.E.S.I. Engineering

AR/S Archeosistemi

SIL engineering

### consulenti:

Prof. Arch. Stefano Capolongo

Prof. Dr. Andrea Cambieri

Dr. Geologo Riccardo Losito





# ORTOFOTO E PLANIMETRIA



## LEGENDA

Area oggetto di intervento

## LEGENDA

### AMBITI DI PROGETTO

- 1 Ingresso al Nuovo Ospedale di Andria
- 2 Ingresso cortile meridionale per Pronto Soccorso e Urgenze
- 3 Parcheggio pedonale destra
- 4 Parcheggio urbano
- 5 Parcheggio autostrada
- 6 Parcheggio Pronto Soccorso
- 7 Parcheggio Urgenze
- 8 Piazza con annesso urbano
- 9 Area sotto Teli e Blu
- 10 Drop-off pazienti
- 11 Spazio di attesa con vedute integrate
- 12 Accesso pedonale principale Nuovo Ospedale di Andria
- 13 Connesioni pedonali Parcheggio urbano - Ospedale
- 14 Ingresso - Uscita Parcheggio urbano
- 15 Ingresso - Parcheggio urbano
- 16 Uscita Parcheggio urbano
- 17 Ingresso - Parcheggio autostrada
- 18 Uscita Parcheggio Autostrada
- 19 Ingresso - Uscita Parcheggio Pronto Soccorso
- 20 Ingresso - Uscita Parcheggio Urgenze
- 21 Ingresso - Uscita area Logistica
- 22 Ingresso - Uscita area per Emergenza
- 23 Rinnocivita
- 24 Spazio attesa ambulante per ottocento
- 25 Connesi Ingresso - Uscita Cantina Casa
- 26 Area di sosta e servizio urbano
- 27 Corte di parcheggio in verde
- 28 Servizio multifunzionale per emergenza
- 29 Corte con verde in area e servizi
- 30 Corte con area verde in area e servizi
- 31 Connesioni pedonali Ospedale - Piazza
- 32 Connesioni pedonali Ospedale - Centrali tecniche
- 33 Rinnocivita pedonale
- 34 Area ricovero familiari e pazienti
- 35 Area giochi per bambini
- 36 Area per sport e ricreazione all'aperto
- 37 Area per lettura all'aperto e multimediateca
- 38 Area attrezzata a Parco
- 39 Area con Teli di Blu
- 40 Parcheggio ciclopista
- 41 Area verde con dare vedute di integrazione
- 42 Area natura e cartocentro in area logistica
- 43 Accesso di emergenza

### Linea area di progetto

Area di progetto

Rettilineo

Caricati

Muri di contenimento

Dislivelli

### MATERIALI\_vedi tavola PD-105E-T-02N-010

- Cemento drenante
- Adatto drenante
- Inerti naturali con legante a base di resina
- Terra sciolta
- Litame in Palla

### ALBERATURE\_vedi tavola PD-105E-T-02N-011

- Area a verde e pedoni
- Ulmi isolati da materiale
- Ulmi di progetto
- Alberi fruttiferi pedonali di progetto
- Albero nani per progetto di progetto
- Albero da frutto di progetto









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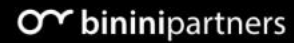
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thank you!

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