

INTEGRATED BIM DATA ECO-SYSTEM



BEXEL MANAGER SINGLE SOURCE OF TRUTH

GEOMETRY	SELECTION SETS	RESOURCES
ATTRIBUTES	MATERIALS	COST ITEMS
RELATIONS	ELEMENTS	SCHEDULE TASKS
QTO	ZONES	PROGRESS
DOCUMENTS	CONFLICTS	SUBCONTRACTORS
SCHEDULE	BUDGET	FM



INTERCONNECTED BIM DATA DOMAINS

EXAMPLES

- AUTOMATED IDS DATA VERIFICATION ENGINE
- SMART CLASSIFICATION BASED ON MODEL ATTRIBUTES
- TIME AND COST BASED CLASH MANAGEMENT
- SYNCHRONIZATION OF TIME, COSTS AND RESOURCE DATA WITH BIM AUTHORIZING TOOLS

BIM QUERY LANGUAGE
DATA QUALITY CONTROL
AND DATA MANAGEMENT

AUTOMATED DATA
ENRICHMENT

EXAMPLES

- ADVANCED DATA HANDLING USING CLOUD BASED SERVICES AND EXTERNAL SYSTEMS
- TAILORED DATA EXPORTS FOR ADVANCED MS POWER BI DASHBOARDS
- DATA EXPORTS TO REGION SPECIFIC FORMATS (GAEB, BC3, ...)
- DATA INTEGRATION WITH ERP SYSTEMS (SAP, MS DYNAMICS, ...)

BIM DATA
REPORTS&EXPORTS

IMPLEMENTATION OF IDM
(INFORMATION DELIVERY
MANUAL)

IDS (INFORMATION DELIVERY
SPECIFICATION)
BASED BIM DATA
VERIFICATION



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INTERCONNECTED BIM DATA
DOMAINS

- ▶ AUTOMATED IDS DATA VERIFICATION ENGINE
- ▶ CONDITIONALLY ENHANCED IDS DATA VERIFICATION ENGINE
- ▶ SMART COST CLASSIFICATION DATA ENRICHMENT (UNIFORMAT, MASTERFORMAT, UNICLASS)
- ▶ ATTACH MAXIMUM NUMBER OF PEOPLE TO SPACE ACCORDING TO SPECIFIC STANDARD

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INTERCONNECTED BIM DATA DOMAINS

AUTOMATED IDS DATA VERIFICATION ENGINE

CONDITIONAL ENHANCED IDS DATA VERIFICATION ENGINE BASED ON MATERIAL

CHECK IF WINDOWS AND DOORS ARE HOSTED BY WALLS

CHECK IF EQUIPMENT, FURNITURE, FITTINGS HAVE ROOM DEFINED OR IF THEY EXIST IN THE CERTAIN SPACE

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INTERCONNECTED BIM DATA
DOMAINS

- ▶ AUTOMATED IDS DATA VERIFICATION ENGINE PER CONSTRUCTION MONTH/WEEK
- ▶ AUTOMATED IDS VERIFICATION ONLY FOR THE ELEMENTS WHICH COST MORE THAN 100€
- ▶ CHECK IF THERE ARE ELEMENTS WHICH ARE NOT SCHEDULED/PRICED
- ▶ CREATE LOOK-AHEAD SELECTION SETS PER EACH ACTIVITY FOR NEXT DAY, WEEK, MONTH
- ▶ ATTACH EXACT COST AND SCHEDULE INFORMATION TO ELEMENTS
(IFCProperties, IFC CostItems, IFCTask)
- ▶ ATTACH ALL COST ITEMS AND RESOURCE INFORMATION TO ELEMENTS
- ▶ ATTACH TASK(S) INFO TO ELEMENTS

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INTERCONNECTED BIM DATA
DOMAINS

AUTOMATED VERIFICATIONS IF ZONE/SPACE ELEMENT PROPERTIES ARE CORRECTLY DEFINED

CREATE SELECTION SETS GROUPING CLASHES PER ZONE

IMPORT CUSTOMIZED CLASH MATRIX AND PERFORM CLASH DETECTION

ADD PROPERTY TO EACH ELEMENT DEFINING ITS ZONE AND SPACE

ADD ALL RESPECTIVE SPATIAL IFCRelations (EG. Contained In Room)

EXPORT THE ENRICHED DATA TO IFC, BCF OR EXCEL

ATTACH EXACT CONSTRUCTION DATE TO EACH CLASH BCF

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INTERCONNECTED BIM DATA
DOMAINS

- ▶ CREATE SELECTION SETS FOR EACH SUBCONTRACTOR
- ▶ CREATE SELECTION SETS FOR EACH RESOURCE (MATERIAL, EQUIPMENT, LABOUR)
- ▶ CREATE SELECTION SETS WITH LOOK-AHEAD PLANS PER SUBS, MONTHS, COST CLASSIFICATIONS
- ▶ ADD SUBCONTRACTOR(S) PROPERTY TO EACH ELEMENT
- ▶ ATTACH RESOURCE PROPERTIES (NAME, QTY, COST) TO EACH ELEMENT
- ▶ CALCULATE TASK DURATIONS BASED ON ACTIVITIES, QUANTITIES AND RESOURCE LIMITATIONS
- ▶ EXPORT THE ENRICHED DATA TO IFC, BCF, EXCEL, POWER BI

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INTERCONNECTED BIM DATA
DOMAINS

- ▶ CHECK IF EACH ELEMENT HAVE LINKED/ATTACHED REQUIRED DOCUMENTS
- ▶ CHECK IF EACH ELEMENT HAVE ATTACHED REQUIRED FM PLANS
- ▶ AUTOMATED CREATION OF FM PLANS AND RESPECTIVE QUANTITIES BASED ON FORMULAS AND RULES
- ▶ AUTOMATED DOCUMENT ELEMENT LINKING BASED ON ELEMENT OBJECT TYPE (FAMILY)
- ▶ AUTOMATED LINKING OF ELEMENTS AND FM PLANS
- ▶ EXPORT THE ENRICHED DATA TO IFC, BCF, EXCEL, POWER BI

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INTERCONNECTED BIM DATA
DOMAINS

- ▶ AUTOMATED PROGRESS ENTRIES BASED ON ACTUAL ACTIVITY SELECTION SETS
- ▶ AUTOMATED PROGRESS ENTRIES BASED ON SUB/COST CLASSIFICATION SELECTION SETS
- ▶ CALCULATE EVA, CPI, SPI AND OTHER KPIS FOR EACH ELEMENT / GROUP OF ELEMENTS/TASKS
- ▶ CREATE SELECTION SETS WITH ELEMENTS PERFORMED ON TIME, BEHIND OR AHEAD OF SCHEDULE
- ▶ ATTACH EVA, CPI, SPI TO EACH ELEMENT
- ▶ EXPORT THE ENRICHED DATA TO IFC, BCF, EXCEL, POWER BI

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INTERCONNECTED BIM DATA
DOMAINS

- ▶ IMPORT DATA FROM 3RD PARTY APPS AND CLOUD BASED SOLUTIONS
- ▶ AUTOMATED DATA ENRICHMENT OF KNOWLEDGE BASES FOR FUTURE PROJECTS
- ▶ ADVANCED DATA HANDLING USING CLOUD BASED SERVICES AND EXTERNAL 3RD PARTY APPS
- ▶ TAILORED DATA EXPORTS FOR ADVANCED MS POWER BI DASHBOARDS
- ▶ DATA EXPORTS TO REGION SPECIFIC FORMATS (GAEB, BC3, ...)
- ▶ DATA INTEGRATION WITH ERP SYSTEMS (SAP, MS DYNAMICS, ...)

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