

MYAA Digital Future

www.myaa.eu

Digital innovation in the design of buildings



Mangera Yvars Architects is an architectural design practice based in London and Barcelona providing architecture, master planning, landscape, interiors design services for clients world wide



Thinking Process



Our work relates Culture to Form and Environment, using layers that make buildings unique in their Context.

Thinking Process

Architecture allows us to create public space, identity and by it promote social change.



MYAA Thinking Process

As architects we do our best to promote sustainability and to protect the environment. We learn from traditional solutions and we implement them through new technologies.



MYAA Thinking Process

We get inspired by the essence of things



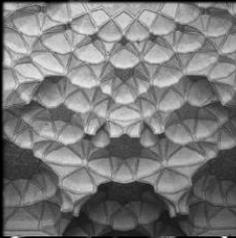
Light



Colour



Calligraphy



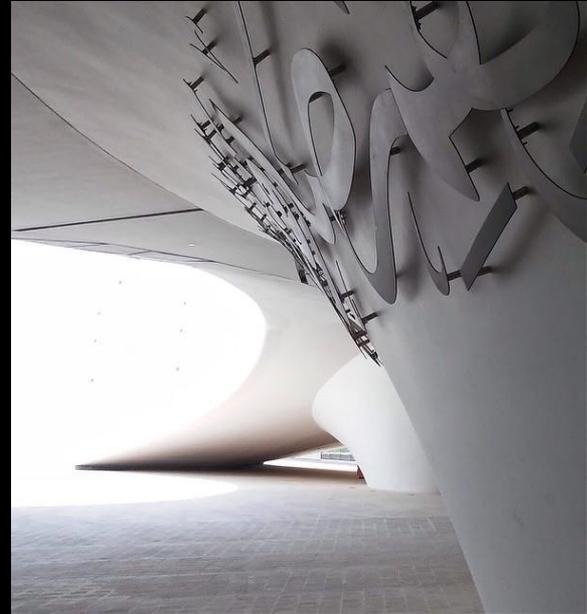
Geometry



Gardens



Water



Thinking Process

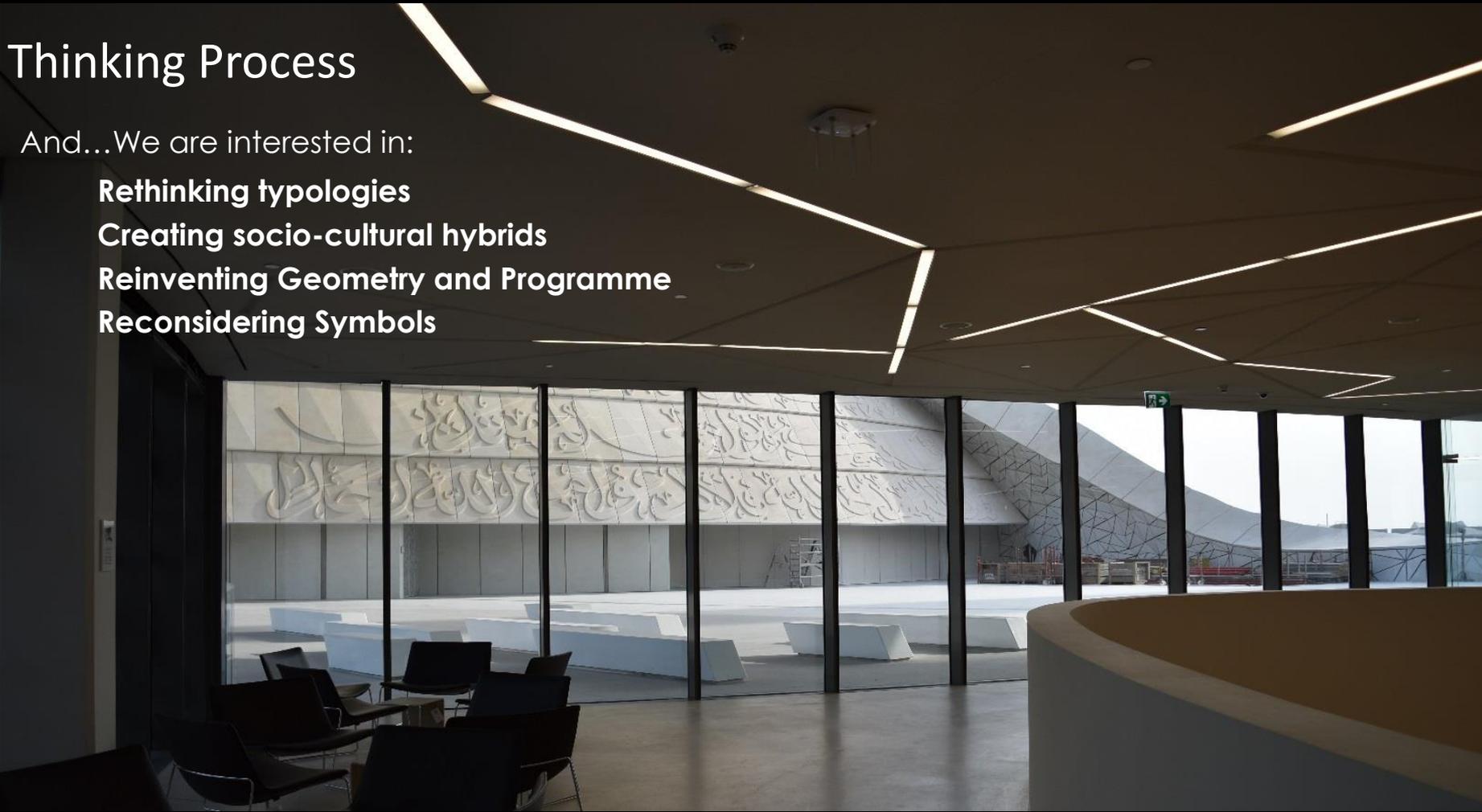
And...We are interested in:

Rethinking typologies

Creating socio-cultural hybrids

Reinventing Geometry and Programme

Reconsidering Symbols



Architects Navigate between the Ideal World and the Real World



With BIM is the same
There is an Ideal BIM World
and a Real BIM World



Our first project with BIM 2008
Faculty of Islamic Studies with
ARUP engineering

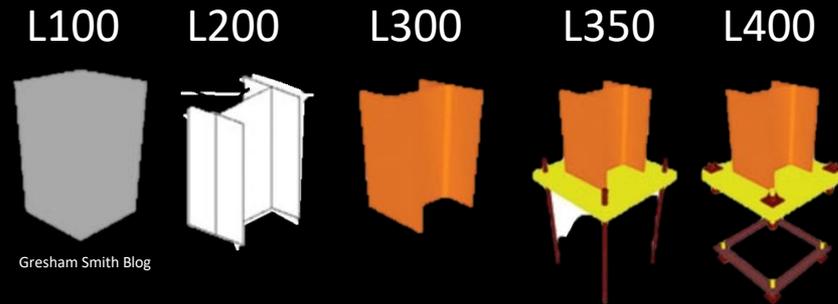
Learning

Praying

What is BIM in a Design Process?

The digital modeling is not about geometrical shapes, but it is about parametric building objects full of information allowing the sustainability studies and building performance analysis to be part of the design process

Level of Definition (LOD)



BIM Dimensions

3D

Modeling

4D

Time

5D

Cost

6D

Performance

7D

FM &M

8D

Decommissioning

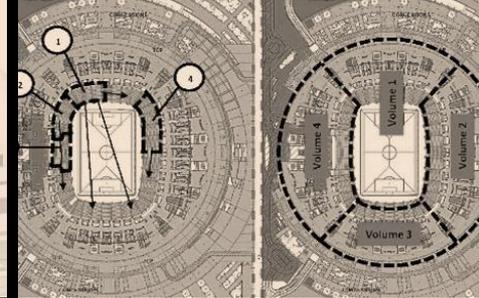
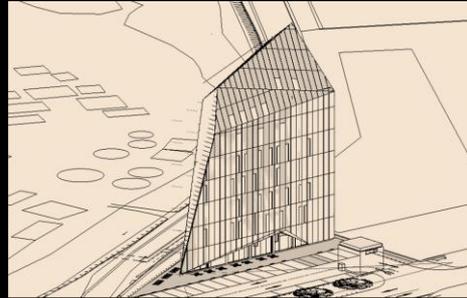
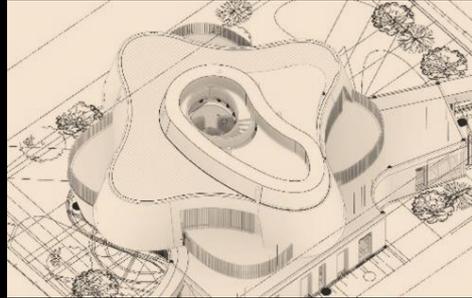
BIM MYAA Experience, Lessons learn

SMALL SCALE

MEDIUM SCALE

LEAD CONSULTANT

MEGAPROJECTS



COST IMPLICATIONS

- Project Profitability
- Cost: Software, Hardware, Training
- Important that all the team works in 3D

WORKSHARING

- Internal organization,
- BIM manager, coordinator, modellers
- Worksharing methods
- LOD Level of Detail

COMMON DATA ENVIRONMENT (CDE)

- Cloud working
- Work Flow: WIP, Shared, Publish, Archive
- Clash Detection methodology

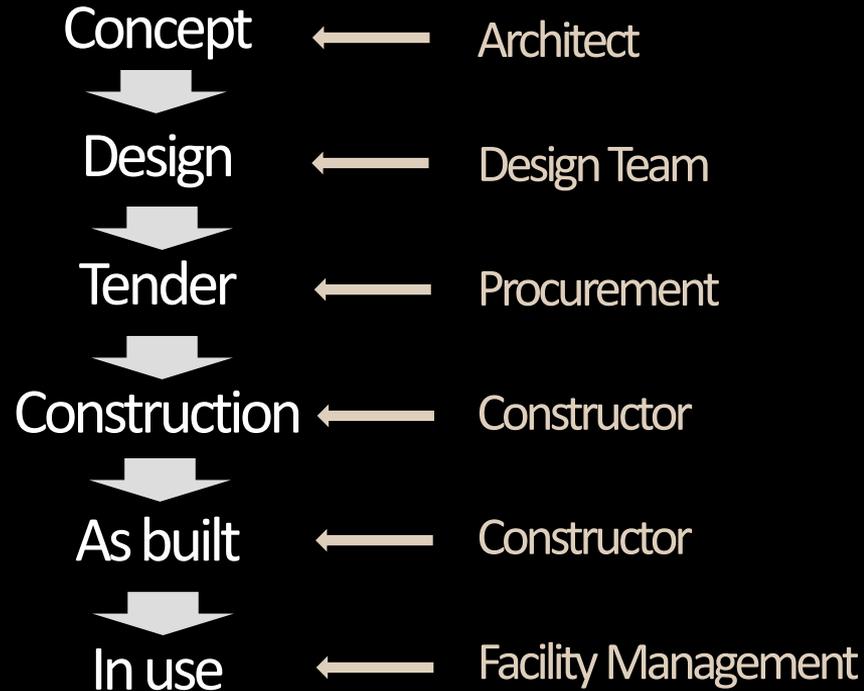
LEVEL OF INFORMATION

- Include Uniclass, Omniclass
- BIM families included information (BID process)
- Clash detection priority codes
- 4D programme information
- BIM schedules for BoQ (areas, elements, furniture...) filters

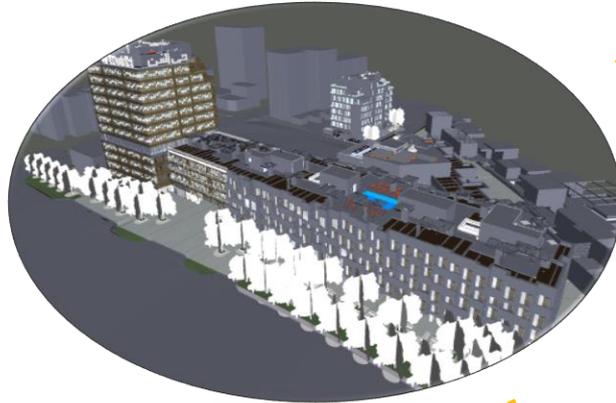
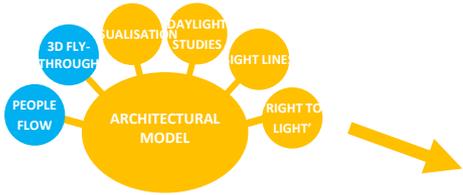
How We Work



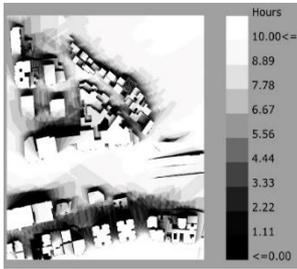
The Model Life Flow



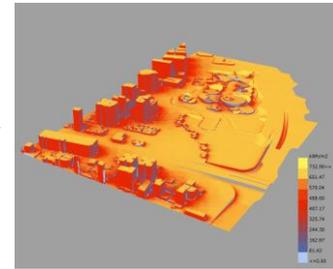
BIM Architectural Model



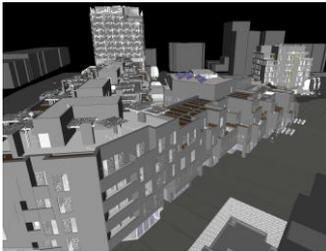
Physical model



Daylight analysis



'Right to light' studies



Fly through visualisations Renders



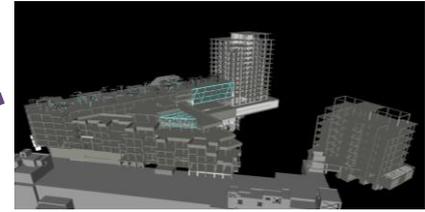
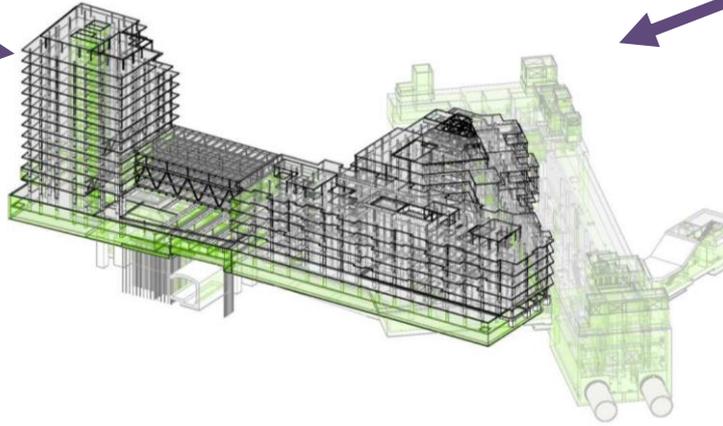
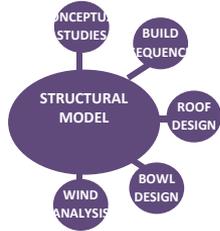
People Flow



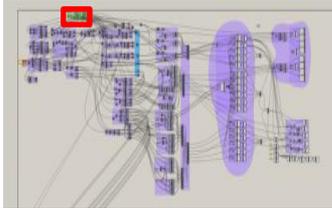
Crowd Modelling



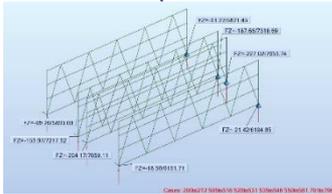
BIM Structural Model



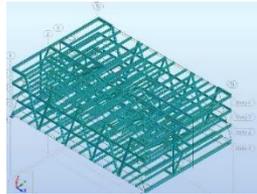
Linked via Geometry Gym and IFC link



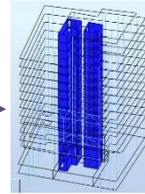
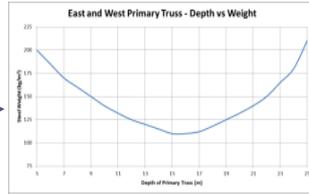
Generative model with input parameters



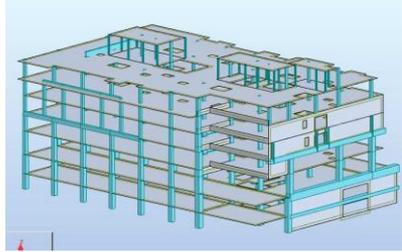
Models exported to Robot



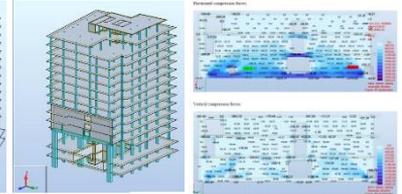
Optimised for minimum steel weight avoiding value engineering



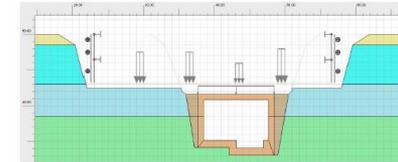
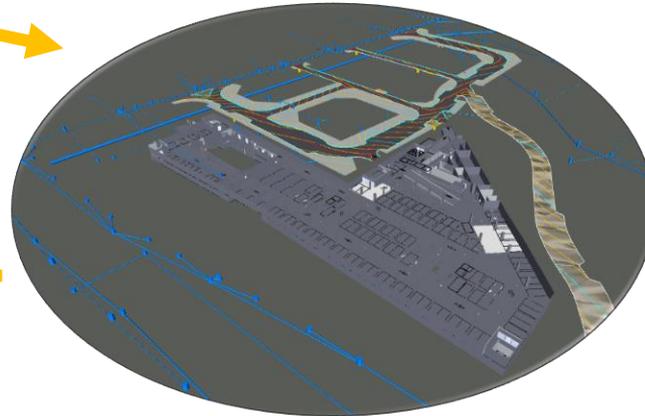
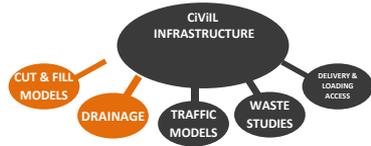
Revit model exported into CSC Fastrak



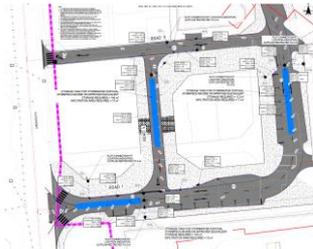
Exported to Robot for dynamics calculation



BIM Civil Infrastructure



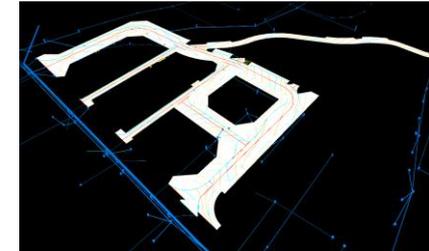
Earthworks drawing and quantities schedule



Autotracks for vehicle movement calculations



Line Group	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
Line Configurations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Volume (m³)	26	456	122	120	196	266	822	244	240	240	561	561	761	1061	1361	1661	1961	2261	2561	2861	3161
Mean Fill (m³)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Line Width (m)	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Grade (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Storage Length (m)	140.0	30.0	30.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
Storage Level	3	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Travel Length (m)	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Load Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Push Bike Factor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PS	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850
PS Protected	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850
Cost Flow (m³)	0	456	122	120	196	266	822	244	240	240	561	561	761	1061	1361	1661	1961	2261	2561	2861	3161
PS Paved	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850	0.850
Cost Flow (m³)	0	456	122	120	196	266	822	244	240	240	561	561	761	1061	1361	1661	1961	2261	2561	2861	3161
Right Turn on Red	No																				
Cost Flow (m³)	0	456	122	120	196	266	822	244	240	240	561	561	761	1061	1361	1661	1961	2261	2561	2861	3161
Link Speed (km/h)	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Link Distance (m)	402.2	402.2	402.2	402.2	402.2	402.2	402.2	402.2	402.2	402.2	402.2	402.2	402.2	402.2	402.2	402.2	402.2	402.2	402.2	402.2	402.2
Total Time (s)	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
Cost Peak (m³)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cost (m³)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Push Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Green Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Green Volume (m³)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Cost Blockages (m³)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



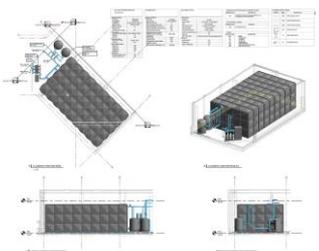
Traffic Analysis



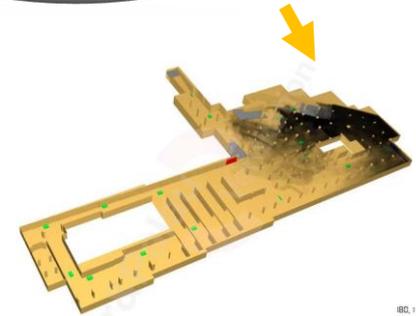
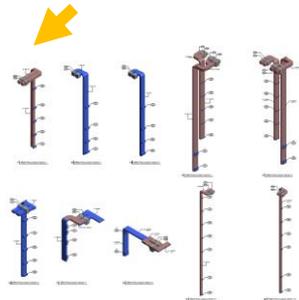
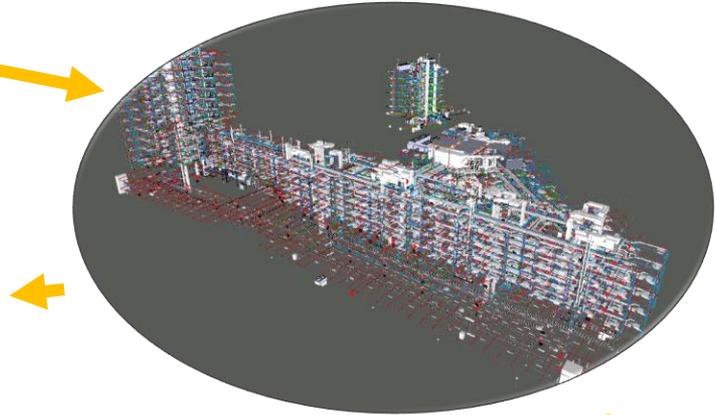
BIM MEP model



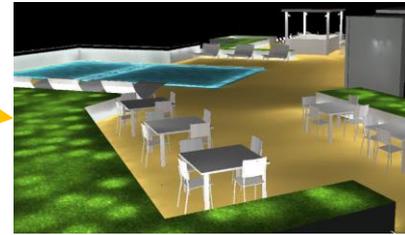
Truss feature lighting



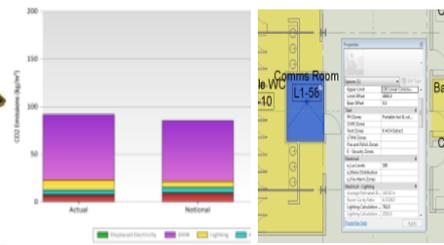
3D modelling of plant areas and main distribution routes



Emergency smoke clearance analysis



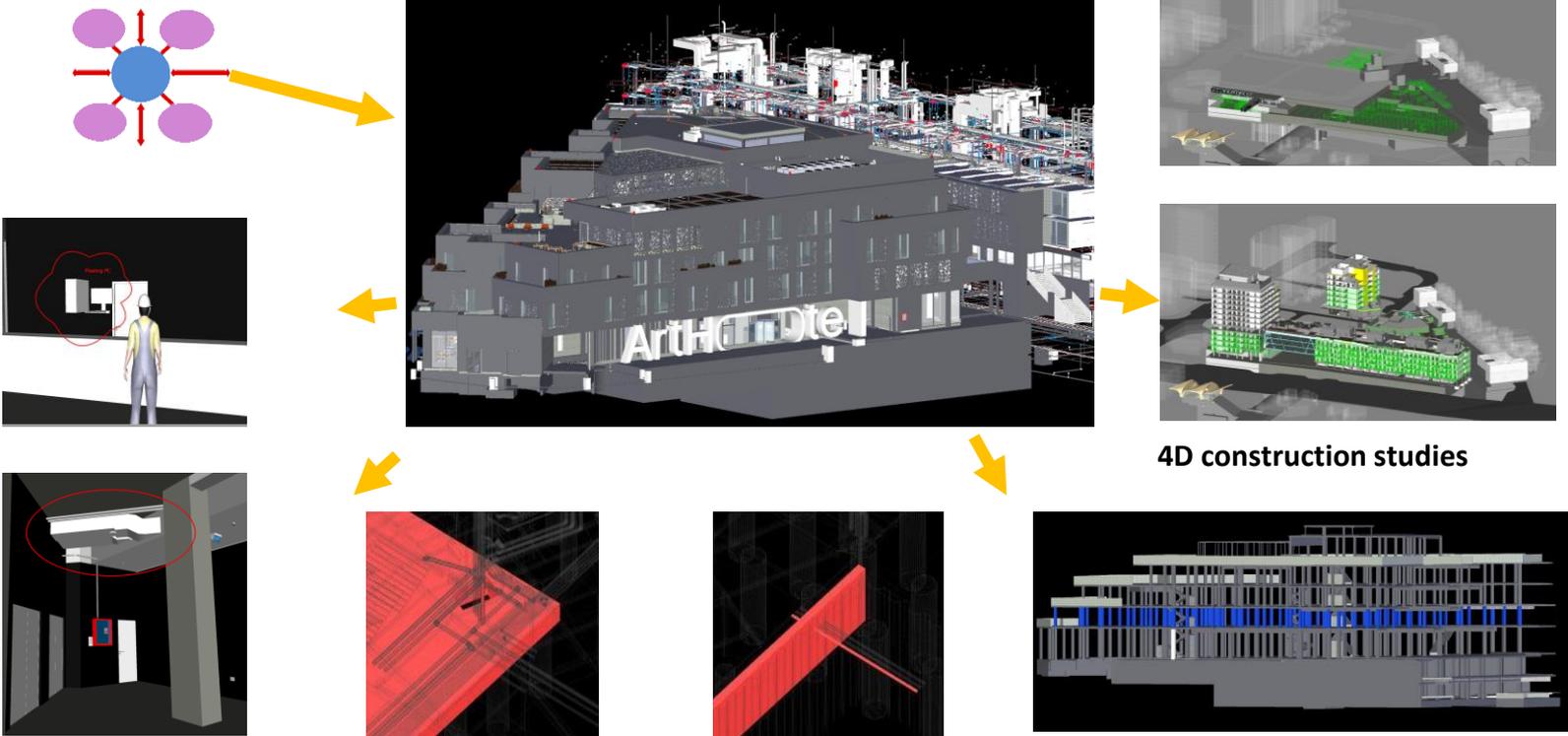
Lighting analysis



Intelligent properties



BIM Central BIM



Multidisciplinary reviews

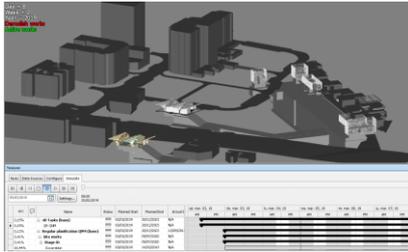
Clash Detection

4D construction studies

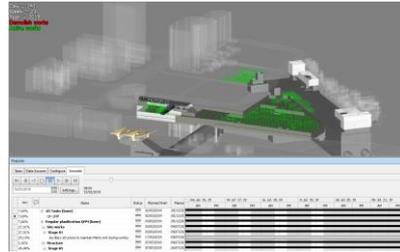
BIM used for elemental quantification



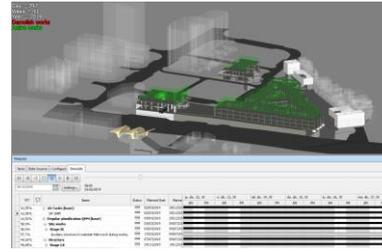
BIM 4D Construction Planning



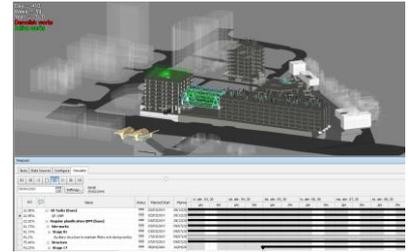
WEEK 2



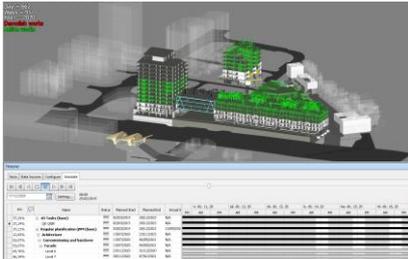
WEEK 21



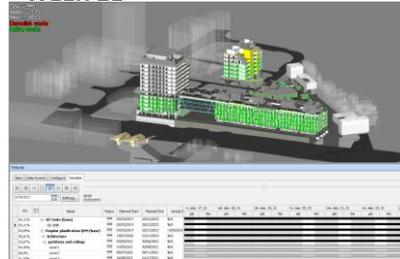
WEEK 43



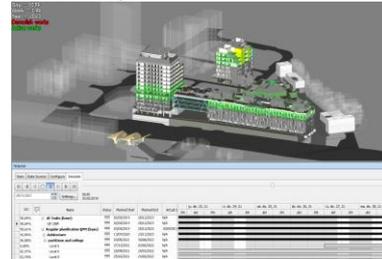
WEEK 59



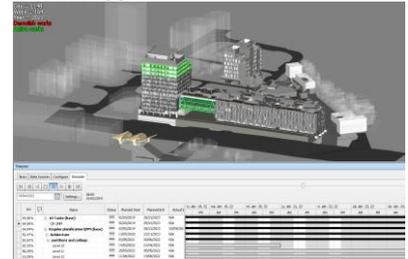
WEEK 95



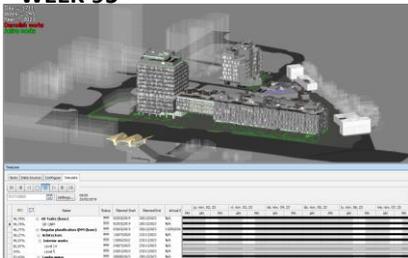
WEEK 135



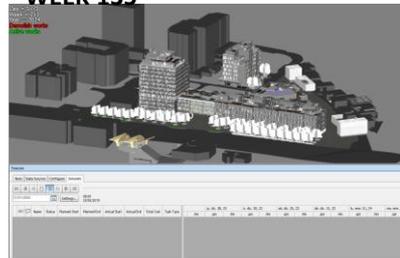
WEEK 149



WEEK 164



WEEK 245



WEEK 253



MYAA BIM Small Scale Lessons Learned



Tradition

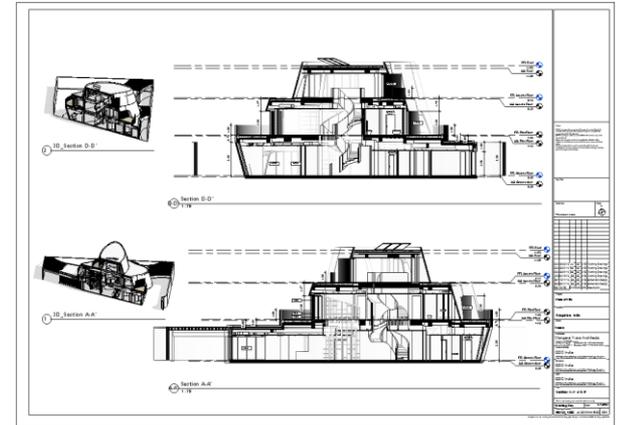
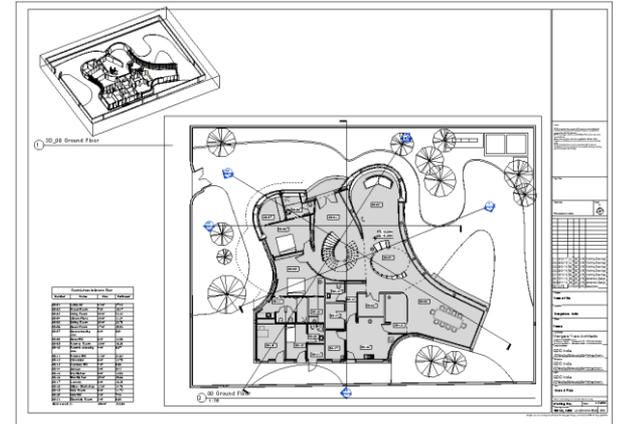
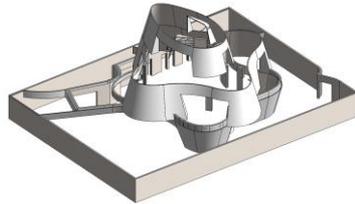
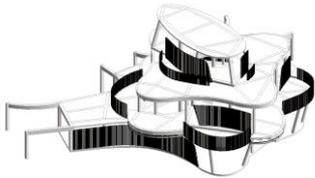
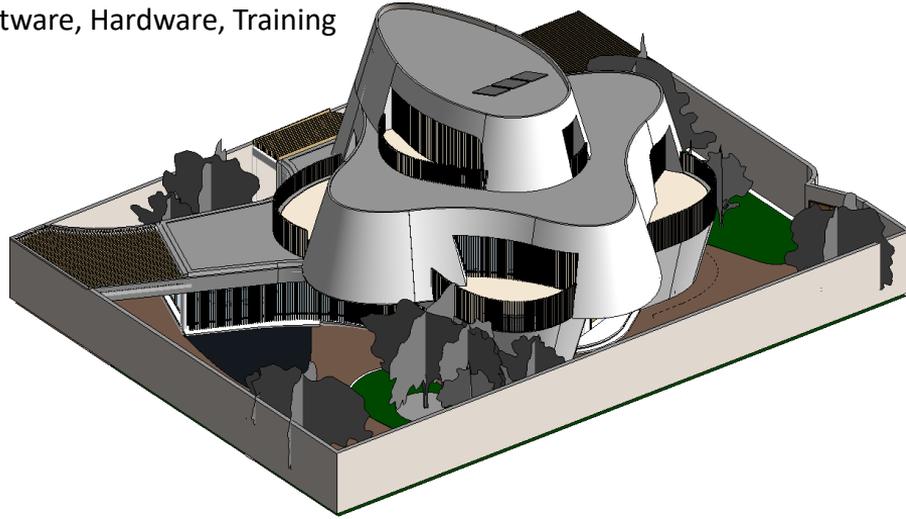


Reinterpreting Tradition

MYAA BIM Small Scale

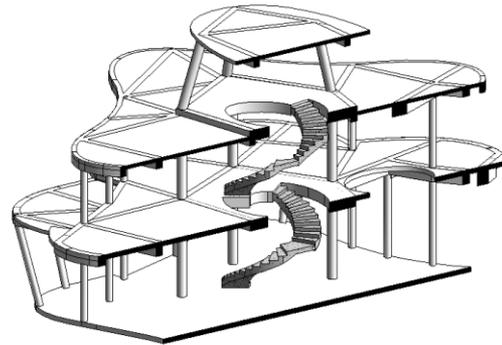
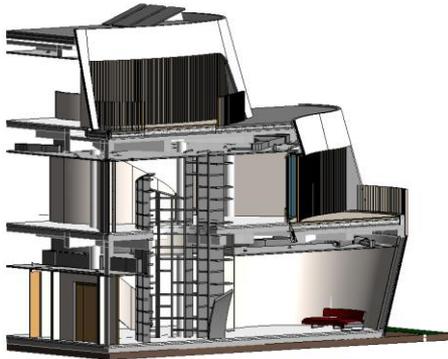
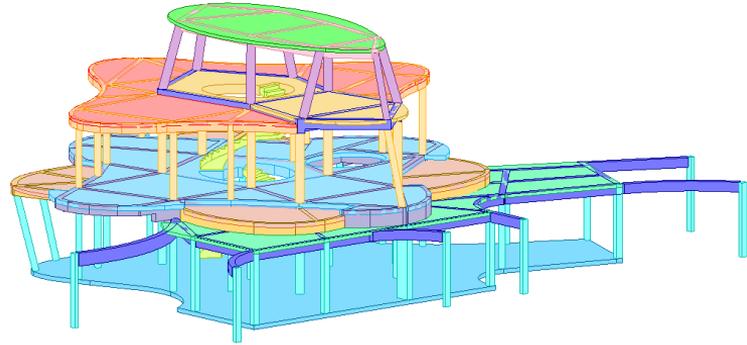
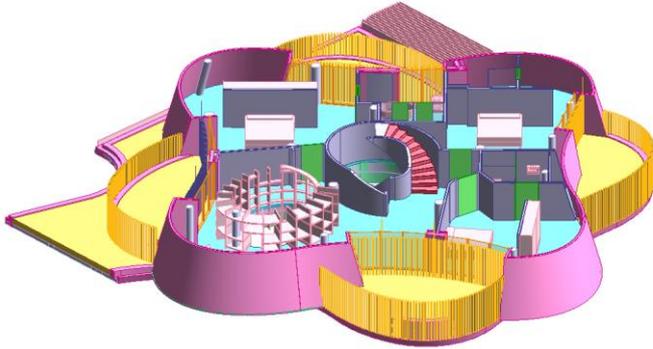
Cost implications

- Project Profitability
- Cost: Software, Hardware, Training



MYAA BIM Small scale

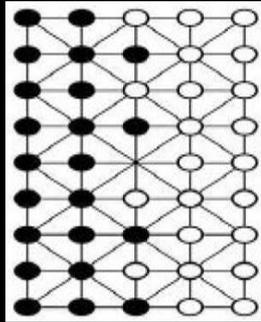
Important that all the team works in 3D





MYAA BIM Medium Scale Lessons Learned

Tradition



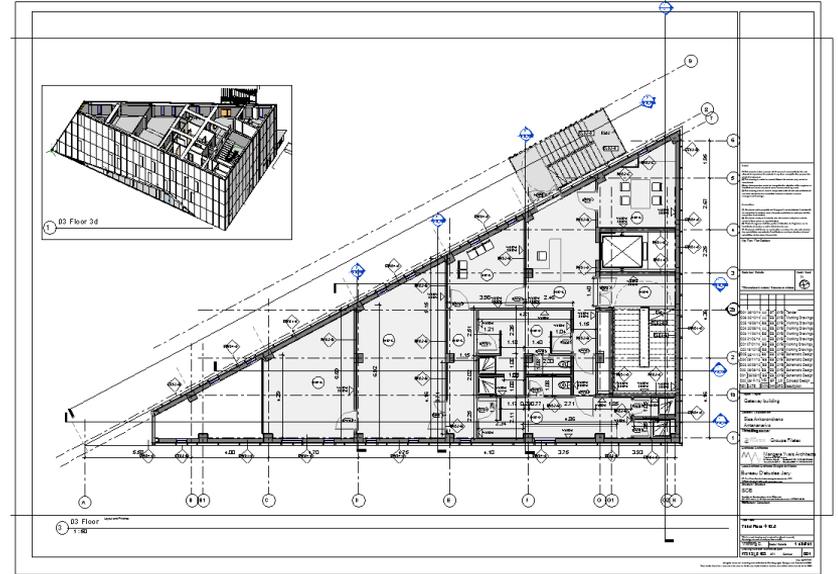
Reinterpreting Tradition



MYAA BIM Medium Scale

Worksharing

- Internal organization, BIM manager, coordinator, modellers
- Worksharing methods
- LOD Level of Detail





MYAA BIM Lead Consultant Lessons Learned



Doha Art District

Qatar Rail National Qatar Museum Metro Site
Mangera Yvars Architects & ASTAD Consult
January 2017

MYAA BIM Lead Consultant Art District Doha



MYAA BIM Lead Consultant Qatar Rail Art District Doha



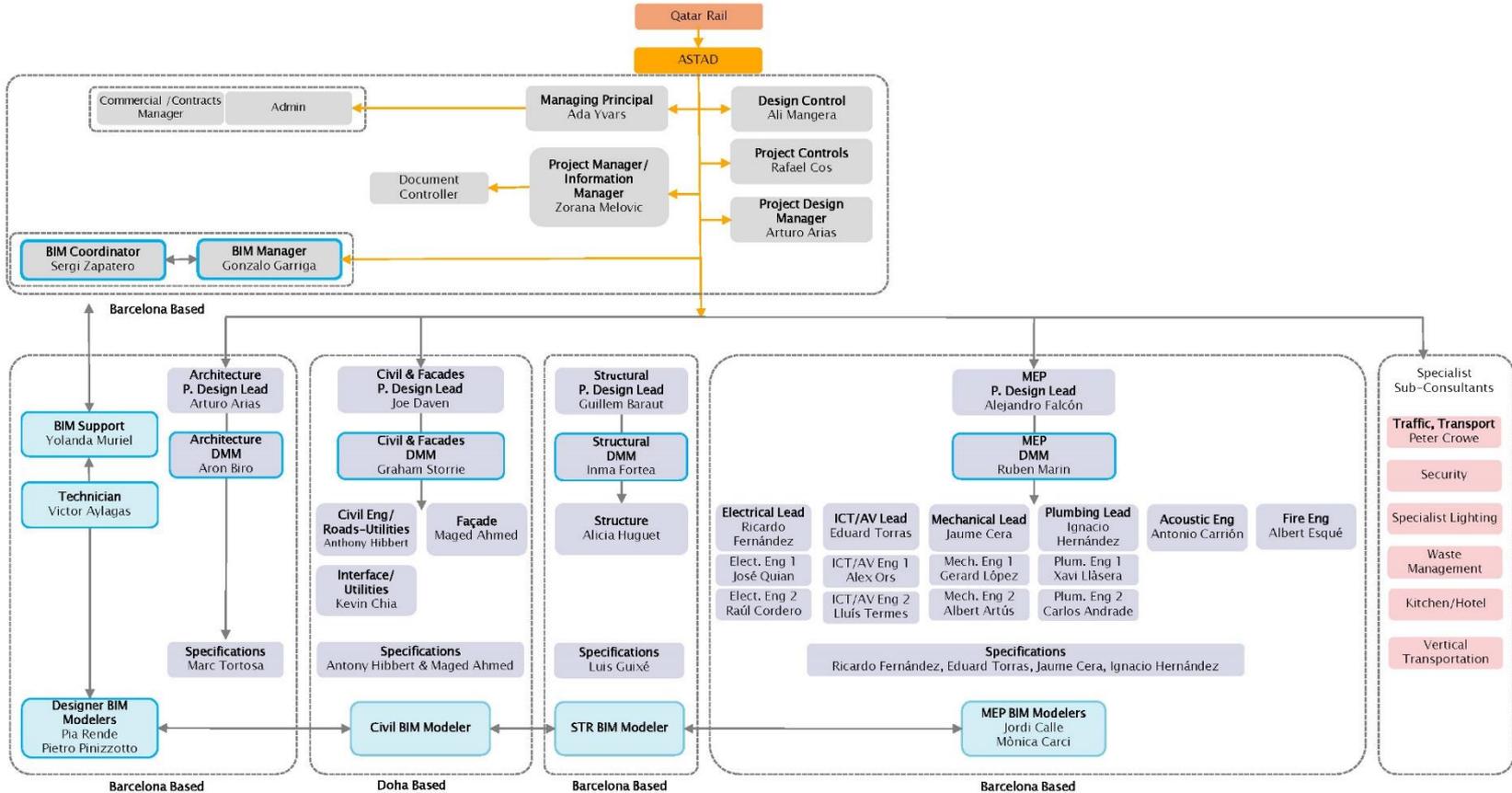
MYAA BIM Lead Consultant:

Common Data Environment (CDE)

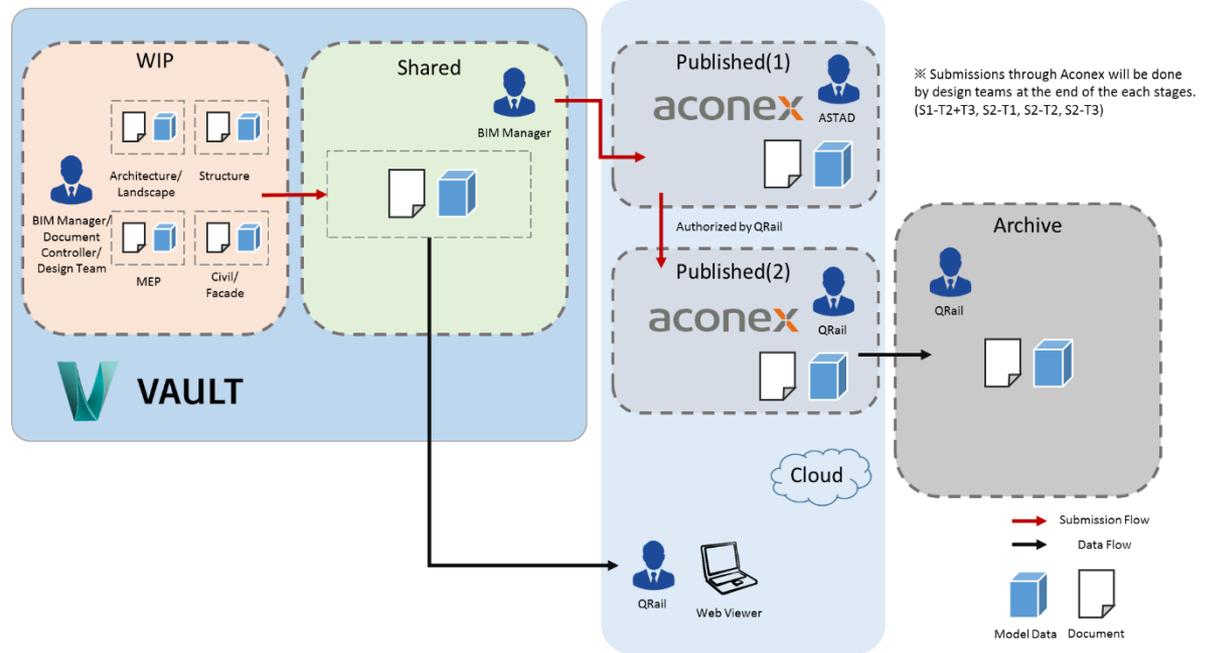
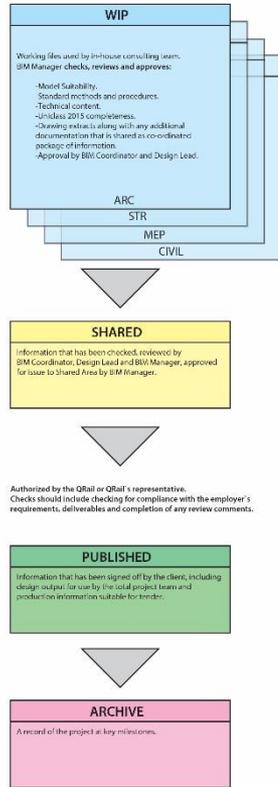
- Cloud working
- Work Flow: WIP, Shared, Publish, Archive
- Clash Detection methodology
- Consultants Review



MYAA BIM Lead Consultant Cloud Working



MYAA BIM Lead Consultant Document Workflows



MYAA BIM Lead Consultant Review

Project No.		21119 National Museum of Qatar		Stage	S1-T2T3		Document No.	3553_Clash Design Report_Template RevA.doc	
Review of		BAC Engineering Consultancy Group		Review by	INMA FORTEA		Received on	13 of 09 2017	
Date		19 of 09 2017							
7.1		R001-AST-STR-M03-H000BQ-ZZ-0001				Open			

2.6 R001-AST-ELE-DWG-03BDNMQ-02-01250 - SECOND FLOOR LIGHTING SYSTEM LAYOUT (BD 3) A ZONE
Same as above *



No.	Type	Room No.	Level	Description	Resolution	Status
31	YM	B002 First Floor Plan	1	Restaurant is recommended to add mezzanine level to the restaurant which will be overlooking the atrium and the surrounding plaza.	14/02/18: Due to there is a huge concrete beam that is supporting the steel beams of bridge building the available height for this mezzanine is too low. We prefer to have a double space instead of mezzanine. 15/02/18: Item discussed in workshop 15 Feb 2018 and considered closed.	Closed
32	YM	B002 First Floor Plan	1	Room No. 01-01-RU003: Access to the retail is contradicting with the star.	17/02/18: The stairs on the right side are not landing on first floor so the room inside the retail 01-01-LU003 is a storage.	Closed
33	YM	B002 First Floor Plan	1	Room No. 02-02-R102: Main room shall be accessed from the corridor allowing for more kitchen cabinets.	17/02/18: We have updated the layout for any clarifications check the BIM model in Vault. 15/02/18: Item discussed in workshop 15 Feb closed.	Closed
				Room No. 02-01-R031: In order to increase the living dining area: a) rotate the kitchen 90 degree. b) reduce the size of the shaft. Access to the retail is contradicting with the star.	17/02/18: We cannot rotate the kitchen because of the minimum dimension for living and dining (3x3m + 3x3m) following the Qatar Building Regulation for apartment buildings. 15/02/18: See image below with rotated kitchen as per your comment. Now dining area has to share the space with the living.	Closed

Consultants models Review

No.	Initial	Page/Section	Comment Code	Reviewers Comments (PMC/CPD, CTO)	Reply Code	Consultant	Reply Status by GR
1	VP	B01 - Ground Floor - General - R001-AST-ARC-DWG-01BDNMQ-01-02110	1	We still do not understand the waste strategy of this kitchen. We presume that the two storage spaces indicated on the drawing, should be clean storage areas. Even if they are not, explain how all the waste will be transferred outside the building. Which will be its route? 		B01/18: The waste strategy is explained in the report R001-AST-N10ANMQ-HSE-RPT-00008 waste strategy and you can find more information of the kitchens at R001-AST-010ANMQ-ARC-RPT-00024. In this particular situation the corridor leads directly to the main street and the collection point is at building 4, to avoid having it at the hotel entrance. 	

Client models and plans review

Lead consultant Design Review Feedback



MYAA BIM Megaproject Lessons Learned

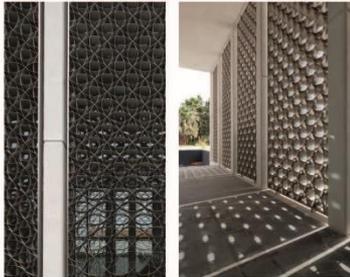


Qatar National Stadium 2022 Lusail
Team Member

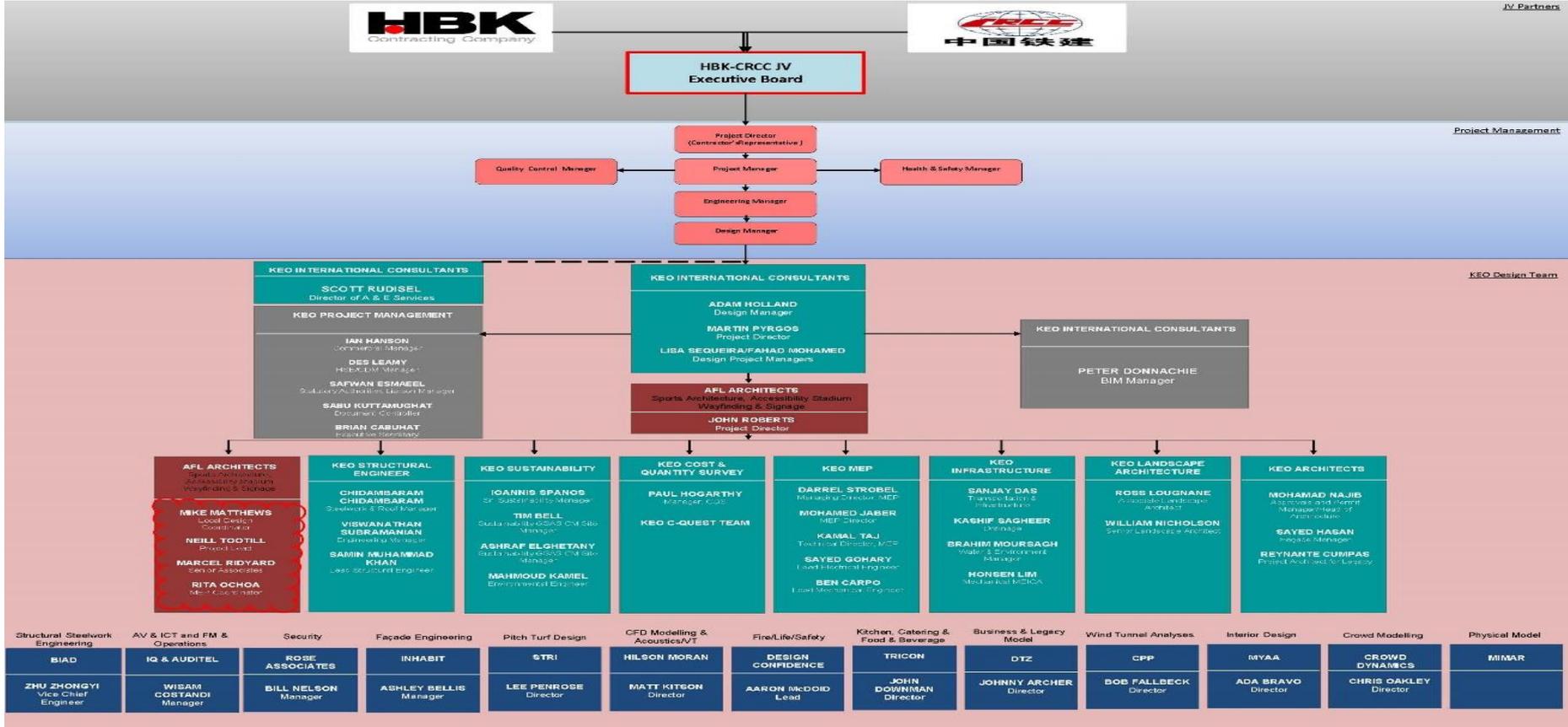
MYAA BIM Megaproject Interior Role

5.1.4.5 Step 5 - The Mashrabiya Cladding

The double curved surface of the vessel sets the geometric definition and panelisation of the facade. The facade is composed of flat panels which are supported by 3D adjustable brackets off the steel structure. The panels are triangular along the diagonal grids to follow the warp of the surface. The facade grid follows the steel structure and emphasizes the diagonals on the exterior with feature clad elements. These elements are a visual continuation of the internal steel structure. Primary and secondary steel members are linear (not curved) and set out on a triangular grid arrangement to follow the curved geometry of the vessel.



MYAA BIM Megaproject



MYAA BIM Megaproject

Level of information

- Include Uniclass, Omniclass

Type Properties

Family: System Family: Floor
Type: Ss_30_42_32_INT.FL.001_FLF-1_Reside

Type Parameters

Parameter	Value
Coarse Scale Fill Pattern	
Coarse Scale Fill Color	Black
Materials and Finishes	
Structural Material	
Material	FLF
Designation	1
Analytical Properties	
Heat Transfer Coefficient (U)	15.0072 W/(m²·K)
Thermal Resistance (R)	0.0666 (m²·K)/W
Thermal mass	9.78 kJ/K
Absorptance	0.100000
Roughness	1
Identity Data	
Type Image	
Keynote	
Model	
Manufacturer	
Type Comments	
URL	
Description	
Assembly Description	
Assembly Code	
Type Mark	INT.FL.001
Cost	
Workset	Floor Types
Edited by	
Data	
Classification.Uniclass.Ss.Number	Ss_30_42_32_40
Classification.Uniclass.Ss.Description	Internal floor tiling system
Classification.Uniclass.Pr.Number	
Classification.Uniclass.Pr.Description	

<< Preview OK Cancel Apply

Type Properties

Family: MD-3_Fire door MEP
Type: Pr_23_30_10_900x2200 - 1fr

Type Parameters

Parameter	Value
IFC Parameters	
COBIE Type Category	Door
IFC Classification	88 10 00
Masterformat 2014 Code	25-30-20-20
Masterformat 2014 Description	Doors and Frames
NBS Reference Code	Doorset Systems
NBS Reference Description	Doorset Systems
Omniclass Code	23-17 11 31
Omniclass Description	Fire Doors
Operation	
UNSPSC Code	301715
UNSPSC Description	L411
Uniclass 1.4 Code	Doors
Uniclass 2.0 Code	SS-25-30-20-20
Uniclass 2.0 Description	Doorset Systems
Uniclass 2015 Code	Ac_15_50_25
Uniclass 2015 Name	Doors, windows and glazing su
Uniclass II Code	C1020
Uniclass II Description	Interior Doors
General	
Date of publishing	
Design country	
Edition number	0
Manufacturer country	
Manufacturer name	
Nominal height	0.0000
Nominal width	0.0000
Product SKU	
Product family	Interior door
Product group	REI door
Weight Net (Kg)	0

<< Preview OK Cancel Apply

<Multi-Category Schedule>

A	B	C	D	E	F	G
Family	Type	Type Mark	Classification Uniclass	Classification Uniclass	Classification Uniclass	Classification Uniclass
Air Terminals						
Exhaust_Air_Grille_0_Blades_Horizontal_1200 x 200						
Caseswork						
21116_Ceiling_Access_Panel	Pr_30_59_36_CF-5_600x600mm	CF-5	Access panels	Pr_30_59_36_01		
Bath Bag Coverage	Sa_25_45_88_W900 H1200 mm		Counter tops	Pr_40_30_30_18		
Bath Bag Coverage	Sa_25_45_88_W1000 H1200 mm		Counter tops	Pr_40_30_30_18		
Bath Bag Coverage	Sa_25_45_88_W1200 H1200 mm		Counter tops	Pr_40_30_30_18		
Bath Bag Coverage	Sa_25_45_88_W1300 H1200 mm		Counter tops	Pr_40_30_30_18		
Bath Bag Coverage	Sa_25_45_88_W1500 H1200 mm		Counter tops	Pr_40_30_30_18		
Bath Bag Coverage	Sa_25_45_88_W1600 H1200 mm		Counter tops	Pr_40_30_30_18		
Bath Bag Coverage	Sa_25_45_88_W1700 H1200 mm		Counter tops	Pr_40_30_30_18		
Bath countertop	Sa_25_45_88_WFT 1 - W900 mm		Tiling systems	Sa_25_45_88		
Bath countertop	Sa_25_45_88_WFT 1 - W1000 mm		Tiling systems	Sa_25_45_88		
Bath countertop	Sa_25_45_88_WFT 1 - W1200 mm		Tiling systems	Sa_25_45_88		
Bath countertop	Sa_25_45_88_WFT 1 - W1600 mm		Tiling systems	Sa_25_45_88		
Bath countertop	Sa_25_45_88_WFT 1 - W1700 mm		Tiling systems	Sa_25_45_88		
Bath countertop	Sa_25_45_88_WFT 3 - W900 mm		Tiling systems	Sa_25_45_88		
Bath countertop	Sa_25_45_88_WFT 3 - W1000 mm		Tiling systems	Sa_25_45_88		
Bath countertop	Sa_25_45_88_WFT 3 - W1500 mm		Tiling systems	Sa_25_45_88		
Bath countertop	Sa_25_45_88_WFT 3 - W1700 mm		Tiling systems	Sa_25_45_88		
KBS-1_Backspash	Pr_40_50_21_Backspash	KBS-1	Desks, tables and	Pr_40_50_21		
KCB-1_Cabinet	Pr_40_50_21_Cabinet_300x600 (L)	KCB-1	Desks, tables and	Pr_40_50_21		
KCB-1_Cabinet	Pr_40_50_21_Cabinet_500x600 (L)	KCB-1	Desks, tables and	Pr_40_50_21		
KCB-1_Cabinet	Pr_40_50_21_Cabinet_500x600 (R)	KCB-1	Desks, tables and	Pr_40_50_21		
KCB-1_Cabinet	Pr_40_50_21_Cabinet_600x600 (L)	KCB-1	Desks, tables and	Pr_40_50_21		
KCB-1_Cabinet	Pr_40_50_21_Cabinet_600x600 (R)	KCB-1	Desks, tables and	Pr_40_50_21		
KCB-3_Drawer Cabinet	Pr_40_50_21_Drawer_600x600	KCB-3	Desks, tables and	Pr_40_50_21		
KCB-4_Topcase	Pr_40_50_21_Topcase_300x350 (L)	KCB-4	Desks, tables and	Pr_40_50_21		
KCB-4_Topcase	Pr_40_50_21_Topcase_500x350 (L)	KCB-4	Desks, tables and	Pr_40_50_21		
KCB-4_Topcase	Pr_40_50_21_Topcase_500x350 (R)	KCB-4	Desks, tables and	Pr_40_50_21		
KCB-4_Topcase	Pr_40_50_21_Topcase_600x350 (L)	KCB-4	Desks, tables and	Pr_40_50_21		
KCB-4_Topcase	Pr_40_50_21_Topcase_600x350 (R)	KCB-4	Desks, tables and	Pr_40_50_21		
KCB-6_Hot Topcase	Pr_40_50_21_Topcase_600x350 (R)	KCB-6	Desks, tables and	Pr_40_50_21		
KCB-9_Oven tower	Pr_40_50_21_Cupboard_600x600_left	KCB-9	Desks, tables and	Pr_40_50_21		
KCB-9_Oven tower	Pr_40_50_21_45_Kitchen_tower_left	KCB-9	Desks, tables and	Pr_40_50_21		
KCB-10_Cupboard	Pr_40_50_21_Cupboard_600x600_left	KCB-10	Desks, tables and	Pr_40_50_21		
KCB-10_Cupboard	Pr_40_50_21_Cupboard_600x600_right	KCB-10	Desks, tables and	Pr_40_50_21		
KCB-11_Cabinet for Dishwasher	Pr_40_50_21_Dish_Washer_600x600	KCB-11	Desks, tables and	Pr_40_50_21		
KCB-13_Corner Cabinet (R)	Pr_40_50_21_Cabinet_600x600 (R)	KCB-13	Desks, tables and	Pr_40_50_21		
KCB-14_Corner Topcase	Pr_40_50_21_Corner_Topcase_600x600	KCB-14	Desks, tables and	Pr_40_50_21		
KCB-16_Sink Cabinet	Pr_40_50_21_Cabinet_600x600 (L)	KCB-16	Desks, tables and	Pr_40_50_21		
KCT-1_Counter top	Pr_40_50_21_Worktop	KCT-1	Kitchen worktops	Pr_40_50_21_45		
TV bureau	Pr_40_50_21_400 x 300 x 2000 mm		Kitchen worktops	Pr_40_50_21_45		

WIP_FT (Not Editable)

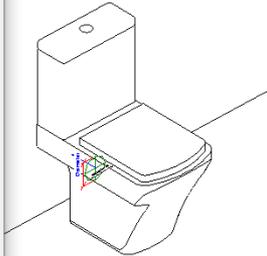


MYAA BIM Megaproject

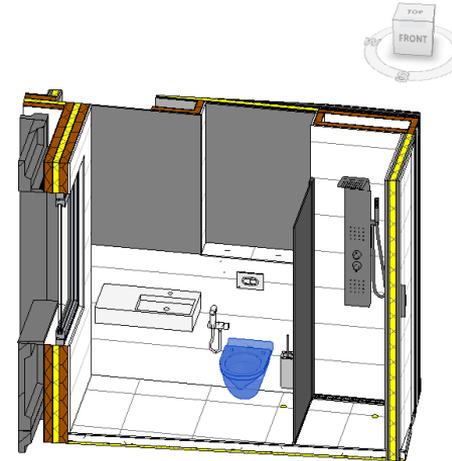
Level of information

- BIM families included information (BID process)

Parameter	Value	Formula	Lock
General			
Weight Net (Kg)	0		
Region South America	All		
Region Oceania	All		
Region North America	All		
Region Middle East	All		
Region Europe	All		
Region Asia	All		
Region Antarctica	All		
Region Africa	All		
QR code	http://bimobject.com/		
Product group	TOILETS		
Product family	Hall		
Product SKU	A342627170		
Nominal width	595.00		
Nominal height	765.00		
Manufacturer name	Roca		
Manufacturer country			
Edition number	0		
Design country			
Date of publishing	2012-06-01		
Other			
Identity Data			
Youtube clip			
URL	http://www.roca.com		
Technical description	http://www.roca.com		
Product data url	http://bimobject.com		
Product certification			
Product Guid	9ef2856a-ae72-4a86-a01		
Model	342627...		



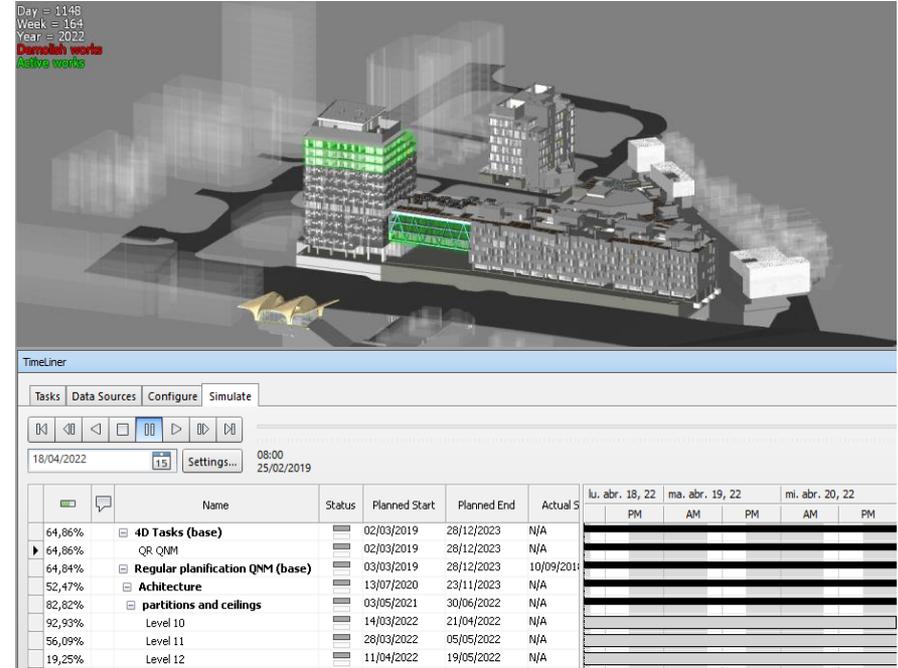
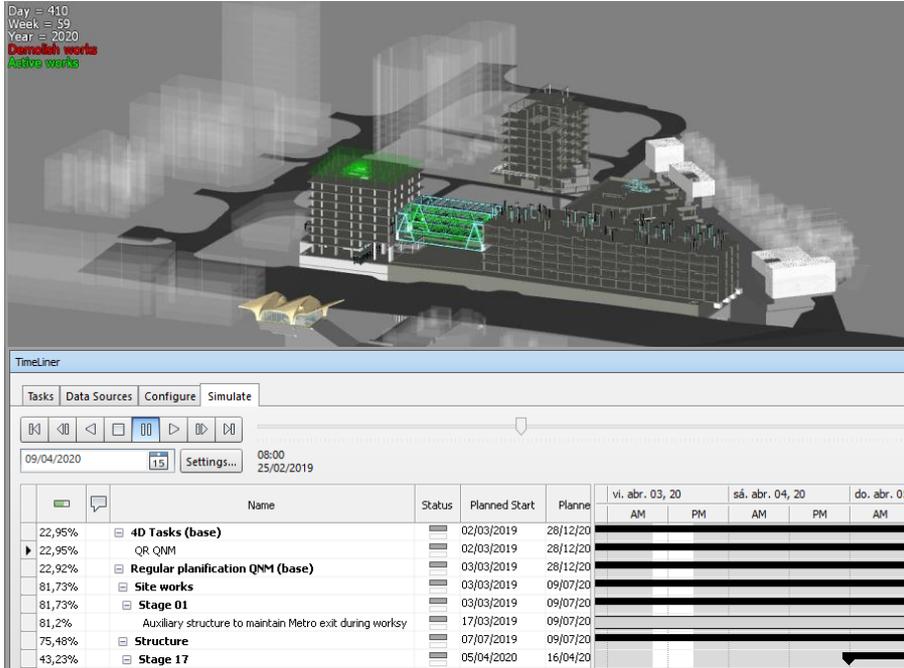
Parameter	Value
IFC Parameters	
Unifomat II Description	Sanitary Waste
Unifomat II Code	D2030
Uniclass 2015 Name	Uninail and WC fittings
Uniclass 2015 Code	Pr_40_20_93
Uniclass 2.0 Description	Toilet Systems
Uniclass 2.0 Code	55-35-65-90
Uniclass 1.4 Description	Toilets
Uniclass 1.4 Code	L7216
UNSPSC Code	301815
OmniClass Description	Toilets
OmniClass Code	23-31 19 00
NBS Reference Description	Toilet Systems
NBS Reference Code	35-65-90
Masterformat 2014 Description	Sanitary Facilities
Masterformat 2014 Code	01 52 19
IFC Classification	Sanitary Terminal
COBie Type Category	
BIMObject category	Toilets



MYAA BIM Megaproject

Level of information

- 4D programme information



MYAA BIM Megaproject

Level of information

- BIM schedules for BoQ (areas, furniture...)

Door Family	Door Name	Door Code	Door Type	Door Dimensions			Material	Color	Finish	Hardware	Notes	Door Schedule
				Width	Height	Depth						
...

A	B	C	D	E	F	G	H
Level	Department	Number	Name	Perimeter	Area	Count	Room Type by Usage
04B0 Level B1	COMMON	04-B1-L001	LOBBY	28.83	35 m²	1	L
COMMON					35 m²	1	
04B0 Level B1	CORE	04-B1-S001	STARS 13	32.36	21 m²	1	S
CORE					21 m²	1	
04B0 Level B1	MEP	04-B1-R001	DOMESTIC TANK	20.00	23 m²	1	R
04B0 Level B1	MEP	04-B1-R002	PLUMBING PUMPS	27.46	45 m²	1	R
04B0 Level B1	MEP	04-B1-R003	FIRE FIGHTING PUMPS	25.46	25 m²	1	R
04B0 Level B1	MEP	04-B1-R004	FIRE TANK	10.80	7 m²	1	R
04B0 Level B1	MEP	04-B1-R005	MOI SECURITY ROOM	14.61	14 m²	1	R
04B0 Level B1	MEP	04-B1-R006	STORM WATER TANK	11.80	9 m²	1	R
04B0 Level B1	MEP	04-B1-R007	MDB ROOM	46.43	54 m²	1	R
MEP					177 m²	7	
04B0 Level 0	COMMON	04-00-R002	WASTE	12.39	9 m²	1	R
04B0 Level 0	COMMON	04-00-L001	LOBBY	38.19	70 m²	1	L
04B0 Level 0	COMMON	04-00-L002	CORRIDOR	10.24	6 m²	1	L
04B0 Level 0	COMMON	04-00-R006	TOILET	8.86	4 m²	1	R
04B0 Level 0	COMMON	04-00-R005	AMENITIES	9.58	5 m²	1	R
04B0 Level 0	COMMON	04-00-R004	CORRIDOR	6.31	2 m²	1	R
04B0 Level 0	COMMON	04-00-R001	PARKING	137.66	791 m²	1	R
COMMON					888 m²	7	

This block contains a detailed BIM schedule table with multiple columns for different categories of items. The table is organized into several sections with distinct color-coded headers: blue, orange, purple, and pink. To the right of the main table, there is a small site plan diagram showing the building's footprint and surrounding context. Below the diagram, there are various project information fields, including a title block with the company logo (MYAA) and project details.



- **How do you use BIM and for what type of projects it can be used? Do the use of BIM help in your daily work? What are the difficulties found to use it and how did you cope with them? Do you find any difference between the design and construction phases? Is it easy to apply BIM to already built buildings?**
- **Based on the experience with BIM, how are you facing the uptake of other technologies? Is easy to find people? If not how did you get there? What is the involvement of an architect in the process of improving energy efficiency?**