PORTFOLIO

PROJECT / CONSTRUCTION MANAGEMENT

CREATING A BETTER REALITY

ATI | Project

Table of contents

Profile ..... pg. 5

Works

Nyt OUH University Hospital ..... pg. 6

United Nations Office at Geneva ..... pg. 20

Bispebjerg Hospital ..... pg. 28

Belgrade Tower ..... pg. 34

Shopping Mall Gran Reno ..... pg. 38

Segreen Buildings ..... pg. 42

Student House Giovenale ..... pg. 46

ECMWF Data Center Buildings ..... pg. 50

Nyt OUH University Hospital, Odense, Denmark

PISA
MILAN
BELGRADE
ODENSE
COPENHAGEN
PARIS
GENEVA

PROFILE

Creating a better reality

Architecture, landscape and technology conceived as a source of inspiration and enrichment of everyday life.

ATI Project is an international firm specialized in **integrated design** in the field of architecture and engineering, committed to the development of **sustainable buildings** with a reduced environmental impact.

The studio was established in 2011 by **Branko Zrnic** and **Luca Serri**, founders dedicated to research in bioclimatic architecture and renewable energy.

In just over a decade, the **team** has grown from **2 to 350 collaborators**.

The initial outline of the office is the same that still drives its growth today: a young, visionary, technological studio that natively uses BIM to promote **multidisciplinarity**, as well as **innovation** and **sustainability.**

The complexity and number of projects reflect the **internationality** of the studio, which today, in addition to its headquarters in **Pisa**, has offices in **Milan, Belgrade, Odense, Paris, Copenhagen** and **Geneva**.

15
YEARS OF CONSTANT GROWTH

27.5 Mln
TURNOVER IN EUROS

1+ Milion of m²
OF COMPLETED OR ONGOING PROJECTS

This university hospital embodies several key concepts, combining sustainability, integration with the context, innovation, well-being and functionality in a single project.

Click to see the video!

HEALTHCARE

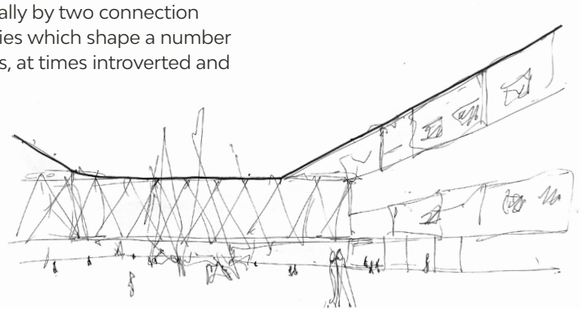
NYT OUH University Hospital

Perfect harmony between technology, context and comfort

The project for the **New Odense University Hospital** is a **complex organism, both from a technological and urban perspective**; providing a space where the relationships between patients, local community and environment weld.

The structure is composed of four blocks, hosting clinics, day hospital, offices and educational labs, crossed horizontally by two connection trajectories which shape a number of spaces, at times introverted and immersed in the green landscapes and at times extroverted towards the city.

The **integrated design** of NYT OUH has been developed thoroughly in **BIM technology**, performing a computerisation of the project, through which space, aesthetics and technology work together towards defining **one of the biggest hospitals in Europe.**



Location:
Odense, Denmark

Typology:
New construction

Year:
2018 - 2025

Status:
Under construction

Dimensions:
250.000 sqm

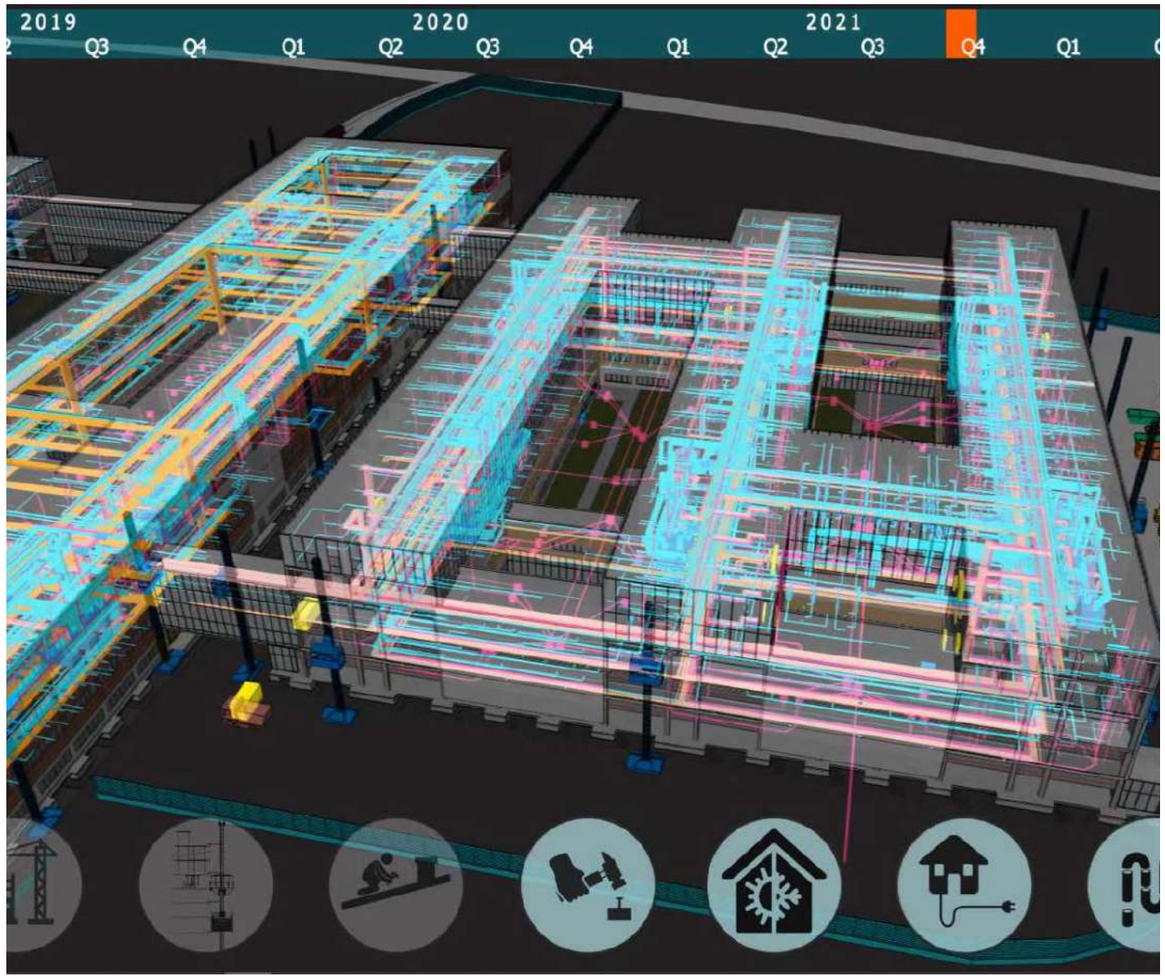
Budget:
€ 665 mln

Client:
JV (CMB+ITINERA)

Activities:
ARC - STR – MEP design,
Project Management support

Awards:
The Plan Award 2019
Category: Future Hospital
BIM & Digital Award 2018
Category: Public Buildings

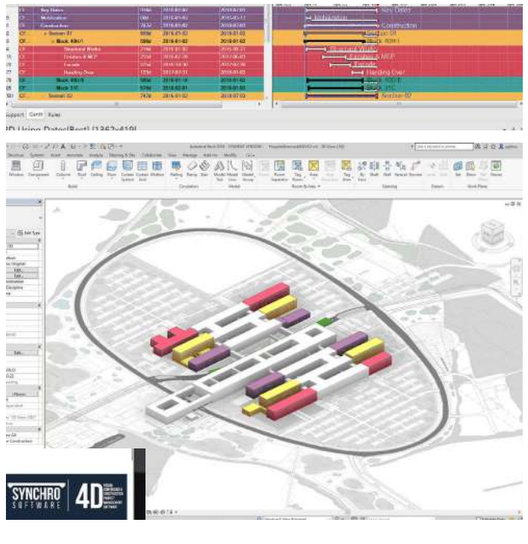
Credits:
Project Concept: C.F. Moller
Render: Mtsys
Photos: Andrea Zanchi



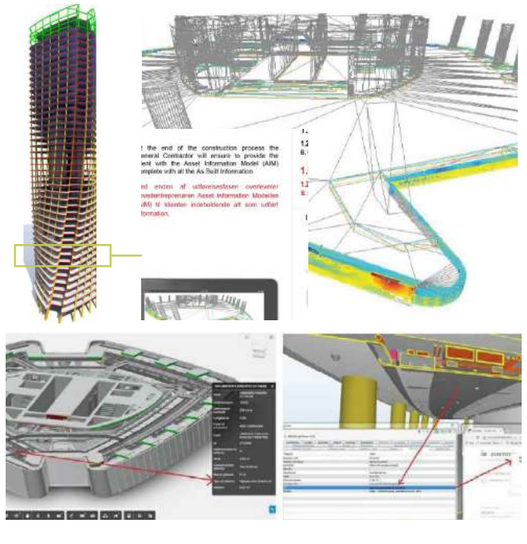
01 BIM Management

- **Bim Execution Plan**
- **Time Control** through **BIM 4D**
- **Cost Control** through **BIM 5D**
- **Clash Detections** and **Code Checkings**
- **Quality Control** through **laser scanning**
- **Construction Site management** through **BIM Field**

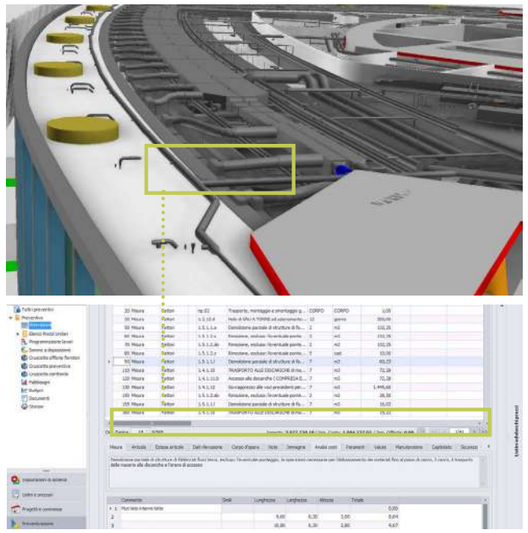
TIME CONTROL



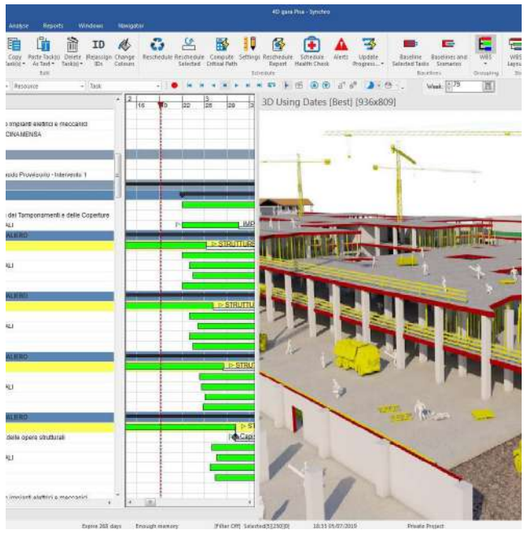
QUALITY CONTROL

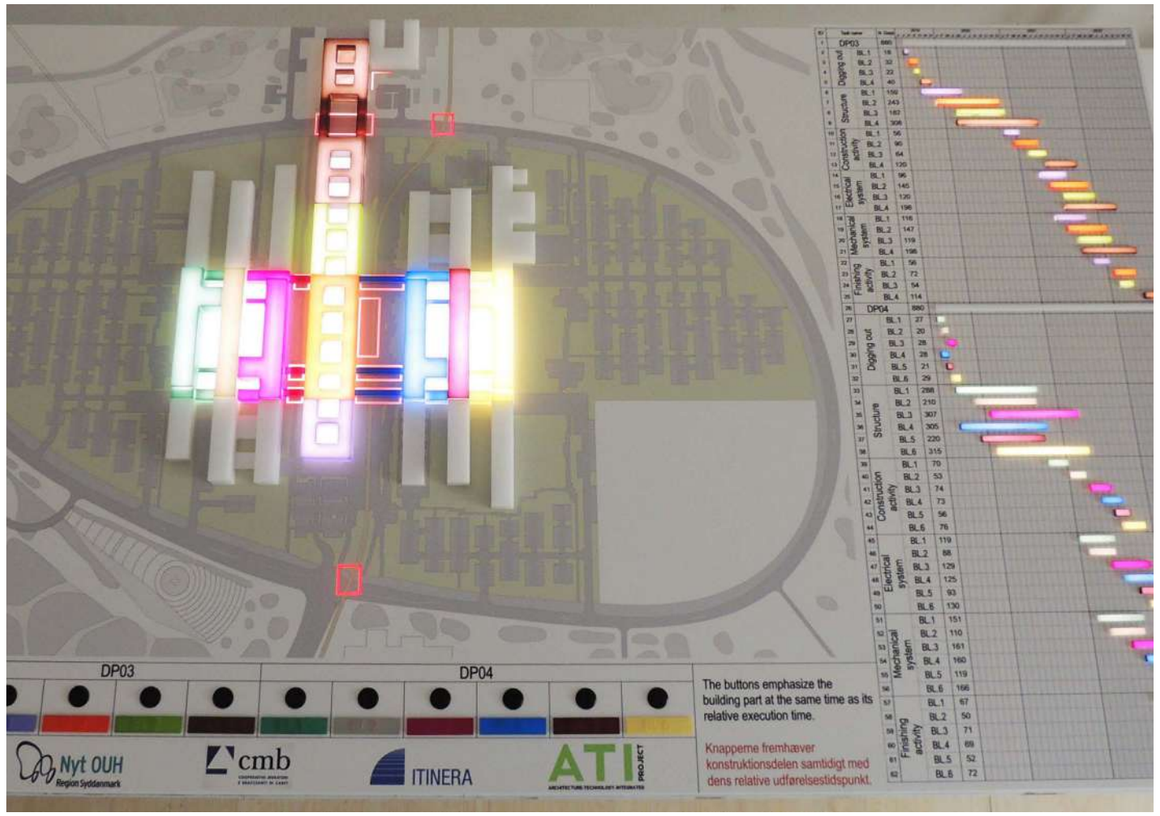


COSTS CONTROL

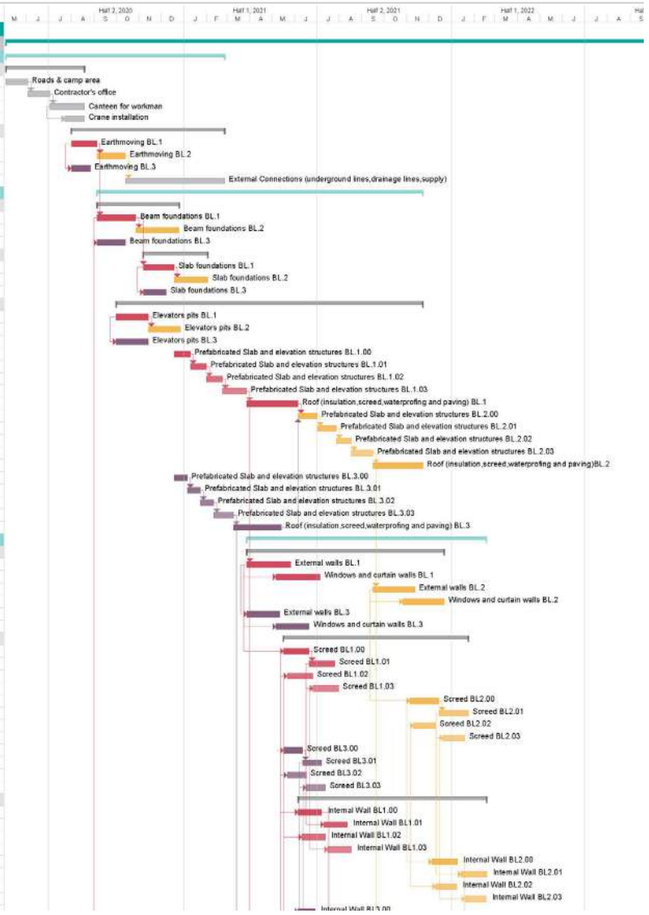


SAFETY CONTROL





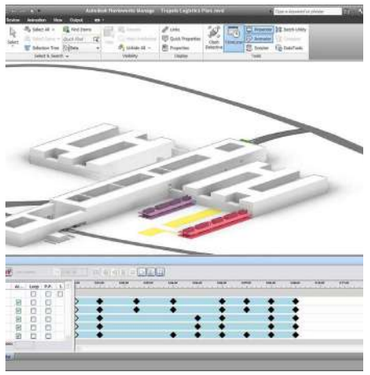
ID	Activity name	Start	Finish
1	**CONSTRUCTION PHASE**	**Mon 04/05/20**	**Fri 11/11/22**
2	**SITE INSTALLATION**	**Mon 04/05/20**	**Thu 25/02/21**
3	**Construction site installation**	**Mon 04/05/20**	**Tue 18/08/20**
4	Roads & camp area	Mon 04/05/20	Tue 02/06/20
5	Totalentreprenør's office	Wed 03/06/20	Thu 02/07/20
6	Canteen for workman	Fri 03/07/20	Tue 18/08/20
7	Crane installation	Thu 23/07/20	Tue 18/08/20
8	**Soil preparation**	**Sat 01/08/20**	**Thu 25/02/21**
9	Earthmoving BL.1	Sat 01/08/20	Fri 04/09/20
10	Earthmoving BL.2	Sat 05/08/20	Tue 13/10/20
11	Earthmoving BL.3	Sat 01/08/20	Wed 26/08/20
12	External Connections (underground lines,drainage lines,supply)	Wed 14/10/20	Thu 25/02/21
13	**STRUCTURE**	**Sat 05/09/20**	**Mon 22/11/21**
14	**Beam foundations**	**Sat 05/09/20**	**Fri 25/12/20**
15	Beam foundations BL.1	Sat 05/09/20	Tue 27/10/20
16	Beam foundations BL.2	Wed 28/10/20	Fri 25/12/20
17	Beam foundations BL.3	Sat 05/09/20	Tue 13/10/20
18	**Slab foundations**	**Sat 07/11/20**	**Tue 02/02/21**
19	Slab foundations BL.1	Sat 07/11/20	Fri 18/12/20
20	Slab foundations BL.2	Sat 19/12/20	Tue 02/02/21
21	Slab foundations BL.3	Sat 07/11/20	Mon 07/12/20
22	**Elevations**	**Thu 01/10/20**	**Mon 22/11/21**
23	Elevators pits BL.1	Thu 01/10/20	Fri 13/11/20
24	Elevators pits BL.2	Sat 14/11/20	Sun 27/12/20
25	Elevators pits BL.3	Thu 01/10/20	Fri 13/11/20
26	Prefabricated Slab and elevation structures BL.1.00	Sat 19/12/20	Sat 09/01/21
27	Prefabricated Slab and elevation structures BL.1.01	Sun 10/01/21	Sun 31/01/21
28	Prefabricated Slab and elevation structures BL.1.02	Mon 01/02/21	Mon 22/02/21
29	Prefabricated Slab and elevation structures BL.1.03	Tue 23/02/21	Sat 27/03/21
30	Roof (insulation,screed,waterprofing and paving) BL.1	Sun 28/03/21	Sat 05/06/21
31	Prefabricated Slab and elevation structures BL.2.00	Sun 06/06/21	Thu 01/07/21
32	Prefabricated Slab and elevation structures BL.2.01	Fri 02/07/21	Tue 27/07/21
33	Prefabricated Slab and elevation structures BL.2.02	Wed 28/07/21	Mon 16/08/21
34	Prefabricated Slab and elevation structures BL.2.03	Tue 17/08/21	Wed 15/09/21
35	Roof (insulation,screed,waterprofing and paving)BL.2	Thu 16/09/21	Mon 22/11/21
36	Prefabricated Slab and elevation structures BL.3.00	Sat 19/12/20	Tue 05/01/21
37	Prefabricated Slab and elevation structures BL.3.01	Wed 06/01/21	Sat 23/01/21
38	Prefabricated Slab and elevation structures BL.3.02	Sun 24/01/21	Wed 10/02/21
39	Prefabricated Slab and elevation structures BL.3.03	Thu 11/02/21	Tue 09/03/21
40	Roof (insulation,screed,waterprofing and paving) BL.3	Wed 10/03/21	Thu 13/05/21
41	**CONSTRUCTION ACTIVITIES**	**Sun 28/03/21**	**Thu 17/02/22**
42	**Facades**	**Sun 28/03/21**	**Tue 21/12/21**
43	External walls BL.1	Sun 28/03/21	Wed 26/05/21
44	Windows and curtain walls BL.1	Fri 07/05/21	Mon 05/07/21
45	External walls BL.2	Thu 16/09/21	Thu 11/1 1/21
46	Windows and curtain walls BL.2	Tue 26/10/21	Tue 21/12/21
47	External walls BL.3	Sun 28/03/21	Tue 11/05/21
48	Windows and curtain walls BL.3	Fri 07/05/21	Sun 20/06/21
49	**Screed**	**Mon 17/05/21**	**Sun 23/01/22**
50	Screed BL1.00	Mon 17/05/21	Sun 20/06/21
51	Screed BL1.01	Mon 21/06/21	Sun 25/07/21
52	Screed BL1.02	Sat 23/05/21	Fri 25/06/21
53	Screed BL1.03	Sat 26/06/21	Fri 30/07/21
54	Screed BL2.00	Fri 05/11/21	Tue 14/12/21
55	Screed BL2.01	Wed 15/12/21	Sun 23/01/22
56	Screed BL2.02	Wed 10/11/21	Thu 09/12/21
57	Screed BL2.03	Mon 20/12/21	Tue 18/01/22
58	Screed BL3.00	Mon 17/05/21	Fri 11/06/21
59	Screed BL3.01	Sat 12/06/21	Wed 07/07/21
60	Screed BL3.02	Sat 22/05/21	Wed 16/06/21
61	Screed BL3.03	Thu 17/06/21	Mon 12/07/21
62	**Internal walls**	**Sun 06/06/21**	**Thu 17/02/22**
63	Internal Wall BL1.00	Sun 06/06/21	Wed 07/07/21
64	Internal Wall BL1.01	Sun 11/07/21	Wed 11/08/21
65	Internal Wall BL1.02	Fri 11/06/21	Mon 12/07/21
66	Internal Wall BL1.03	Fri 16/07/21	Mon 16/08/21
67	Internal Wall BL2.00	Sun 05/12/21	Sat 08/01/22
68	Internal Wall BL2.01	Fri 14/01/22	Thu 17/02/22
69	Internal Wall BL2.02	Fri 10/12/21	Fri 07/01/22
70	Internal Wall BL2.03	Wed 19/01/22	Wed 16/02/22



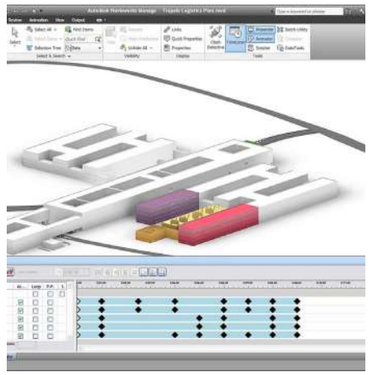
02 Time Schedule

- **Gantt Diagrams**
- **Work Breakdown Structure** (WBS)
- **Organization Breakdown Structure** (OBS)
- **Delay Management**
- **Resource Breakdown Structure (RBS)**
- **Procurement Planning**
- **Critical Path**

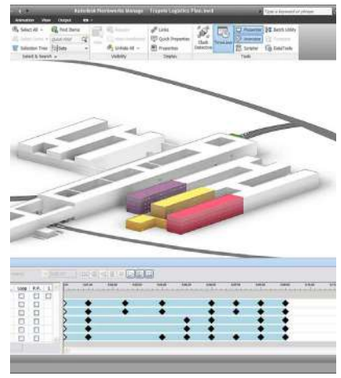
PHASE 1

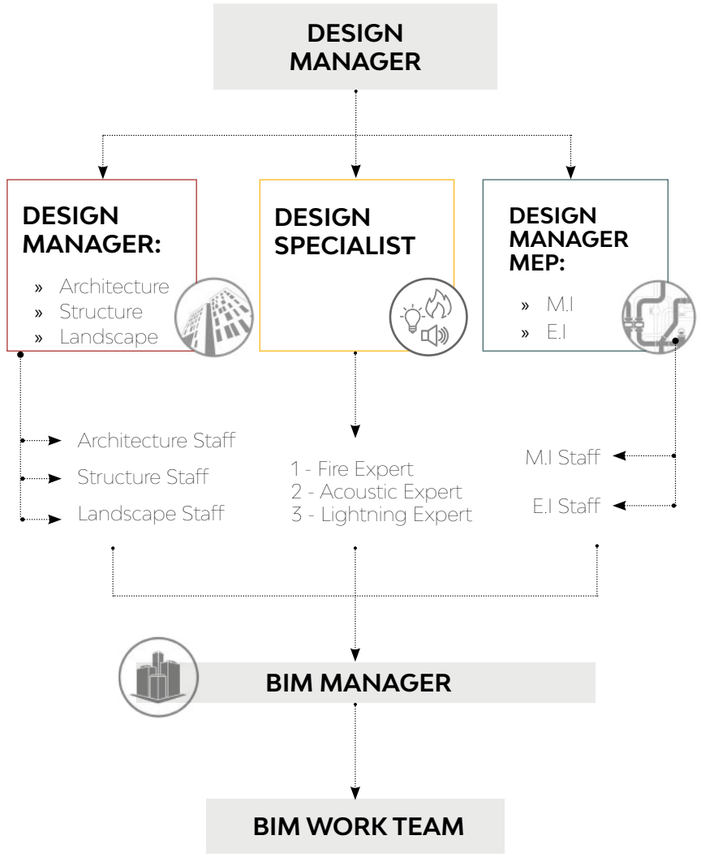


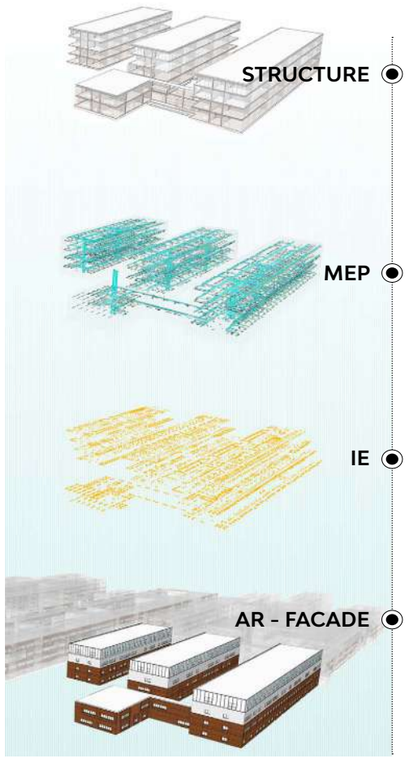
PHASE 2

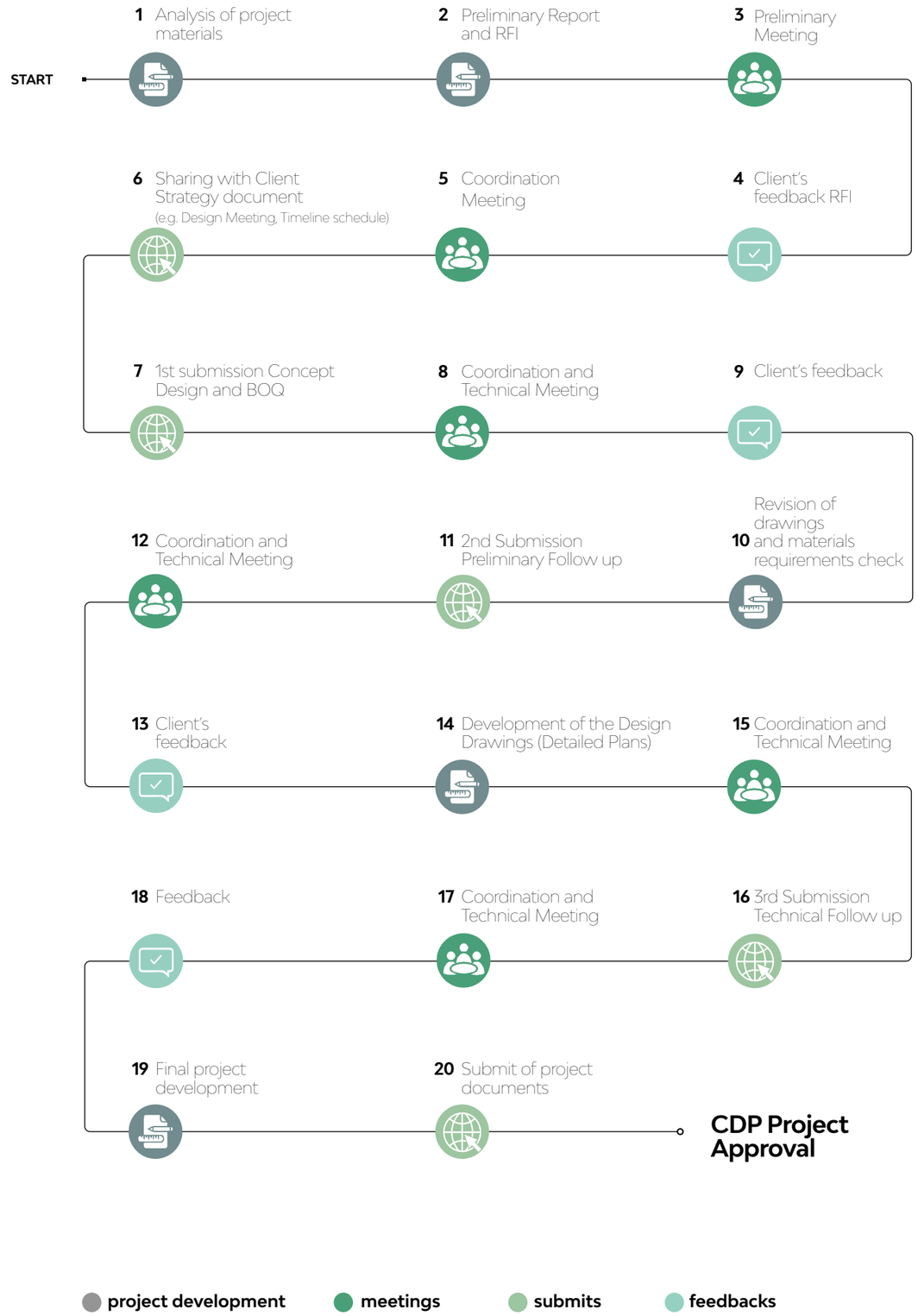


PHASE 3









03 Design process organization

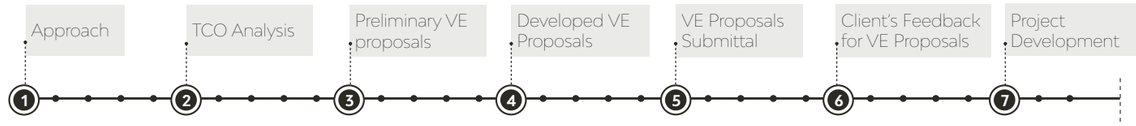
- Organizational Chart and Key figures
- Submission Plan
- Document Management
- Communication Plan
- Reporting System
- Information Technology tool

VE PROPOSALS LIST _ FORMAT

Code	Category	VE solution description	Technical specification ORIGINAL SOLUTION	Technical specification VE SOLUTION	TCO ORIGINAL SOLUTION	TCO VE SOLUTION	Client's feedback		
							Y	N	I
ST	Structures								
EN	Envelope								
IN	Internal works								
FN	Finishes								
MEP	MEP								
FF	Fittings, Furnishings, etc								

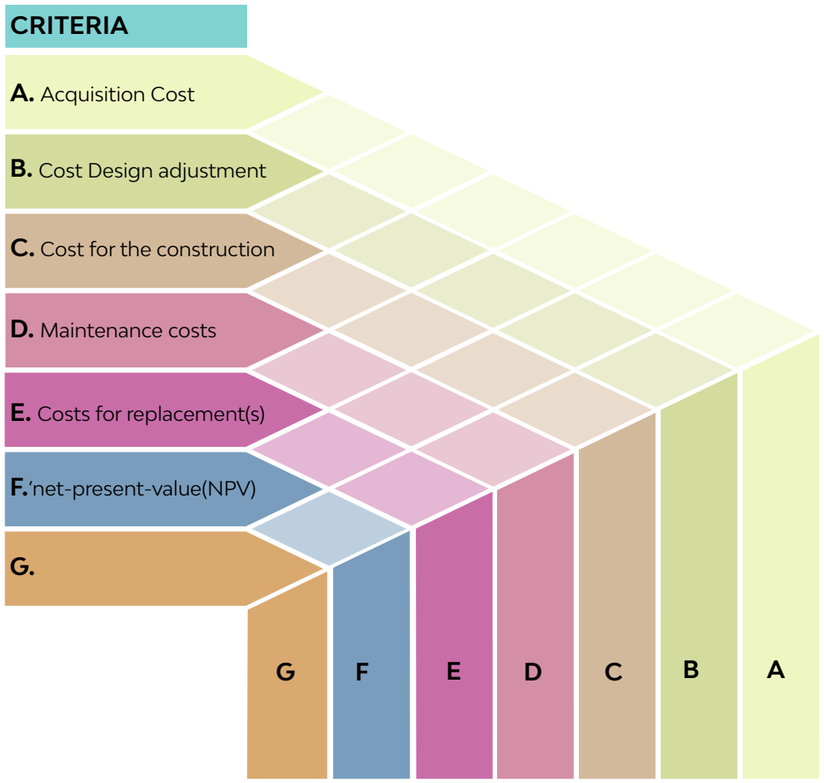
04 Value Engineering

- Value Engineering Strategy
- Analysis of alternative
- Value Engineering Check List
- VE Documentation
- Time and costs impact evaluation
- Project Update



VALUE ENGINEERING PROPOSALS

PROJECT: ☐ ARCHITECTURAL ☐ MECHANICAL ☐ STRUCTURAL ☐ OTHERS



								TOTAL TCO
1. Original Solution		14	14	11	4	4	40	87
2. Alternative n°1		14	14	7	8	6	50	99*
3. Alternative n°2		20	20	16	10	10	10	86
4.								

*Selected based on weighted evaluation

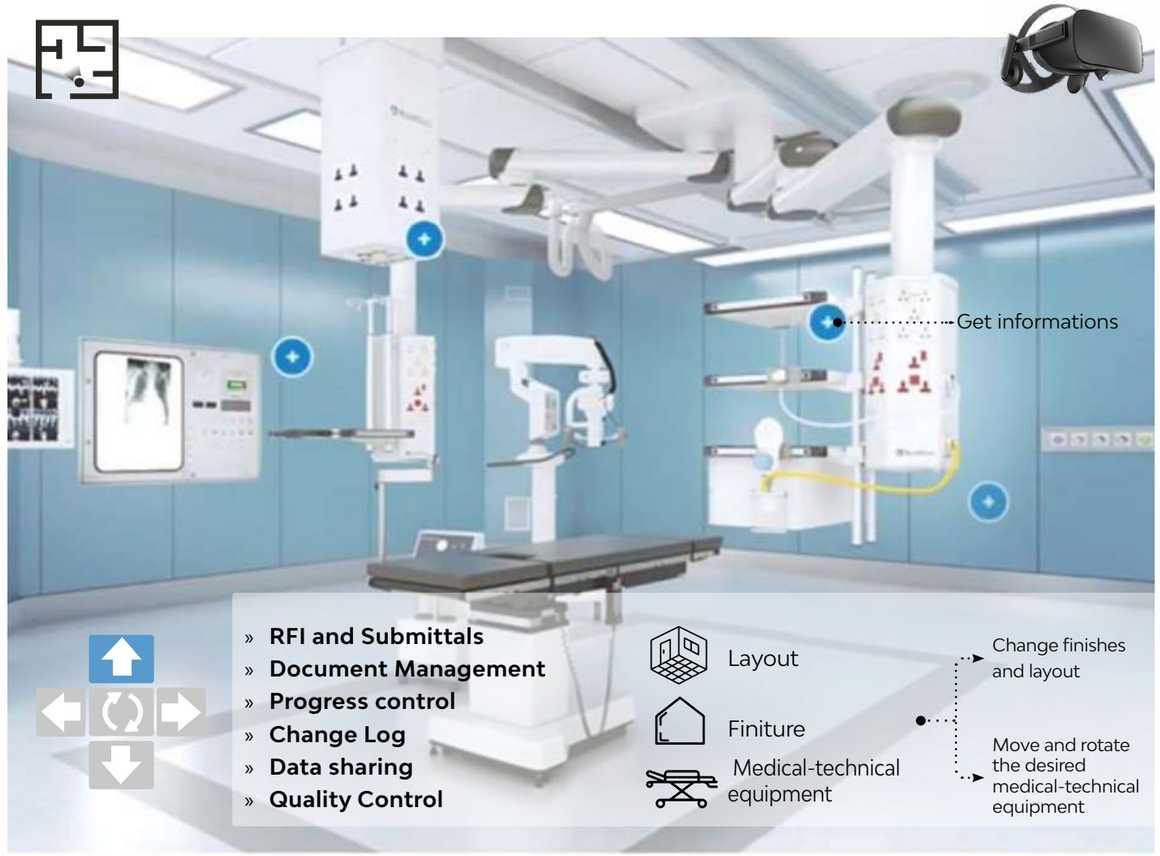
TECHNICAL SCORING CRITERIA			Subcontractor 1		Subcontractor 2		Subcontractor 3	
			Score (1-5)	TOTAL	Score (1-5)	TOTAL	Score (1-5)	TOTAL
1	**Technical solution proposed**	Technical solution details, project well analyzed, general solution proposed, qualification and optimization proposed	3	**3,2**	5	**4,6**	4	**4,4**
		Storage managing	3		4		4	
		Labelling system	3		4		5	
		Tracking and managing sofware	3		5		5	
		Packaging and move solution	4		5		4	
2	**Level of experience in similar works**	Pre-qualification requirements	Compliant	**3**	Compliant	**5**	Compliant	**4**
3	**Previous experience**	Previous experience and tested capacity to fulfill project requirements	Not directly	**4**	Not directly	**3**	Not directly	**4**
4	**Time schedule**	Compliance with execution times	2	**2**	3	**3**	4	**4**
5	**Capacity to carry out the work**	Compliance with technical specifications	4	**3,5**	5	**4,5**	5	**5**
		Level of technical assistance proposed	3		4		5	
6	**References QA, Environment, etc**	Quality issues proposal	2	**2**	4	**3**	4	**4,5**
		Environment high level proposal	2		2		5	
Total			**2,95**		**3,85**		**4,32**	
Technically validated			**Y**		**Y**		**Y**	

TECHNICAL EVALUATION SCORE

Recommended

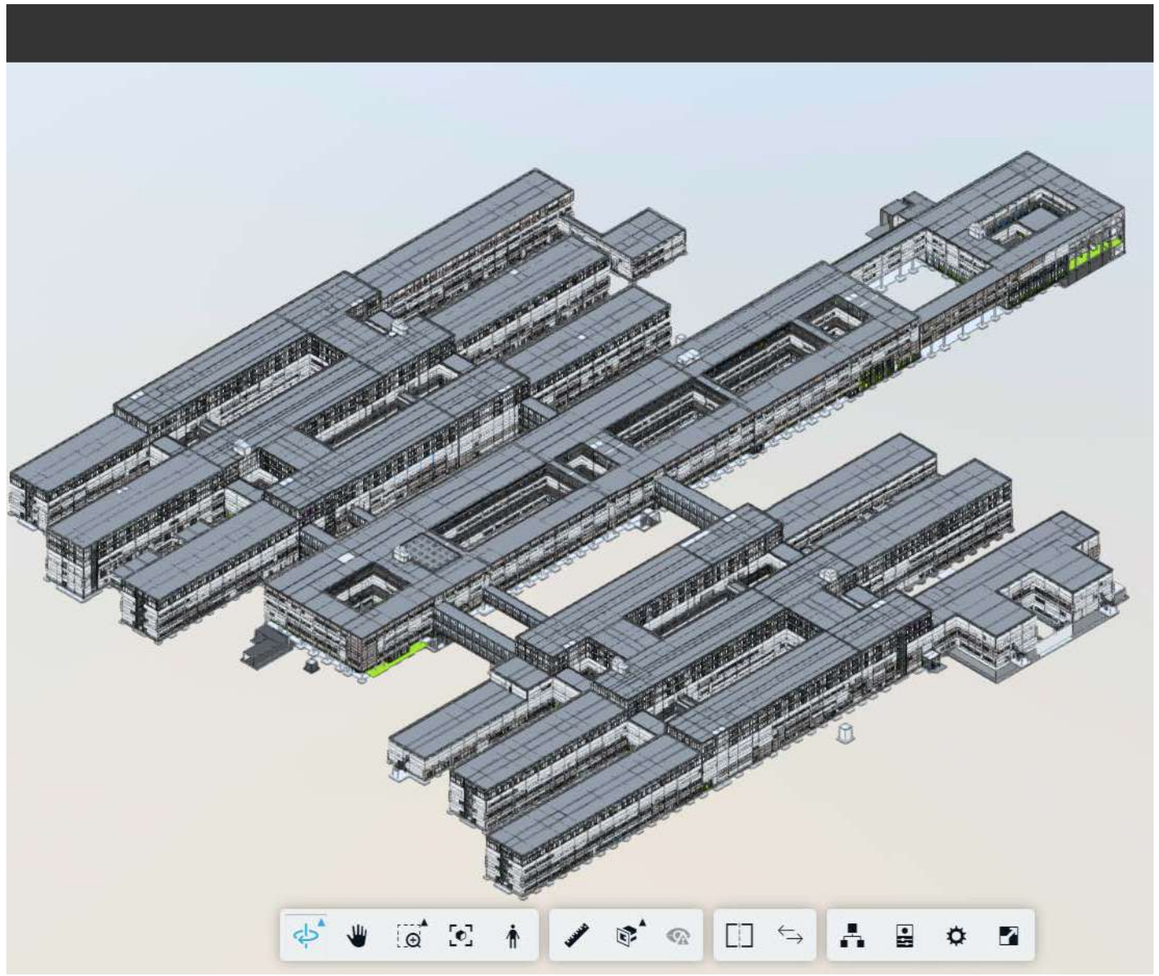
5	Optimization	**4**	Compliant with requirements	**3**	To be agreed - so maybe compliant	**2**	Deviation to be discussed	**0**	Deviation - not acceptable

SUBCONTRACTORS' PROPOSALS EVALUATION



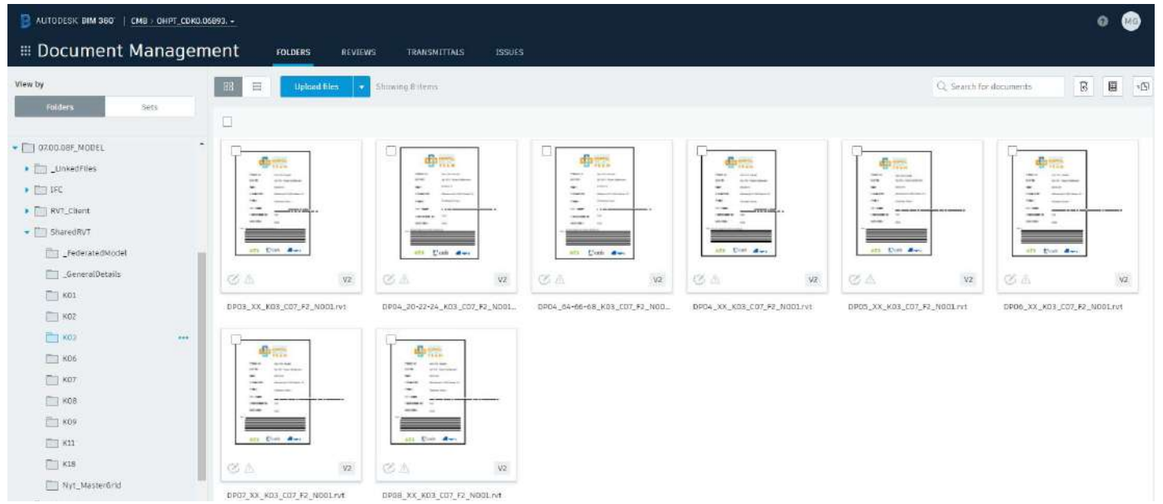
05 Procurement

- **Procurement Strategy**
- **Procurement Plan**
- **Tenders Management**
- **Subcontracotrs/Suppliers management**
- **Communication Plan**
- **Mock up and Virtual Reality**

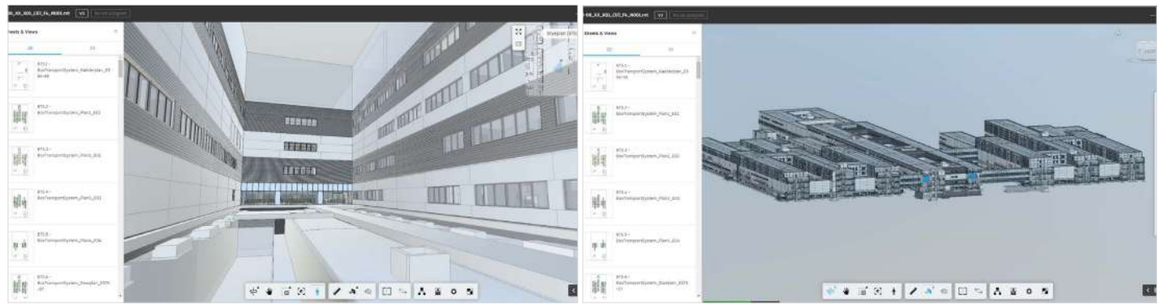


06 Common data environment (CDE)

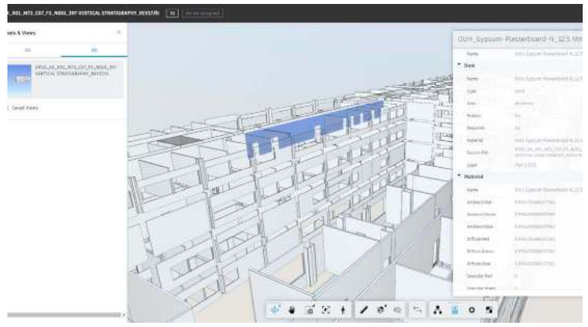
- RFI and Submittals
- Change Log
- Document Management
- Data sharing
- Progress control
- Quality Control



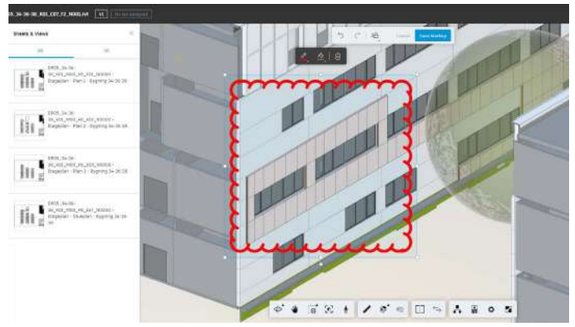
Organize, distribute, and share files across the project with a single, cloud-based document management platform



The entire team has access to the drawings, models, and documents



Connect workflows to improve quality control



Quickly resolve quality-related problems

A complex and prestigious construction site involving the main UN offices in Geneva.

OFFICE

United Nations Office at Geneva

UN Buildings, between history and future

A unique and exciting challenge, one of the projects that has become a **symbol of our studio's internationality**. We made our **Swiss debut** at the **UNOG Building**, one of the world's most prestigious building sites.

From a **joint venture of Italian companies** and the continuous development of project management systems, another great international result is achieved.

The degree of complexity engendered by interfering jobs, the security standards expected by such an organization, and the need to ensure the continuity of the current activities made this experience a truly unique challenge.

Location:
Geneva, Switzerland

Typology:
Renovation

Year:
2019 - ongoing

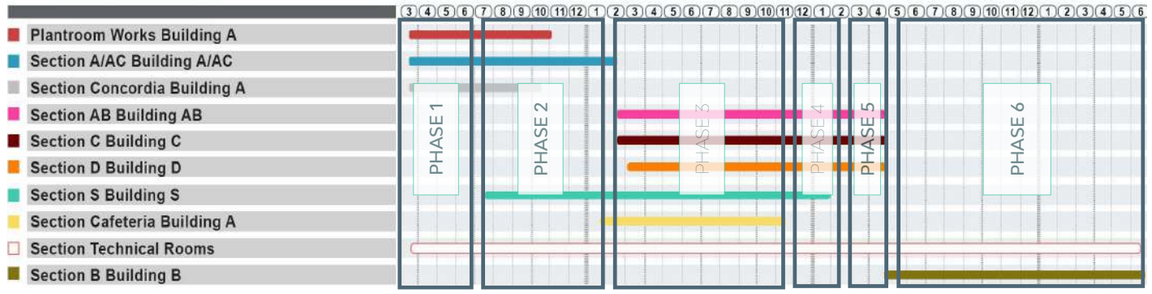
Status:
Under construction

Budget:
€ 240 mln

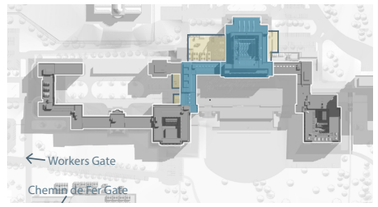
Client:
JV (Cmb + Italiana Costruzioni + Csc)

Activities:
Constructive BIM design,
Project Management

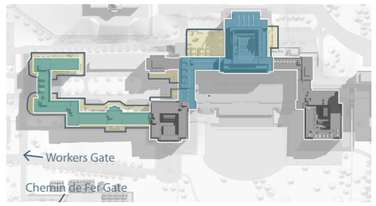
Credits:
Architectural design: Jv Som and B+P
Structural design: Igeni
Plants design: Rapp
Landscape: Oxalis It
Audiovisual: Shen Milson & Wilke
Security: Sbis Securitas



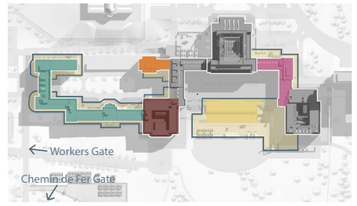
PHASE 1



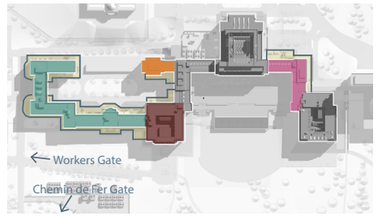
PHASE 2



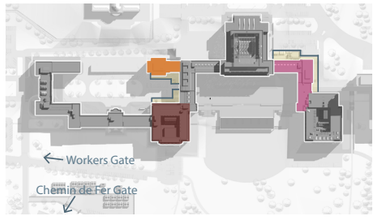
PHASE 3



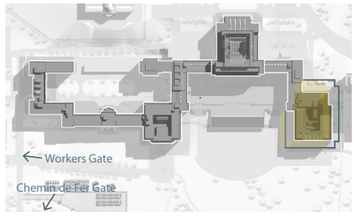
PHASE 4



PHASE 5

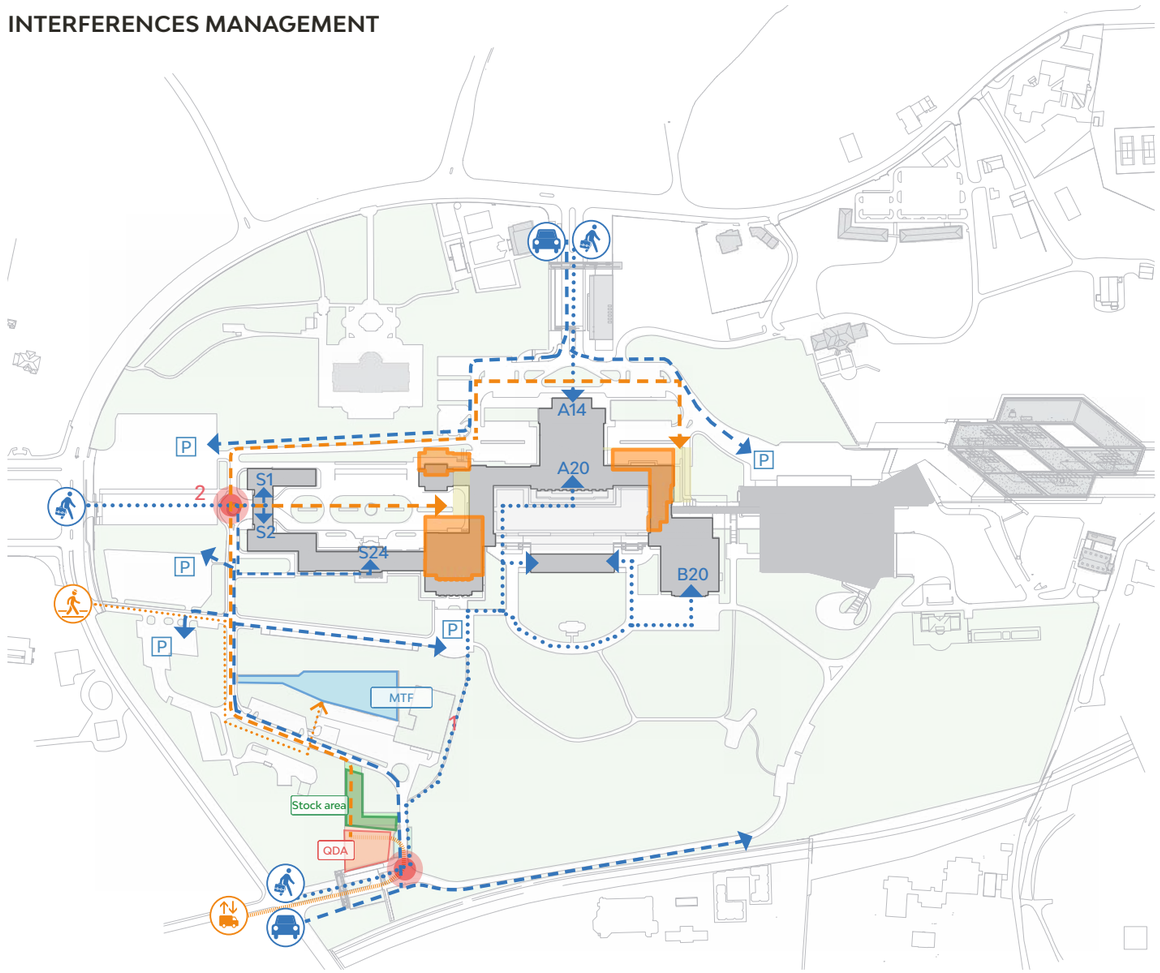


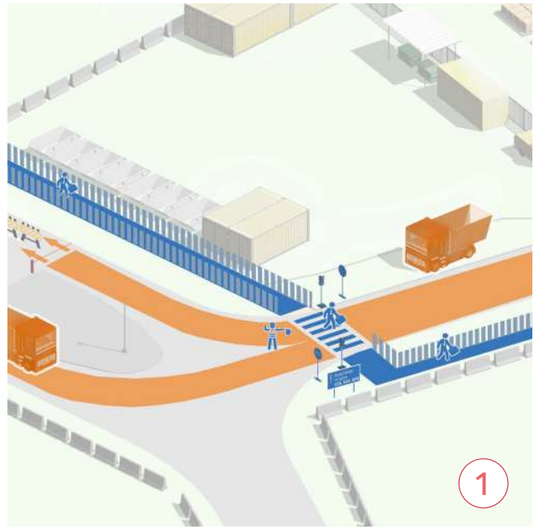
PHASE 6

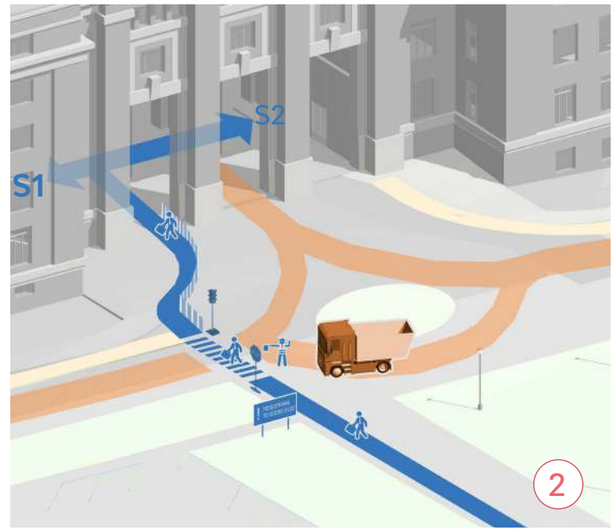


PHASING MANAGEMENT DIAGRAM

INTERFERENCES MANAGEMENT

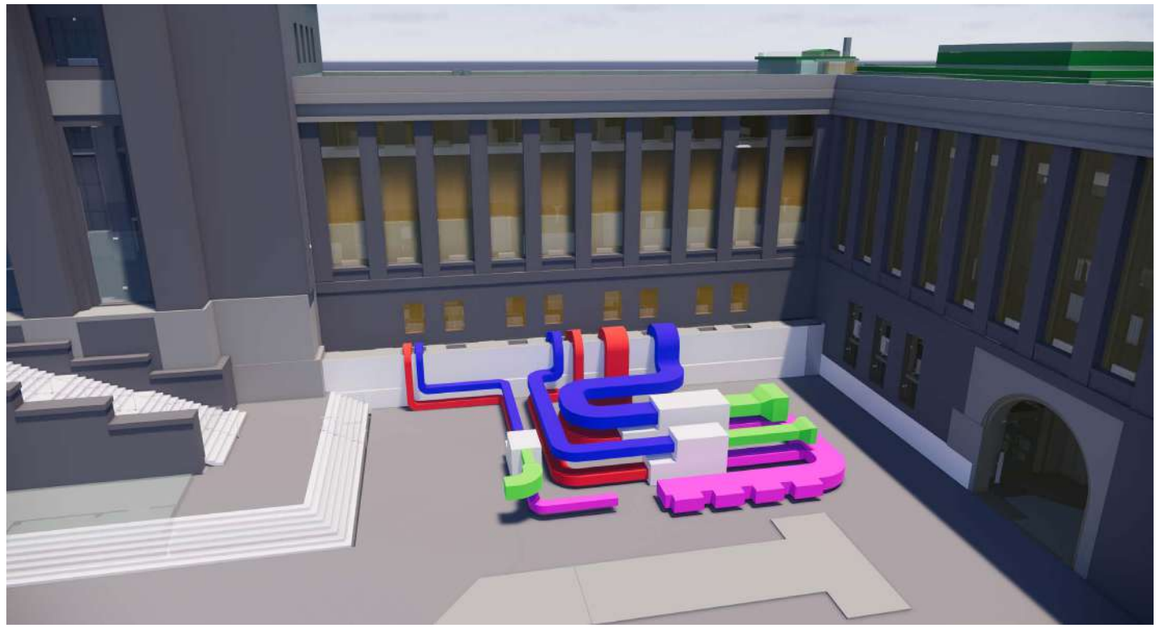


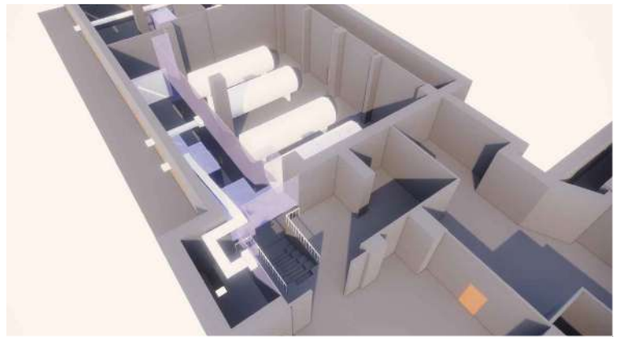


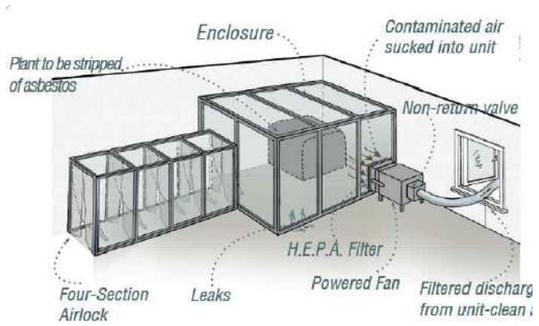


01 Phasing & Interferences Management

- Phasing Strategy
- Site Layouts
- Health & Safety management
- Risk Management
- Flows Interferences management
- Progress Control

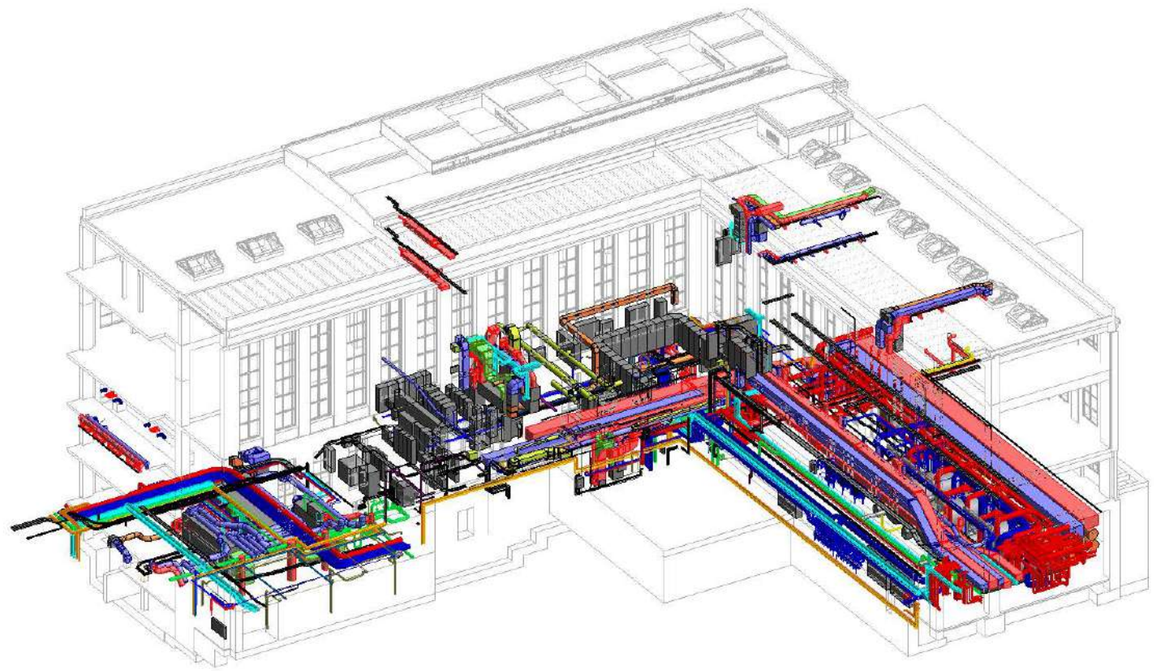


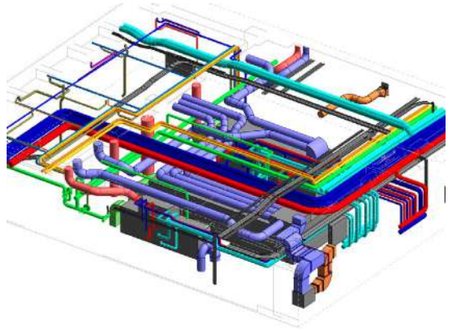


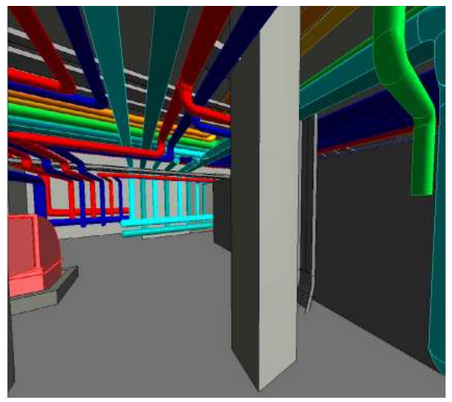


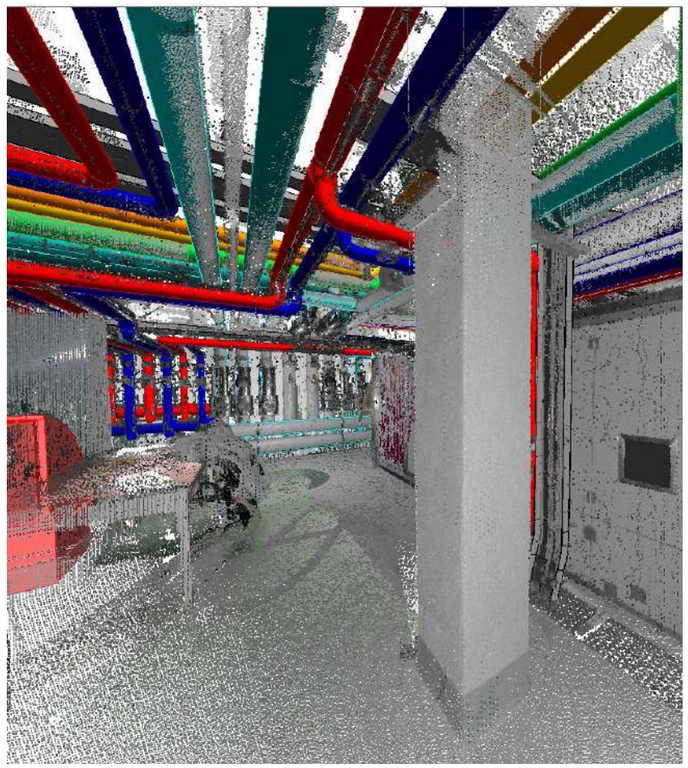
02 Business Continuity

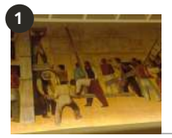
- Workflow analysis
- Risk Assessment
- Business Continuity Strategy
- Services and Systems Continuity
- Activities Continuity
- Circulation Continuity





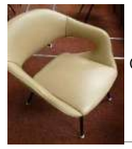




General View	Element	No. Inventory	Location	Type	Artist	Title	Dimension
1 	Picture	xxxx	Salle XII	Wall Painting	Massimo Campigli	The construction of the Palais of Nations	5 x 16 m
2 	Architectural finishes	xxxx	Salle XII	Ceiling	--	--	28 x 10 m

03 Move & Heritage Management

- **Move operations programme**
- **Moving procedures**
- **Heritage management programme**
- **Heritage items management**
- **Temporary Storage**
- **IT Support**

General View	Model No.	Typology	Type	Material	Dimension	Location	Description	Quantity
	CH-CP-BEIGE	Heritage	Chaise Charlotte Perriand	Cuir beige	48x52x78	Salle VII Salle XII Salle XVII Salle XVIII and Salle XIX	Chaise pour salle de Conference	47
	CH-CP-BEIGE-ACC	Heritage	Fauteuil	Cuir beige	56x56x75	Salle VII Salle XII Salle XVII Salle XVIII and Salle XIX	Fauteuil de Conference	155
	C-7-TABLE-BOIS-4P	Heritage	Table	Bois marron Fonce	290x60x77	Salle VII	Table de conference 4 Places (interface Audio)	37
	C-7-TABLE BOIS-3 P	Heritage	Table	Bois marron Fonce	225x70x76	Salle VII	Table de conference 3 Places (interface Audio)	3

A perfect combination of quality and sustainability. The added value lies in the concerted and shared effort of the various professionals involved.

Click to see the video!

HEALTHCARE

Bispebjerg Hospital

A reference point for the territory and healthcare. The new Copenhagen hospital

The project for the **new Bispebjerg hospital** represents a key intervention within the vision proposed by the Capital Region of Denmark for the development of health care services in the area.

The architectural complex develops in an area of **approximately 77.500 sqm**, within which **six pavilions** host a dense and widely articulated functional program.

There are three key departments: **emergency, operation** and **radiology**. These are adjeced by departments with the most contact with patients, such as pediatrics and woman & child. Operating rooms, laboratories, connection tunnels and services complete the **programmatic layout**, making the new facility a **state-of-the-art hub** for the entire region.

In the new hospital, the design disciplines intersect forming a technological unicum with a decisive language, that is at the same time perfectly integrated from a landscape and environmental point of view.

It is an intervention of great logistical and institutional importance; and was made possible thanks to the transversal nature of the **BIM methodology**, which allows to articulate each phase of the life cycle of the new building in compliance with the purposes of the project vision and with a careful control of construction times and costs.

Location:
Copenhagen, Denmark

Typology:
New construction

Year:
2020 - 2024

Status:
Under costruction

Dimensions:
Approx. 89.000 sqm

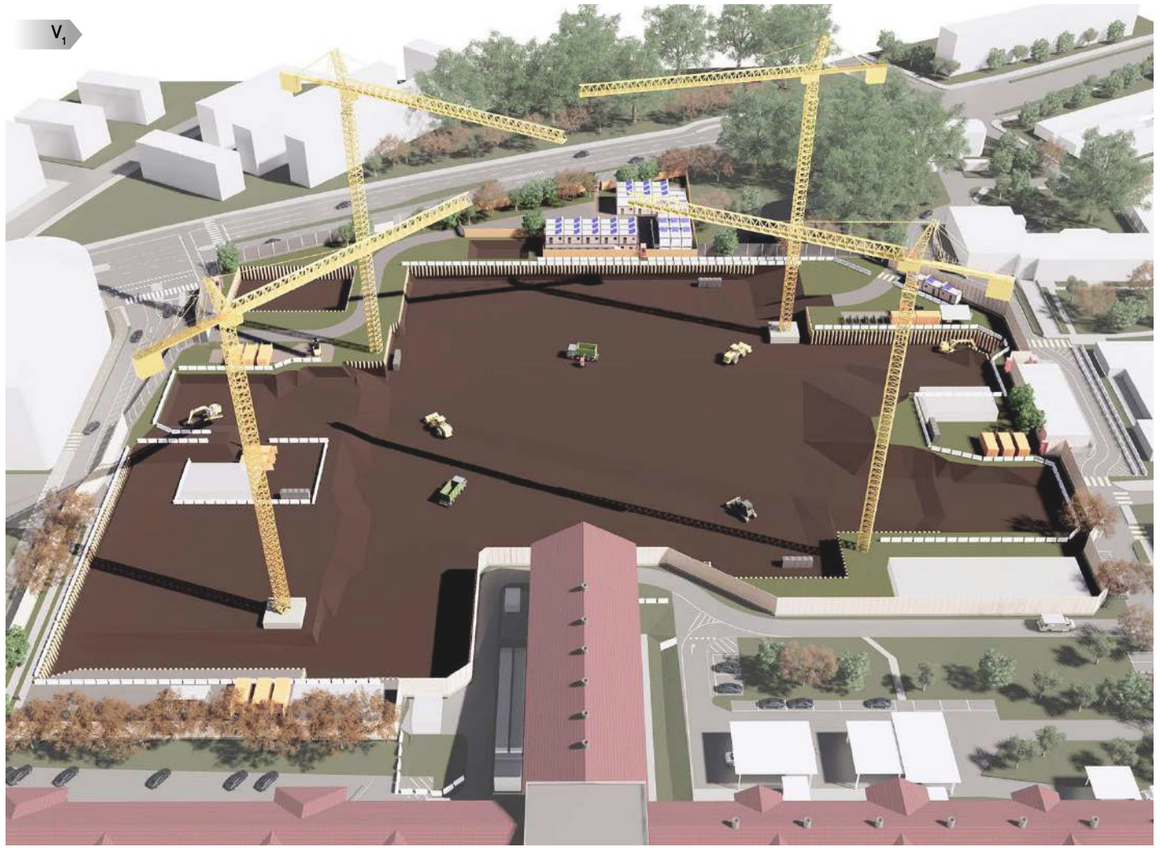
Budget:
€ 230 mln

Client:
Rizzani De Eccher

Activities:
ARC - STR – MEP,
Infrastructure and Landscape design

Credits:
Preliminary design: Khr Arkitekter A/S, Arup, Urbanlab Nordic, Eyp

Consultants:
Sweco - Creo Arkitekter



PHASE 1
Step 1 - Step 2 -Step 3 -Step 4

PHASE 2
Step 1 - Step 2 -Step 3

PHASE 3
Step 1 - Step 2 -Step 3 -Step 4

PHASE 4
Step 1 - Step 2

01 Construction site organization

- Phasing Strategy
- Construction Site Layouts
- Temporary Facilities
- Health & Safety management
- Workforce & Site Equipment
- Deliveries paths plan

PHASE 1 Step 3

PHASE 1 Step 4

PHASE 2 Step 2

PHASE 3 Step 1

PHASE 3 Step 2

PHASE 4 Step 2

TESTING PROCESSES

Laboratory Testing

Mock-up Testing

Site Testing

FUNCTIONAL PERFORMANCES

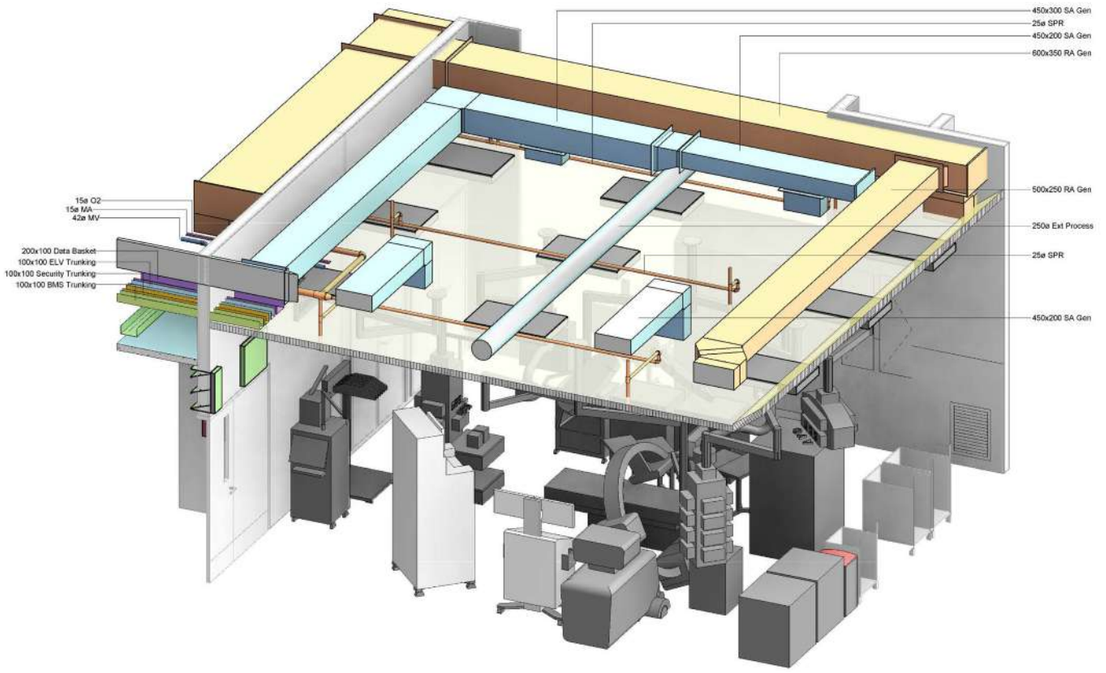
Air-Tightness

Water-Tightness/ Waterproofing (static and dynamic)

Thermal/Energy

Acoustical

Structural / Impact



02 Commissioning

- Commissioning Process
- Test & Commissioning Plan
- Commissioning documents
- Non-compliance management
- Handover procedures

MEP ASSET INFORMATION

Electrical quantity	Electrical specifications	Electrical consumption	Data quantity	Data specifications	Cold water quantity

Cold water specifications	Hot water quantity	Hot water specifications	Drains quantity	Drains specifications

Respect for history and openness to innovation. With its particular form which enlivens the profile of the Serbian capital, the Belgrade Tower expresses the architectural combination of these two core values.

HOSPITALITY, RESIDENTIAL

Belgrade Tower

The discreet luxury of a view over Belgrade

Destined to become the new symbol of the Serbian capital, as well as the tallest building in the region, the Belgrade Tower is the architectural and urban centrepiece of a **wider plan to redevelop** the right bank of the Sava River.

With its elegant, elongated shape, **Belgrade Tower** is the emblem of a far-reaching vision that sees it as the scenic container for a **hotel**, **high-profile residences**, **offices** and modern **retail**.

Hovering between the past and the future, the building draws inspiration from the historic city and the river that runs through it, from which it takes its reflections and materials.

More than 160 metres high with a total of **41 floors** characterise this skyscraper, designed to stand out in the skyline as an **iconic landmark**. A beacon of well-being that offers visitors a privileged view of the entire city of Belgrade. The interior is defined by natural and elegant materials.

Location:
Belgrade, Serbia

Typology:
New construction

Year:
2018 - 2023

Status:
Completed

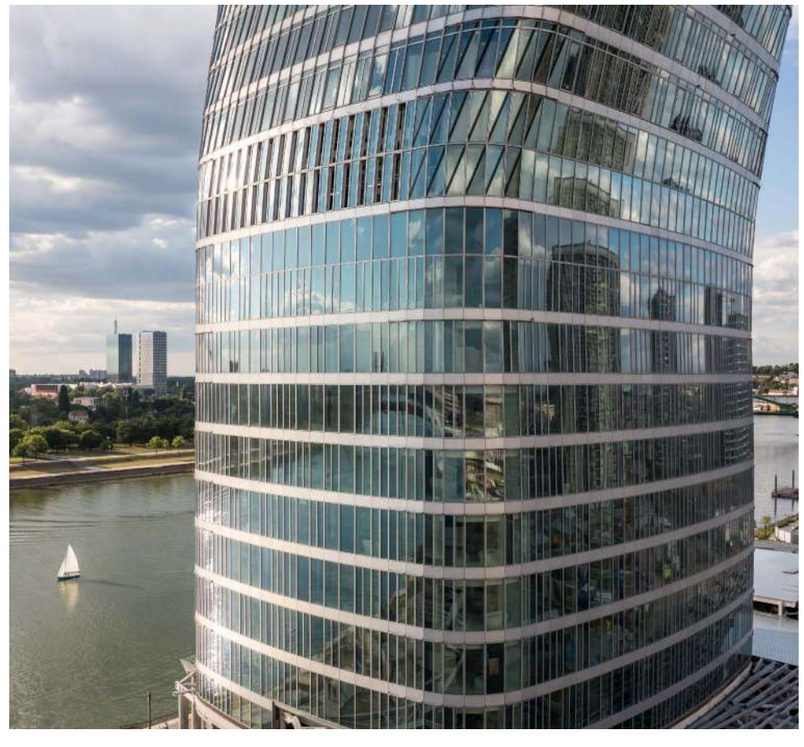
Dimensions:
67.000 sqm

Budget:
€ 110 mln

Client:
Impresa Pizzarotti & C.

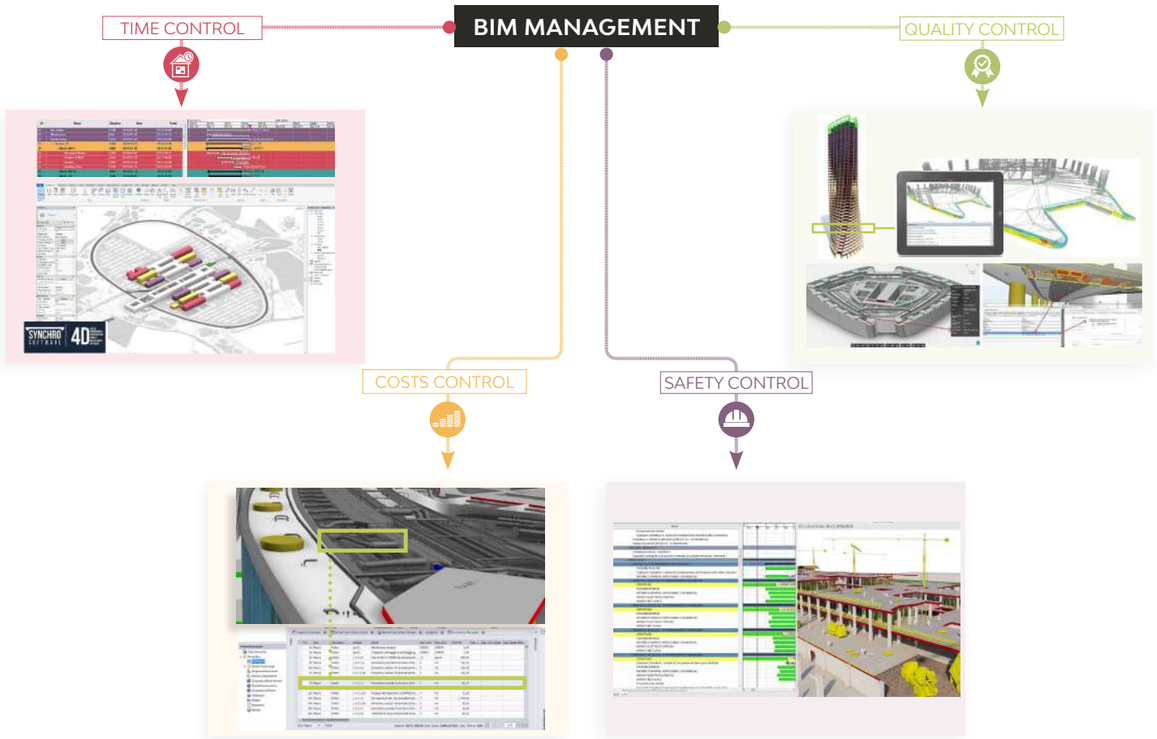
Activities:
Constructive BIM design,
Project Management

Credits:
Architectural Concept: Skidmore, Owings & Merrill Llp
Leading Designer / Consultant: Aecom Middle East Limited
Interior Design: Hok

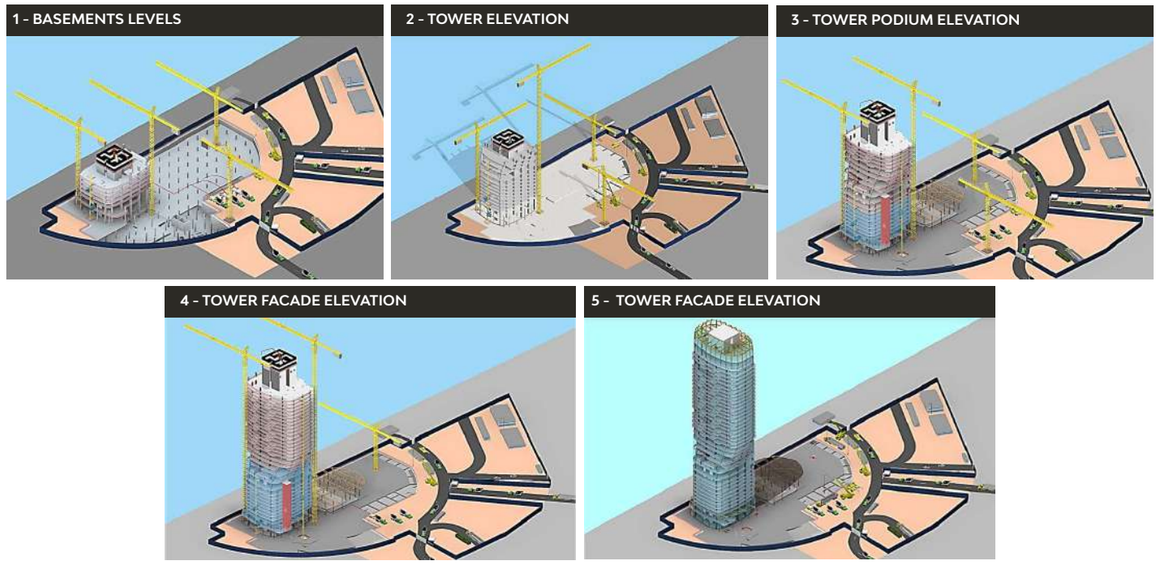


BIM Execution Plan

The importance of BIM in the construction phase



Phases of implementation



BIM: QTO (Quantity takeoff)

PIZZAROTTI
MILLENNIUM

Client Name: Eagle Hills
Project Name: Belgrade W
Measured Works
Quantity Takeoff

Floor QTO for levels B1-4

LEVEL B1
Pt-01
Pt-02
Pt-02.1
Pt-03
Pt-04
Pt-04.1
Pt-05
Pt-05
Pt-06
Pt-06
Pt-07c1
Pt-07c1
Pt-07g
Pt-07j
Pt-08
Pt-08
Pt-09
Pt-11
Pt-12
Pt-13
Pt-15
Pt-16
Pt-17
Pt-18
Pt-19
Pt-21 (no screed)

LEVEL B1M		
Mk-06	TC-01	4194.94
Mk-07.1c1	CT-01	51.10
Mk-07.1f		
Mk-07.1g		
Mk-07.1j		
Mk-07.1j		
Mk-07.1k		
Mk-08.1c1		
Mk-08.1f		
Mk-08.1g		
Mk-08.1g1		
Mk-08.1g2 (no screed)		
Mk-08.1g2 (100mm scre		
Mk-08.1i		
Mk-08.1j		
Mk-08.1j		
Mk-08.1k		
Mk-08.2k (Screed 80mm		
Mk-08.2k (Screed 180mr		
Mk-08i		
Mk-08i.1		
Mk-08k (no Lightweight		
Mk-08k (200mm Lightwe		
Mk-08l		
Mk-08m		
Mk-08p		
GROUND LEVEL		
Mk-01.1c1		
Mk-01c		
Mk-01c1		
Mk-01d		
Mk-01d		
Mk-01g		
Mk-01g1		
Mk-03g		
Mk-08g		
Mk-12.1g1		

Mk-12.1d	RF-02	6.96
Mk-12.1d	RF-01	18.22
Mk-12.1g	EPX-01	38.73
Mk-12.1g1	EPX-01	
Mk-12.2c1		
Mk-12g		
Mk-13c1		
Mk-13g		
LEVEL 03-11		
Mk-12.1c1		
Mk-12.1d		
Mk-12.1d		
Mk-12.1g		
Mk-12.1g1		
LEVEL 12		
Mk-09.1		
Mk-09.1g		
Mk-09d		
Mk-09g		
Mk-09w		
Mk-12.1g		
Mk-12.1g1		
Rk-05		
LEVEL 14		
Mk-05d		
Mk-05g		
Mk-12.1g1		
LEVEL 15		
Mk-12.1g1		
LEVEL 16		
Mk-05d		
Mk-05g		
Mk-12.1g1		
LEVEL 17		

Waterfront - Kula T
Date: 21.02.

LEVEL 20-39		Area per level
Mk-12.1d	RF-02	4.23
Mk-12.1g	EPX-01	38.99
Mk-12.1g1	EPX-01	13.29
Rk-13	GR-02	25.47
LEVEL 40		
Mk-12.1d	RF-02	4.21
Mk-12.1g	EPX-01	39.47
Mk-12.1g1	EPX-01	12.66
Mk-18	EPX-01	22.50
Rk-04	GR-02	91.33
LEVEL 41		
Mk-10	SC	124.96
Mk-12.1d	RF-02	4.23
Mk-12.1g	EPX-01	94.71
Mk-12.1g* (no acustic)	EPX-01	21.27
Mk-12.1g1	EPX-01	13.84
Rk-03	GR-02	91.85
LEVEL 42		
Mk-15	EPX-01	166.34
Mk-15 (50mm screed)	EPX-01	7.51
Rk-02	PAV-01	530.38
LEVEL 43		
Rk-01	PAV-01	202.21
STAIRS ST-01, ST-02, ST-03		
Epoxy (EPX-01)	EPX-01	2014.00
STAIRS ST-04, ST-05, ST-06		
Polyurethane epoxy (TC-01)	TC-01	153.00

01 Advantages of QTO (Quantity takeoff) in BIM

- Purchase of materials in exact quantities by subcontractors
- Control of differences between contract quantities and real quantities
- Greater accuracy in invoices to be sent to the contracting authority
- Real-time management of changes and variations
- More productivity: a process that previously required a full day of work can now be achieved with a click

The complexity of the intervention is supervised thorugh BIM which allows each construction process to be articulated in accordance with the objectives, while overseeing construction time and costs.

SHOPPING MALL

Shopping Mall Gran Reno

Beyond shopping: From a mall to a meeting place

Shopville Gran Reno is a historic shopping centre with a regional profile. The large-scale **renovation and extension project involves** will double the current surface are. It is an intervention that interprets the contemporary philosophy of the mall, intended not only as a place for shopping but also as a **place to meet**, relax, and socialise.

The new centre will host prestigious fashion brands, a modern food court, entertainment and show spaces, a hypermarket and various other shops.

Location:
Bologna, Italy

Typology:
New construction

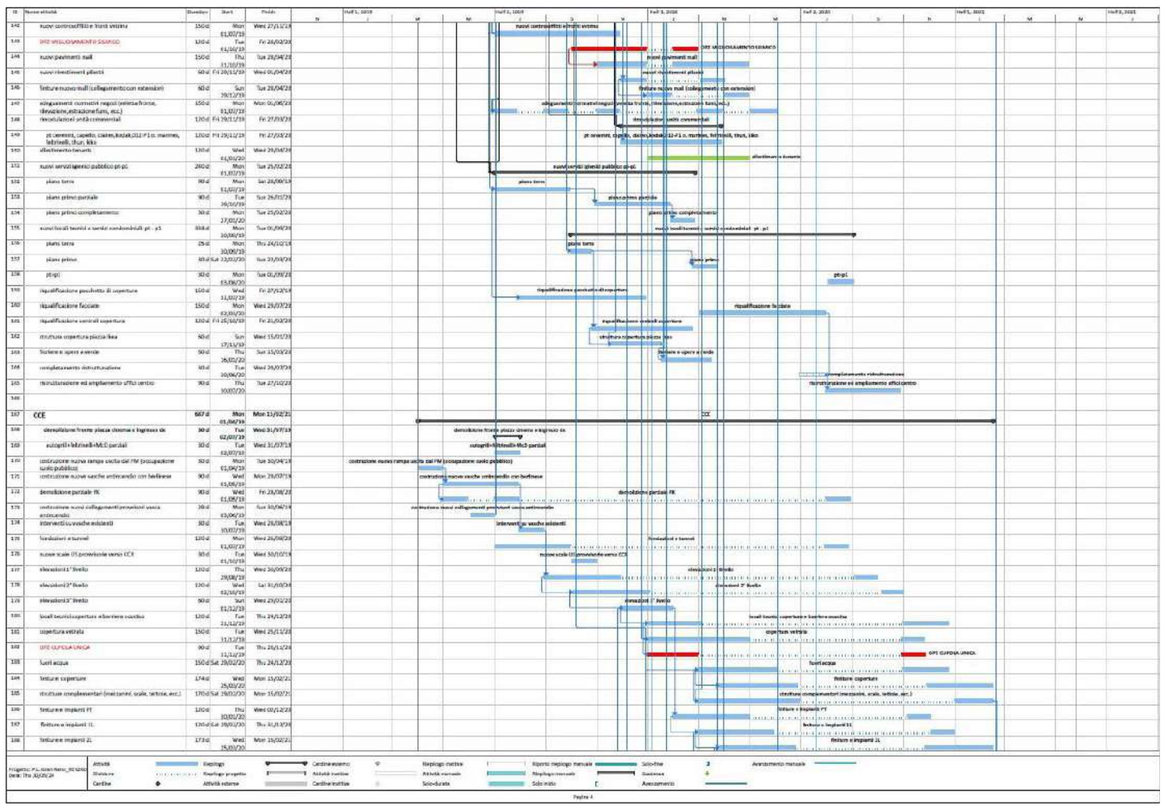
Year:
2019 - 2021

Status:
Completed

Client:
CMB Carpi

Activities:
BIM design, Project Management

Credits:
Architectural concept: Design International
Architectural and Structural design: Planning
Mechanical Plants Design: Studio Nocera
Eletrical and Special Plants Design: Sytec
Landscape: Studio Silva
Photo: Andrea Zanchi

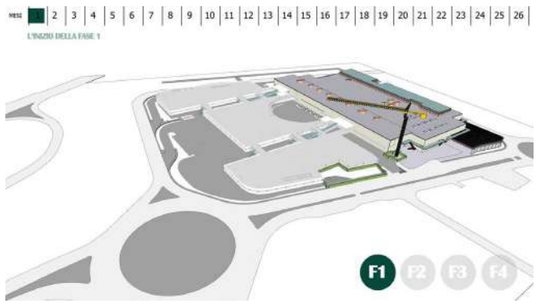


Scheduling - BIM 4D/5D

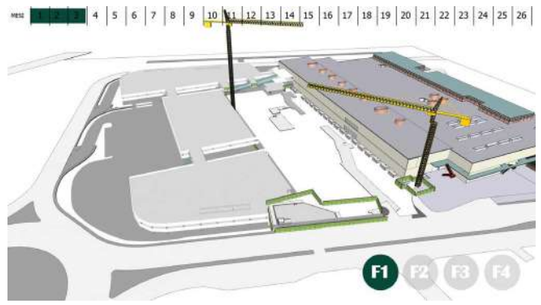
Construction & Quality Management

- Planning
- BIM 4D/5D
- Detailed & Construction Design
- VE & Design Control
- Quantities Control

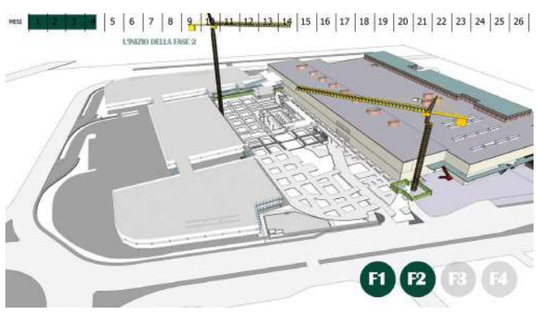
  (Construction Phase)



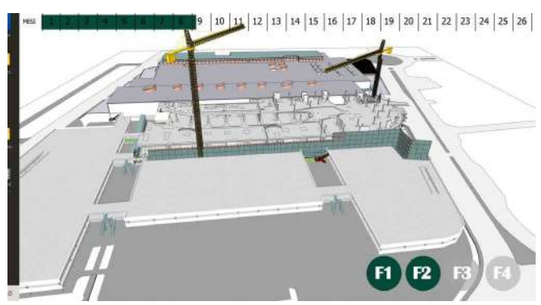
PHASE 1 Step 1



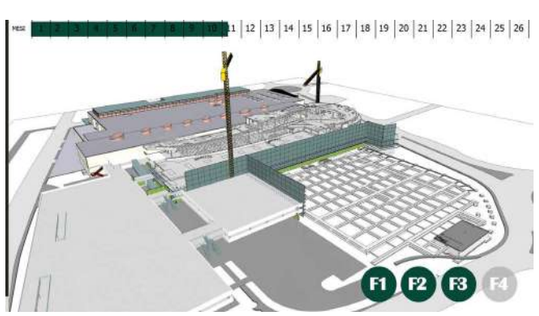
PHASE 1 Step 2



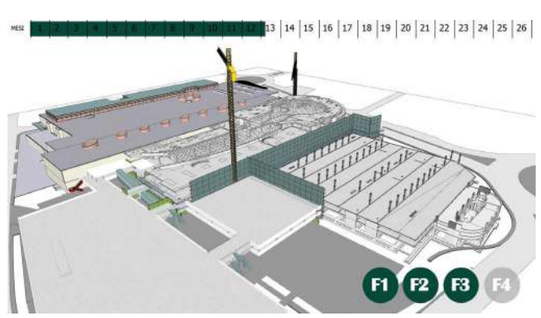
PHASE 2 Step 1



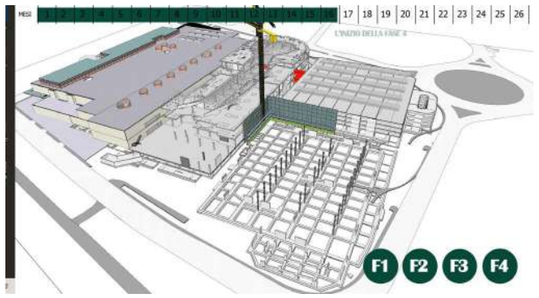
PHASE 2 Step 2



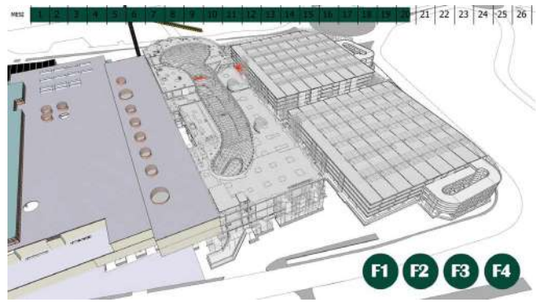
PHASE 3 Step 1



PHASE 3 Step 2



PHASE 4 Step 1



PHASE 4 Step 2

Same vocation but new design and conceptual layout for a building intended to be the headquarters of company offices.

Click to see the video!

OFFICE

Segreen Buildings

The new Segreen offices as a backdrop to the urban landscape

The project regards a refurbishment of an 80s complex in Segrate.

The new buildings, divided into three volumes and ancillary service structures, sees the presence of offices and auditoriums inside.

The refurbishment and new construction envisage the creation of the **+SeGreen complex** of approximately 30,000 square meters, for tertiary use.

The structures are configured as a wing with alternating volumes, able to recompose the urban texture and complete the extension of the Business Park, in continuity with SeGreen.

Location:
Segrate, Italy

Typology:
New construction

Year:
2020 - 2022

Status:
Completed

Dimensions:
Approx. 23.000 sqm

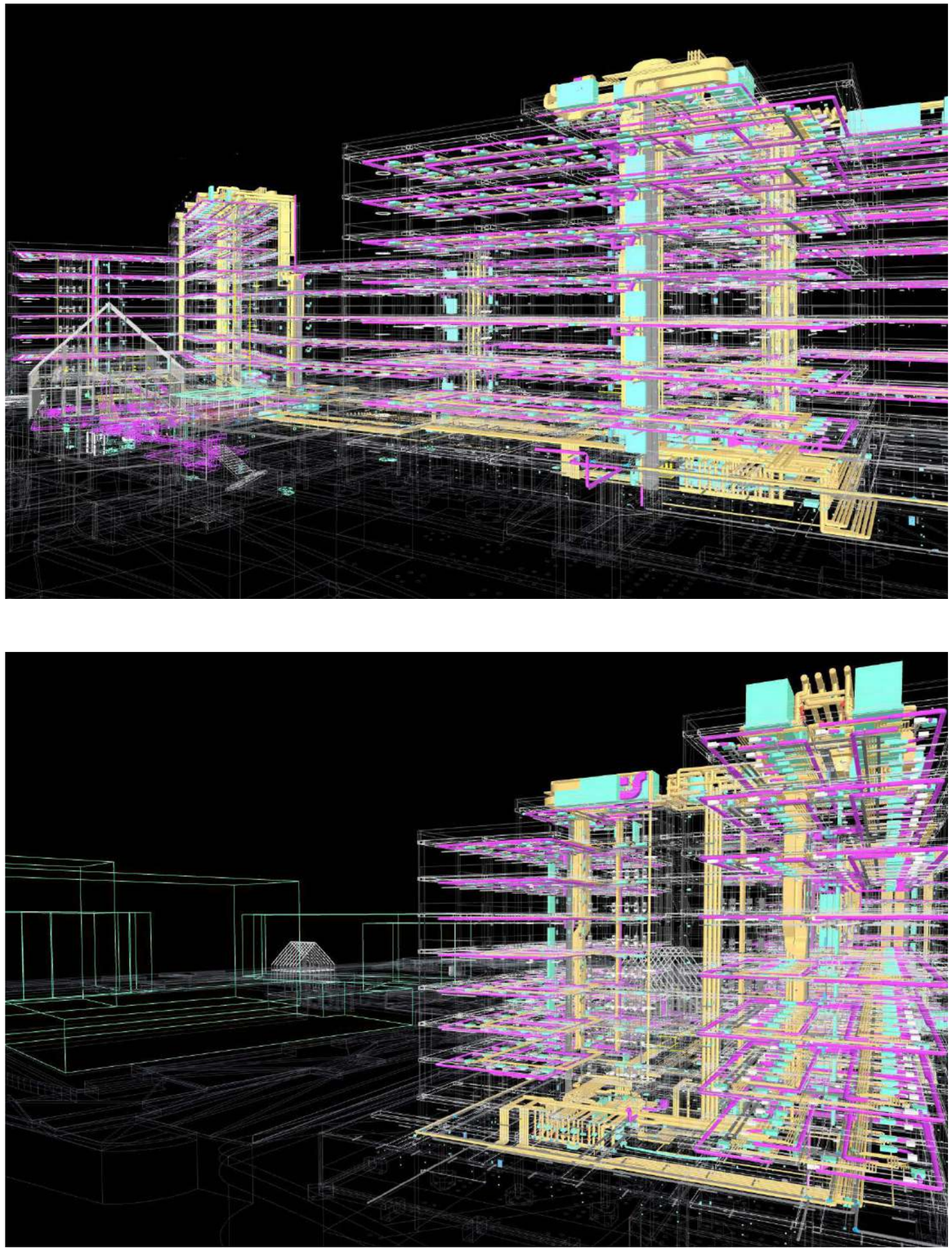
Budget:
€ 32 mln

Client:
Ediltecnorestauri

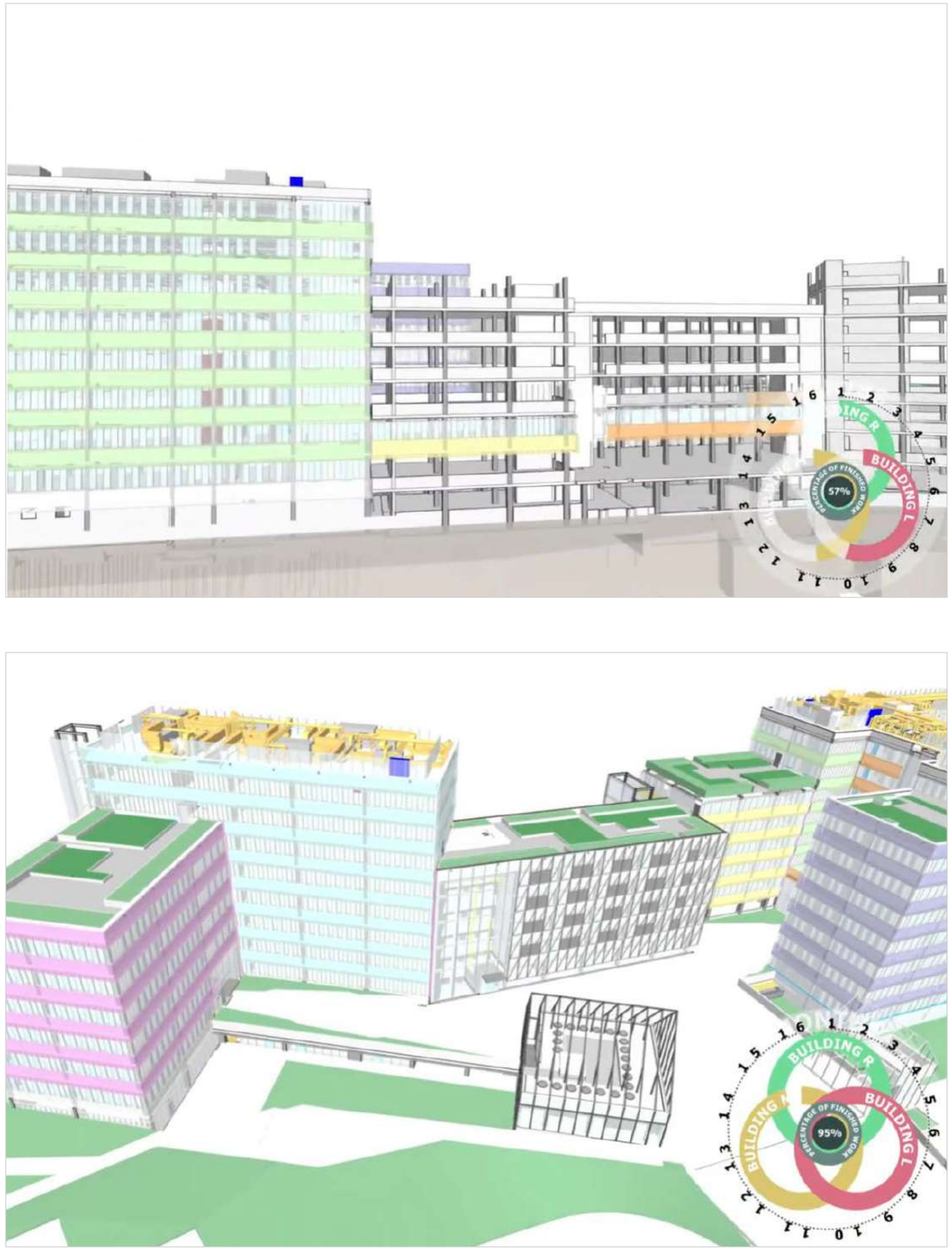
Activities:
Constructive BIM Design,
Project Management

Credits
Local and design architect: Studio Elementare
Landscape design: Studio Elementare
Development and executive architect: Tekne Spa
Structural design: Tekne Spa
MEP: Tekne Spa
Fire prevention: Tekne Spa
Remediation: Tekne Spa
Constructive structural design: Ideas
Photo: Andrea Zanchi

BIM system model



Phases of work: timelapse of construction site advancement



A modern and functional student house designed to meet contemporary living needs and spark urban revitalisation processes.

HOSPITALITY, RESIDENTIAL

Student House Giovenale

Engaged residences: Between education and urban regeneration

A symbol of revitalization and enhancement. The new project of the **Milanese student residence**, located a few steps from the Bocconi university campus, is an opportunity for renewal for a corner of the city that has long expressed the desire to trigger new dynamics of aggregation and socialization.

The intervention involves the demolition of a derelict lot and the **construction of a new complex of residences** serving education and culture.

With a well structured architectural layout, able to meet the new **demands of contemporary living**, the building aims to offer high quality accommodation for students and young workers, with shared services and open spaces towards the city.

This is a **highly valuable** building, which requires the application of careful and meticulous management of the construction process through the implementation of the most advanced project management and process optimisation techniques.

Location:
Milan, Italy

Typology:
New construction

Year:
2020 - 2021

Status:
Completed

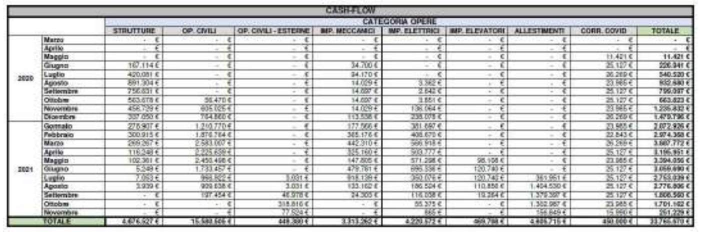
Dimensions:
17.650 sqm

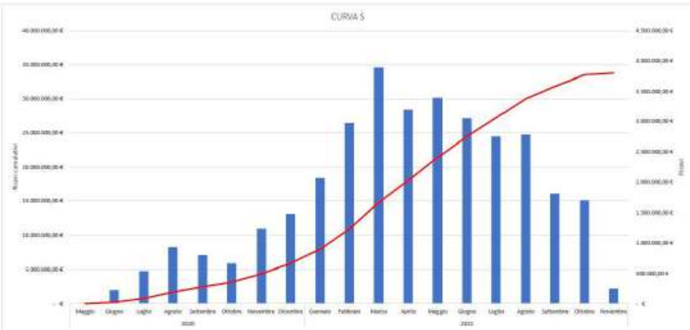
Client:
Colombo Costruzioni

Budget:
€ 35 mln

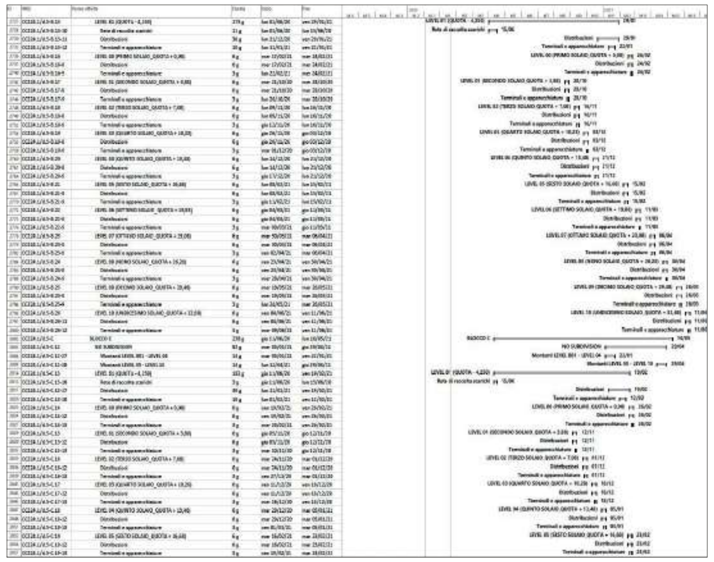
Activities:
Constructive BIM Design,
Project Management

Credits:
Architectural design: Carmody Groarke, Calzoni Architetti
Structural design: B.Cube Srl
Plants design: Esa Engineering
Fire safety: Jensen Hughes
Safety and envrionment: Reeas - Real Estate asset & Assurance service
Landscape: Arch. Giovanna Longhi
Photo: Andrea Zanchi

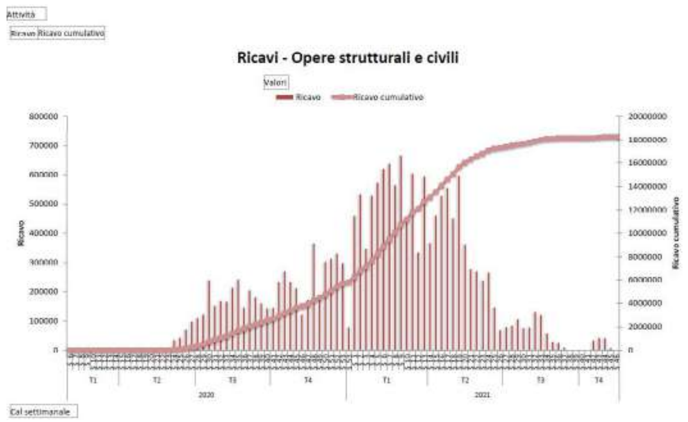




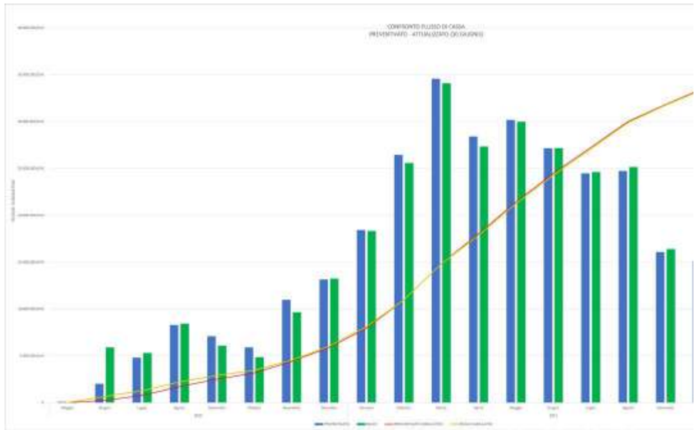
Cash flows



Scheduling



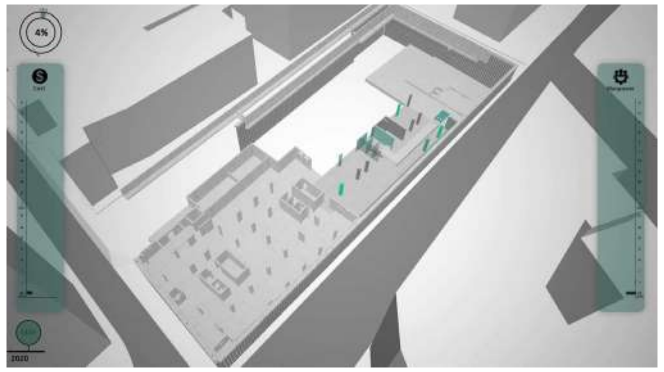
Revenues



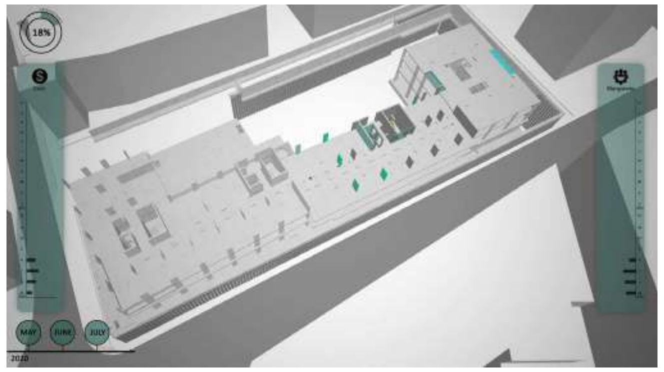
Forecasted vs Actual Revenues

Project Controlling

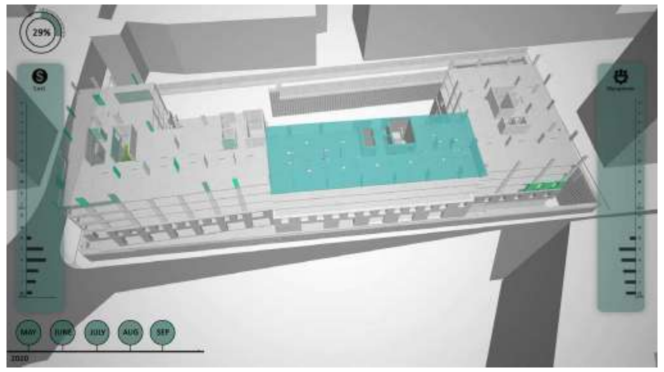
- Scheduling
- Forecasted Revenues/Costs
- Workforce & Site Equipment
- Cash-flow Management
- S-Curves
- 4D/5D BIM Model



Month 1



Month 4



Month 6

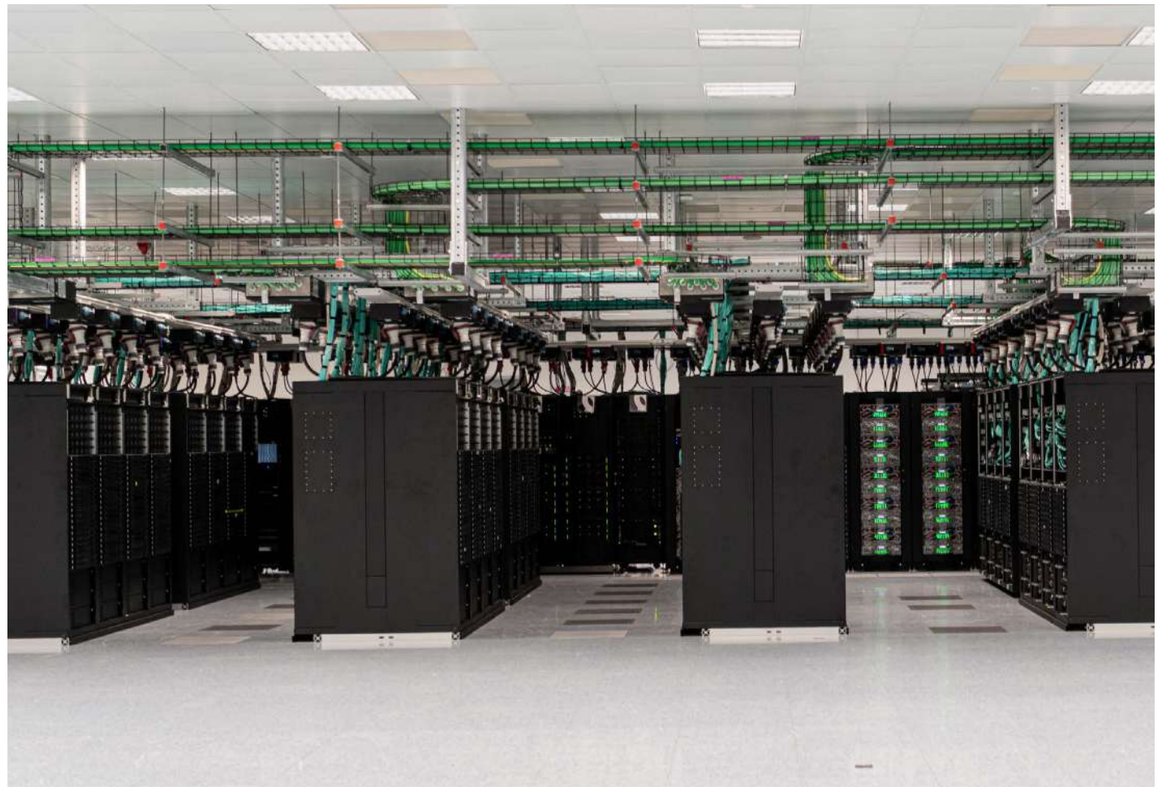
Month 7

Month 9

Month 10

Month 13

Month 16



Respect and innovation are the key words of this complex intervention, which converts part of a historic architecture into an avant-garde data centre, using BIM methodology.

DATA CENTER

ECMWF Data Center Buildings

A meteorological centre in Bologna's former tobacco factory

The new **ECMWF Data Center**, European center for medium-term weather forecasts, is characterized by the **high degree of complexity of the intervention**, on a global level.

The meteorological center covers an area of about **20.000 square meters** and is inserted within a part of the area of the f**ormer Tabacchi Factory in Bologna**, designed and built by the architect **Pier Luigi Nervi** in the **1950s** and subjected to protection by the **Cultural and Landscape Heritage of Emilia-Romagna** for its high historical and engineering value.

The need therefore consisted in **re-functionalizing part of the existing complex** by creating a complex infrastructure to establish the data center and – at the same time – interacting respectfully with the **pre-existing architectural context.**

Function and conservation find their synthesis through the advanced use of BIM, which accompanied the project management throughout the construction phase and for all disciplines, up to the development of the as built.

This methodology becomes the starting point for an **optimized management of the structure**, a need increasingly aimed at the **sustainability** of the complex and the **safeguarding** of an architecture created by an internationally renowned designer.

Location:
Bologna, Italy

Typology:
Renovation

Year:
2019 - 2021

Status:
Completed

Budget:
€ 42.8 mln (IT technologies not included)

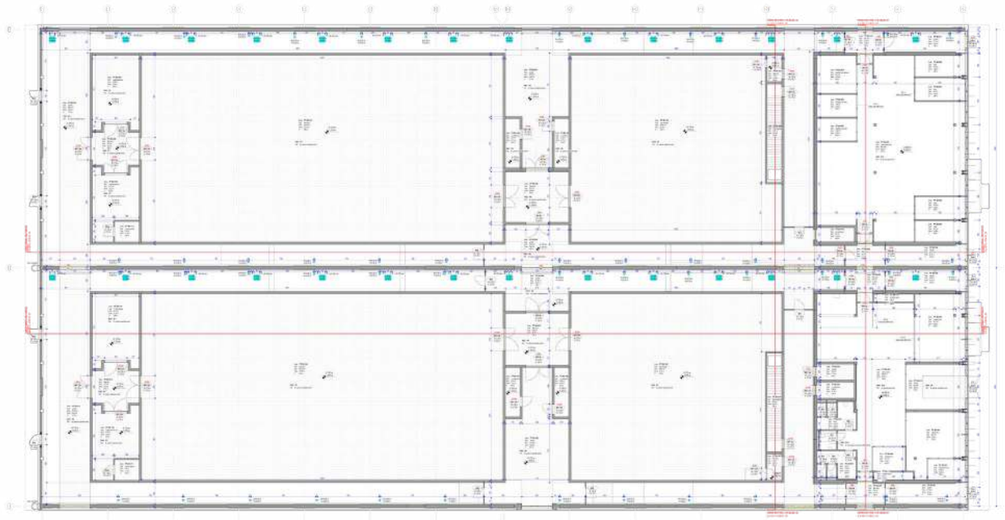
Dimensions:
Approx. 17.000 sqm project surface,
9.000 sqm building surface

Client:
RTP Frimat - Site - Gianni Benvenuto

Activities:
Constructive BIM Design,
Project Management

Credits:
Architectural Design and Coordination: GMP Architekten Von Gerkan, Marg and Partner
Plants Design: Studio T
Structural Design: Werner Sobek Stuttgart
Landscape: LAND Italia
Photo: ECMWF

Ground floor plan - Buildings B2 & B3



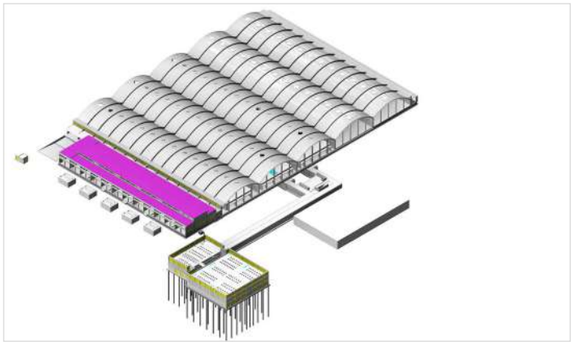
MEP details

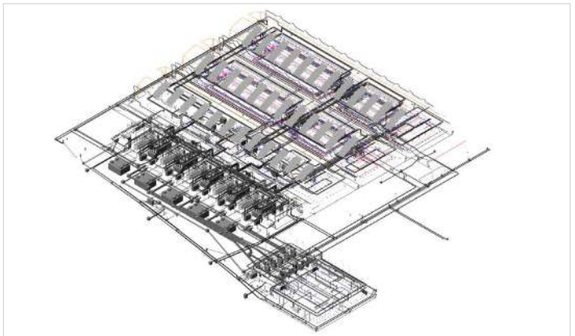
Photos

BUILDING DATA

- Power: 10 MW electric power
- Housing 80%+ of the national computing power and 20% of the European
- Main HPC (high performance computer) hosted: Atos, Leonardo, Lisa
- 5 DRUPS of 2 MW each, for a total of 10 MW

Model screenshots



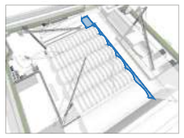


Organization & Logistics of construction site

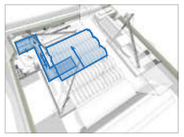
PHASE 1

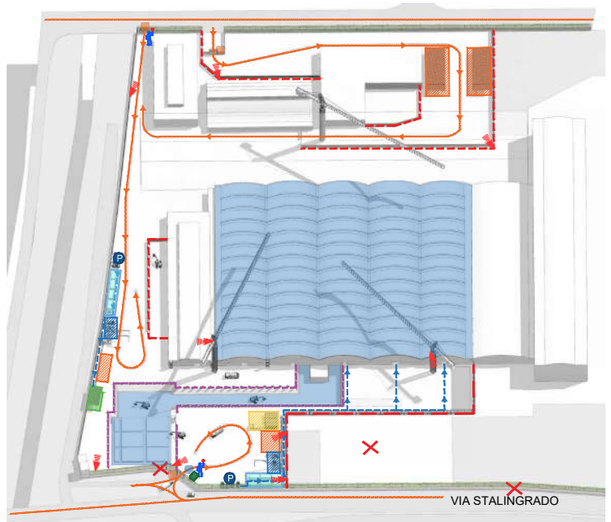
Harassment

Demolition



Excavations

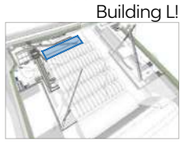




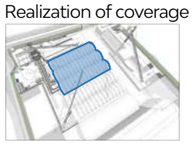
PHASE 2

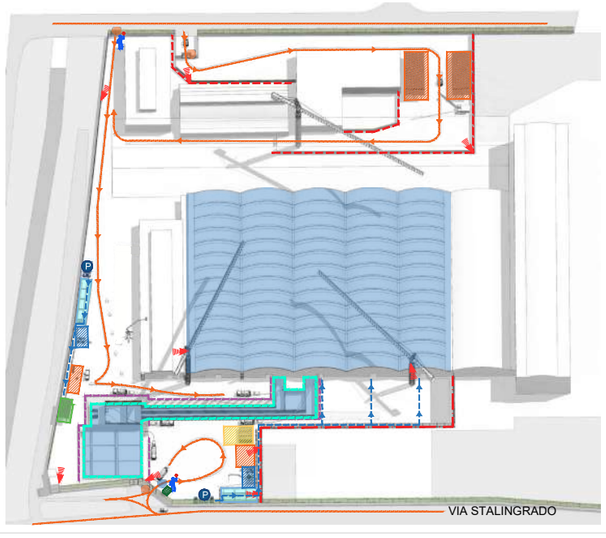
Construction of foundations

Consolidation Building L!



Consolidation & Realization of coverage

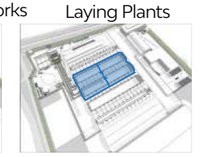




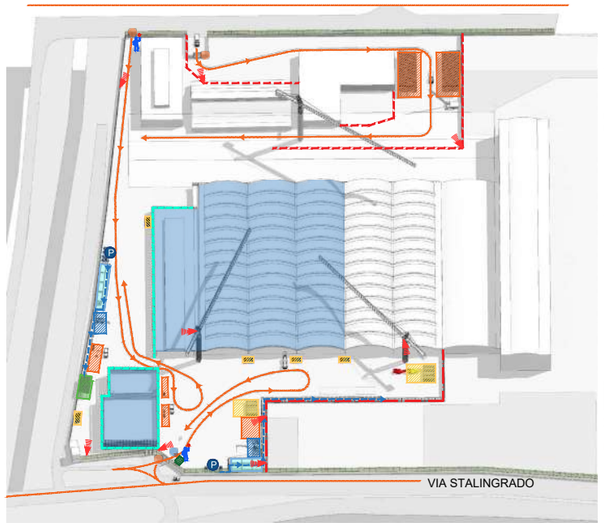
PHASE 3

Realization of internal works

Laying Plants



Construction L2

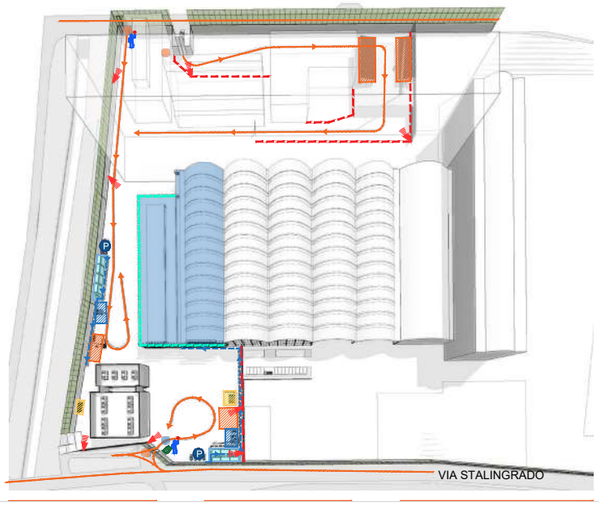


PHASE 4

Building delivery B2, B3 & L2

Laying plants buildings B1&L1

Excavation and external works



Certifications

BIM UNI PDR 74:2019
CERTIFIED COMPANY

ISO 9001:2015
CERTIFIED COMPANY

ISO 14001:2015
CERTIFIED COMPANY

ISO 45001:2018
CERTIFIED COMPANY

UNI PDR 125:2022
CERTIFIED COMPANY

SA 8000:2014
CERTIFIED COMPANY

ASSOCIATE OF
CONFINDUSTRIA
ASSOIMMOBILIARE

MEMBER OF
OICE

MEMBER OF
EFCA

MEMBER OF CNETO
CENTRO NAZIONALE EDILIZIA
E TECNICA OSPEDALIERA

BIM QUALITY
ENVIRONMENT POLICY

SOCIAL RESPONSABILITY
POLICY

GENDER EQUALITY
POLICY


ATI | Project
CREATING A BETTER REALITY
PISA
MILAN
BELGRADE
ODENSE
COPENHAGEN
PARIS
GENEVA