منتدى دبي العالمي لإدارة المشاريع

DUBAI INTERNATIONAL PROJECT MANAGEMENT FORUM

6th EDITION الدورة السادسة

7 – 10 ديسمبر 2019 • مدينة جميرا • دبي

7 – 10 December 2019 • MADINAT JUMEIRAH • DUBAI

PARALLEL SESSION STREAM

BIM, THE ASSETS LIFECYCLE DIGITAL PLATFORM

Issam Elabsi

BIM Centres / BIM Academy Director

CCC

CULTURAL DIVERSITY

www.dipmf.ae

CCC B I M

CCC BIM CENTERS HAS ACCUMULATED EXTENSIVE EXPERIENCE, CAPABILITIES AND SKILLS IN THE FIELD OF BIM AND THE RELEVANT DIGITIZATION WORKFLOWS - 22 YEARS OF EXPERIENCE

240 PROFESSIONAL BIM ENGINEERS

BIM OPERATIONS BACKBONE

CENTERS OF EXCELLENCE

Athens BIM Centre
Cairo BIM Centre
Palestine BIM Centre

PROJECTS

AL BUSTAN STR NORTHROAD
SIDRA
AL ZAHIA
QMPC
MDP4
MALL OF OMAN

BIM CONSULTANSY

HIGH END CLIENTS

SIEMENS
ADNOC
ADAC
SUNWAY

BIM EDUCATION

CCC BIM ACADEMY

PARTNERS

Zigurat Global Institute of Technology

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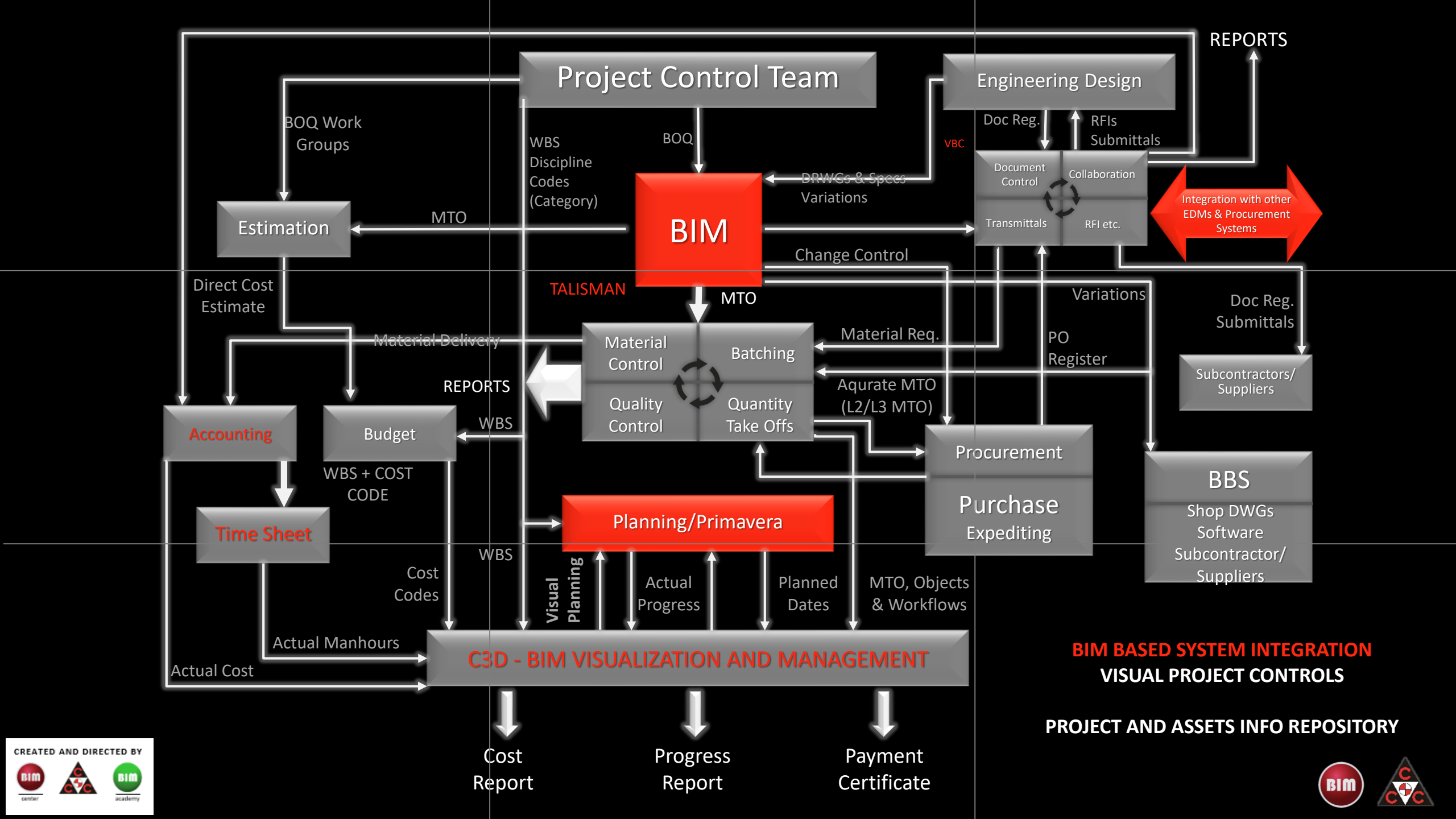
REPORTS
Project Control Team
Engineering Design
BOQ Work Groups
WBS Discipline Codes (Category)
BOQ
VBC
Doc Reg.
RFIs Submittals
Document Control
Collaboration
Transmittals
RFI etc.
Integration with other EDMs & Procurement Systems
DRWGs & Specs
Variations
Estimation
MTO
BIM
Change Control
Direct Cost Estimate
TALISMAN
MTO
Variations
Doc Reg. Submittals
Material Delivery
Material Control
Batching
Material Req.
PO Register
Subcontractors/ Suppliers
REPORTS
Quality Control
Quantity Take Offs
Aqurate MTO (L2/L3 MTO)
Accounting
Budget
WBS
Procurement
WBS + COST CODE
BBS
Purchase
Expediting
Shop DWGs
Software
Subcontractor/ Suppliers
Time Sheet
Planning/Primavera
WBS
Cost Codes
Visual Planning
Actual Progress
Planned Dates
MTO, Objects & Workflows
Actual Manhours
C3D - BIM VISUALIZATION AND MANAGEMENT
Actual Cost
Cost Report
Progress Report
Payment Certificate
BIM BASED SYSTEM INTEGRATION
VISUAL PROJECT CONTROLS
PROJECT AND ASSETS INFO REPOSITORY
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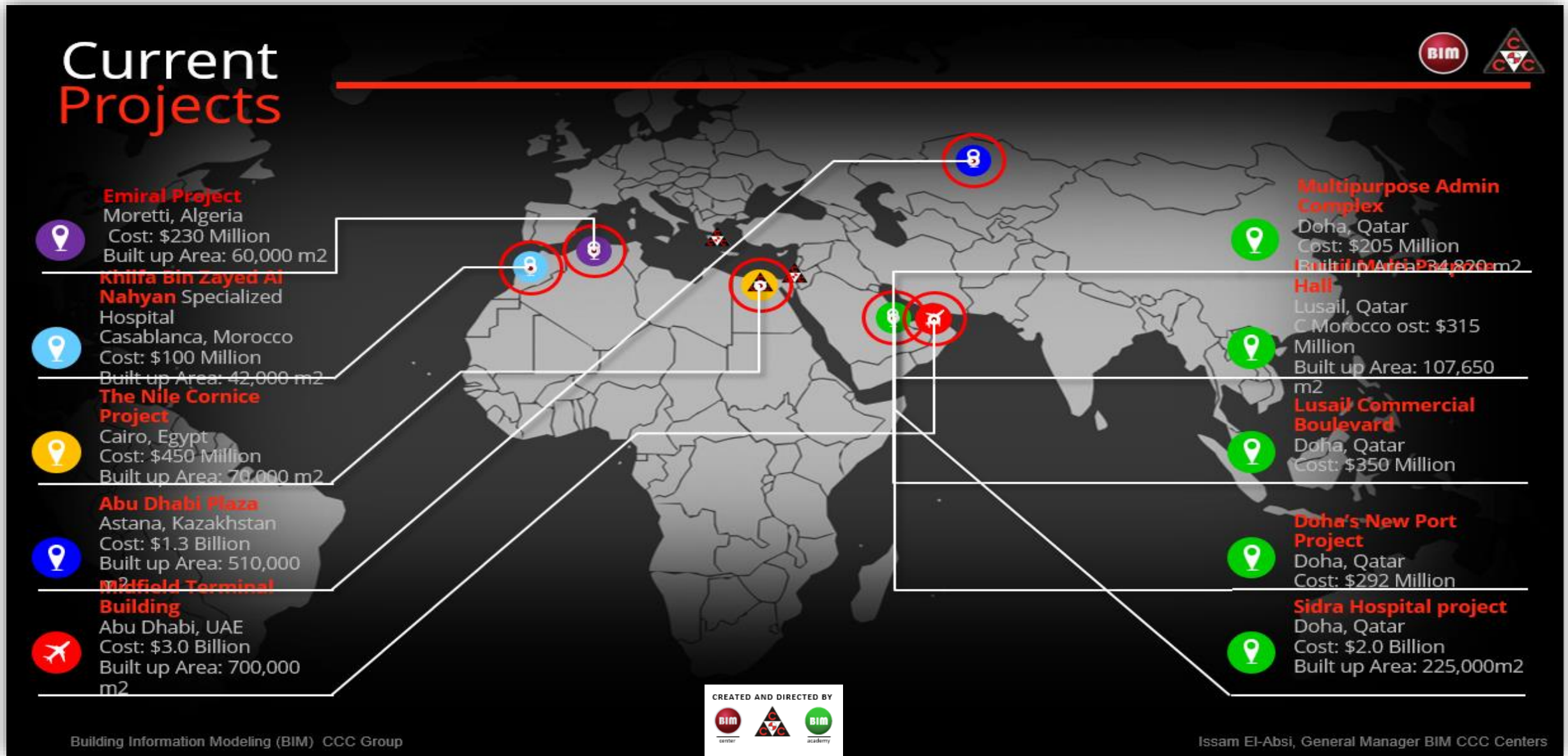
TRACK RECORD



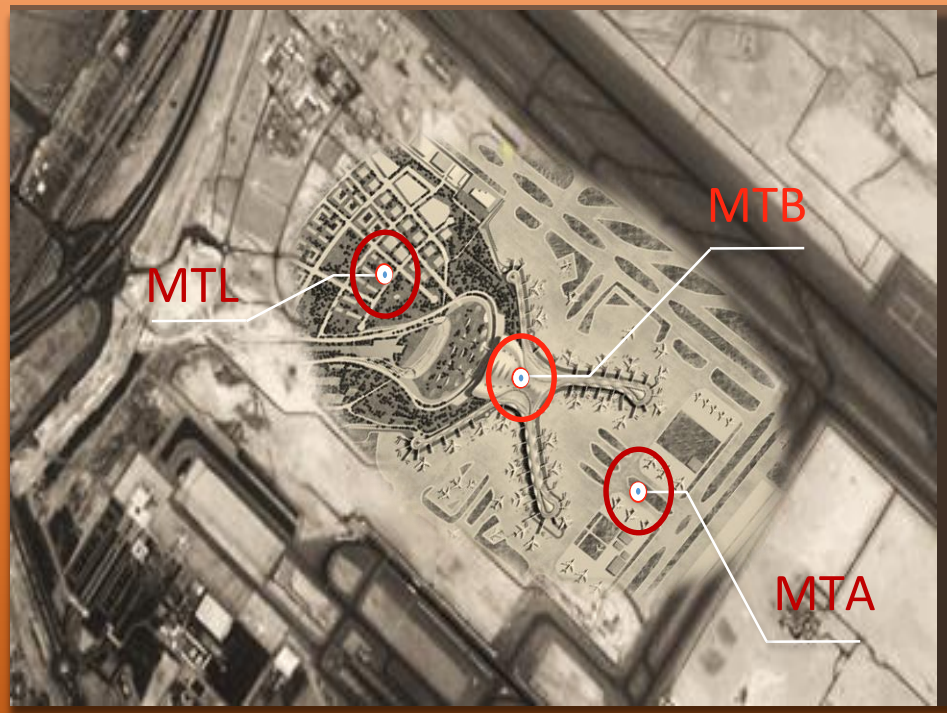
ICONIC BIM IMPLEMENTATION

CONSTRUCTION DIGITAL TWIN

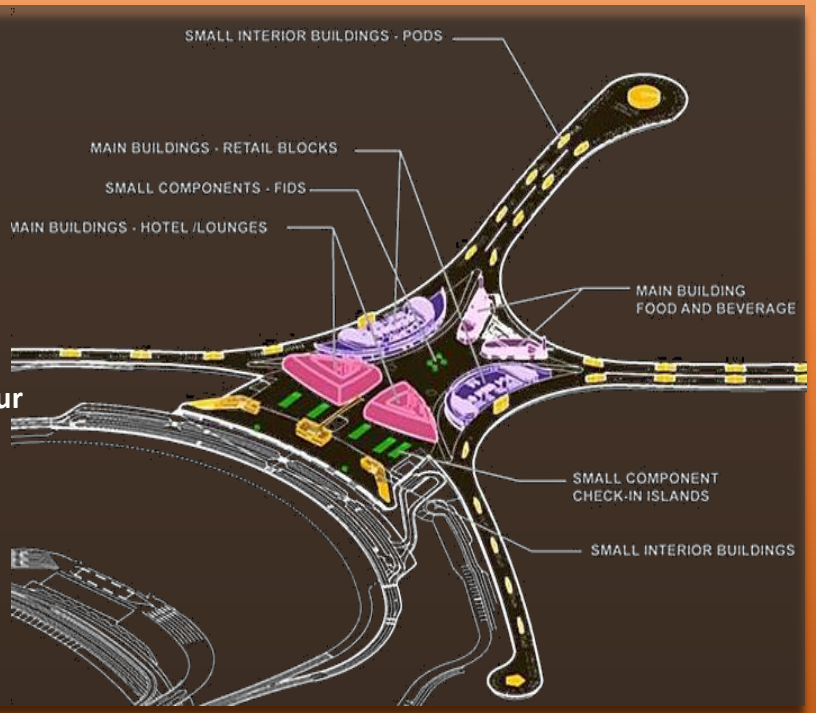
ICONIC BIM IMPLEMENTATION

CONSTRUCTION DIGITAL TWIN

General Figures



Built Up Area : 700 000 m2
Project Value : $ 3 Billion
Piers Aircraft Capacity : 65
Number of Gates : 106
Passenger Capacity : **8500 / Hour**
Check in Counters : 165
BHS Capacity : **19000 / Hour**
BHS Length : **22 Kilometers**



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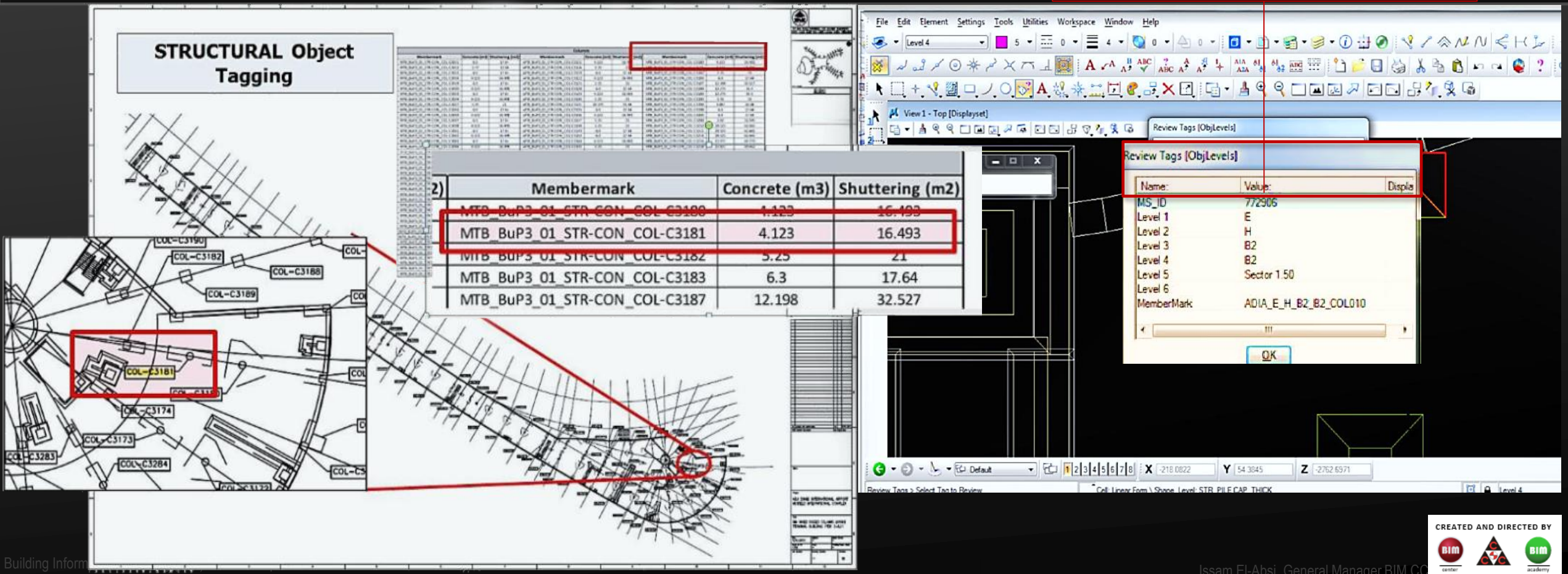
ICONIC BIM IMPLEMENTATION

CONSTRUCTION DIGITAL TWIN

Object Naming: Asset Tagging

CONSTRUCTION ASSETS

Objects are tagged based on agreed WBS ensuring uniqueness of each element.



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ICONIC BIM IMPLEMENTATION
CONSTRUCTION DIGITAL TWIN

Collaboration

ProjectWise

Common Data Environment

Workflow in PW Explorer

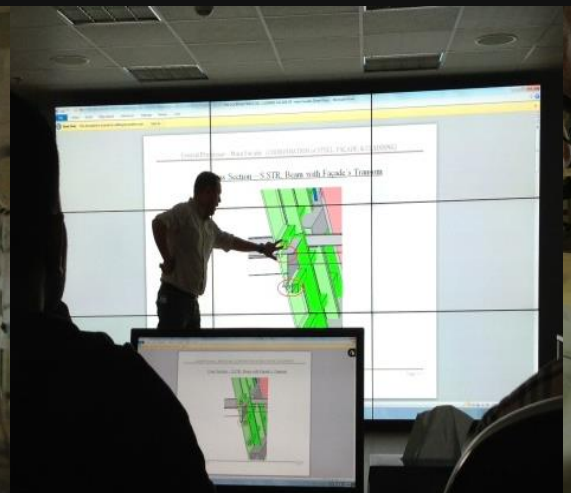
Name	Out to	State
Clash1_Mech vs Struc.pdf		Published
Clash2_Mech vs Struct.pdf		Review
Clash4_Mech vs Struct.pdf		WIP

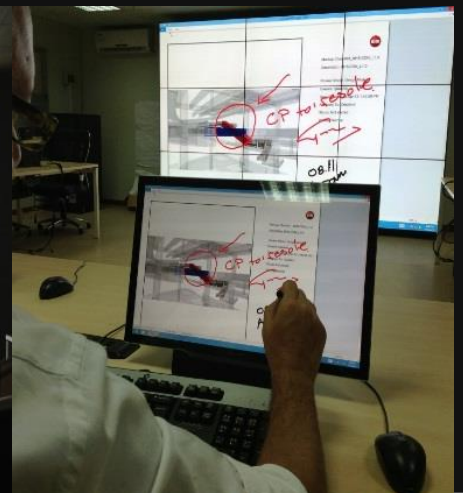
WIP → Review → Publish → Final

ROI :

- Automatic Versions/Revisions
- Automatic Notifications
- File Tracking
- File Information from within Explorer
- Powerful and Fast Search Capability

i-Room





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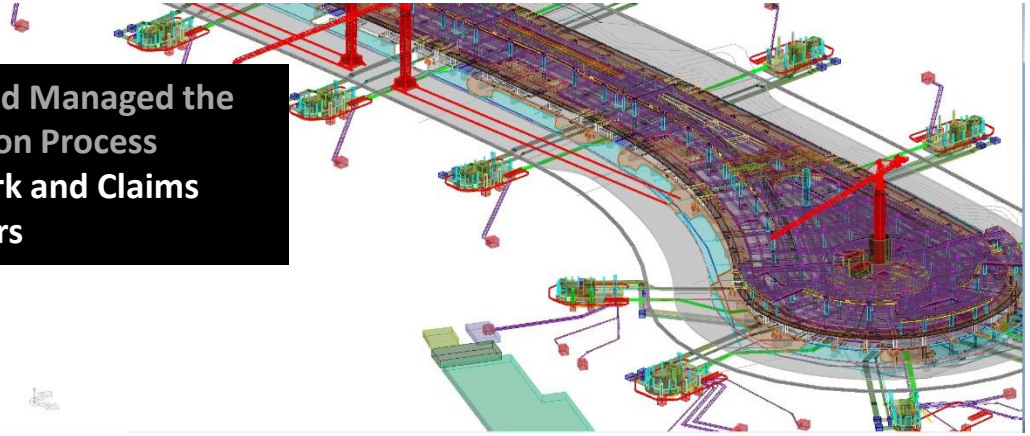
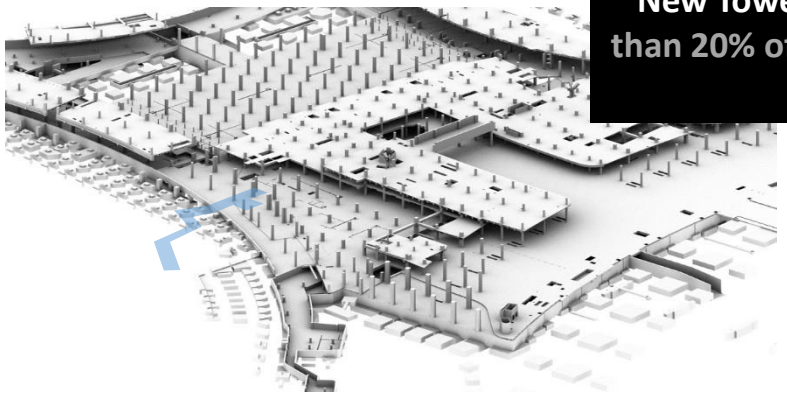
TRUE ROI THROUGH BIM AND C0NSTRUCION DIGITIZATION

ROI : BIM Workflows Facilitated and Managed the Complex Interface Coordination Process
Eliminating Costly Delays, Rework and Claims Between Stakeholders



ROI : Innovative Methods For BIM Based Collaboration Reduced The Cycle Of Critical RFI'S
From 28 Days Down to (7 to 2) days

ROI : BIM Methods Eliminated the Acquisition of 5 New Tower Cranes - 4D Simulation Proved Less than 20% of Effective Utilization – Cancelled Costly Non Feasible Investment



Schedule Table

	Project Name	Building Level	System	Activity	Sector	Description-1	Description-2	Handle	Length	Room	From	To	BOQ No
3	MTB	CP	LB.2	ELE-SP	5.16D	RGS	25.00 MM CONDUIT EMT SET SCREW US METRIC	15174	375.				
4	MTB	CP	LB.2	ELE-SP	5.16D	RGS	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	15173	?				
5	MTB	CP	LB.2	ELE-SP	5.16D	RGS	25.00 MM CONDUIT EMT SET SCREW US METRIC	15164	375.				
6	MTB	CP	LB.2	ELE-SP	5.16D	RGS	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	15163	?				
7	MTB	CP	LB.2	ELE-SP	5.16D	RGS	25.00 MM CONDUIT EMT SET SCREW US METRIC	15154	375.				
8	MTB	CP	LB.2	ELE-SP	5.16D	RGS	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	15153	?				
9	MTB	CP	LB.2	ELE-SP	5.16D	RGS	25.00 MM CONDUIT EMT SET SCREW US METRIC	15144	375.				
10	MTB	CP	LB.2	ELE-SP	5.16D	RGS	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	15143	?				
11	MTB	CP	LB.2	ELE-SP	5.16D	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	1512D	659.021				
12	MTB	CP	LB.2	ELE-SP	5.16D	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	1511E	659.021				
13	MTB	CP	LB.2	ELE-SP	5.16D	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	1510F	659.021				
14	MTB	CP	LB.2	ELE-SP	5.16D	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	15100	659.021				
15	MTB	CP	LB.2	ELE-SP	5.12A	RGS	25.00 MM CONDUIT EMT SET SCREW US METRIC	15075	375				
16	MTB	CP	LB.2	ELE-SP	5.12A	RGS	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	15074	?				
17	MTB	CP	LB.2	ELE-SP	5.12A	RGS	25.00 MM CONDUIT EMT SET SCREW US METRIC	15065	375.				
18	MTB	CP	LB.2	ELE-SP	5.12A	RGS	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	15064	?				
19	MTB	CP	LB.2	ELE-SP	5.12A	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	15055	1045.754				
20	MTB	CP	LB.2	ELE-SP	5.12A	PVC	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	15054	?				
21	MTB	CP	LB.2	ELE-SP	5.12A	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	15053	629.218				
22	MTB	CP	LB.2	ELE-SP	5.12A	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	15044	945.734				
23	MTB	CP	LB.2	ELE-SP	5.12A	PVC	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	15043	?				
24	MTB	CP	LB.2	ELE-SP	5.12A	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	15042	529.218				
25	MTB	CP	LB.2	ELE-SP	5.12C	RGS	25.00 MM CONDUIT EMT SET SCREW US METRIC	1502D	375.				
26	MTB	CP	LB.2	ELE-SP	5.12C	RGS	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	1502C	?				
27	MTB	CP	LB.2	ELE-SP	5.12C	RGS	25.00 MM CONDUIT EMT SET SCREW US METRIC	1501D	375.				
28	MTB	CP	LB.2	ELE-SP	5.12C	RGS	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	1501C	?				
29	MTB	CP	LB.2	ELE-SP	5.12C	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	15000	986.974				
30	MTB	CP	LB.2	ELE-SP	5.12C	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	14FFE	987.694				
31	MTB	CP	LB.2	ELE-SP	5.11D	RGS	25.00 MM CONDUIT EMT SET SCREW US METRIC	14FE0	375.				
32	MTB	CP	LB.2	ELE-SP	5.11D	RGS	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	14FDF	?				
33	MTB	CP	LB.2	ELE-SP	5.11D	RGS	25.00 MM CONDUIT EMT SET SCREW US METRIC	14FD0	375.				
34	MTB	CP	LB.2	ELE-SP	5.11D	RGS	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	14FCF	?				
35	MTB	CP	LB.2	ELE-SP	5.11D	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	14FB0	870.564				
36	MTB	CP	LB.2	ELE-SP	5.11D	PVC	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	14FAF	?				
37	MTB	CP	LB.2	ELE-SP	5.11D	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	14FAE	1168.455				
38	MTB	CP	LB.2	ELE-SP	5.11D	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	14F9F	776.564				
39	MTB	CP	LB.2	ELE-SP	5.11D	PVC	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	14F9E	?				
40	MTB	CP	LB.2	ELE-SP	5.11D	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	14F9D	1068.455				
41	MTB	CP	LB.2	ELE-SP	5.17C	RGS	25.00 MM CONDUIT EMT SET SCREW US METRIC	14F8A	375.				
42	MTB	CP	LB.2	ELE-SP	5.17C	RGS	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	14F89	?				
43	MTB	CP	LB.2	ELE-SP	5.17C	RGS	25.00 MM CONDUIT EMT SET SCREW US METRIC	14F7A	375				
44	MTB	CP	LB.2	ELE-SP	5.17C	RGS	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	14F79	?				
45	MTB	CP	LB.2	ELE-SP	5.17C	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	14F6A	198.457				
46	MTB	CP	LB.2	ELE-SP	5.17C	PVC	25.00 MM CONDUIT EMT SET SCREW US METRIC	14F5B	208.943				
47	MTB	CP	LB.2	ELE-SP	5.22A	RGS	25.00 MM CONDUIT EMT SET SCREW US METRIC	14F4C	375.				
48	MTB	CP	LB.2	ELE-SP	5.22A	RGS	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	14F4B	?				
49	MTB	CP	LB.2	ELE-SP	5.22A	RGS	25.00 MM CONDUIT EMT SET SCREW US METRIC	14F3C	375.				
50	MTB	CP	LB.2	ELE-SP	5.22A	RGS	25.00 MM DIAMETER 90.0 DEGREE CONDUIT ELBOW EMT SET SCREW US METRIC	14F3B	?				

ROI : BIM Methods Reduced The Number of Quantity Surveying Team from
60 to 6 - 90% Saving in Direct Cost

SUSTAINABILITY

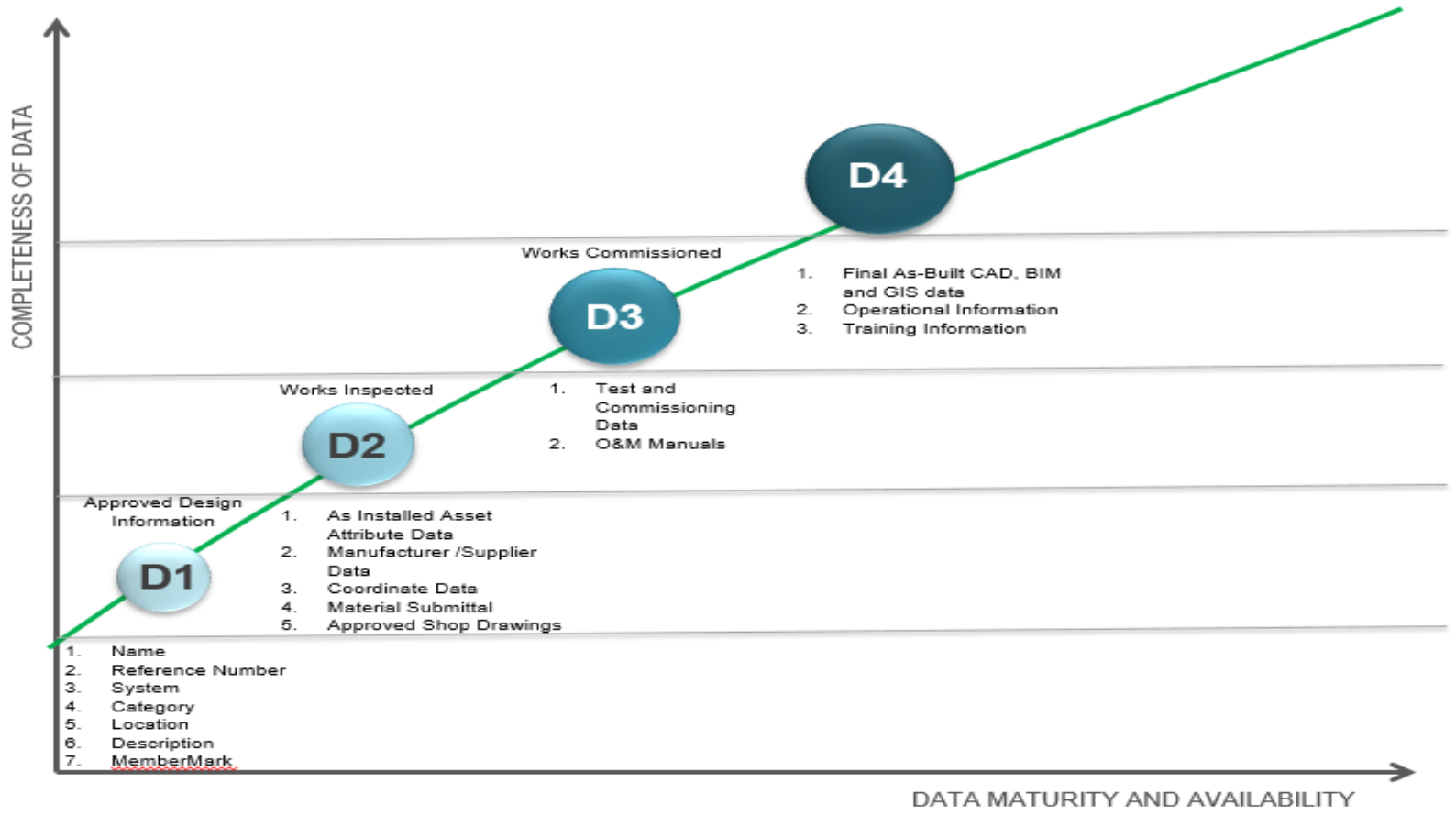
ROI: Use of 1,040,437 m³ recycled aggregates

ICONIC BIM IMPLEMENTATION

POST CONSTRUCTION DIGITAL TWIN – HANDING OVER PROCESS

Data Drops

مطارات أبوظبي
ABU DHABI AIRPORTS



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ICONIC BIM IMPLEMENTATION

POST CONSTRUCTION DIGITAL TWIN – HANDING OVER PROCESS

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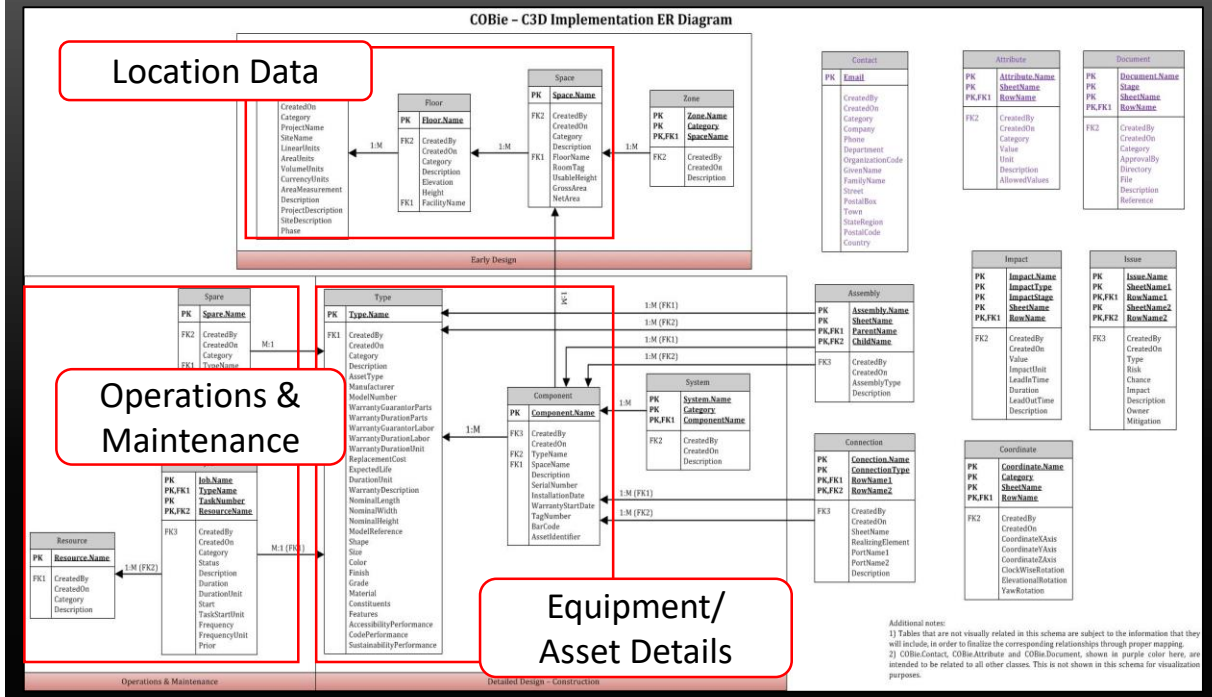
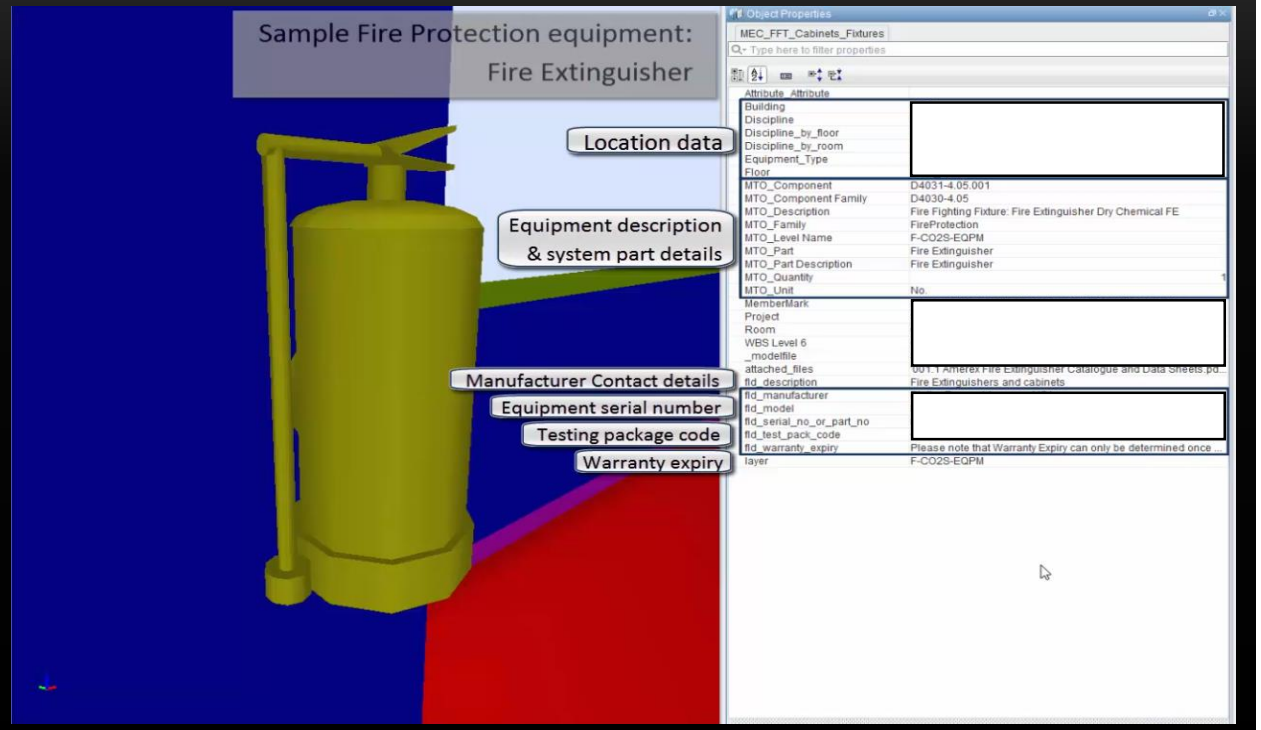
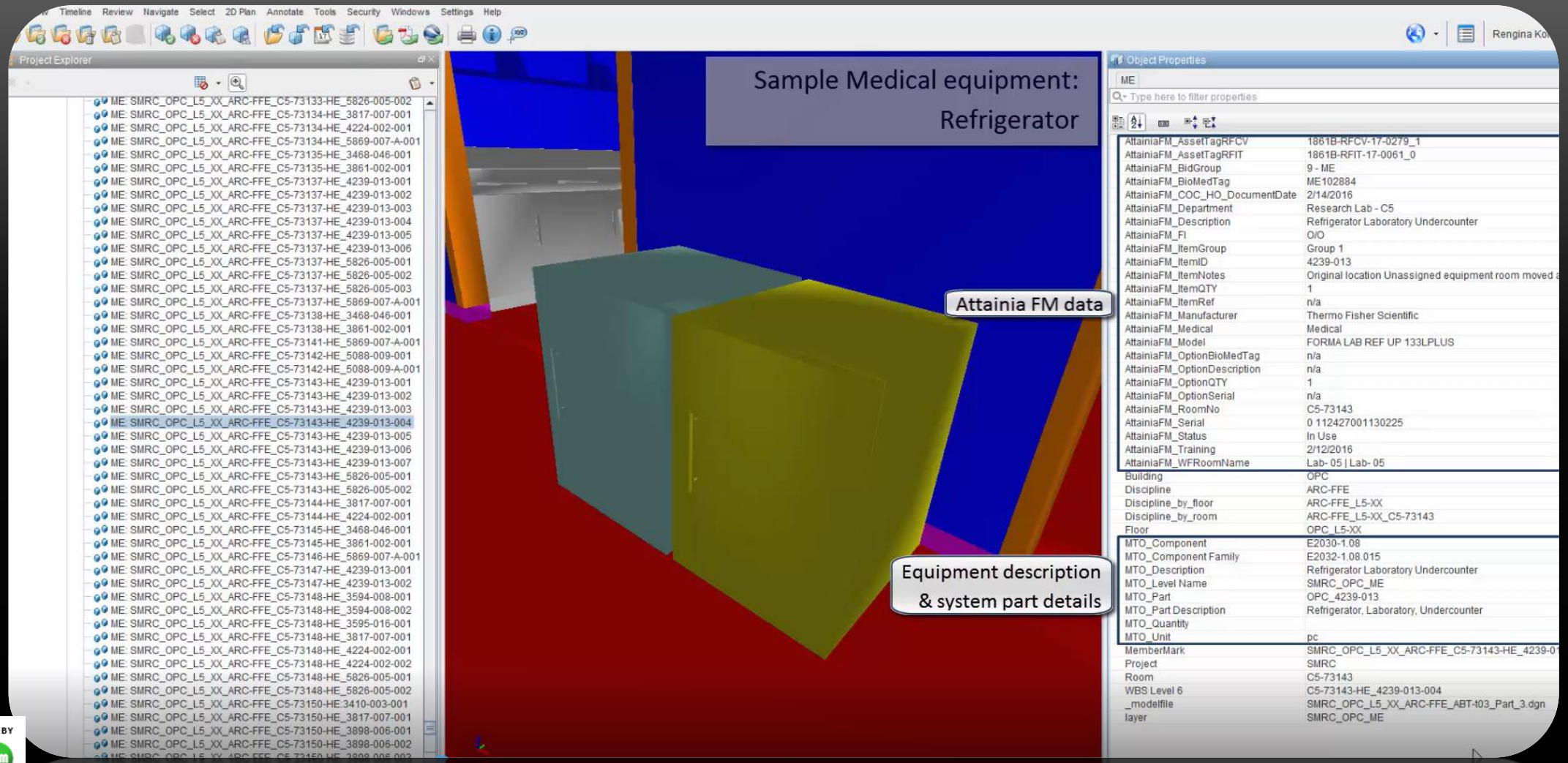
COBie Compliance



ASSET INFORMATION



TOWARDS FACILITIES DIGITIZATION POST CONSTRUCTION
CONSTRUCTION ASSETS TO FM ASSETS



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BIM INTEGRATION WITH IoT
ASSETS PERFORMANCE AND LIFECYCLE MANAGEMENT

CCC BIM CENTERS

TECHNOLOGY PARTNERS

IOT AND SMART

CITIES

senseone

Member of
Singular Logic Group

Innovating BIM-IoT integration: our strategic partnership with SenseOne

"Our strategic partnership with SenseOne aims at fully grasping the IoT opportunity at the intersection of Building Information Modeling ("BIM") and Building Internet of Things ("BIoT") technologies through integrating "Building Information Modeling System-CCC" (BIM) with SenseOne IoT Platform (BIoT).

This integration will offer our customers unparalleled user experience in terms of utilizing real-time IoT data for the dynamic digital representation of buildings throughout their full lifecycle; that is, enabling intelligent interactions between heterogeneous and / or homogeneous buildings' assets that may generate valuable engineering and economic context."

ISSAM EL-ABSI
General Manager
BIM Centers - CCC

Our aim is to deliver the "new smart" in the construction technologies industry

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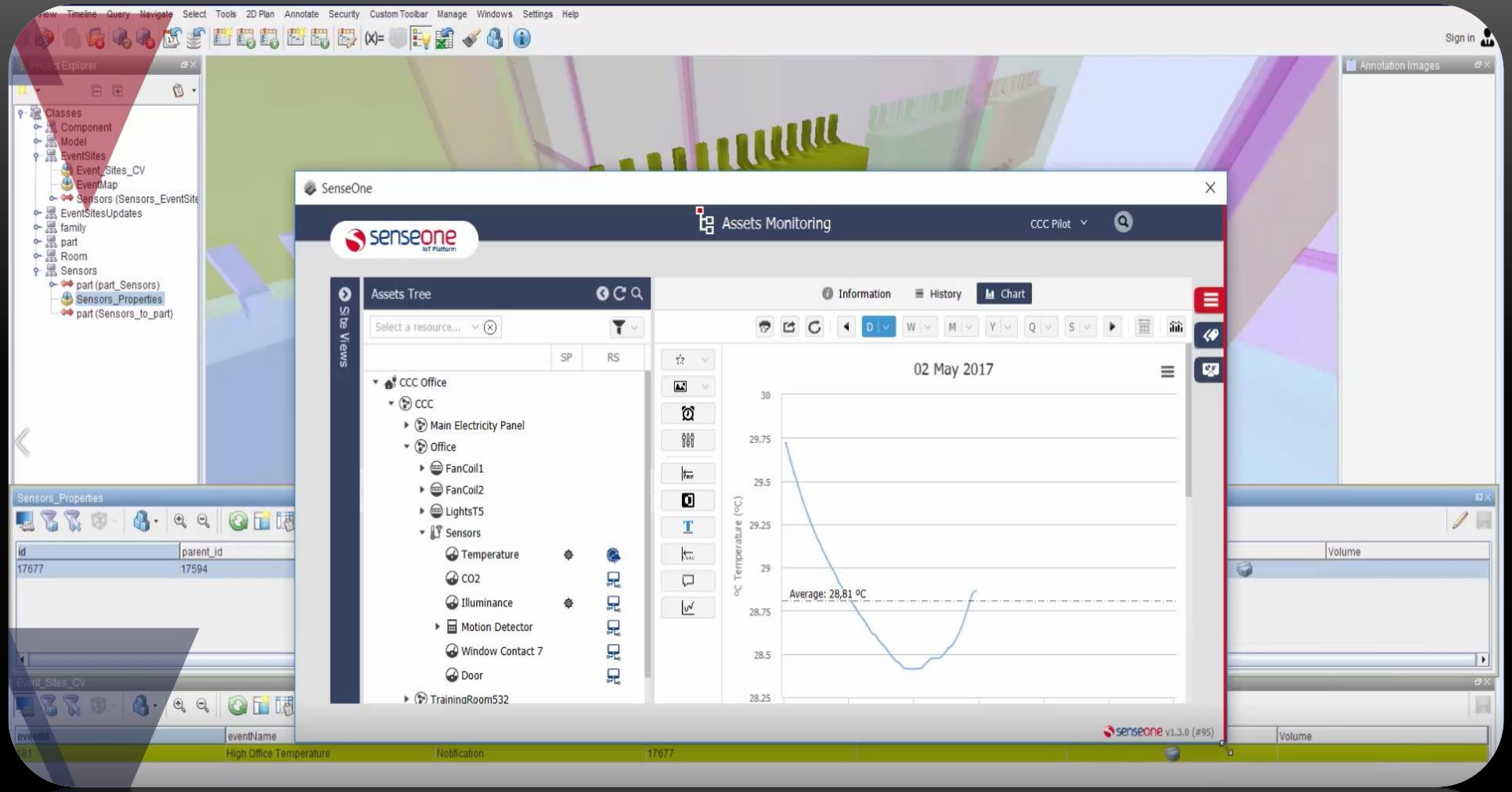
BIM INTEGRATION WITH IoT
ASSETS PERFORMANCE AND LIFECYCLE MANAGEMENT



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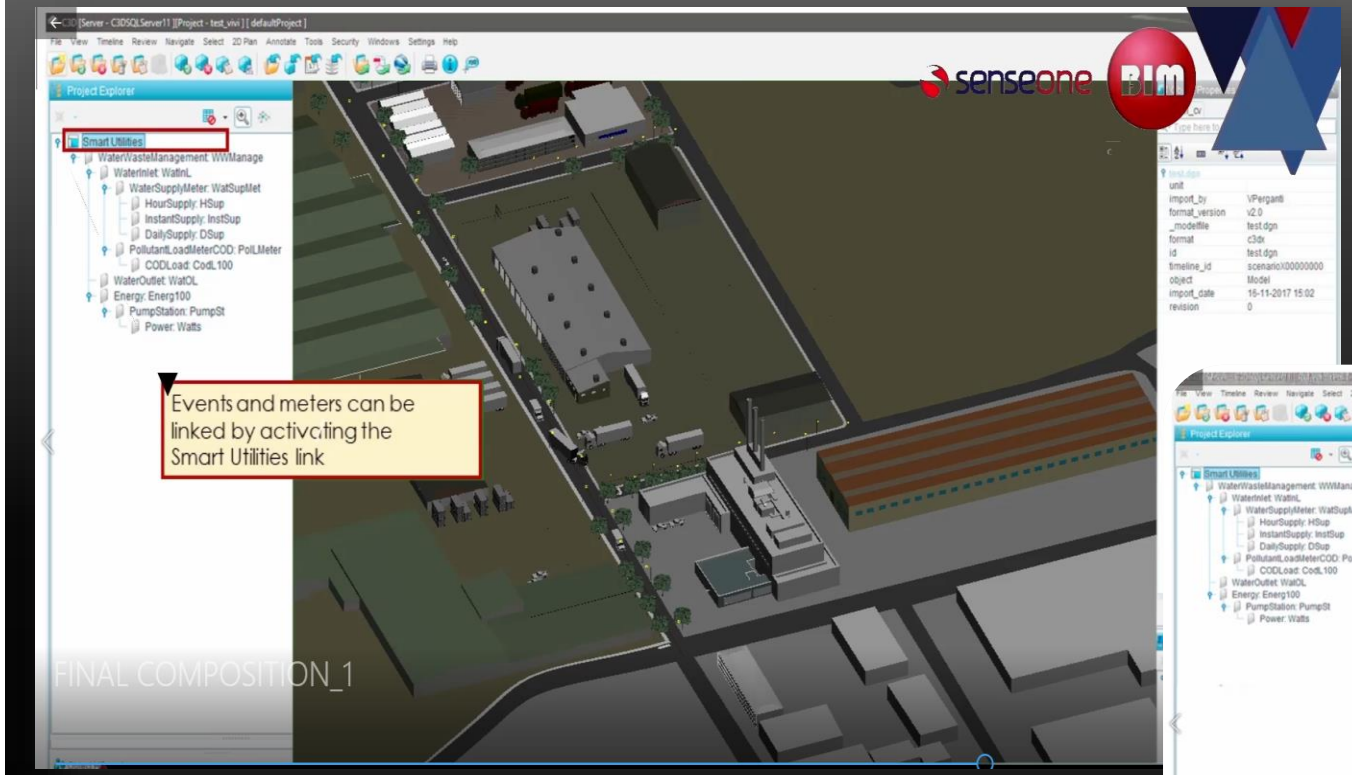
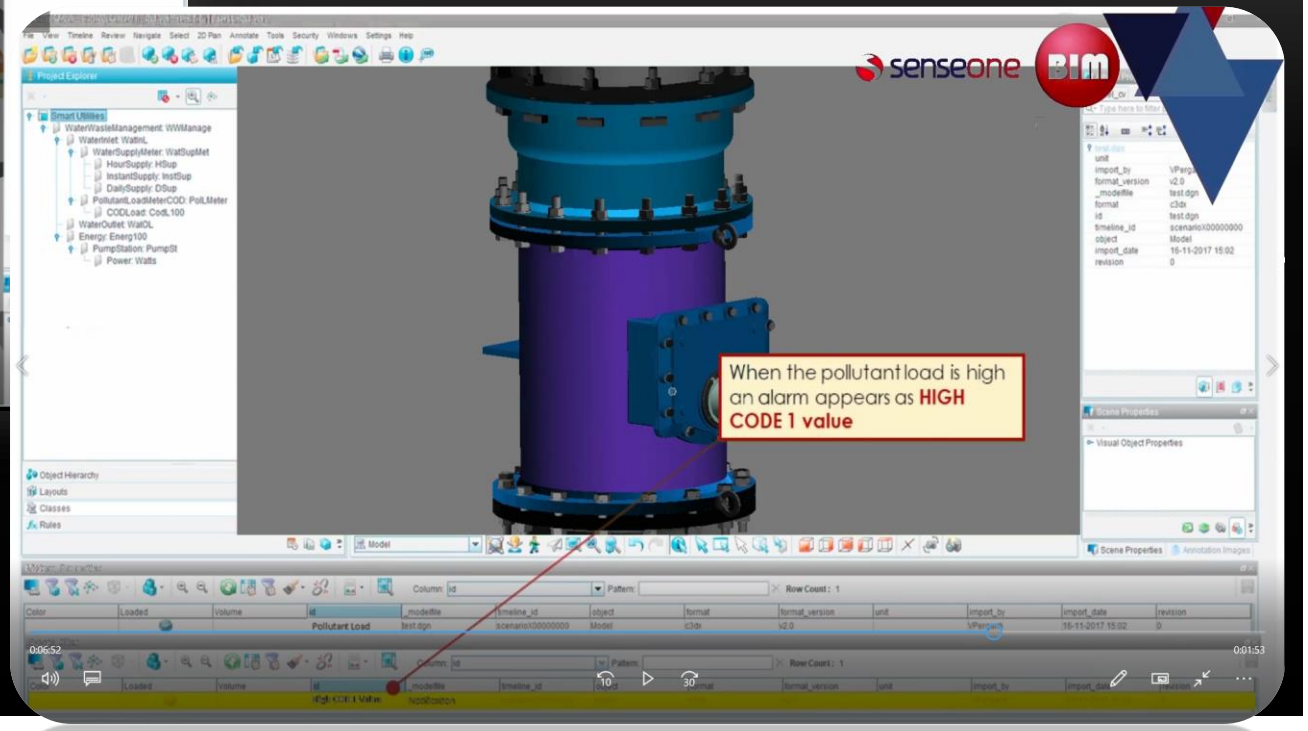
INFRASTRUCTURES DIGITIZATION
BIM TO SMART CITIES – SOCIETY / PUBLIC ASSETS





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DIGITIZATION CHALLENGES AND OBSTACLES

AVAILABILITY OF RESOURCES

CHANGE MANAGEMENT

CULTURE

SOCIAL

TRANSPARENCY

TECHNOLOGY

COMPETITION

INTEROPERABILITY

ROI

STANDARDS

ECONOMY

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2011

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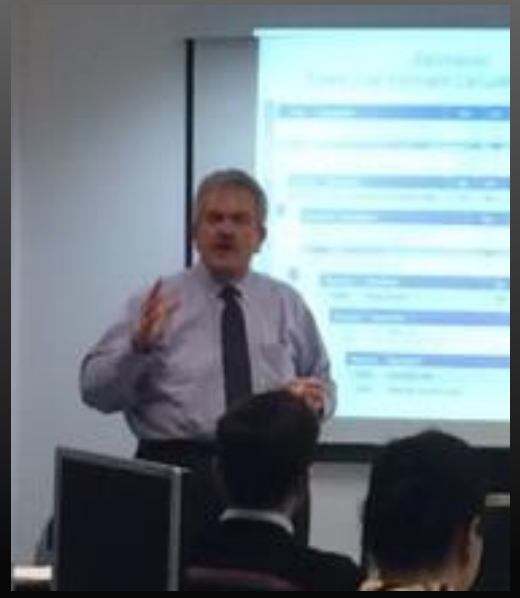
STARTED *2011*



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Master's Degree in GLOBAL BIM MANAGEMENT for INFRASTUCTURE PROJECTS

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Academic partners of the master

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IL3 Instituto de Formación Continua

CanBIM Canada BIM Council

bre

National Taiwan University

CIAT

Chartered Institute of Architectural Technologists

SOFTWARE:

Bentley

GRAPHISOFT

AUTODESK. Authorized Training Center

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buildingSMART International Alliance for Interoperability

CanBIM Canada BIM Council

BIM Forum Chile

Ministerio de Vivienda y Urbanismo

Gobierno de Chile

THANK YOU FOR ATTENDING!