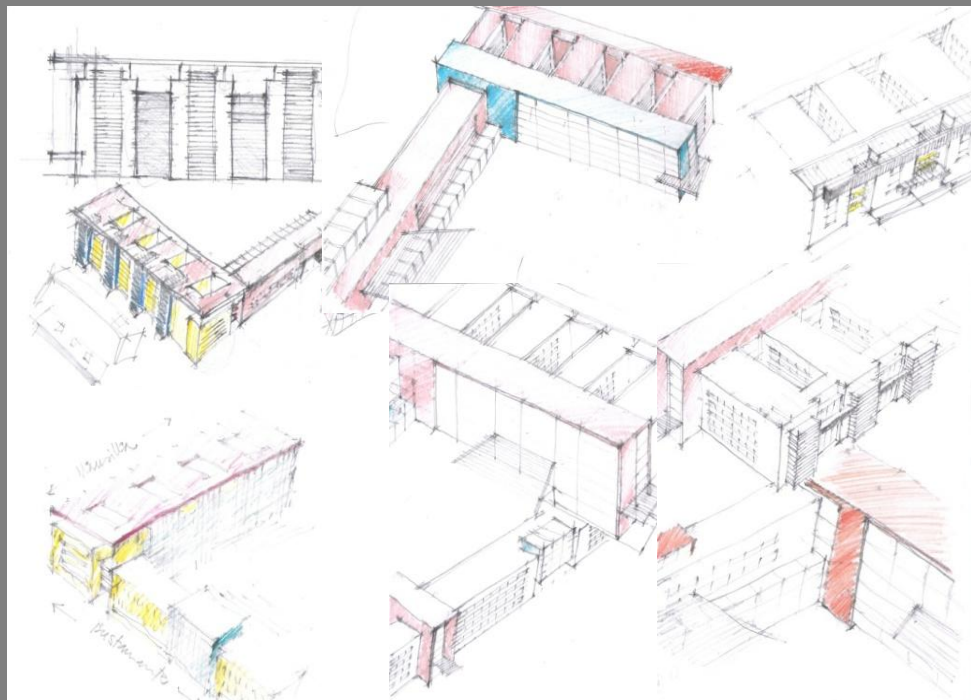


MASTER PLAN IN STAGES FOR A CENTENNIAL CHILDREN'S HOSPITAL, BS AS ARGENTINA



TEAM

RICARDO REZZONICO
MARIA ELENA GALESIO
SILVINA PAN
MARIA ELIZABETH RIAL

THANKS TO

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DIRECTORS OF GUTIERREZ CHILDREN'S HOSPITAL

LABORATORIES
JULIO GLADSTEIN, DOCTOR IN CHEMISTRY
RENDERS
ANABELLA KIPRIZLIAN, ARCH.
MASTER PLANS
SANDRA TUYA, ARCH.

MASTER PLAN IN STAGES FOR A CENTENNIAL CHILDREN'S HOSPITAL, BS AS ARGENTINA



TEAM PROFILE

REZZONICO, M.D.

1963 DOCTORATE IN MEDICINE UNIVERSIDAD BUENOS AIRES
 1976 PUBLIC HEALTH ADMINISTRATOR
 1993 M.D., PUBLIC HEALTH
 1996 M.D., PUBLIC HEALTH, ACADEMIA NACIONAL MEDICINA
 PROFESSOR, PUBLIC HEALTH, U.B.A.
 PROFESSOR, PUBLIC HEALTH, UNIVERSIDAD FAVALORO

2002-2205 DIRECTOR, RAMOS MEJÍA HOSPITAL
 2003 TECHNICAL LEGAL SECRETARY FUNDACION FAVALORO

2006 MASTER PLAN IN STAGES, RAMOS MEJÍA HOSPITAL
2006 ACADEMIC SECRETARY, UNIVERSIDAD FAVALORO

**2011 RESEARCH WORK INTEGRATED MASTER PLAN
 FOR PUBLIC HOSPITALS IN BS. AS.**

GALESIO PAN RIAL, ARCHITECTS

1985 ARCHITECTURE, UNIVERSIDAD DE BUENOS AIRES

1988 ARCHITECTURE FOR MEDICAL BUILDINGS, U.B.A.

2000 MEDICAL BUILDING PLANNING, ARCHITECTURE, U.B.A.

2001 BID FOR G.C.B.A. PUBLIC HOSPITAL MASTER PLAN, IN
 BUENOS AIRES

2006 MASTER PLAN IN STAGES, RAMOS MEJÍA HOSPITAL

2009 MASTER PLAN GUTIERREZ CHILDREN'S HOSPITAL

2010 SPECIALIZATION FACILITIES MANAGEMENT U AUSTRAL

**2011 RESEARCH WORK, INTEGRATED MASTER PLAN
 FOR PUBLIC HOSPITALS IN BS AS**

GUTIERREZ CHILDREN'S HOSPITAL : YESTERDAY AND TODAY



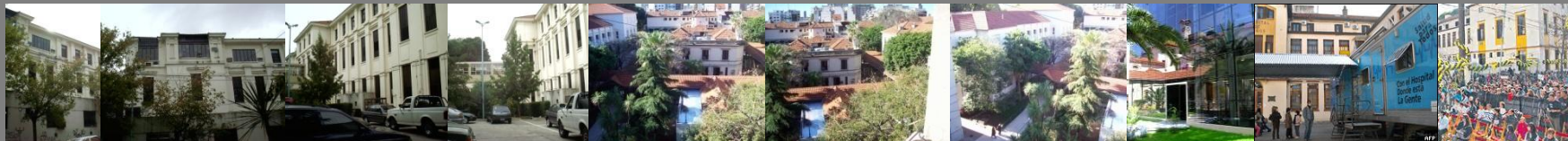
ORIGINAL 19TH CENTURY CAMPUS COMPRISED OF NINE PAVILIONS
TODAY THE CAMPUS CONSISTS OF A GROUP OF SIXTEEN BUILDINGS, INCLUDING MAIN PAVILIONS AND SECONDARY CONSTRUCTIONS

THESE BUILDINGS INCLUDE 31.621 SF OF SPACE, SITUATED ON A 26.500 SA OF LAND,

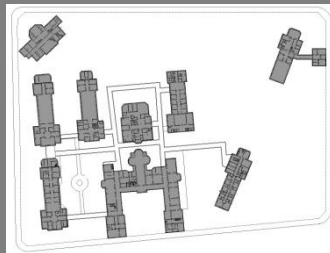


THE ORIGINAL LAYOUT WAS DESIGNED BY ARCHITECT ALEJANDRO CHRISTOPHERSEN AND ERNESTO BUNGE IN 1893

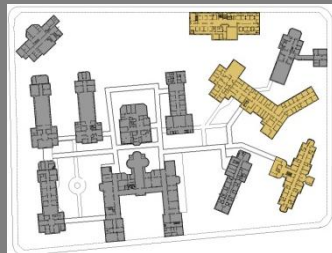
CHRISTOPHERSEN WAS ONE OF THE MOST IMPORTANT FIGURES IN ACADEMIC ECLECTICISM ARCHITECTURE IN THE LATE 19TH CENTURY AND THE AUTHOR OF SEVERAL INSTITUTIONAL BUILDINGS.
SON OF THE NORWEGIAN CONSUL, HE WAS BORN IN CADIZ, RECEIVED HIS UNDERGRADUATE DEGREE IN NORWAY AND RECEIVED HIS ARCHITECTURE DEGREE IN FRANCE



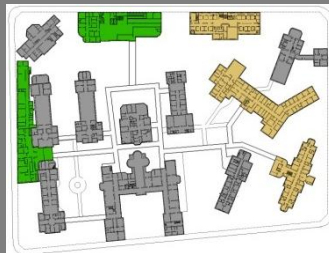
GUTIERREZ CHILDREN'S HOSPITAL : YESTERDAY AND TODAY



1890



1910



1930



1960



1980

THE GUTIÉRREZ HOSPITAL HAS UNDERGONE SUSTAINED, CHAOTIC GROWTH FOR THE LAST SIXTY YEARS. BUILDINGS WERE ADDED TO THE OVERALL LAYOUT WITHOUT PREVIOUS PLANNING, GIVING RISE TO A GROUP OF AUTONOMOUS BUILDINGS INDEPENDENT OF ONE ANOTHER

THEY WERE CONCEIVED OF IN ACCORDANCE WITH A HOSPITAL MODEL AT THAT TIME, ORGANIZED ON THE BASIS OF SERVICES RATHER THAN PATIENTS. EACH PAVILION WAS DEVELOPED FOR A DIFFERENT MEDICAL SPECIALTY, WHERE AREAS OF ATTENTION AND OTHER SUPPORT SERVICES WERE DUPLICATED



GUTIERREZ CHILDREN'S HOSPITAL TODAY: LOCATION, SITE AND ENVIRONMENT



LOCATED IN THE NORTHERN ZONE OF THE CITY OF BUENOS AIRES, IN A DENSELY POPULATED DISTRICT WITH A GREAT DEAL OF VEHICULAR TRAFFIC, IT WAS NECESSARY TO TAKE CONSOLIDATED URBAN SETTING INTO CONSIDERATION.

PRIORITY WAS GIVEN TO INCORPORATING CIRCUITS FOR PEDESTRIAN AND VEHICULAR ACCESS INTO THE SYSTEM IN ORDER TO INTEGRATE THE COMPLEX WITH THE SURROUNDING NEIGHBORHOOD ENVIRONMENT.

AN UNDERLYING PRINCIPLE IS PROPOSED BASED ON THE "A CITY WITHIN A CITY" CONCEPT, WHERE THE PROPERTY IS ORGANIZED IN AN OPEN PATTERN THAT ECHOES THE EXISTING URBAN GRID.





FROM A HISTORIC HOSPITAL IN PAVILIONS

1. MODEL VALID UNTIL 1930.

2. MODEL BASED ON ONE SERVICE PER PAVILION OR BUILDING

3. MODEL BASED ON PARTIAL TECHNOLOGICAL UPDATES

LACKS A DEPARTMENT OF INTEGRATION,
LACKS FLEXIBILITY FOR GROWTH.

DIFFICULT MAINTENANCE LOGISTICS.

TO AN INTEGRATED HOSPITAL

1. MODEL VALID SINCE 1980

2. PATIENT – BASED HOSPITAL MODEL

3. MODEL BASED ON INTEGRATION,
IN TECHNOLOGY AND CONSTRUCTION

CLEAR AND PRECISE MAIN SOLUTIONS
FLEXIBLE MODULES PROVIDE
THE POSSIBILITY OF CONSTANT
TRANSFORMATIONS

FLEXIBLE LOGISTICS CONCEPT

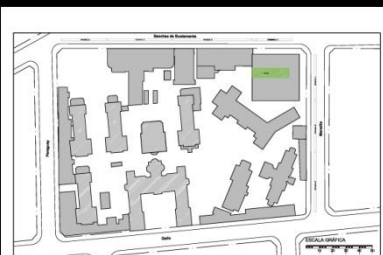
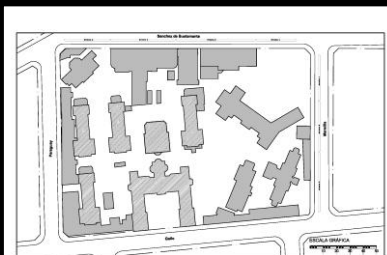
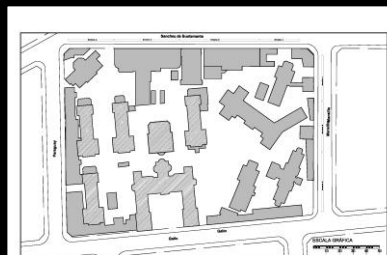
GUTIERREZ CHILDREN'S HOSPITAL MARCH 2009 OBJETIVE # 2 BUILT IN STAGES

NOW

D 1

S 1

D 2

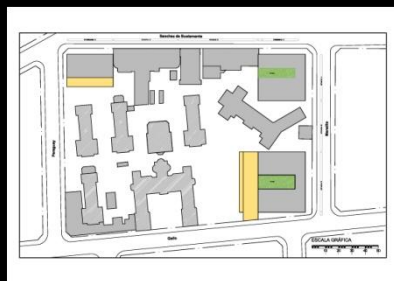


S 2

D 3

S 3

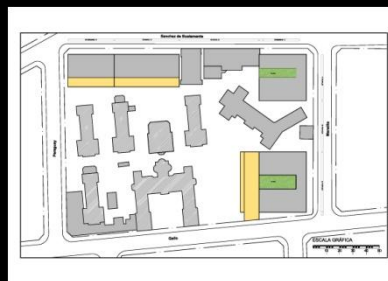
D 4 A



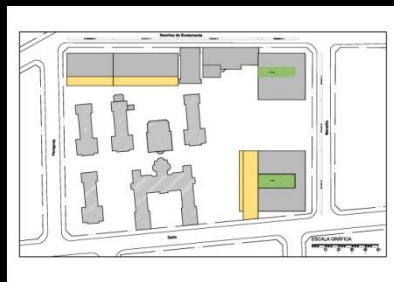
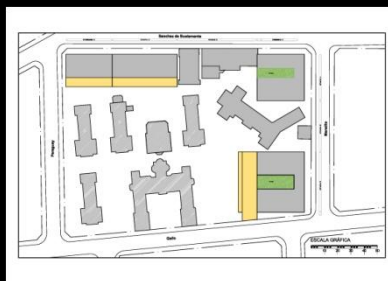
D 4 B



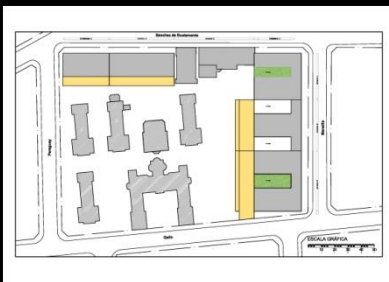
S 4



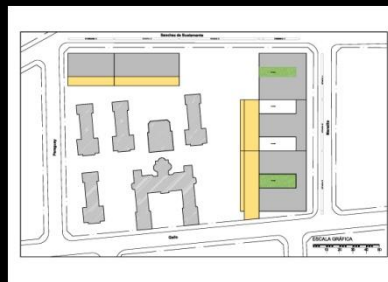
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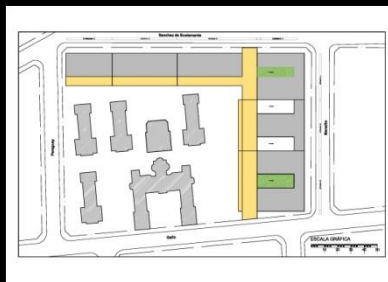
D 5



S 5



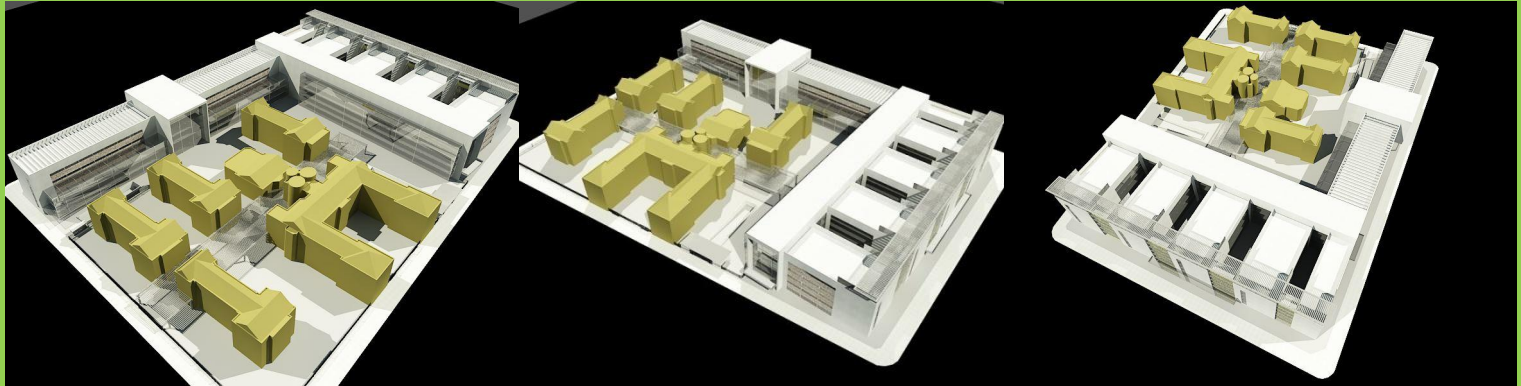
D 6



S 6

METHODOLOGY FOR
AN ARCHITECTURE
THAT GENERATES THE WHOLE
RATHER THAN A SUM OF THE PARTS

AN ARCHITECTURE THAT INTEGRATES
RATHER THAN BEING A LITERAL TRANSLATION OF FUNCTIONAL PROGRAMMING



HOW CAN THIS BE ACHIEVED? METHODOLOGY FOR REACHING OBJECTIVES

1.	2.	3.	4.	5.	6.	7.
P L A N N I N G	H E A L T H C A R E M O D E L	F I N A N C I N G	A R C H I T E C T U R E	T E C H N O L O G Y	C O N S T R U C T I O N	O P E R A T I O N
HOSPITAL MODEL GLOBAL PROGRAM	INTEGRATED HOSPITAL MODEL FOCUS ON PATIENTS	CONSTRUCTION DONE IN STAGES	HISTORIC AND NEW BUILDINGS INTEGRATED MASTER PLAN	FLEXIBLE AND CONSOLIDATED FUTURE CHANGES AND GROWTH	OPEN FLOOR PLANTS WITH FLEXIBLE MODULES VERTICAL NUCLEI AND SERVICES	FUTURE CHANGE AND RENOVATIONS IMPROVE PROLONG LIFESPAN

HOW CAN THIS BE ACHIEVED? METHODOLOGY FOR REACHING OBJETIVES

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PLANNING REGULATIONS



NORTH

SOUTH



GUTIERREZ
CHILDREN'S HOSPITAL



ELIZALDE
CHILDREN'S HOSPITAL

OPERATIVE PLANNING

PROGRAMMING

1. HOSPITAL MODEL

2. GLOBAL
MEDICAL PROGRAMING

3.
INTEGRAL MASTER PLAN

HOSPITAL'S FOCUS IS ON
PEDIATRIC PATIENTS

40%
TECHNICAL ASSISTANCE AREAS

30 %
IMPATIENT AREAS

20 %
GENERAL SUPPORT AREAS

10 %
PERSONAL SUPPORT AREAS

INCLUDES DEPARTMENT
PLANNING AND RELOCATION,
WITH THE AIM OF MODIFYING
THE ESTABLISHMENT'S
BUILDING PROCESSES.



"PLAY WHERE YOU WAIT "

HOSPITAL
MODEL

GLOBAL
PROGRAM

HOW CAN THIS BE ACHIEVED? METHODOLOGY FOR REACHING THESE OBJETIVES

2.

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INTEGRATED
HOSPITAL
MODEL

FOCUS ON
PATIENTS



HOSPITAL MODEL:
DEFINING THE TYPE OF HOSPITAL AND ITS OBJECTIVES, THE HOSPITAL'S POSITION WITH THE NETWORK,
THE SERVICES IT OFFERS, ITS OPERATIONAL AND ORGANIZATIONAL CRITERIA, FUTURE TENDENCIES AND UNCERTAINTIES.

FROM A HOSPITAL IN PAVILIONS

1. INPATIENT AREAS BASED ON DIFFERENT SPECIALTIES, ONE PER PAVILION, WITH LITTLE DEVELOPMENT OF INTERMEDIATE CARE

2. DIAGNOSIS AND TREATMENT AREAS DEVELOPED FOR EACH SPECIALTY WITHOUT CONSOLIDATING LABORATORIES AND IMAGING.

DISPERSE AREAS FOR EACH PAVILION, WITH DUPLICATION OF SUPPORT AREAS AND WITHOUT TEACHING OR RESEARCH AREAS.

AREAS LACKING TECHNOLOGICAL OR LOGISTICAL DEVELOPMENT, WITH UNDERDEVELOPED SYSTEMS FOR ACCESS AND OUTFLOW OF SUPPLIES.

TO AN INTEGRATED HOSPITAL

30% INPATIENT, INTERMEDIATE THERAPY AND INTENSIVE THERAPY AREAS

40% TECHNICAL ASSISTANCE AREAS: OUTPATIENT, DIAGNOSIS AND TREATMENT, DAY TREATMENTS AND EMERGENCIES

10% SOCIAL SERVICES SUPPORT: ADMITTANCE, PATIENT SERVICES, ADMINISTRATIVE AND DIRECTOR'S DEPARTMENT, TEACHING, RESEARCH.

20% GENERAL SUPPORT AREAS: WAREHOUSES, KITCHEN, LAUNDRY, WASTE DISPOSAL, MORGUE AND INFRASTRUCTURE INSTALLATIONS.

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OPTION 1. STANDARD CITY OF BUENOS AIRES BUDGET

OPTION 2. INTERNATIONAL LOAN FROM: WORLD BANK , BID, ONU

OPTION 3. PPT : NOT IN ARGENTINA YET, DUE TO INFLATION: MINIMUM 12%

SOLUTION PROPOSED: HOSPITAL CONSTRUCTION UNDERTAKEN IN STAGES:
PERHAPS SOME TYPE OF PPT , FOR EACH STAGECONSTRUCTION
DONE
IN
STAGES

HOW CAN THIS BE ACHIEVED?

METHODOLOGY FOR REACHING OBJETIVES

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THE SYSTEM PROPOSED FOR THE NEW BUILDINGS IS THE DEFINITION OF A AN ORTHOGONAL PATTERN OR GRID OF MODULES THAT:

REPLICATES THE URBAN GRID
CONSOLIDATES THE LIMITS OF THE BLOCK
FRAMES EXISTING HISTORICAL BUILDINGS

THIS PATTERN CONSTITUTES AN OPEN SYSTEM
AS AN ORGANIZATIONAL FRAMEWORK
FOR THE PARTS AND THE WHOLE,
JUST LIKE THE “MAT BUILDINGS” CONCEPT

A SYSTEM OF “PUBLIC STREETS” IS ORGANIZED,
INCLUDED WITHIN THE PATTERN ITSELF AS CONNECTING ELEMENTS BETWEEN HISTORIC BUILDINGS

THE DIFFERENT STAGES ARE DEFINED ACCORDING TO “CHESS SYSTEM” TYPE
PLANNING: NEW, HIGHLY COMPLEX MEDICAL AREAS ARE INCORPORATED IN STAGES AND THE HISTORIC
BUILDINGS MAINTAIN FUNCTIONS RELATED TO PRIMARY HEALTHCARE ATTENTION

HISTORIC
AND NEW
BUILDINGS

INTEGRATED
MASTER
PLAN

1. OPEN “MAT BUILDINGS” TYPE ORTHOGONAL PATTERN OR GRID

2. “PUBLIC STREETS” WITHIN THE PATTERN AND CONNECTING HISTORIC BUILDINGS

3. “CHESS SYSTEM” TYPE PLANNING IN STAGES.

RESULT: INTEGRATED MASTER PLAN AS THE RESULT OF TYPOLOGICAL SYNTHESIS.

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CURRENT TRENDS OF CONSTANT CHANGE IN TECHNOLOGIES DEMANDS ARCHITECTURE CAPABLE OF BEING HIGHLY RESPONSIVE.

AFTER AN ANALYSIS OF CURRENT HOSPITALS' FUNCTIONAL LAYOUT AREAS WITH ALREADY DETERMINED DESIGN AND OTHERS OF UNDETERMINED DESIGN HAVE BEEN DETECTED.

THE AREAS WITH DETERMINED DESIGN REQUIRE VERY SPECIALIZED, HIGHLY TECHNICAL FUNCTIONAL ELEMENTS: E.G., SURGICAL AREA, KITCHEN OR STERILIZATION.

THE AREAS WITH UNDETERMINED DESIGN ARE ORGANIZED BY WAY OF AN ORGANIZATIONAL FRAMEWORK WITHIN WHICH PARTICULAR SOLUTIONS CAN BE ADOPTED ACCORDING TO TRANSFORMATIONS IMPOSED BY TECHNOLOGY.

THE ORGANIZATIONAL PATTERN MATERIALIZES BY WAY OF A STRUCTURAL MODULE MEASURING 7 X 7 METERS THAT ASSIMILATES THE PROGRAM'S DIFFERENT TYPOLOGIES AND INCLUDES VERTICAL CIRCULATION NUCLEI AND WET AREAS.

AN OPEN FLOOR OR FREE FLOOR SPACE OR OPEN FLOOR PLAN IS DEFINED WITH THE FLEXIBILITY DEMANDED BY TODAY'S TECHNOLOGY.

FLEXIBLE
AND
CONSOLIDATED

FUTURE
CHANGES
AND
GROWTH

OPEN FLOOR PLANS, FREE FLOOR SPACE, CONSOLIDATION, FLEXIBILITY AND GROWTH

HOW CAN THIS BE ACHIEVED? METHODOLOGY FOR REACHING OBJETIVES

6.

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OPEN FLOOR
PLANTS
WITH
FLEXIBLE
MODULES
VERTICAL
NUCLEI AND
SERVICES

THE CONSTRUCTION SYSTEM NOT SIMPLY ONE MORE VARIABLE, BUT A FUNDAMENTAL PART OF THE SYSTEMIC SOLUTION OF GROWTH IN STAGES

A SYSTEM OF CONCRETE COLUMNS THAT MATERIALIZE MODULES MEASURING 7 X 7 METERS, WITH A HEIGHT OF 3.8 METERS BETWEEN SLABS TO ALLOW FOR TECHNICAL SPACES WITHOUT BEAMS ON EVERY LEVEL.

THE SYSTEM UTILIZES RATIONAL, ORDERLY TRADITIONAL CONSTRUCTION METHODS THAT GENERATE A SIMPLE BUILDING WITH SUSTAINABLE OPERATIVE MAINTENANCE.

THE CONCRETE STRUCTURE WITHSTANDS THE FLEXIBILITY OF CHANGE, THE PARTITIONS BETWEEN MODULES ARE LIGHT AND PORTABLE.

THE INSTALLATIONS ARE COORDINATED WITH THE STRUCTURE IN ORDER TO ASSURE FLEXIBILITY.

THE LAYOUT OF THE INSTALLATIONS IS FORMULATED IN ACCORDANCE WITH MAXIMUM CONSOLIDATION OF WET AREAS AND VERTICAL AND SERVICES NUCLEI ACCORDING TO THE FOLLOWING SYSTEM:

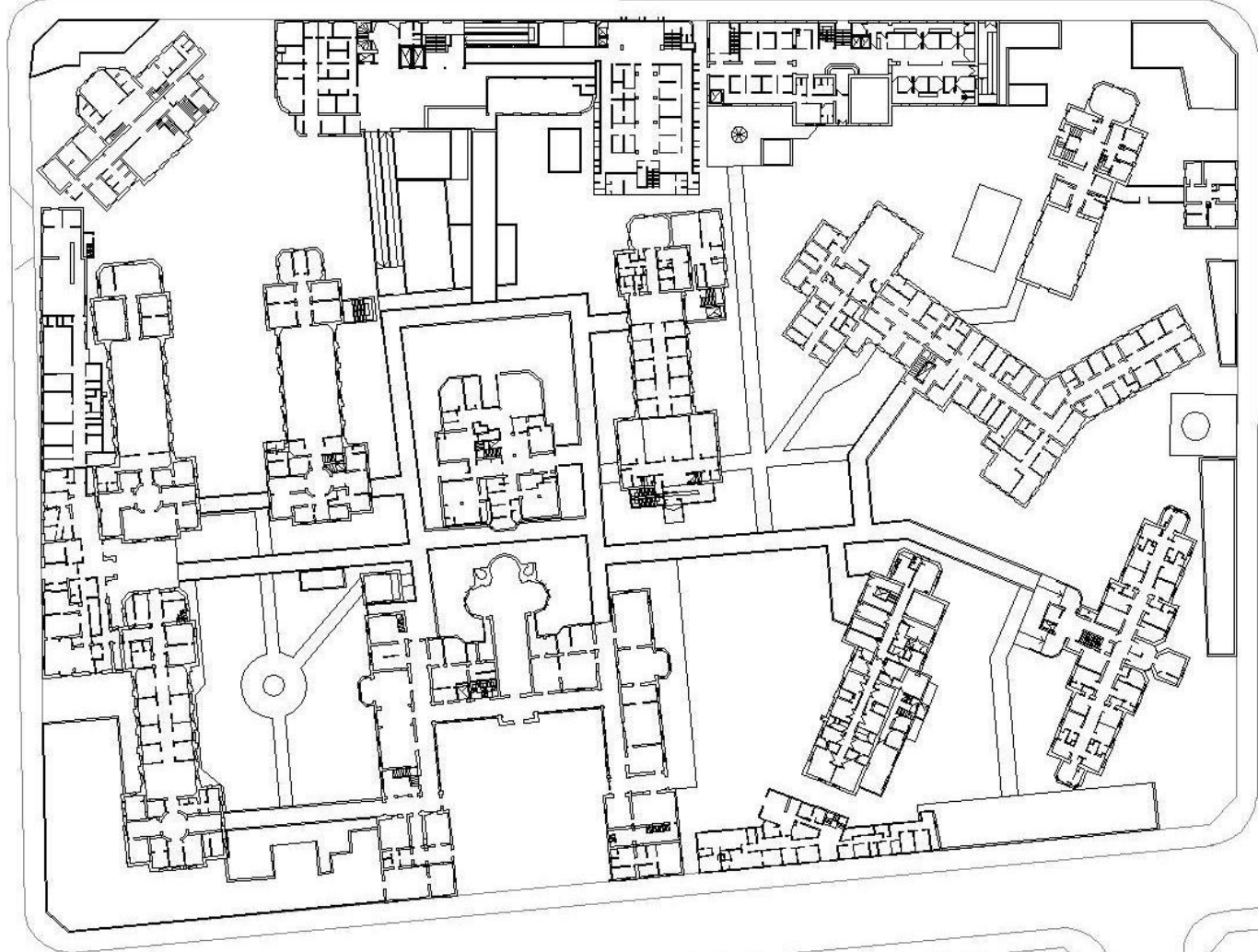
CENTRALIZED SUPPLY OF ELECTRICITY

DECENTRALIZED PROVISION OF AIR CONDITIONING

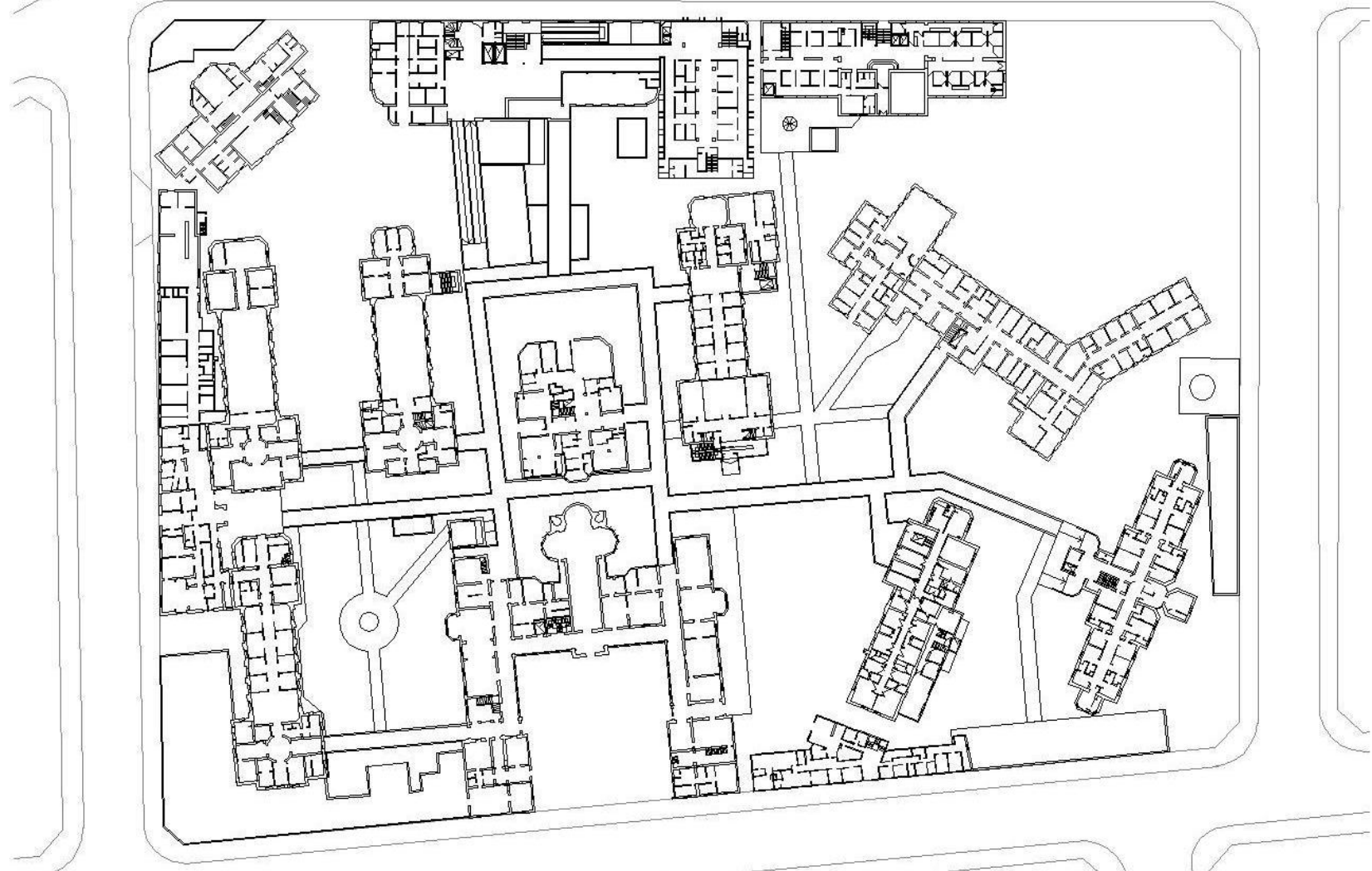
PERIMETER DRAINAGE SYSTEMS IN EACH BUILDING.

7.00 X 7.00 MODULES, CONSOLIDATION OF VERTICAL AND SERVICES NUCLEI

METHODOLOGY IN ACTION



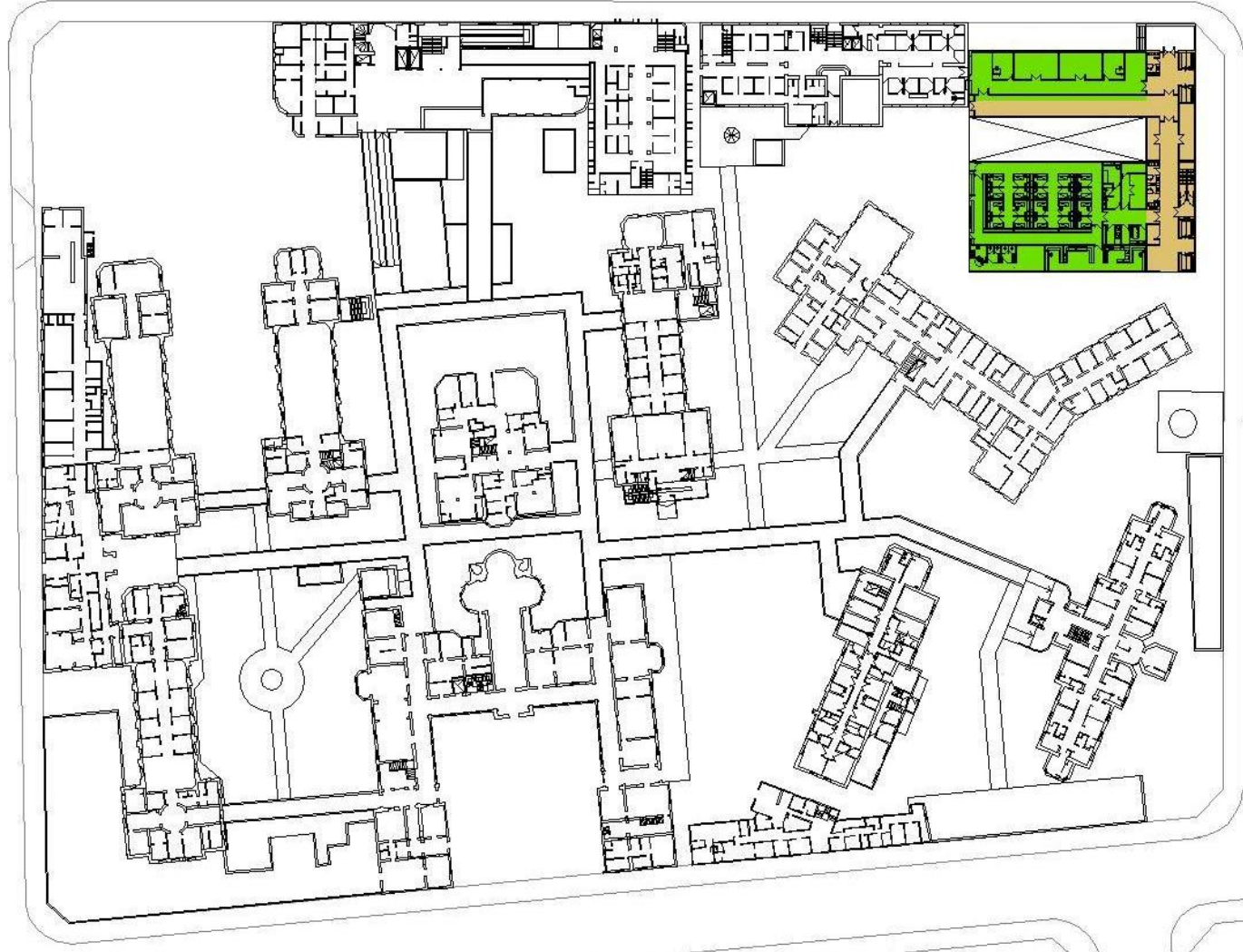
METHODOLOGY IN ACTION



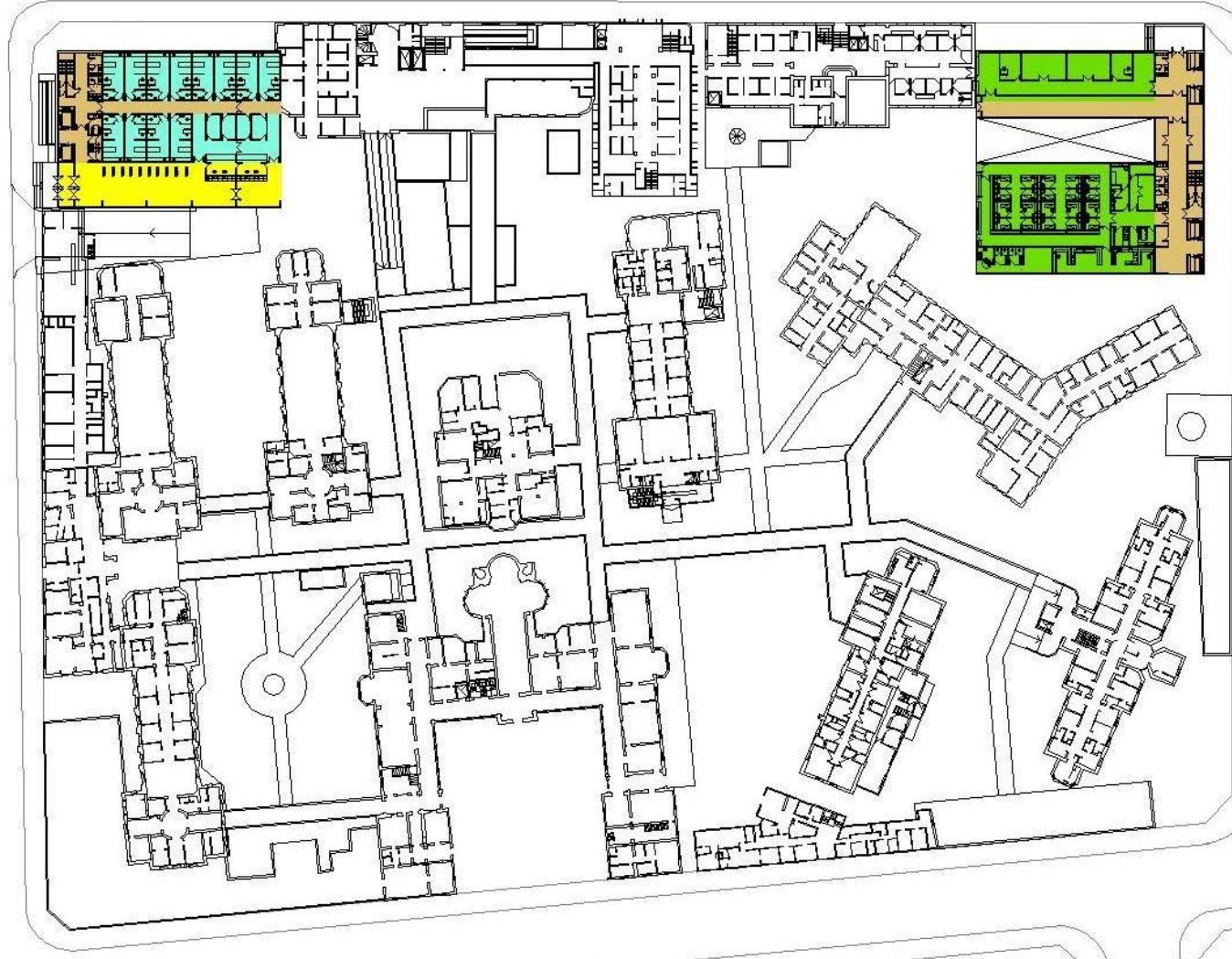
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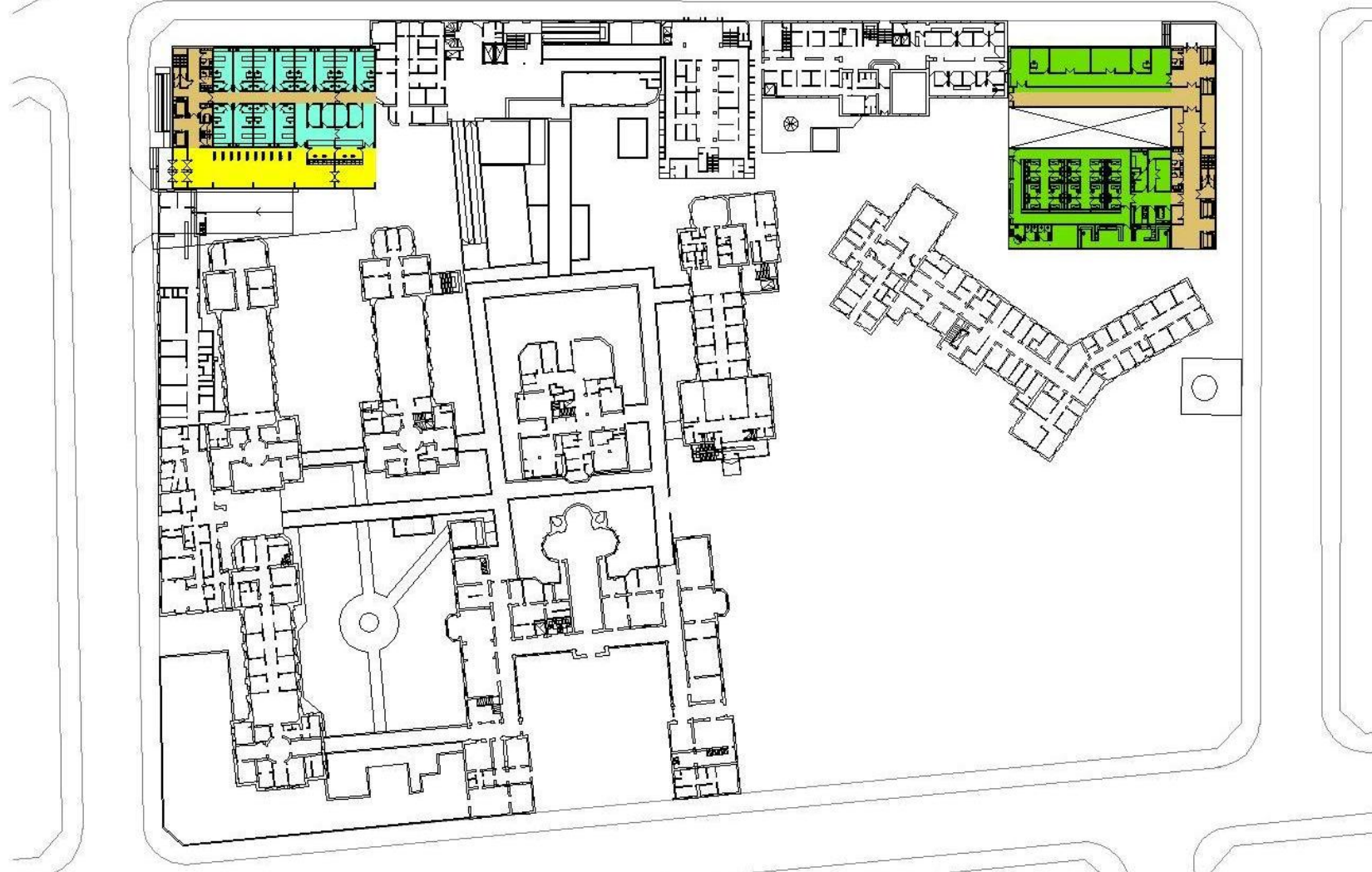
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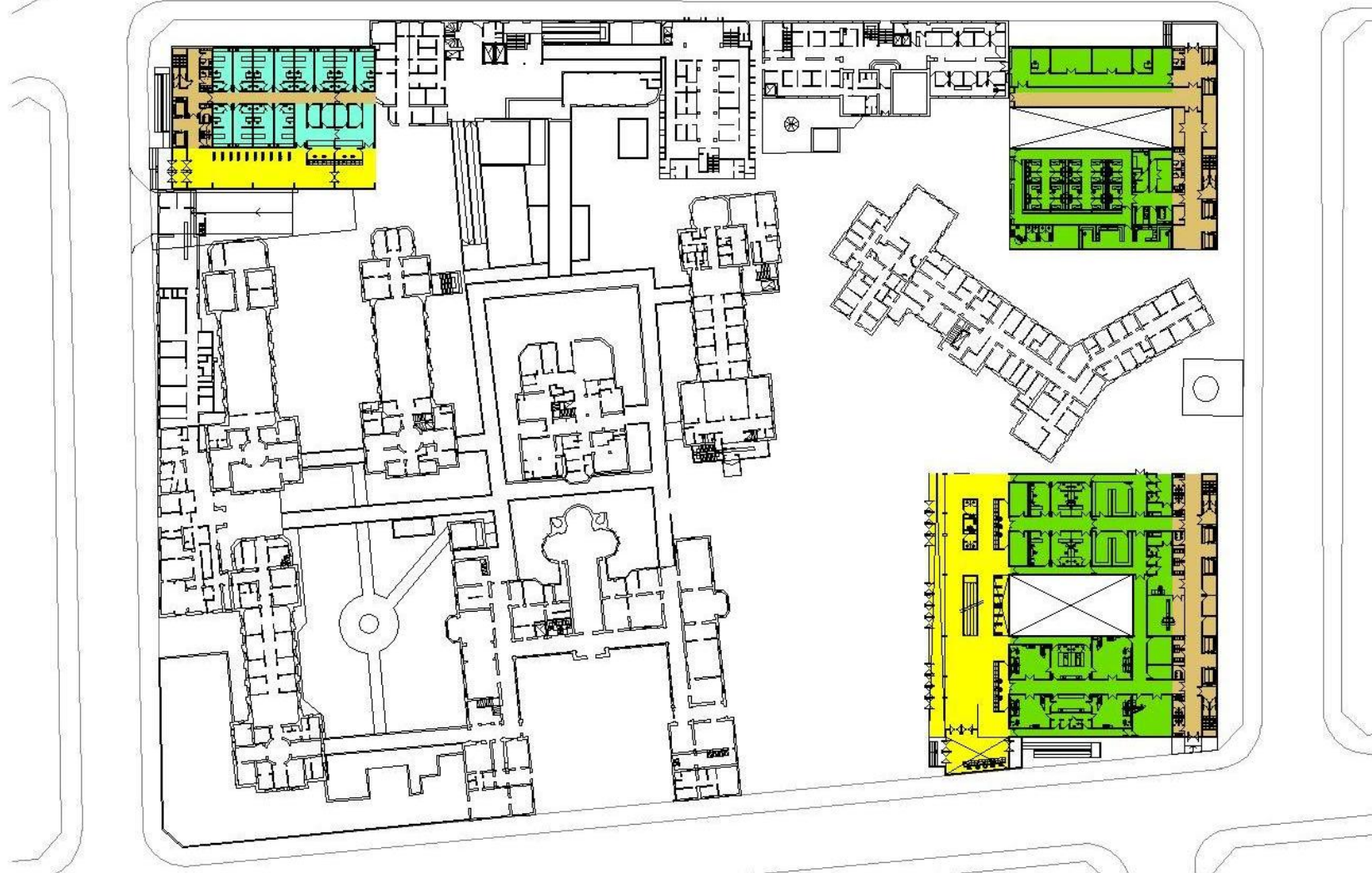
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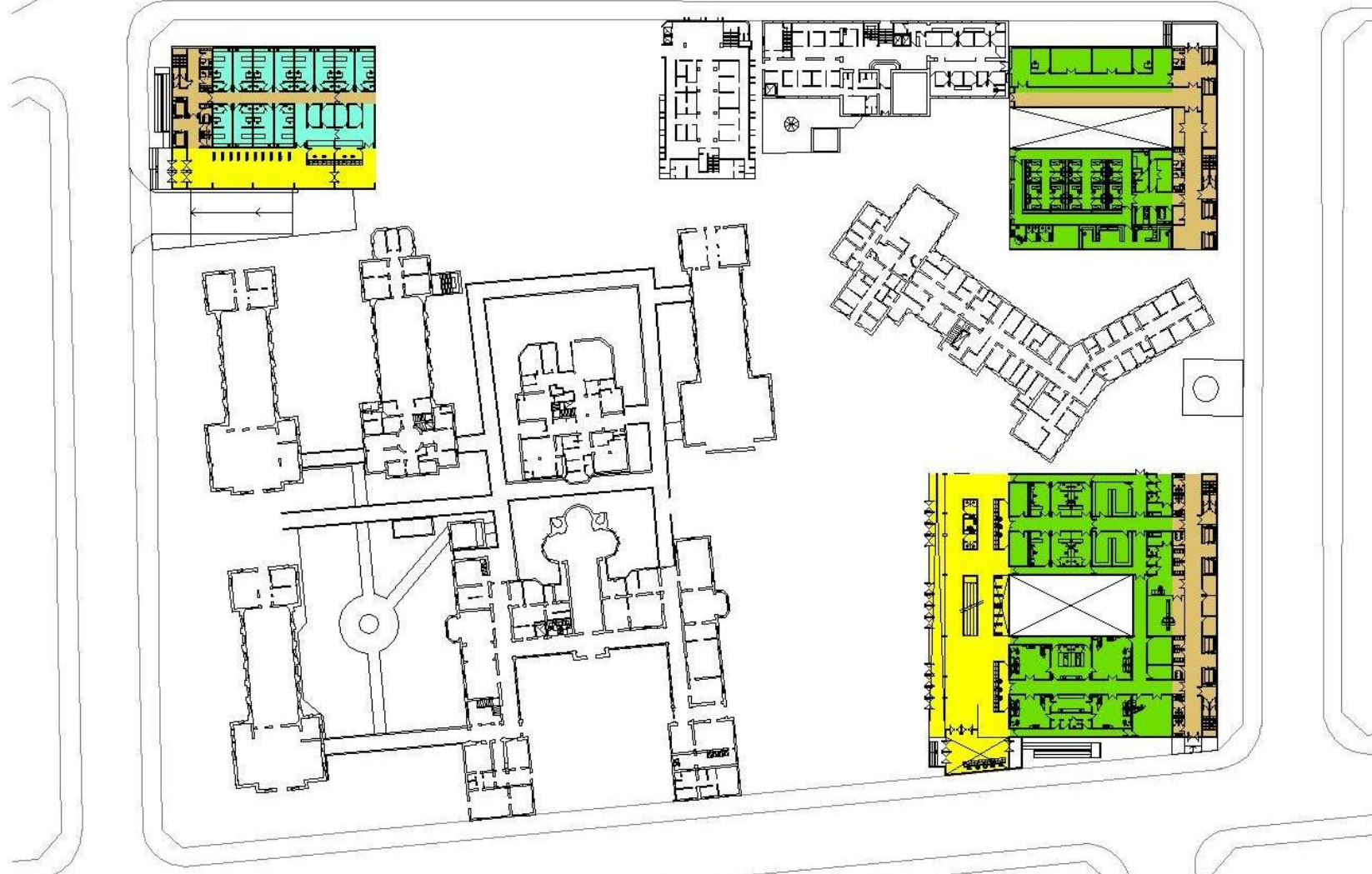
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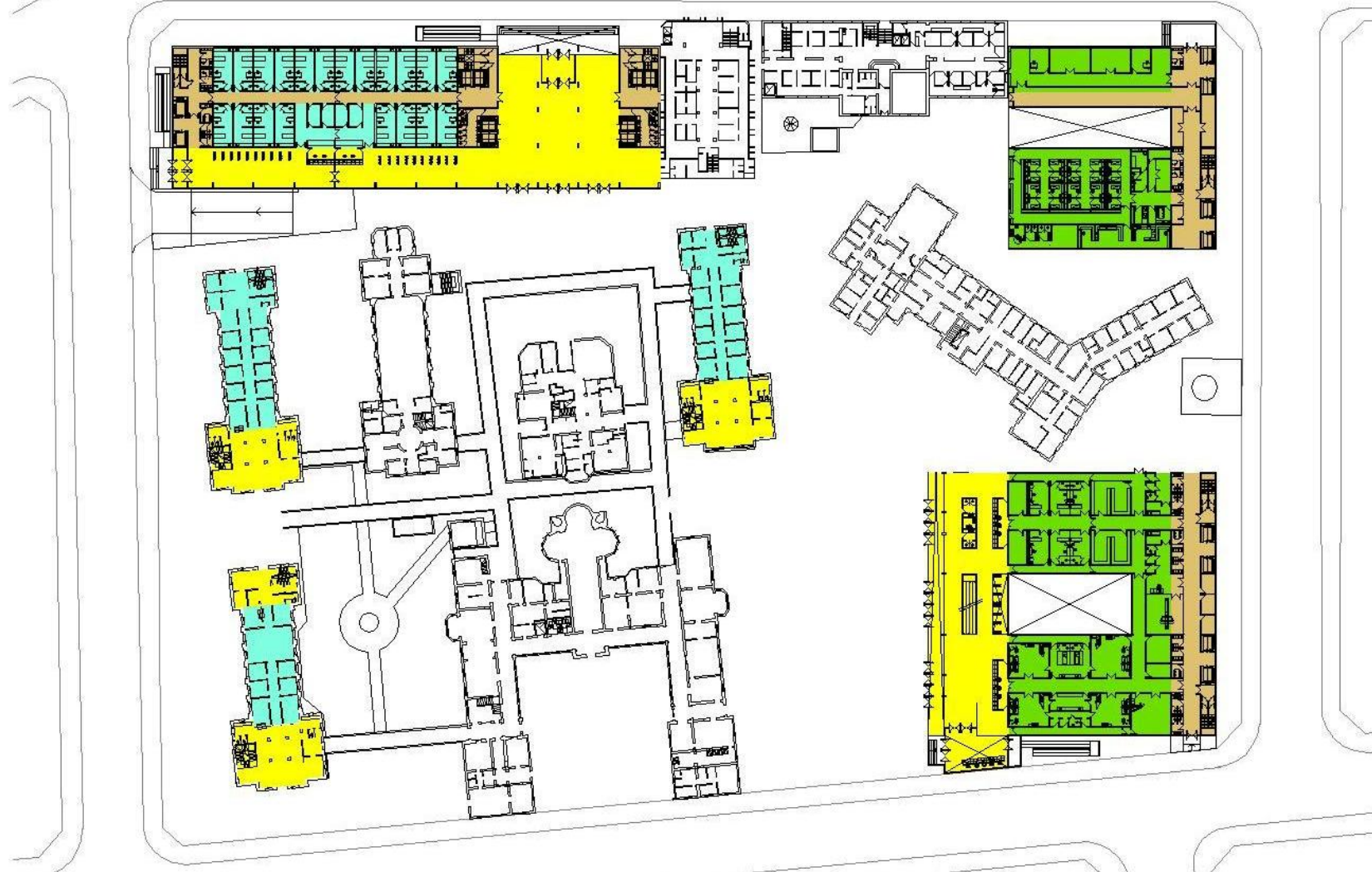
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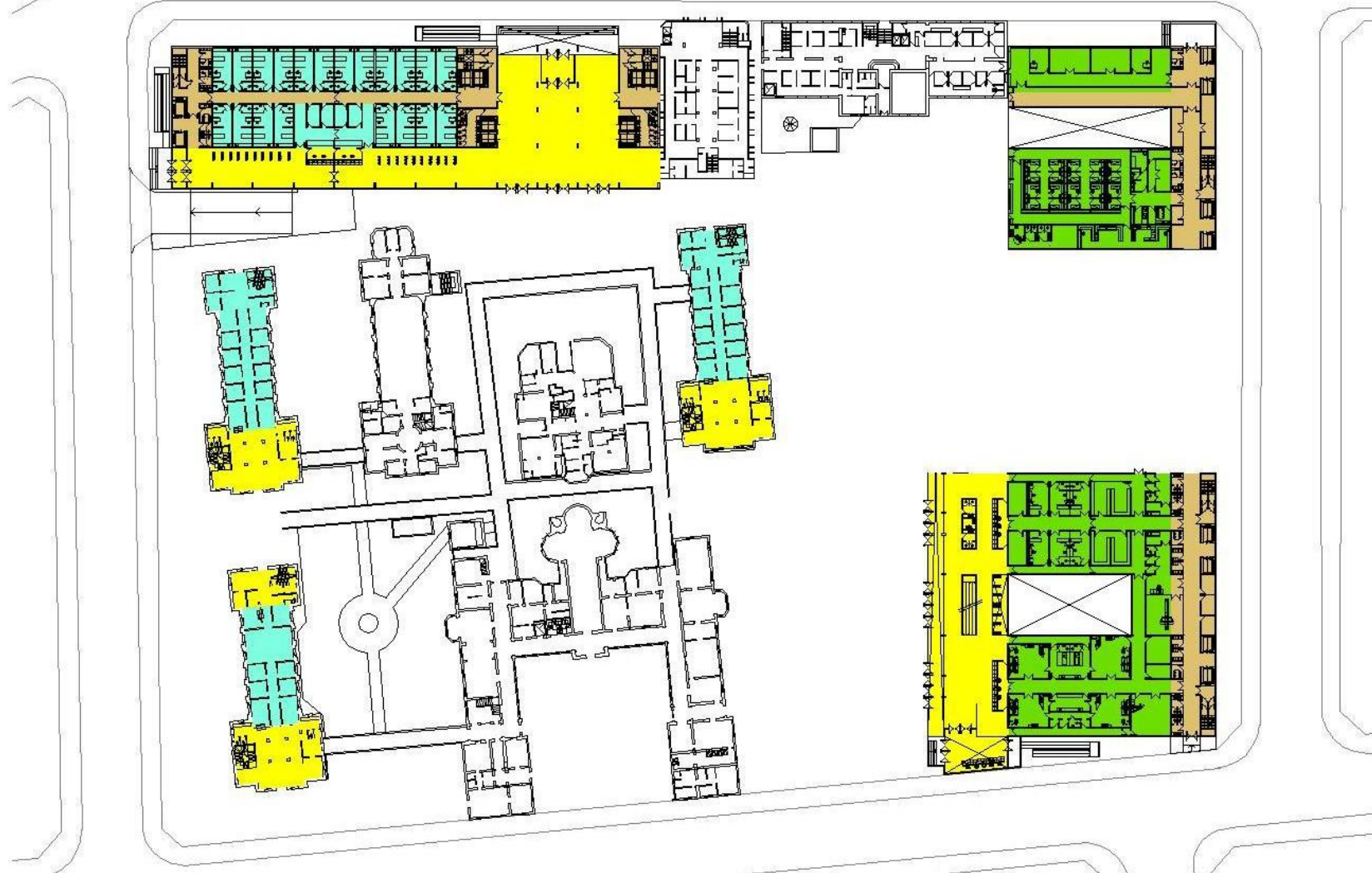
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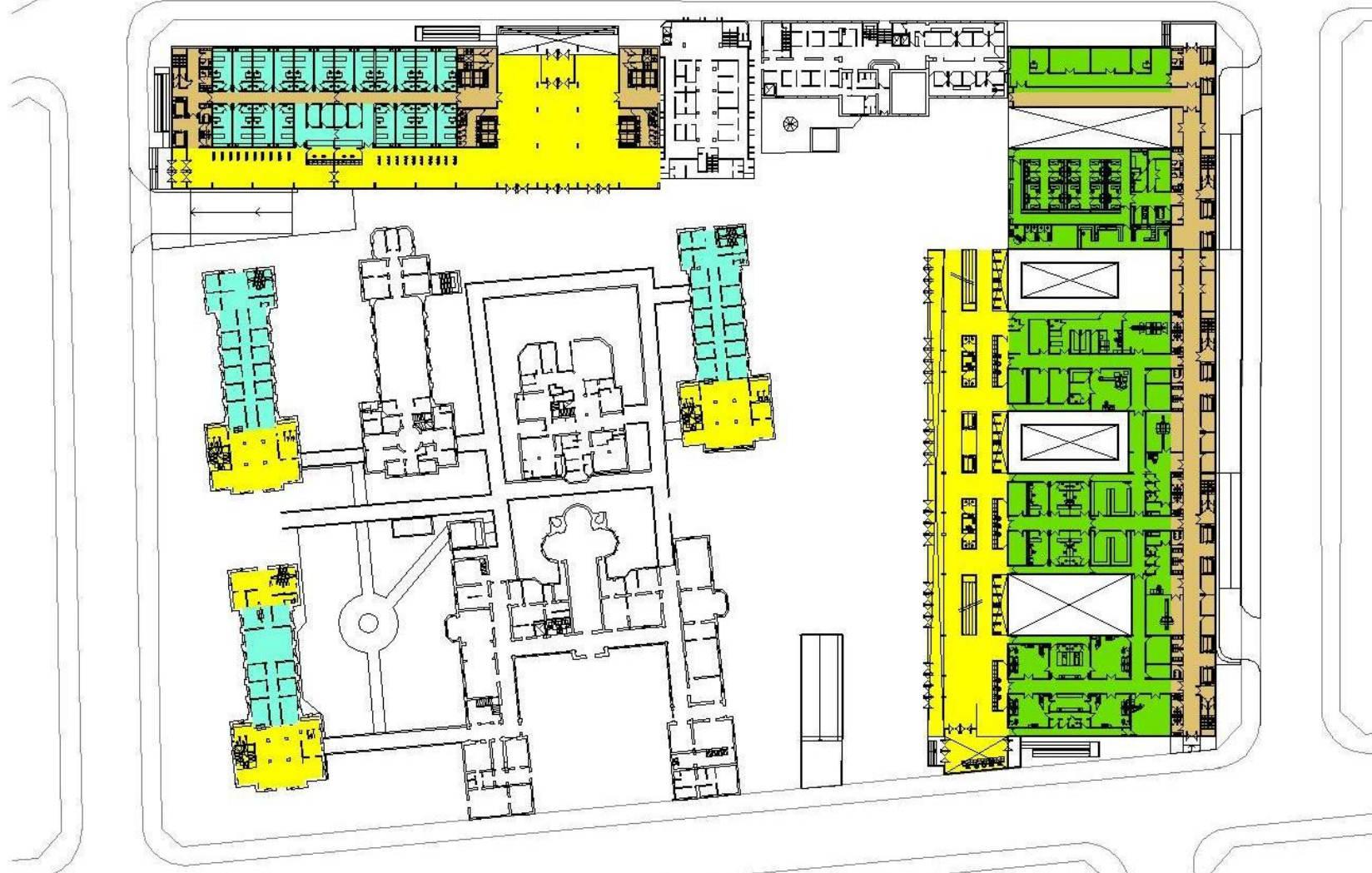
METHODOLOGY IN ACTION



METHODOLOGY IN ACTION



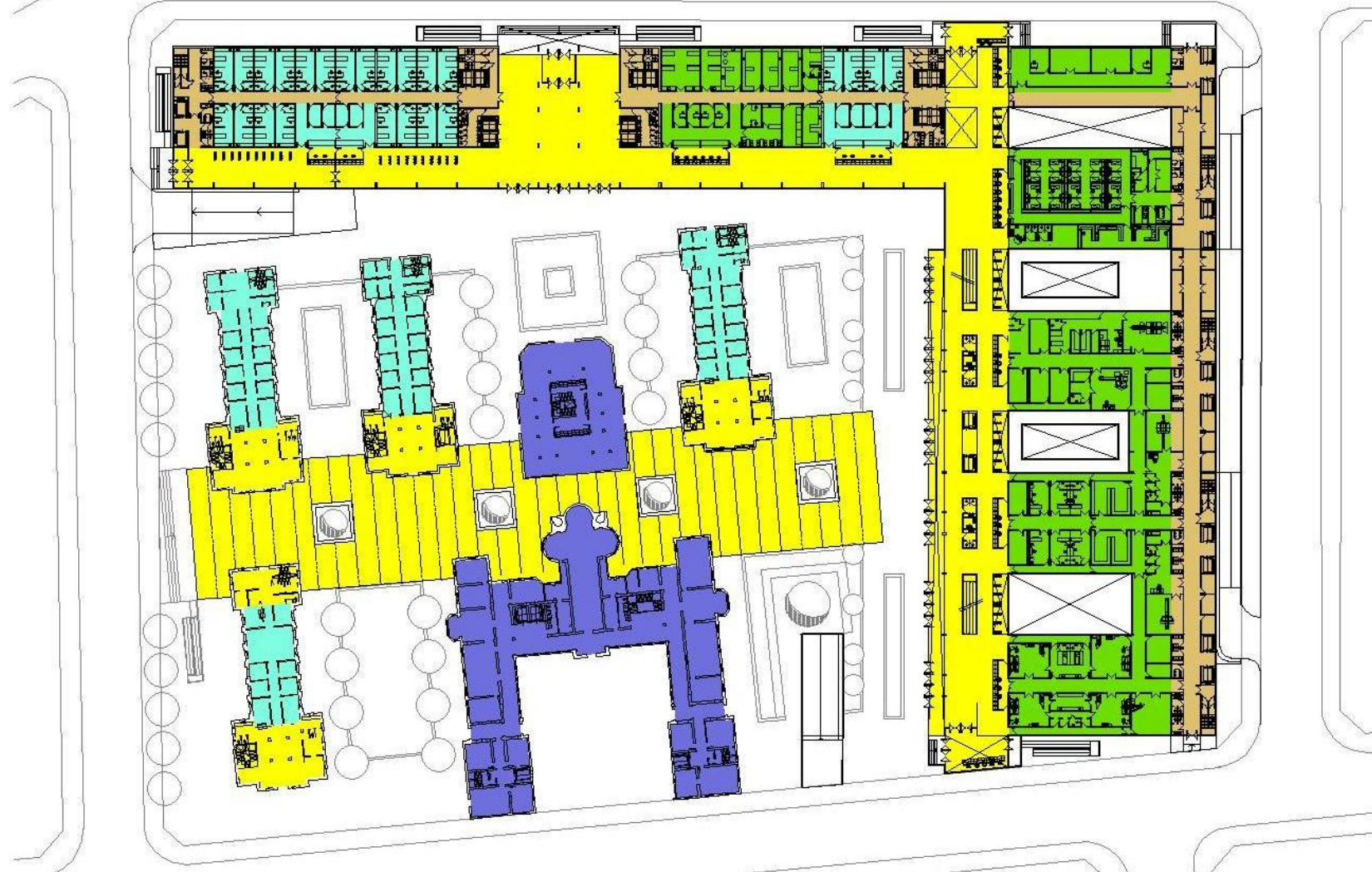
METHODOLOGY IN ACTION

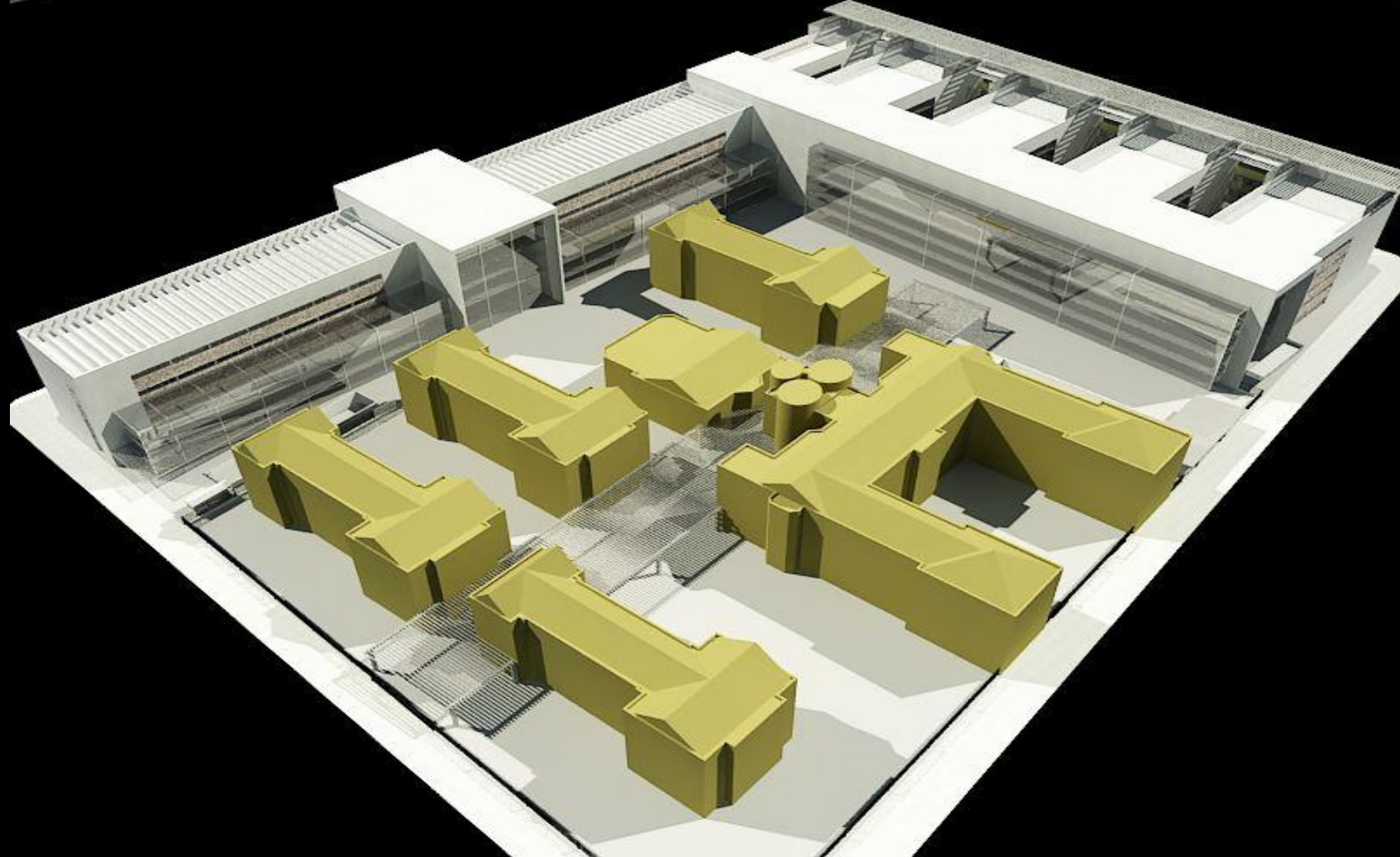


METHODOLOGY IN ACTION

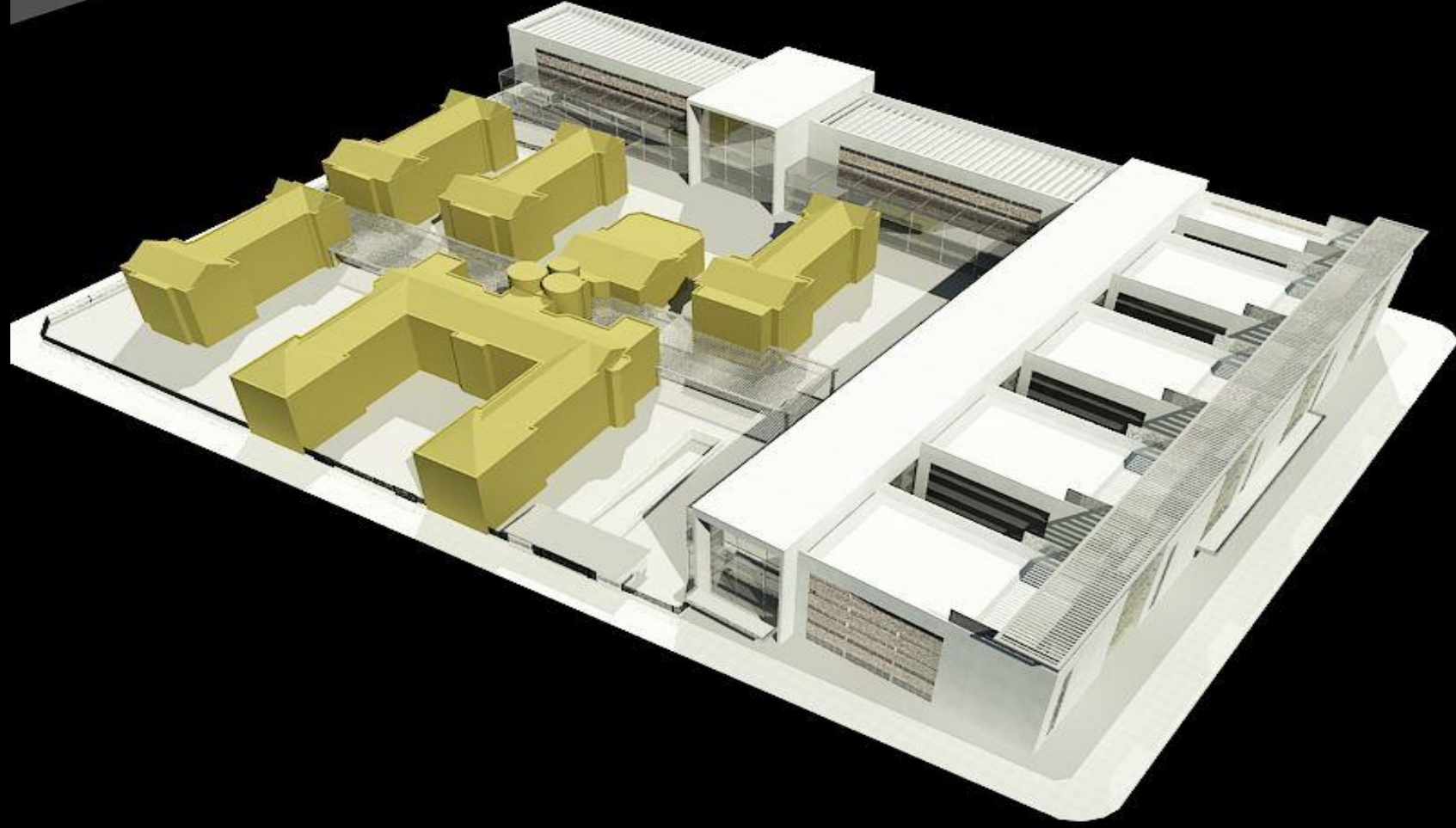


METHODOLOGY IN ACTION

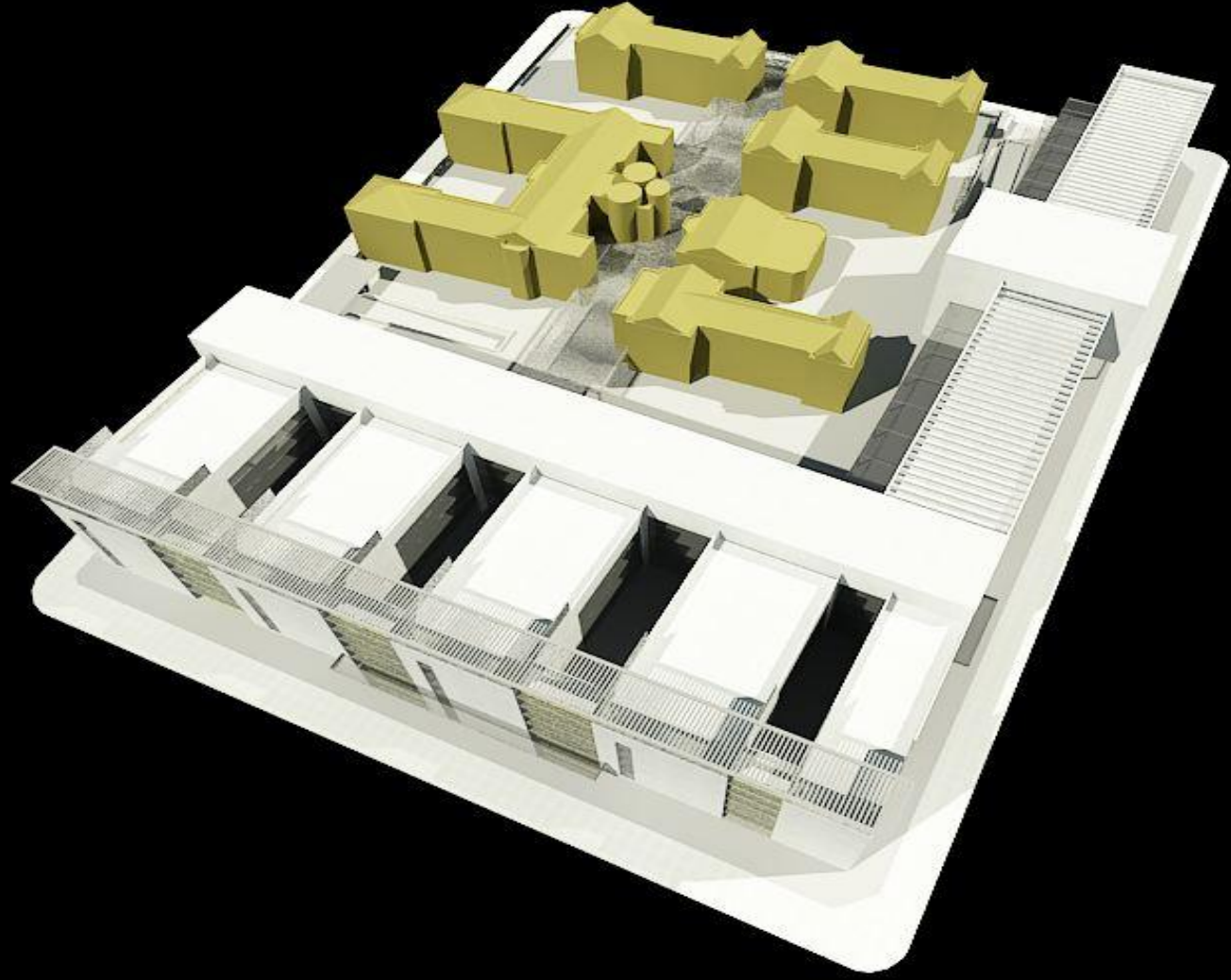




METHODOLOGY IN ACTION



METHODOLOGY IN ACTION



THE INTEGRATED MASTER PLAN DEVELOPED IN THIS PROJECT OR SCHEDULE IS ONLY A FIRST EXAMPLE OF A METHODOLOGY THAT CAN BE REPLICATED IN OTHER HOSPITALS WITH SIMILAR:

ORGANIZATION IN PAVILIONS
CURRENT STATE OF THEIR BUILDINGS
OUTDATED TECHNOLOGY AND OPERATIONAL STRUCTURES

IT ALLOWS:

MAT BUILDINGS – PUBLIC STREETS – CHESS SYSTEMS CONCEPTS TO BE APPLIED IN A SIMILAR MANNER
RECOVERY OF 19TH CENTURY PATRIMONIAL BUILDINGS RE-EVALUATED OR PUT INTO VALUE TO ASSIGNED SIMPLE FUNCTIONS WITH LOW TECHNOLOGICAL COMPLEXITY

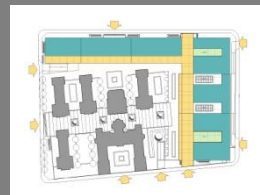
REPLACEMENT OF OUTDATED BUILDINGS WITH NEW ONES CONSTRUCTED IN SUCCESSIVE STAGES TO HOST MEDIUM AND HIGH COMPLEXITY AREAS IN SUCH A WAY THAT AT COMPLETION OF THE FINAL STAGE, THEY COMPRISE AN INTEGRATED, CONSOLIDATED BUILDING

OPERATIONS OF ADDITION AND SUBTRACTION IN EVERY EXAMPLE PROPOSED WHILE THE HOSPITAL CONTINUES TO FUNCTION

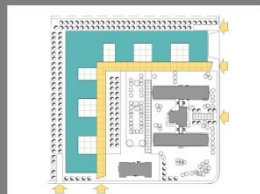
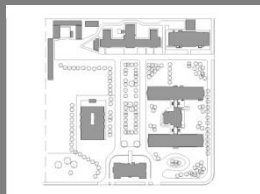
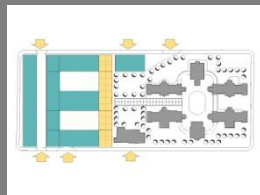
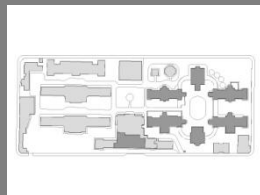
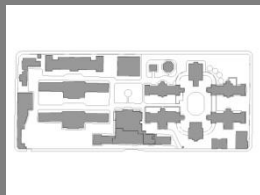


2011 RESEARCH WORK INTEGRATED MASTER PLAN FOR PUBLIC HOSPITALS, BS AS

GUTIERREZ CHILDREN'S HOSPITAL

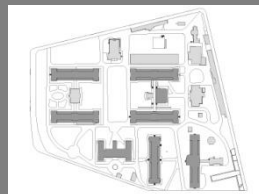
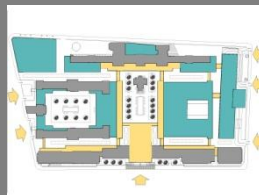
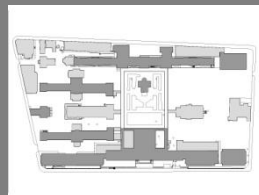
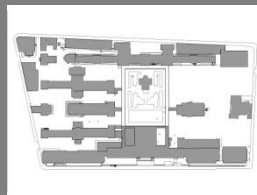


ALVAREZ HOSPITAL



PINERO HOSPITAL

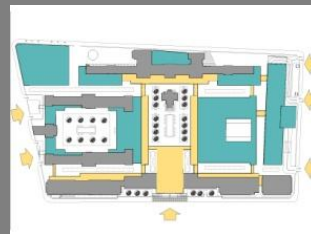
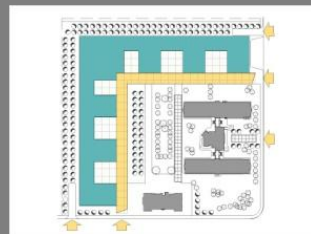
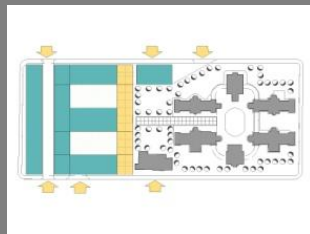
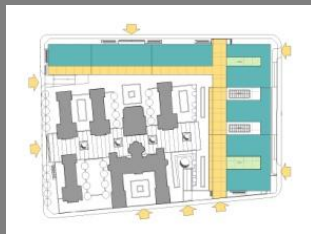
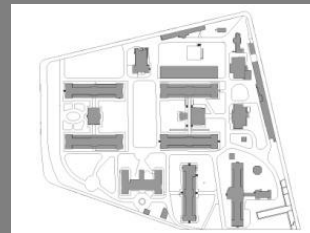
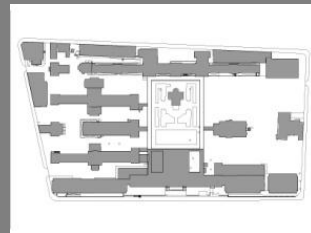
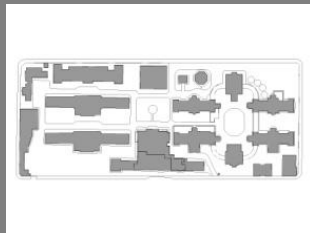
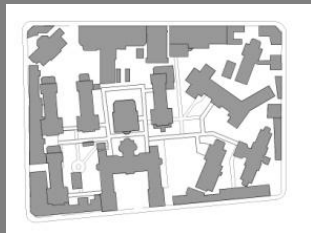
RAMOS MEJIA HOSPITAL



TORNU HOSPITAL

NOW CONSERVATION THE PROJECT

2011 RESEARCH WORK INTEGRATED MASTER PLAN FOR PUBLIC HOSPITALS, BS AS



METHODOLOGY THAT LOOKS TO RECOVER AND RE-EVALUATE O PUT INTO VALUE HISTORIC BUILDINGS.

THE SUCCESSIVE REPLACEMENT OF OTHER BUILDINGS IN A SEQUENTIAL MANNER ACHIEVES
AS A RESULT A CONSOLIDATED, HIGHLY COMPLEX BUILDING
FULLY INTEGRATED WITH EXISTING BUILDINGS.

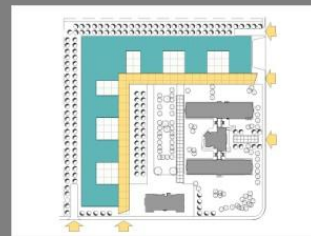
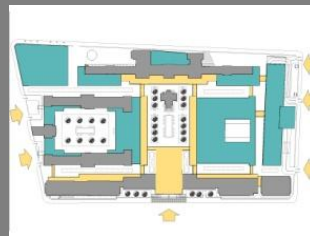
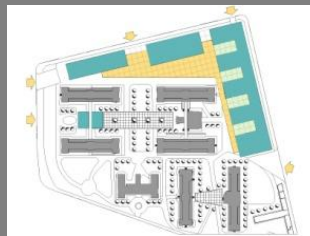
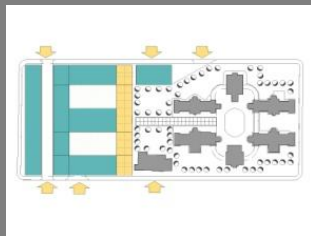
2011 RESEARCH WORK INTEGRATED MASTER PLAN FOR PUBLIC HOSPITALS, BS AS

APPLICATION OF THIS OPEN, TYPOLOGICAL PROJECT SYSTEM IN EVERY HOSPITAL,
FLEXIBLE FOR FUTURE CHANGES AND GROWTH.

THE COMPLEXITY OF THIS OPERATION REQUIRES PROJECT CRITERIA THAT ALLOWS FUTURE DESIGN OPERATIONS
IN ALL CASES, FROM THE FIRST STAGE TO THE LAST.

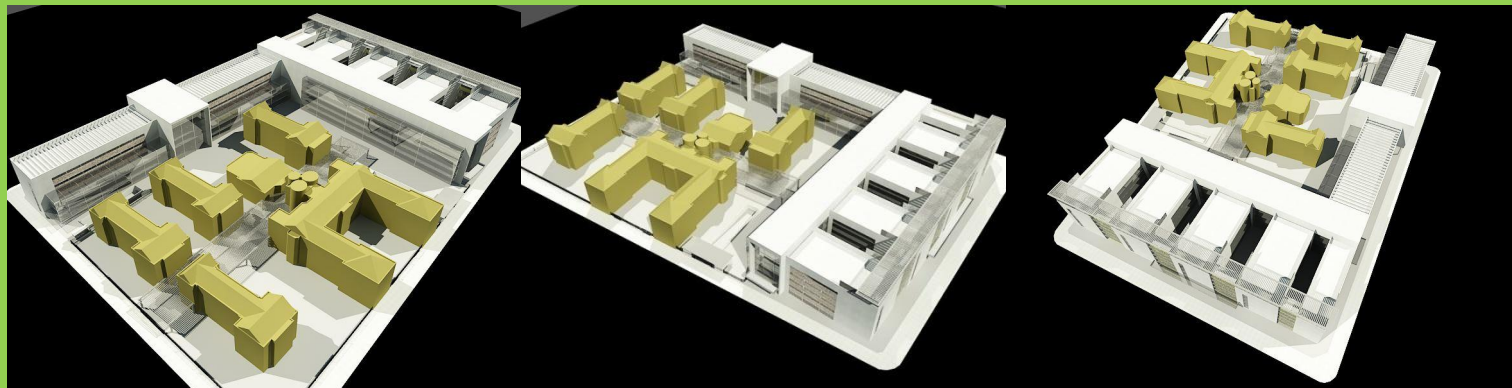
TYPOTOLOGICAL ORGANIZATION DEFINES EACH EXAMPLE:
USE OF MODULAR PATTERN OR GRID
CIRCULATORY STRUCTURE
ARCHITECTURE OF EACH AREA

IN EVERY CASE, THE BUILDINGS ARE ORGANIZED BY WAY OF "PUBLIC STREETS" WITH A SERIES OF PATIOS OR YARDS
AND COMB SHAPED PLAN BUILDINGS THAT MAKE UP A UNIVERSAL ORGANIZATIONAL SYSTEM.



METHODOLOGY FOR
AN ARCHITECTURE
THAT GENERATES THE WHOLE
RATHER THAN A SUM OF THE PARTS

AN ARCHITECTURE THAT INTEGRATES
RATHER THAN BEING A LITERAL TRANSLATION OF FUNCTIONAL PROGRAMMING



IHFE NORWAY APRIL 14TH , 2012

RICARDO REZZONICO, MARIA ELENA GALESIO, SILVINA PAN , MARIA ELIZABETH RIAL