OPINION BUILDERS

BIM IS AN ATTITUDE

PORTFOLIO

As a dynamic engineer team, we believe that 3D modeling can be more than a tool for visualization. Giving more information and attributes to the elements of the 3D model and use them wisely has a huge advantage in the construction industry. That is the essence of BIM modeling.
Even the workflow is well-documented and has many rules or even standards, each project and every client needs a unique solution. That is why we are continuously learning, making research and developing new methods, optimizing the workflows, so that we can keep our agility and flexibly for every upcoming issue.
Information extracted from our 3D database models can save time and money for our clients in the construction field, pre-construction and facility management in Europe, Asia, Middle East and North America.

OUR SUCCESFUL PROJECTS IN THE WORLD

MORE THAN **8 YEARS** OF BIM EXPERIENCE

PROJETS IN **15 COUNTRIES**

MORE THAN **80 SUCCESFUL BIM PROJECTS**

SUPERVISING ABOUT **1 700 000 M²** OF CONSTRUCTION

CONSTANT **DEVELOPMENT**

WIDESPREAD **PARTNERSHIPS**

IN RELATED SERVICES

MASSIVE **SOFTWARE KNOWLEDGE**

United States of America
Australia
Belgium
Denmark
United Arab Emirates
United Kingdom
Netherlands
India
Japan
China
Hungary
Romania
Switzerland
Saudi Arabia
Singapore

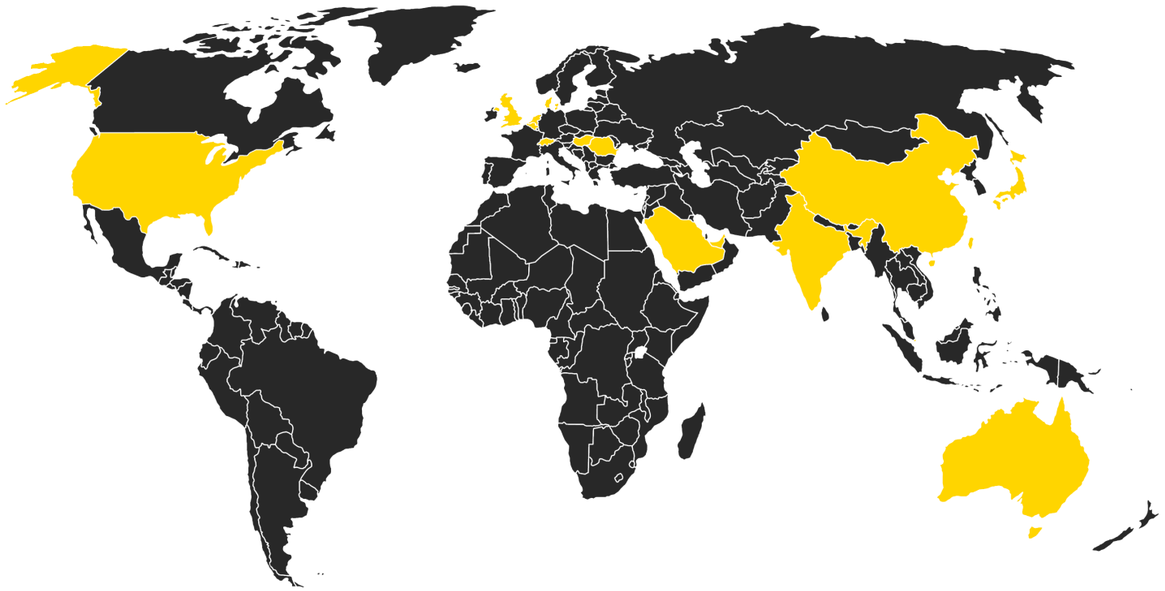


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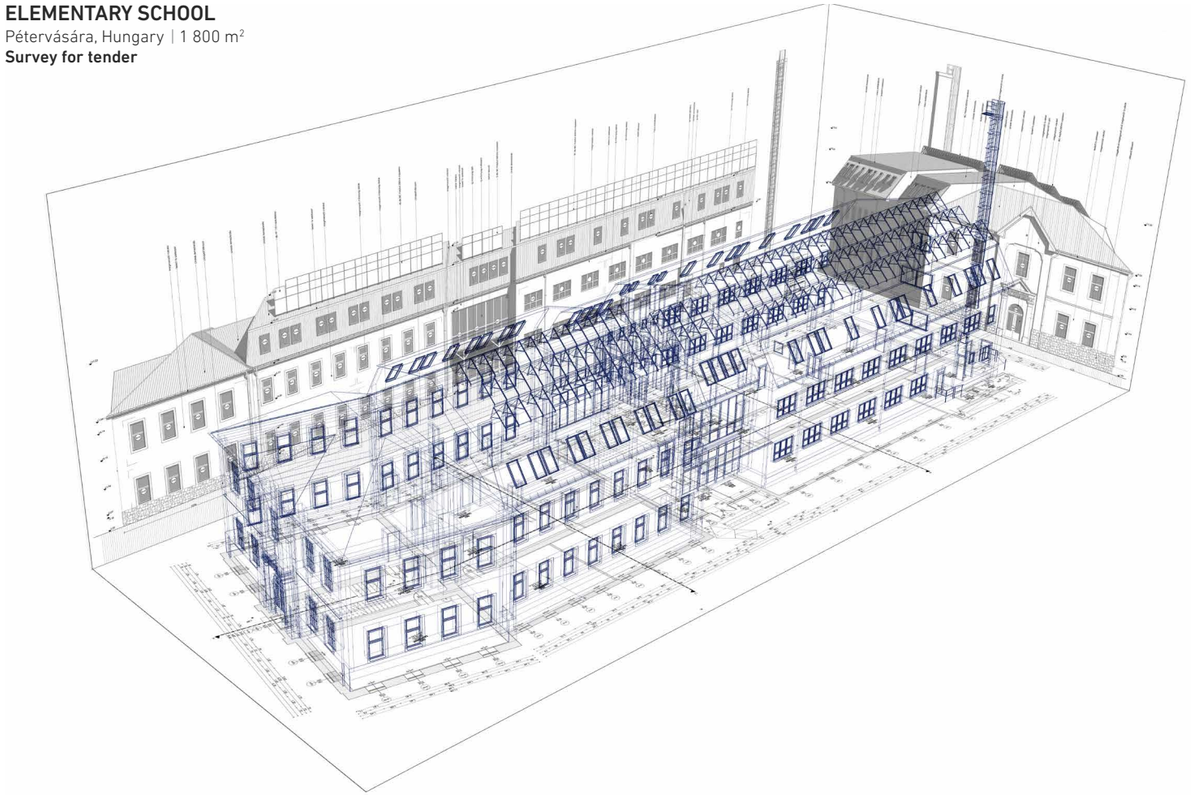
QUANTITY TAKEOFF

TIME SCHEDULE AND RESOURCE OPTIMIZATION

FACILITY MANAGEMENT

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ELEMENTARY SCHOOL
Pétervására, Hungary | 1 800 m²
Survey for tender



2D SURVEYS

Our surveyors with several years of experience can understand the building, they can identify the age, structure and materials, extension periods of the house, and they are familiar with the rules of the architectural drawing, even with a short deadline. The end result can be the base of informed decisions.

3D SURVEYS

A 3D model is built based on the customers' expectations which can provide an excellent foundation for further BIM usage. Upon request the MEP systems can be surveyed and modeled additionally. Point clouds from laser scans can also be provided to give a much more precise picture of the actual condition.



SHOPPING MALL
Bucharest, Romania | 4 500 m²
Point cloud based modeling

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CLASH DETECTION AND PLAN COORDINATION

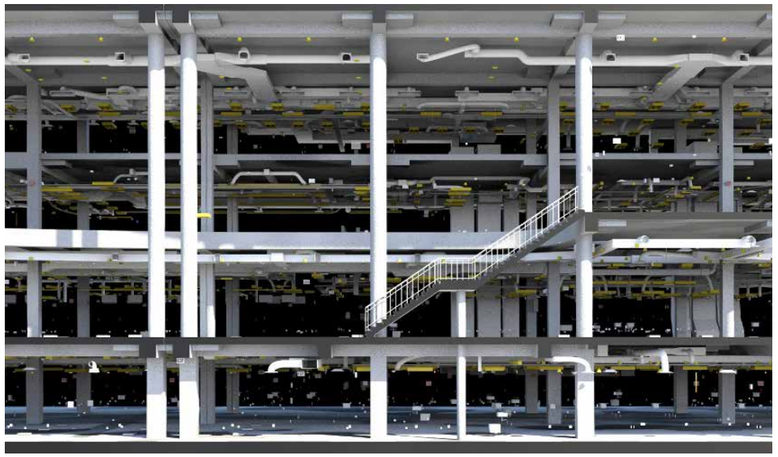
In most cases, the MEP systems have problems due to the limited space. Keeping in mind the priority of the elements and the feasibility we continuously keep in touch with the designers and engineers in order to get mature and basicly clash-free plans. Occasionally a clash detection is also carried out on the model.
Upon request, MEP plans with trace and height dimensions are prepared and provided for the designers. Remember, spending more time on the planning table will pay off on the construction site.

VIRTUAL CONSTRUCTION

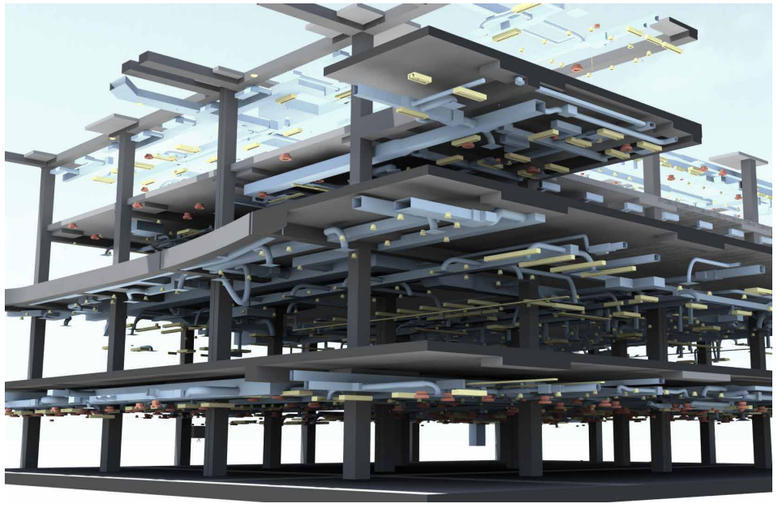
Finding constructability issues in the drawings during the construction is the most expensive and sometimes even unsolvable part of the project. We create the virtual prototype of the building as it would be built in the jobsite the same way it was designed. This way is easier and less expensive to detect the problems and the missing details. Virtual construction is the main test for the layouts: anything that causes issues during modeling could result in time loss, unnecessary expense and ill-conceived solutions later.



INTERNATIONAL AIRPORT
Singapore, Singapore | 70 000 m²
Virtual construction



HOSPITAL AND LABORATORY
Abu Dhabi, United Arab Emirates | 25 000 m²
Coordinated 2D drawings and documentation
Clash detection, MEP coordination resolution



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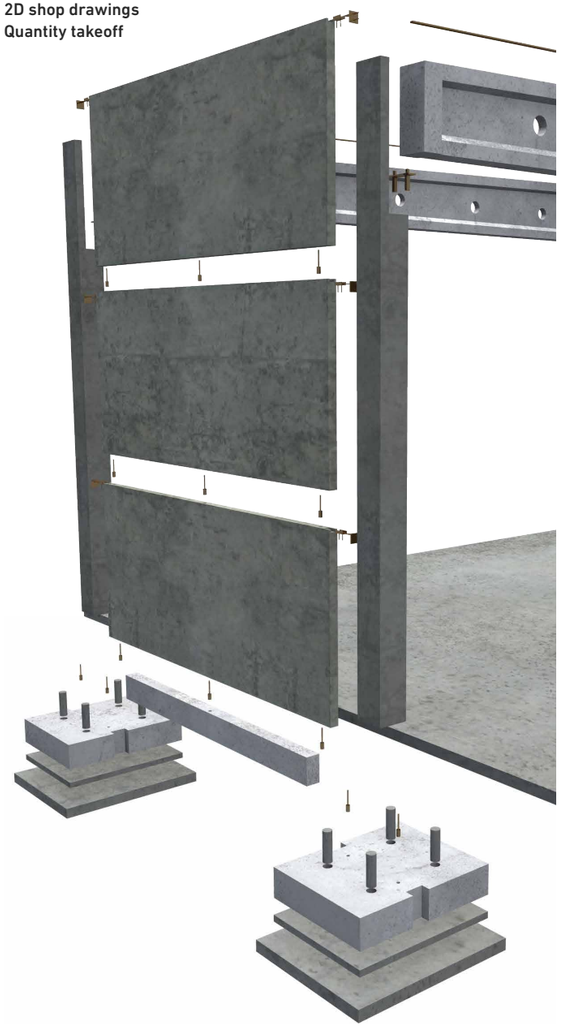
3D PLAN COORDINATION

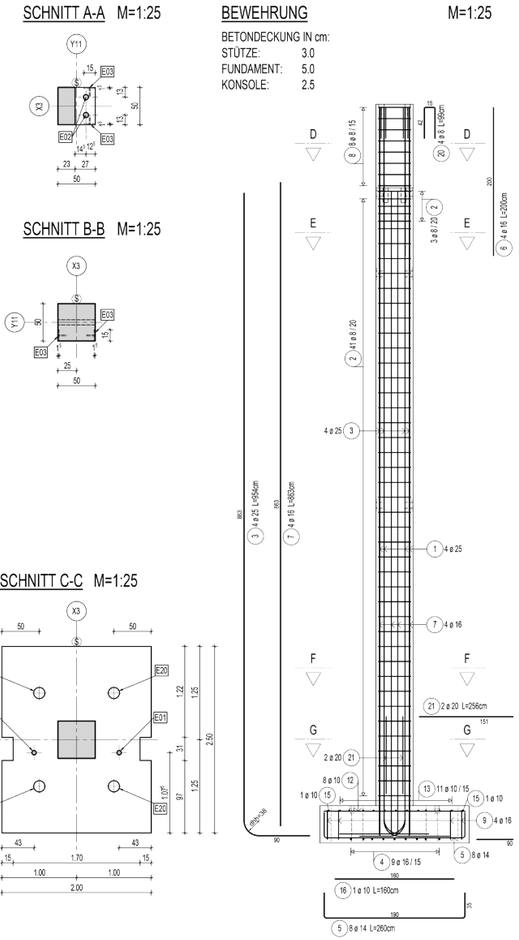
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BIM IS AN ATTITUDE

WAREHOUSE

Rüthi, Switzerland | 4 000 m²

Fabrication level modeling
Constructability analyzing
2D shop drawings
Quantity takeoff





Alle Kanten fasen.
Alle erforderlichen Montage- und Transportanker sind vom Hersteller einschließlich der erforderlichen Zusatzbewehrung festzulegen und einzukalkulieren.

EINBAUTEILLISTE FÜR EINEN BAUTEIL

EB.-POS	ST./FT.	BEZEICHNUNG	ABMESSUNG
E01	2	HÜLLROHR d=60 mm	100 mm
E02	2	HÜLLROHR d=70 mm	200 mm
E03	4	BL 150*150*15 mm + 2 Bolzen d=12mm, L=100 mm	
E04	2	U80 + 2 Bolzen d=12mm, L=100 mm	160 mm
E20	4	HÜLLROHR d=150 mm	500 mm
E22	6	ANSCHWEIßZUNGE FL60/8, MITLIEFERN	150 mm

RESIDENTAL BUILDING

Budapest, Hungary | 1 800 m²

Create BIM and as-built models
Construction simulation
Quantity takeoff







SHOPPING MALL

Bucharest, Romania | 2 500 m²

Construction schedule
Quantity takeoff



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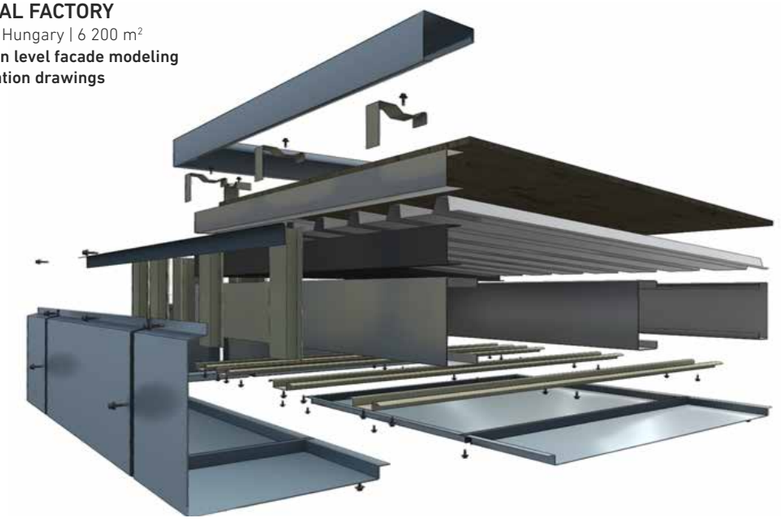
3D PLAN COORDINATION

OPINION
BIM IS AN ATTITUDE
BUILDERS

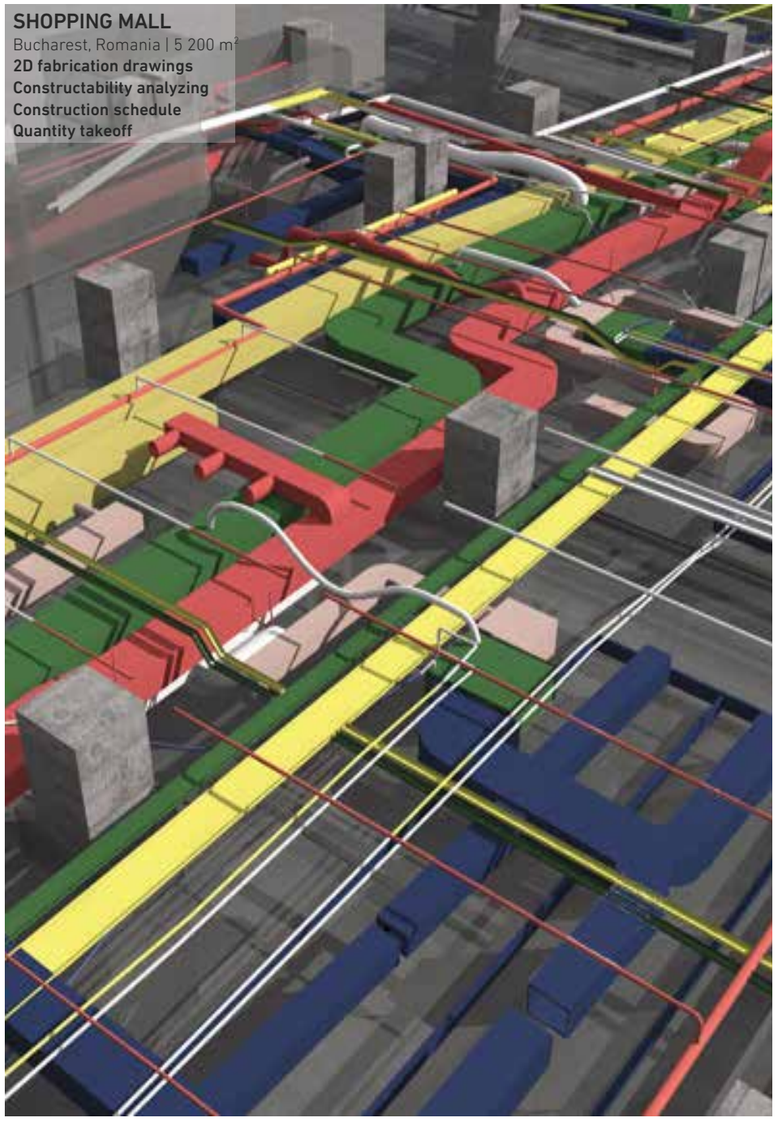
FURNITURE MODELING
Tokyo, Japan | 250 pieces of furniture
Fabrication level modeling
2D documentation



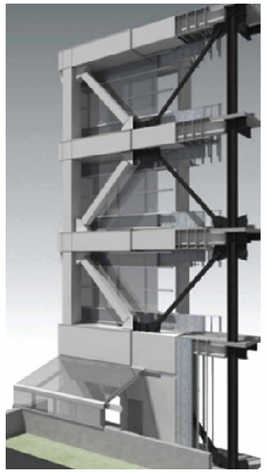
CHEMICAL FACTORY
Budapest, Hungary | 6 200 m²
Fabrication level facade modeling
2D fabrication drawings



SHOPPING MALL
Bucharest, Romania | 5 200 m²
2D fabrication drawings
Constructability analyzing
Construction schedule
Quantity takeoff

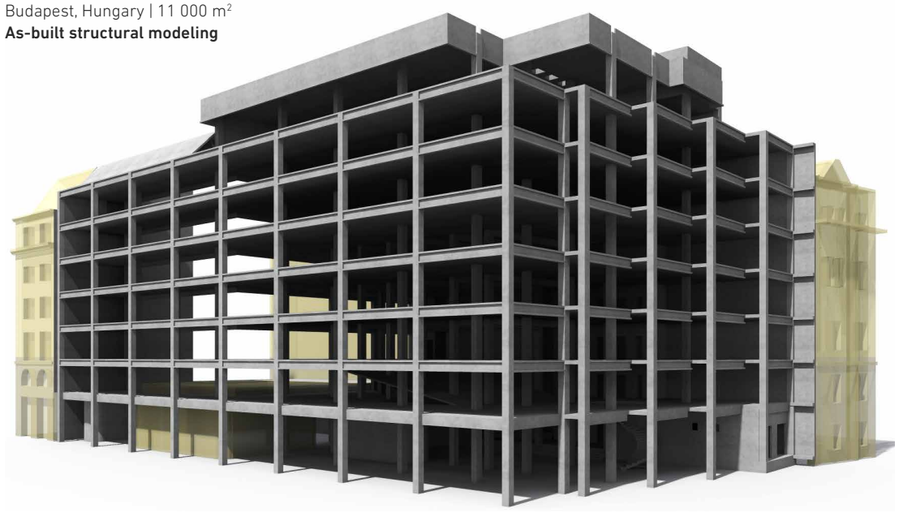


HOSPITAL
Mission Viejo, California, USA | 9 500 m²
Constructability analyzing, 2D fabrication drawings
Fabrication level facade modeling





OFFICE BUILDING
Budapest, Hungary | 11 000 m²
As-built structural modeling



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OPINION BUILDERS
BIM IS AN ATTITUDE

DATA SERVICES FOR TENDERING

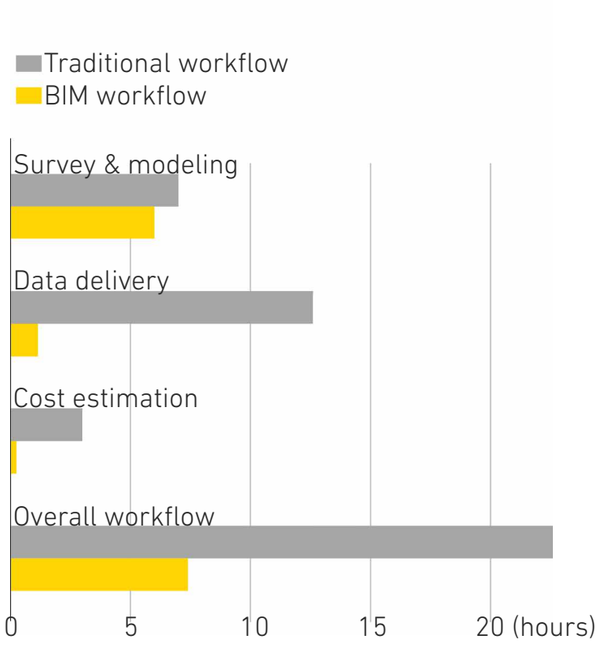
BIM models are perfect for providing and managing big amounts of information you need for tendering. From consciously built BIM models you can quckly generate:

- Structural layers by orientation
- Openings by type and orientation
- Openings schedule
- Optional quantities
- Cost estimations
- Importable datafiles for economical validation

If there is a request, every schedule can be refreshed with just one click. No more searching for information. You can follow any data in an instant. Overall this method takes 70% less time than traditional data services because with the data retrieval can you save about 97% of your time.



Time saving





PUBLIC BUILDINGS
Hungary | More than 300 buildings | 2-8 000 m²
Importable datafiles for economy validation
Quantity takeoff, Cost estimation
Automatized Excel datasheets
2D drawings

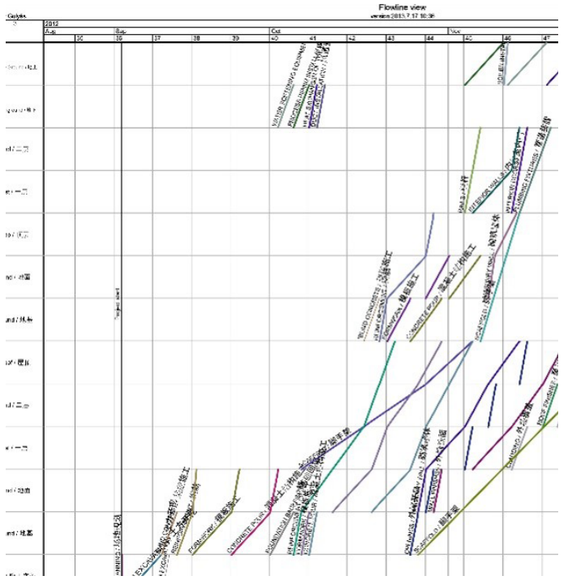
Typical tender datasheet used in Hungary

Energetikai alapadatok (a 7/2006. (V. 24.) TNM rendelet alapján elvégzett energetikai számításokkal összhangban)		
Összes nettó fűtött szintterület:	161,16	m²
Fűtött térfogat:	974,95	m³
Fűtött épülettérfogatot határoló felületek - *fejlesztés utáni állapot - :*	885,13	m²
Külső fal területe:	274,77	m²
Üvegfal területe:	0,00	m²
Nyílászárók területe/felülete:	62,83	m²
Lapostető területe:	0,00	m²
Fűtött tetőteret határoló szerkezet területe:	0,00	m²
Zárófödém (fűtetlen padlástér esetén) területe:	271,98	m²
Alsó, fűtetlen teret határoló zárófödém területe:	275,55	m²

Fűtött teret határoló fal (külső fal, fűtött és fűtetlen terek közötti fal, szomszédos épületek közötti fal, talajjal érintkező fal 0 és 1 m között)		Hőátbocsátási követelményérték	0,45
		Sorszám	R01.03
		Felület (nyílászárók nélkül)	19,30
		Tájolások	K
Meglévő rétegrend (fűtött térből kifelé haladva)		**Tervezett rétegrend (fűtött térből kifelé haladva)**	
Réteg megnevezése	**Rétegvastagság (cm)**	**Réteg megnevezése**	**Rétegvastagság (cm)**
	34,000		**44,000**
belső javított mészhomok vakolat	2,00	belső javított mészhomok vakolat	2,00
B30 blokktégla	30,00	B30 blokktégla	30,00
külső köporos vakolat	2,00	külső köporos vakolat	2,00
		EPS hőszigetelés dryvit rendszerben	10,00
Hőátbocsátási tényező (W/m²K)		**Hőátbocsátási tényező (W/m²K)**	

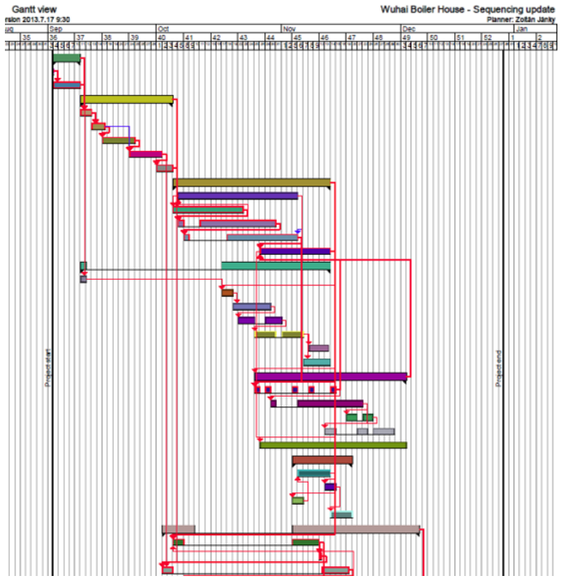
Padlásfödém	Hőátbocsátási követelményérték	0,30
	Sorszám	R03.01
	Terület	188,45

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QUANTITY TAKEOFF

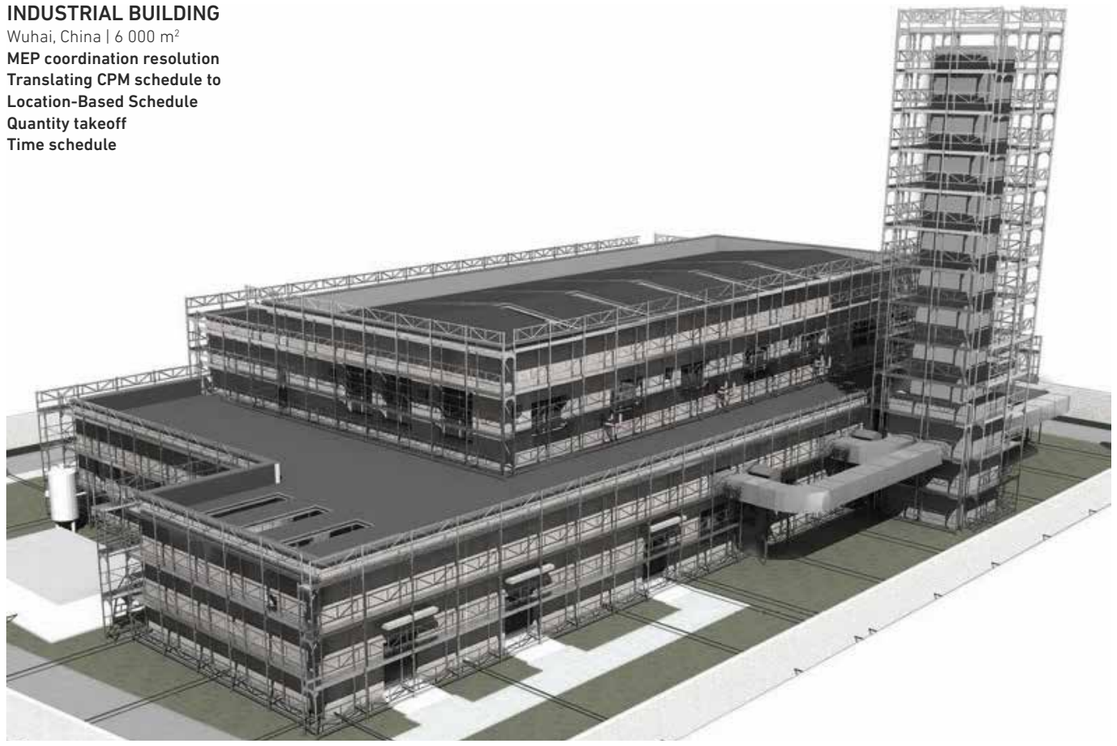
From the BIM models we get the model-based and derived quantities. It has the advantage to be accurate, quick, follows every change in the model and you can trace back the data source every time. It can be linked to a generated, quantity based cost estimation and schedule. This efficiency is in every investor's and constructor's main interest. Every BIM model is able to provide quantity lists, but the accuracy heavily depends on the method therefore needs a lot of experience.

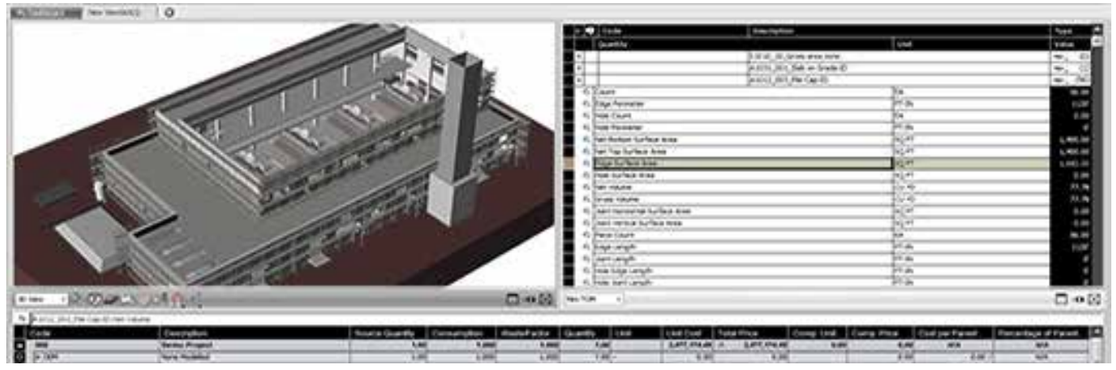


TIME SCHEDULE AND RESOURCE OPTIMIZATION

The base of the time schedule is the 3D model and the quantities we get from it. The construction schedule comes from the quantities from the 3D model linked with the building standards.
The completed schedule usually has plenty of idle time and organization issues that have to be optimized by location-based flowline schedule. These clever diagrams also give the possibilities for time and resource optimization without having a 3D model.

INDUSTRIAL BUILDING
Wuhai, China | 6 000 m²
MEP coordination resolution
Translating CPM schedule to Location-Based Schedule
Quantity takeoff
Time schedule





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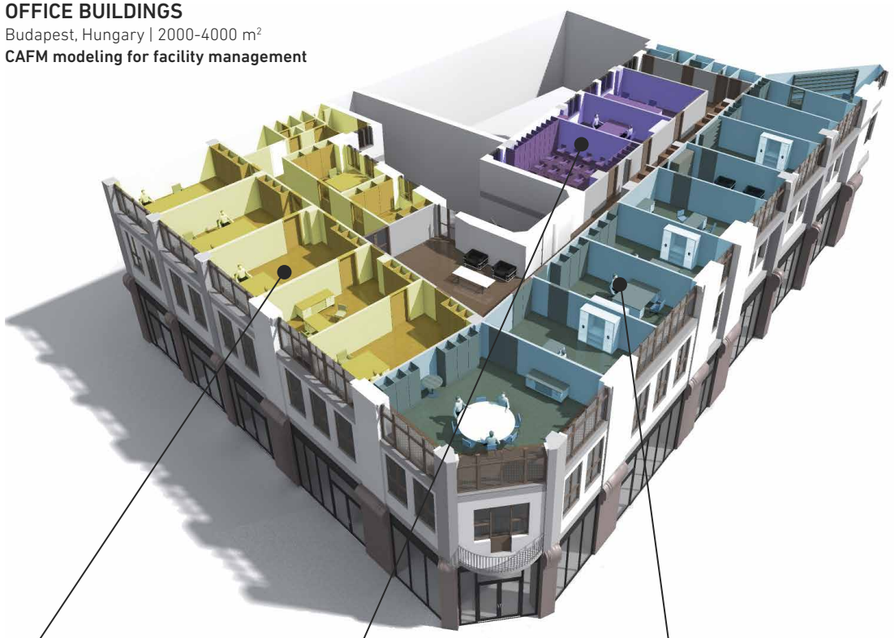
FACILITY MANAGEMENT

We live in the age of smart technologies, so why are we not using the building models smartly?

- By adding information to the elements like material, heat transmission coefficient or heat dissipation. We can create energy validation or consumption calculations.
- Insert the goods in the model so that we can follow every asset and make it easier to move.
- Take people to the virtual space, add position, sa lary, experiments to them.
- Insert the model to a cloud based CAFM software and add more information like cleaning area, tenancy agreement or vacations.
- You get a helpdesk accessible for everyone and you can trace the maintenance periods.
- Since everything is integrated you don't need to survey again, look for the plans or the position of the main valve.
- Smart little sensors are watching over everything and give signals if there is any problem.
- Since the whole system is customized for your unique needs, all of your requests can be fulfilled.

By using this cloud based CAFM system you can follow the life of the building real time on your mobile phone. This is modern facility management.

OFFICE BUILDINGS
Budapest, Hungary | 2000-4000 m²
CAFM modeling for facility management



Pears & Co
CEO: Kis Ádám
Area: 92 m²
Lease exp.: 2015.12.31.
Rental fee: 1000 €/month

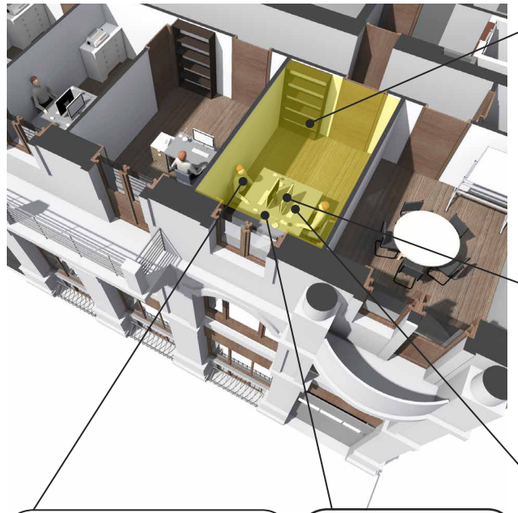
Black BIM Company
CEO: Edward King
Area: 55 m²
Lease exp.: 2014.11.31.
Rental fee: 550 €/month

Flower Ltd.
CEO: Holdas Júlia
Area: 145 m²
Lease exp.: 2015.07.31.
Rental fee: 1000 €/month

FM Helyiségadatok

Helyiség Szám	Név	Terület	Padlóburkolat	Falburkolat	Mennyezetburkolat	FM Dugalj	FM Dugalj padló	FM Kapcsoló	FM Klíma	FM Radiátor típus	FM Radiátor db	FM Tűzjelző	FM Füstjelző	FM Világítótest típus	FM Világítótest db
02_1. emelet															
201	Lépcső	16 m²	Gres lap	Tapéta	Kazettás álmennyezet	1						1	1	Izzó 4db, exit tábla 6db	1
202	Közlekedő	23 m²	Gres lap	Tapéta	Kazettás álmennyezet	1		1		Fan coil	1	1		4 fénycsöves	3
203	Video-szoba	30 m²	laminált padló	Tapéta	Kazettás álmennyezet	1		1		Fan coil	1			4 fénycsöves	5
204	Női mosdó	3 m²	Gres lap	Csempe	Kazettás álmennyezet	2		1						Izzó	2
205	Fér. mosdó	4 m²	Gres lap	Csempe	Kazettás álmennyezet	2		1						Izzó	2
206	Közlekedő	15 m²	Gres lap	Tapéta	Kazettás álmennyezet	1		0		Fan coil	1	1		4 fénycsöves	3
207	Iroda	14 m²	laminált padló	Tapéta	Kazettás álmennyezet	2	12	1		Fan coil	1			4 fénycsöves	3
208	Iroda	14 m²	laminált padló	Tapéta	Kazettás álmennyezet	2	12	1		Fan coil	1			4 fénycsöves	3
209	Közlekedő	36 m²	Gres lap	Tapéta	Kazettás álmennyezet	3				Fan coil	1	2		4 fénycsöves	6
210	Mosdó	9 m²	Gres lap	Csempe	Kazettás álmennyezet	1		1						Izzó	4
211	Teakonyha	8 m²	Gres lap	Csempe/tapéta	Kazettás álmennyezet	1		1		Fan coil	1			4 fénycsöves	3
212	Iroda	14 m²	laminált padló	Tapéta	Kazettás álmennyezet	2	12	1		Fan coil	1			4 fénycsöves	3
213	Iroda	14 m²	laminált padló	Tapéta	Kazettás álmennyezet	2	12			Fan coil	1			4 fénycsöves	3
214	Iroda	14 m²	laminált padló	Tapéta	Kazettás álmennyezet	2	12	1	1	Fan coil	1			4 fénycsöves	3
215	Közlekedő	46 m²	Gres lap	Tapéta	Kazettás álmennyezet	1		1		Fan coil	2	3		4 fénycsöves	7
216	Iroda	15 m²	laminált padló	Tapéta	Kazettás álmennyezet	2	12	1		Fan coil	1			4 fénycsöves	2
217	Iroda	13 m²	laminált padló	Tapéta	Kazettás álmennyezet	2	12	1		Fan coil	1			4 fénycsöves	2
218	Iroda	12 m²	laminált padló	Tapéta	Kazettás álmennyezet	2	12	1		Fan coil	1			4 fénycsöves	2
219	Iroda	12 m²	laminált padló	Tapéta	Kazettás álmennyezet	2	12	1		Fan coil	1			4 fénycsöves	2
220	Iroda	12 m²	laminált padló	Tapéta	Kazettás álmennyezet	2	12	1		Fan coil	1			4 fénycsöves	2
221	Iroda	12 m²	laminált padló	Tapéta	Kazettás álmennyezet	2	2	1		Fan coil	1			4 fénycsöves	2
222	Iroda	12 m²	laminált padló	Tapéta	Kazettás álmennyezet	2	2	1		Fan coil	1			4 fénycsöves	2
223	Iroda	11 m²	laminált padló	Tapéta	Kazettás álmennyezet	2	2	1		Fan coil	1			4 fénycsöves	2
224	Iroda	13 m²	laminált padló	Tapéta	Kazettás álmennyezet	2	2	1		Fan coil	1			4 fénycsöves	2

OFFICE BUILDINGS
Hungary | 600 buildings | 300-4 000 m²
Create As-built models
BIM-based FM systems
Create database



File Cabinet
Model: PRO31-2-219
Serial Nr.: CAB-KJI-2010
Used by: Jakab Péter
Current value: 35 €

Display
Model: CPU-3GT-400
Serial Nr.: 2009-01-22TZ
Maintainer: Kiss József
Maintenance: 2014.12.18.

Fekete Dávid
Room name: Office - 225
Phone Number: +36 30 123 45 67
Position: Leader
Department: Customer Service

Desk
Model: CST-DESK002
Serial Nr.: DESK-RI-2010
Used by: Hold Áron
Current value: 50 €

PC - Keyboard
Model: PRO31-2-219
Serial Nr.: 2010-175-55-YT
Maintainer: Kiss József
Maintenance: 2014.12.18.

GENERAL	Asset name	Executive Desk	Asset Code	EF-D6-1011-026	Category	Office furniture
	Manufacturer	Prime	Model	TA-011-WR Executive Desk with Right Lateral Cabinet		
	Serial Number	EF/28375	Bar Code	95426731	Dealer	
	Building	Moon Office	Floor	7	Room Number	B708
	Status	in use	User	Bomba Arthur	Owner	Slim BIM Ltd.
	Comments	Walnut wood veneer, scratch on top right drawer				
ACCOUNING	Acquired	11/22/2015	Cost	4 500 $	Placed in service	12/1/2012
	Tax		Shipping Cost	59 $		
	Depreciates over	5 years		Depreciation expense per year		900 $
	Accumulated depreciation	1 800 $		Current book value		2 700 $
	Comments					

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BIM IS MORE THAN JUST A METHOD

IT'S AN ATTITUDE