



SOLIBRI

MODEL CHECKING FOR QUALITY



S O L I B R I M O D E L C H E C K E R

Aportando Valor Añadido a los Datos del BIM

www.solibri.com



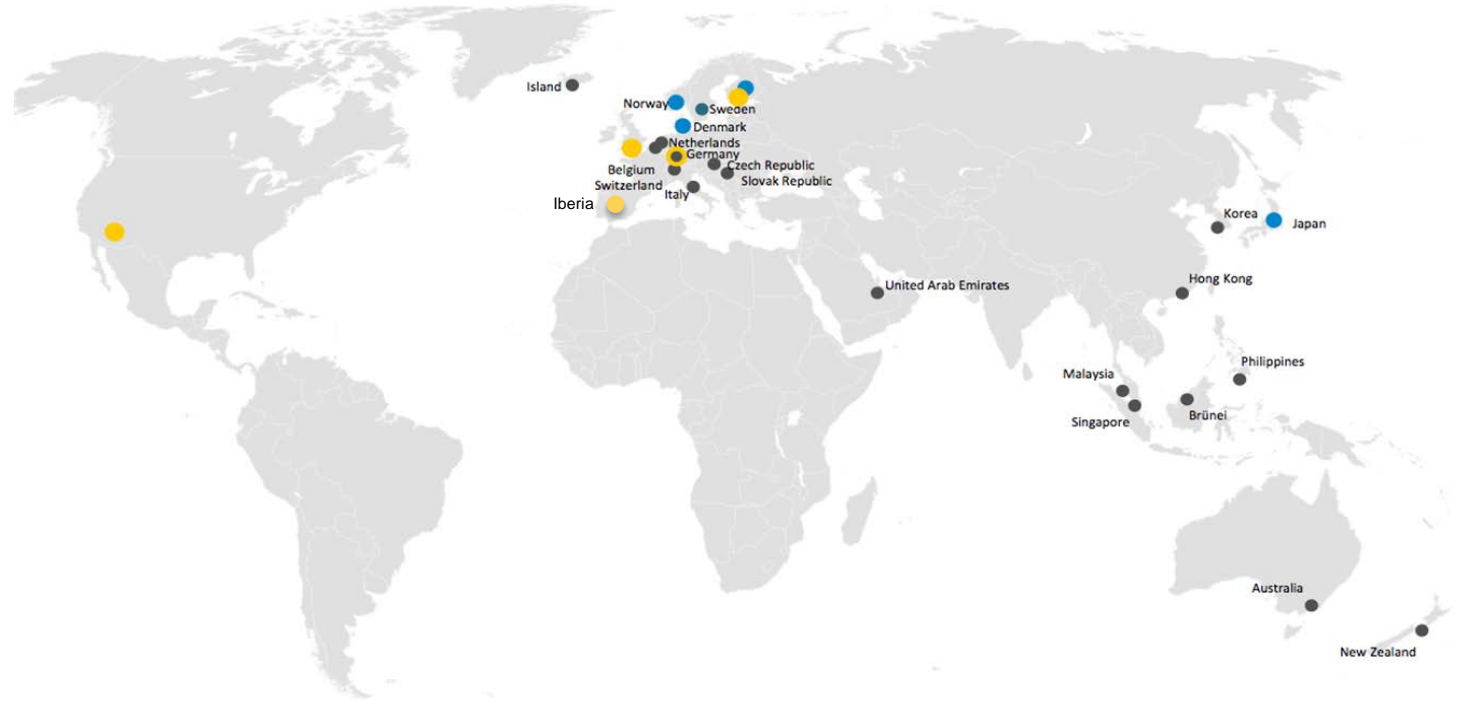
Describe it
Check it
Assure it

Solibri

- Es líder de mercado de la validación automatizada de modelos BIM
- Nuestra Misión:
 - Desarrollar y comercializar soluciones que mejoren la calidad de los modelos (BIM) y hacer que todo el proceso de diseño sea más productivo.
- Somos pioneros en el suministro de software listo para el uso para la comprobación y análisis de los modelos BIM de manera automatizada
- La base de clientes incluye a un número cada vez mayor de propietarios de edificios, empresas constructoras, consultores, arquitectos y empresas de ingeniería
- Soluciones y Servicios:
 - Solibri Model Checker
 - Solibri IFC Optimizador (gratuito)
 - Solibri Model Viewer (gratuito)
 - BIM Consulting - Servicios de validación

Solibri Inc.

Desarrolla y comercializa soluciones de Aseguramiento y Control de Calidad (QA / QC) en **66 países** que mejoran la calidad del diseño basado en OpenBIM lo que hace que todo el proceso de diseño sea más productivo.



- Solibri filiales
- Países con varios partners
- Países con un partner

Clientes
Propietarios, Empresas de construcción,
Arquitectos, Ingenieros, Project
managers ...

Referencias



US Army Corps., US Coast Guard, GSA, Statsbyg, Senaatti Properties,...



Bouygues, Skanska, NCC, ISS Proko, Lemminkäinen, Pöyry CM, NIST, SRV, Webcor...



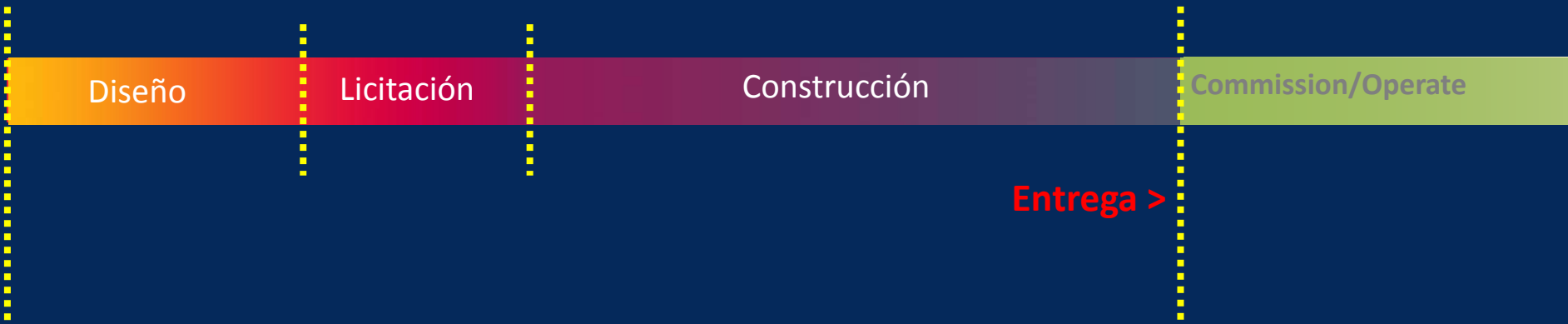
White Architect, SOM, Pöyry Arc, Anshen & Allen, Arkitema, EKJ, Larkas & Laine, HNTB...



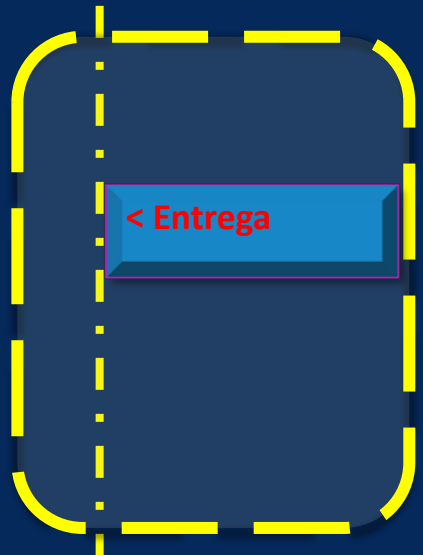
Ramboll, Multiconsult, COWI, Finnmap, Jacobs Eng, Granlund, Vahanen. ProjectusTeam ...



Describe it
Check it
Assure it



Entrega Tradicional de un Proyecto vs. Integrated Project Delivery

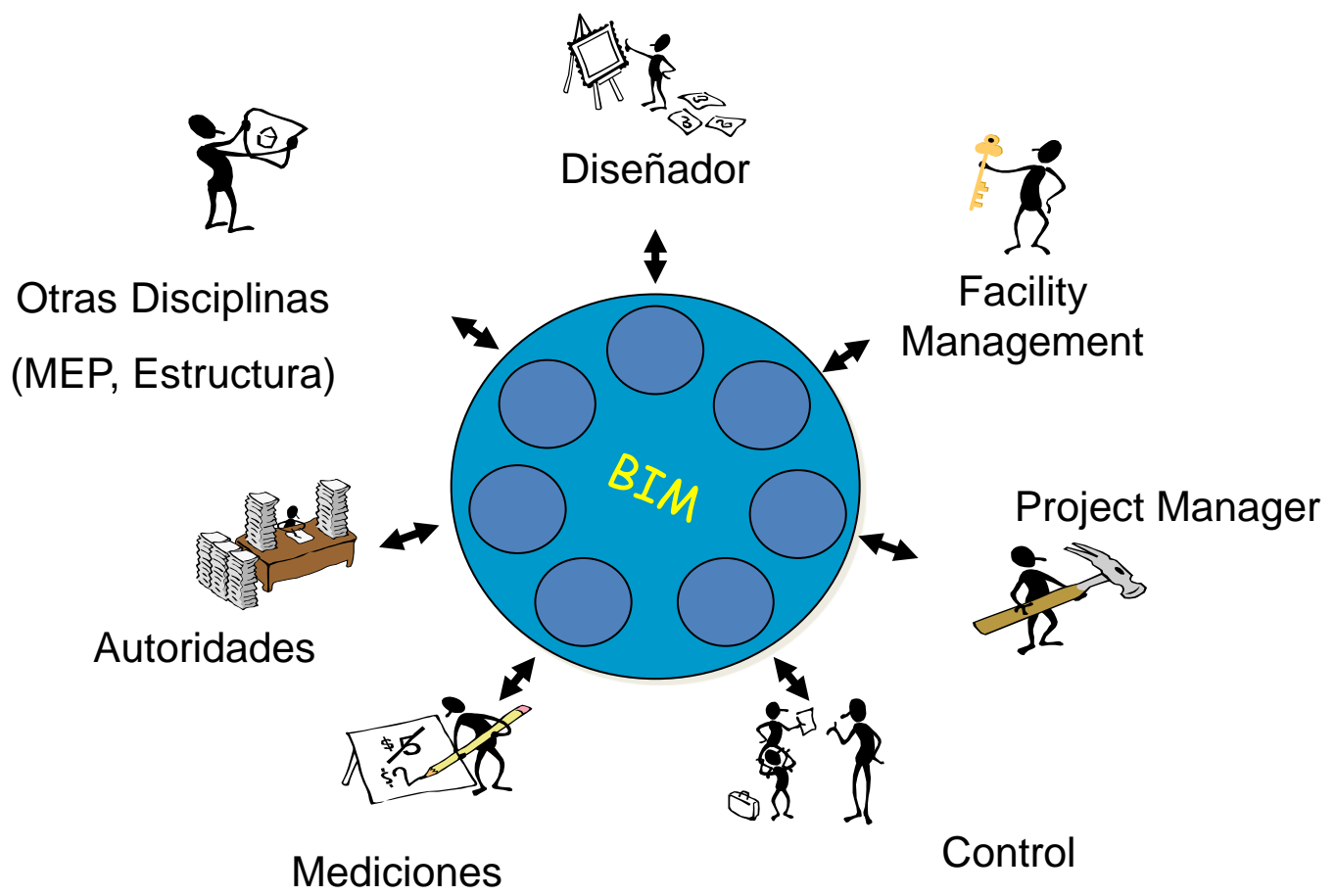


Soft Landing



Describe it
Check it
Assure it

Actores en el proceso de un proyecto



Comprobación de la integridad del modelo.....



Describe it
Check it
Assure it



Componentes solapados



Results No Filtering Automatic

Results

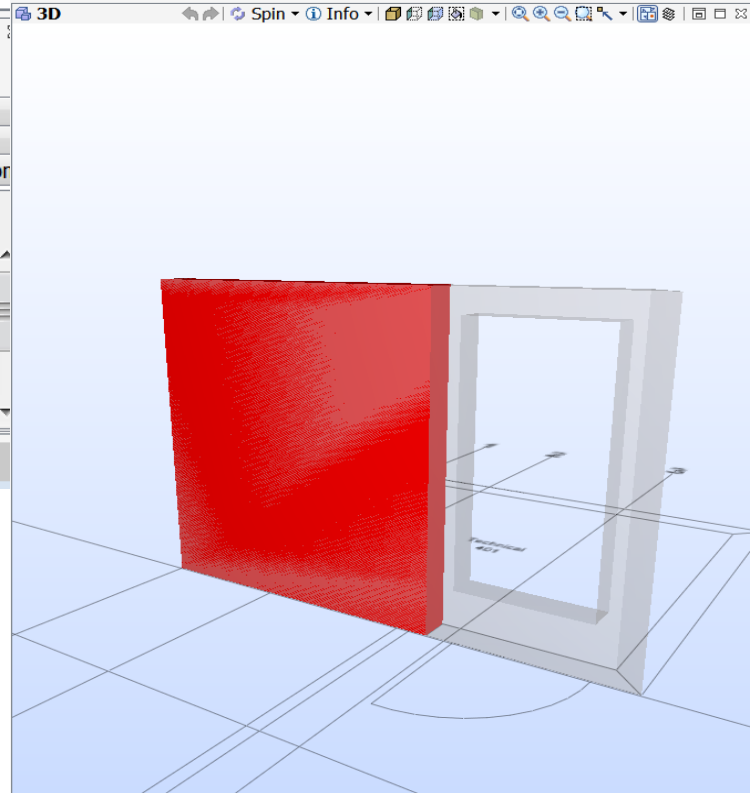
- Components Inside Each Other [0/1]
 - EW-1 240 (2) [0/1]
 - Wall.3.14 (EW-1 240) and Wall.3.7 (EW-1 240) are inside each other
 - Wall.3.14
 - Wall.3.7

Info

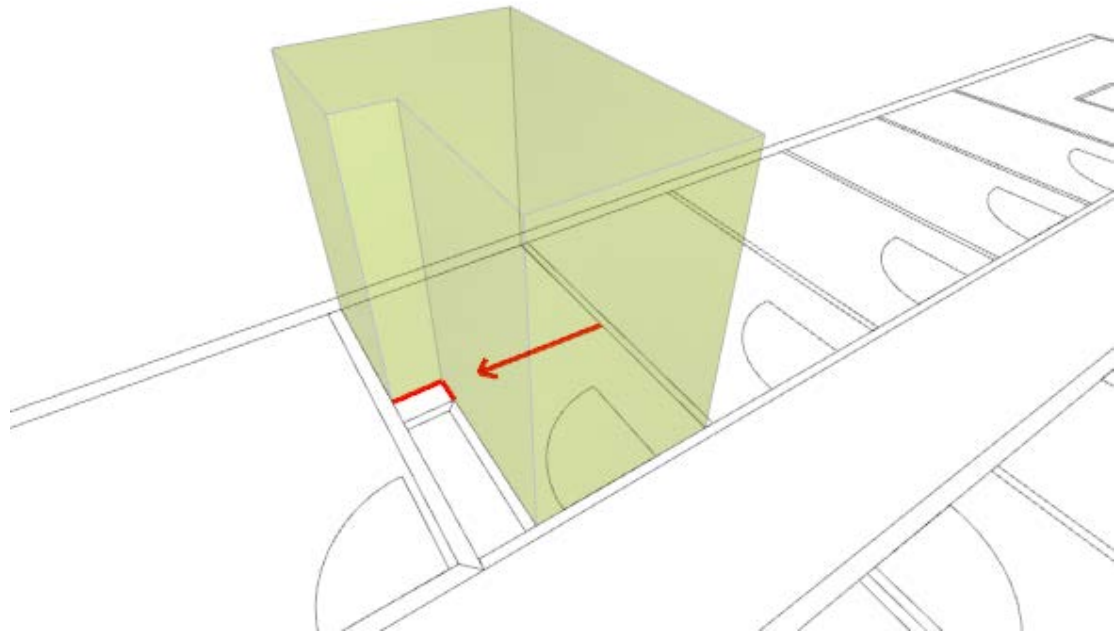
Wall.3.14


BaseQuantities			Pset_WallCommon			
Hyperlinks	AC_Pset_Name		AC_Pset_RenovationAndPhasing			
Identification	Location	Quantities	Material	Profile	Relations	Classification
Property	Value					
Model	SMC Building					
Discipline	Architectural					
Name	Wall-105					
Type	EW-1 240					
Material	face brick 100 mm, Solid Fill 140 mm					
Layer	External walls					
Geometrv	Extrusion					

Welcome to Solibri Model Checker



Comprobación de espacios



Info 

Space.2.3 : Office[308]

Description [Hyperlinks](#)

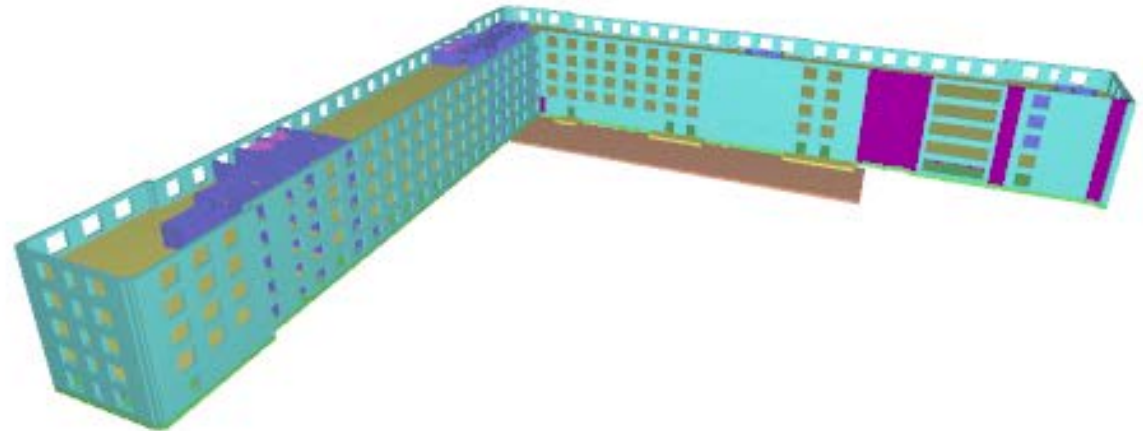
- Space perimeter is not totally aligned with bounding components. The total length of these segments is 829 mm.























Tipos de los elementos de construcción



Describe it
Check it
Assure it



Results			
	 Unknown Type Values in Slab Components [0/3]		
	 Ground_D7 ANSI37		
	 Slab A		
	 Slab: 4" on gravel		
	 Unknown Type Values in Wall Components [0/4]		
	 Empty Fill		
	 Wall A		
	 Wall B		
	 Wall C		

Listado de espacios

Parameters Restore defaults

Required Spaces

Space Type	Space Name	Space Number	Required Count	Target Area	Tolerance
	Conference*		1	38.1 m2	5%
	Conference*		1	25.1 m2	5%
	Lobby		1	20.9 m2	5%
	Corridor*		1	6.5 m2	10%
	Corridor*		1	10.2 m2	10%

Space Groups to Be Taken into Account: Ignore Space Groups

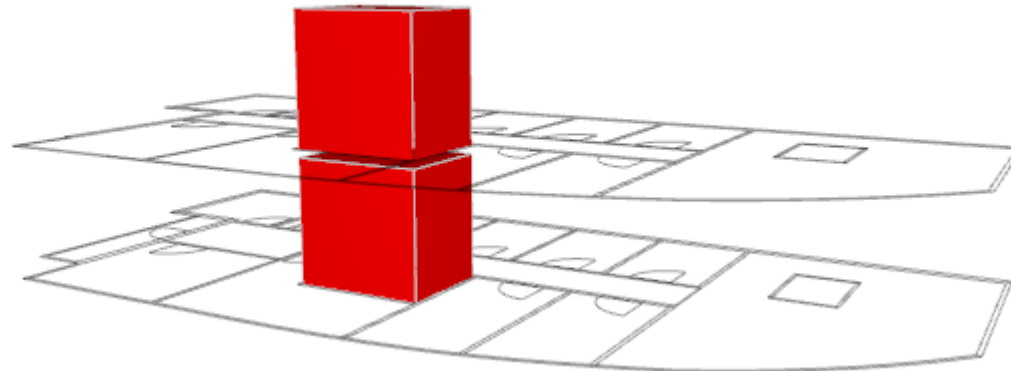
Space Group Types Taken into Account

Space Group Type

Results No Filtering Automatic

Results

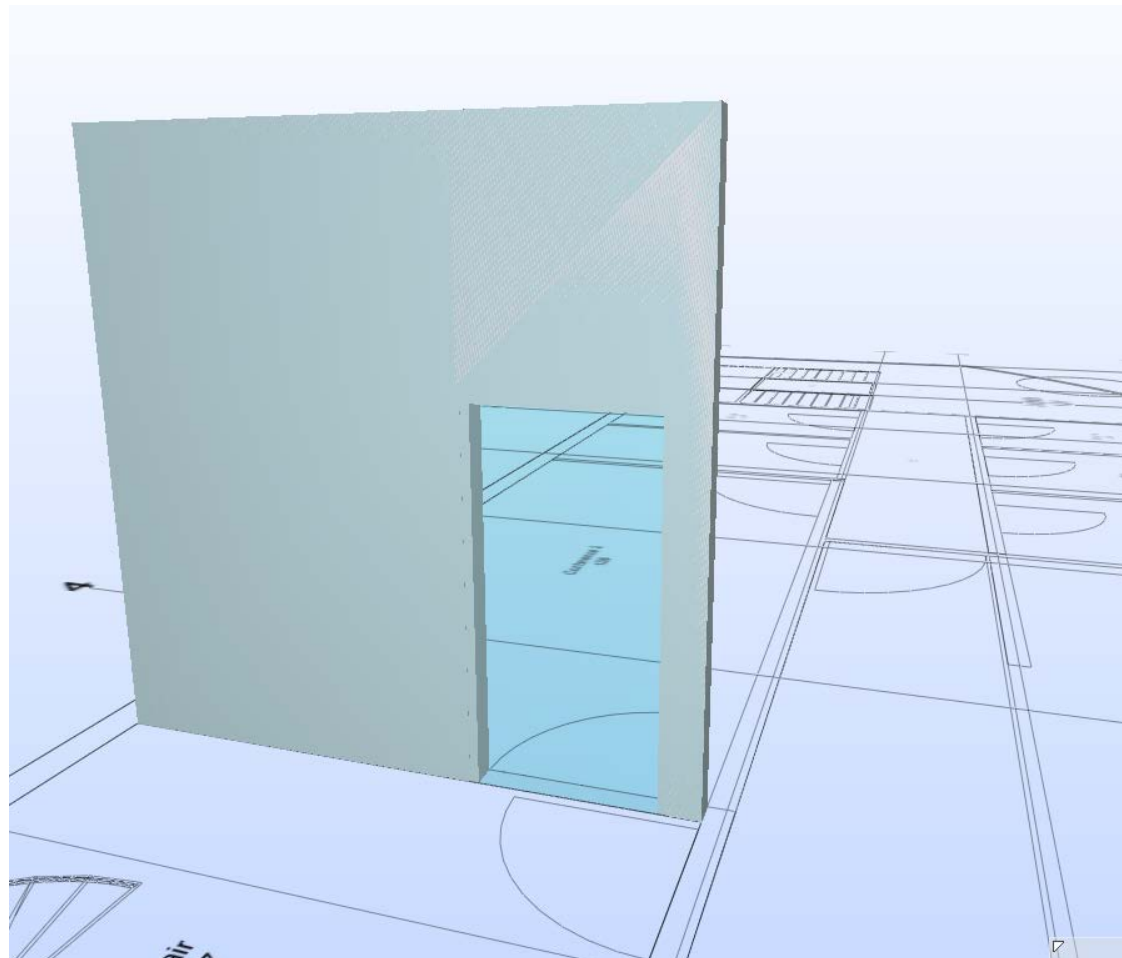
Restroom [0/1]	Not enough spaces, area 6.5 m2 +/- 10% and Nameis Res
Extra spaces [0/4]	
Elevator	
Men	
Pipe Shaft	
Women	



Describe it
Check it
Assure it

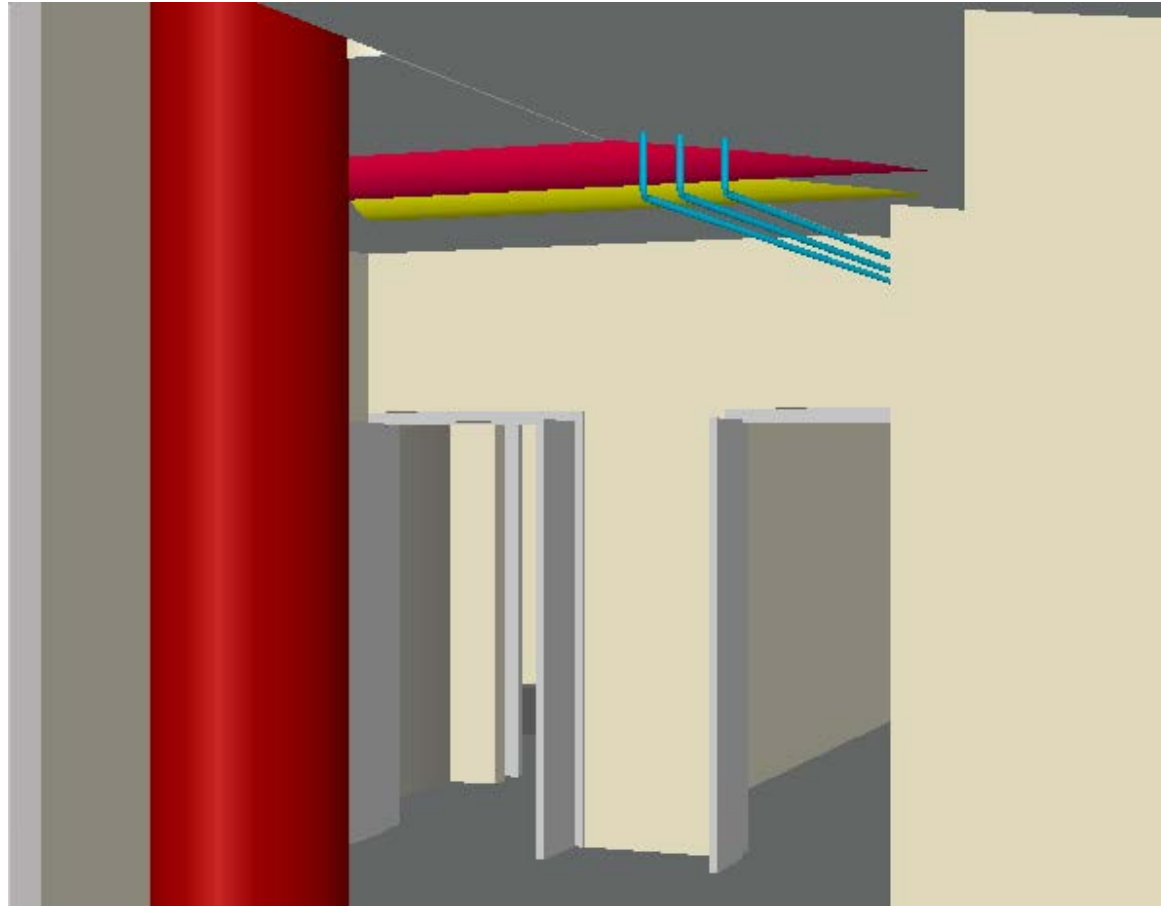
Comparación de modelos - Arquitectura vs Estructura

- No hay ninguna abertura en el muro del modelo estructural (gris) para el componente puerta de la arquitectura que se muestra en transparente



Describe it
Check it
Assure it

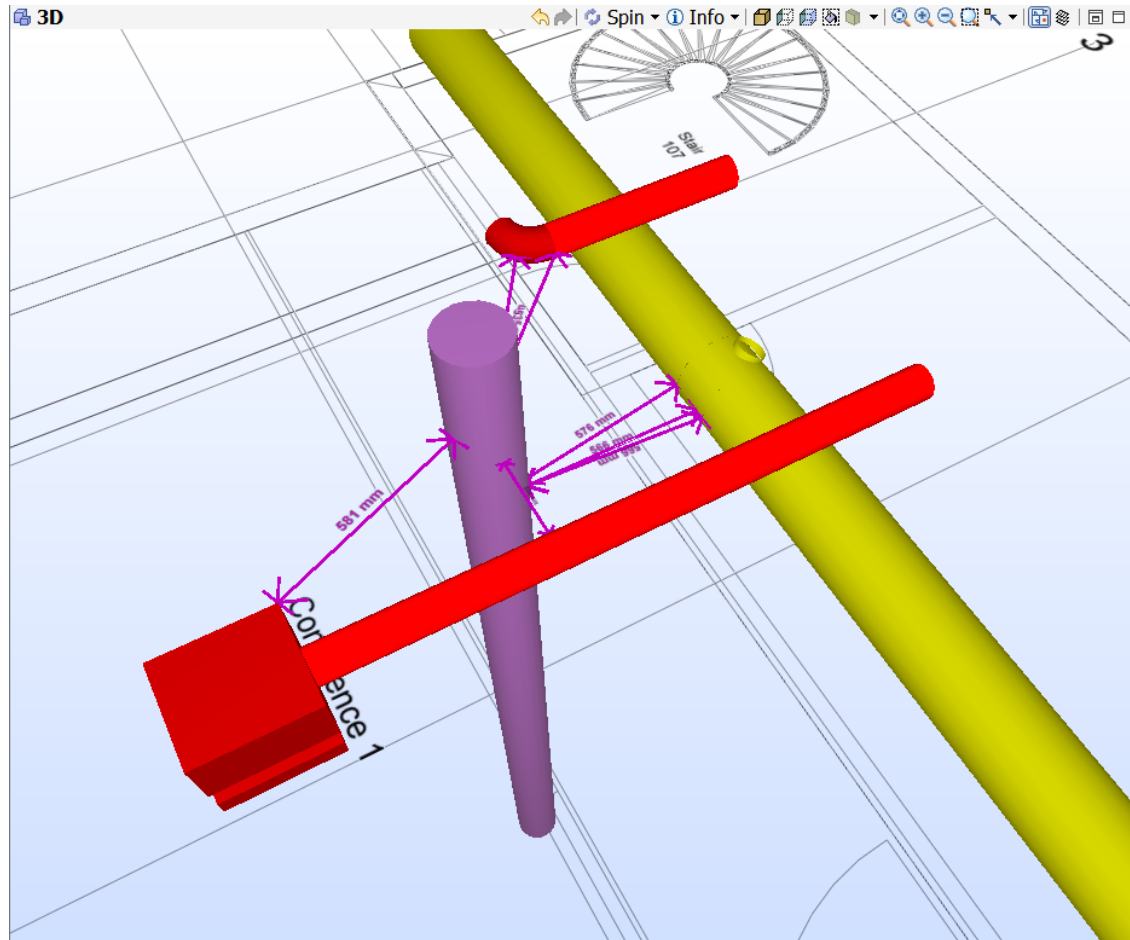
Comparación de modelos - Arquitectura vs MEP



- El techo inclinado no puede albergar los elementos MEP



Estructura vs MEP



- Distancia entre el pilar (estructura) y los componentes MEP

Comprobación del cumplimiento de normas



Describe it
Check it
Assure it



Solibri Model Checker - KP_COMBINED_ORIENTED_Classified_10_11_checks_1850_13_03_13

File Model Checking Communication Information Takeoff COBie Work Packages +

To-Do (2/3)

Checking

- 407.5 Elevator Door Requirements
 - 407.3.6 Width
- Chapter 5. General Site and Building Elements
 - 504 Stairways
 - 504.2 Treads and Risers
 - 504.3 Open Risers
 - 504.5 Nosings
- Chapter 6. Plumbing Elements and Facilities
 - 603 Toilet and Bathing Rooms
 - 603.2.1 Turning Space
 - 604 Water Closets and Toilet Compartments
- Chapter 8. Special Rooms, Spaces, and Elements
- ICC - International Building Code (2009)
 - Chapter 10 - Means of Egress

Result Summary

Issue Count	0	273	0	0	0
Issue Density	0	0.59	0	0	0

Results No Filtering Automatic

Results

- WC [0/273]
 - No Free Floor for Wheelchair Turning Space ø5' [0/273]

Info

No Free Floor for Wheelchair Turning Space ø5'

Description Hyperlinks

3D

LEVEL 5 CSA Design Gross Area 0.00 m2

LEVEL 4 CSA Design Gross Area 0.00 m2

LEVEL 3 CSA Design Gross Area 0.00 m2

LEVEL 2 CSA Design Gross Area 0.00 m2

LEVEL 1 CSA Design Gross Area 0.00 m2

LEVEL 0 CSA Design Gross Area 0.00 m2

Selected: 0

Describe it
Check it
Assure it

Solibri Model Checker - KP_COMBINED_ORIENTED_Classified_10_11_checks_1850_13_03_13

File Model Checking Communication Information Takeoff COBie Work Packages +

To-Do (2/3)

Checking

- Ruleset
 - 407.5 Elevator Door Requirements
 - 407.3.6 Width
 - Chapter 5. General Site and Building Elements
 - 504 Stairways
 - 504.2 Treads and Risers
 - 504.3 Open Risers
 - 504.5 Nosings
 - Chapter 6. Plumbing Elements and Facilities
 - 603 Toilet and Bathing Rooms
 - 603.2.1 Turning Space
 - 604 Water Closets and Toilet Compartments
 - Chapter 8. Special Rooms, Spaces, and Elements
 - ICC - International Building Code (2009)
 - Chapter 10 - Means of Egress

Result Summary

Issue Count	0	273	0	0	0
Issue Density	0	0.59	0	0	0

Results

No Filtering Automatic

Results

- WC [0/273]
 - No Free Floor for Wheelchair Turning Space $\phi 5'$ [0/273]
 - ACC TLT/SH [0/1]
 - (A) Space.4.352 : ACC TLT/SH[3312A]
 - ACC TLT/SHW [0/1]
 - ACC TLT/SHWR [0/1]
 - ACC TOIL/SHW [0/1]
 - ACC. TLT/SHWR [0/2]
 - FEMALE TOILET, STAFF [0/1]
 - MEN TOILET / SHOWER ROOM [0/1]
 - PATIENT TLT [0/246]
 - PATIENT TOILET [0/3]
 - STAFF MEN TOILET [0/1]
 - STAFF TOILET FEMALE [0/1]

Info

ACC TLT/SH

Description Hyperlinks

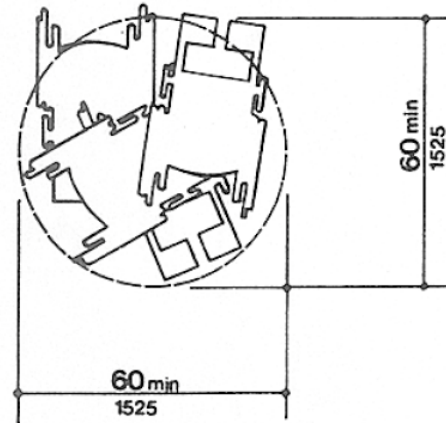
3D

Selected: 0

Describe it
Check it
Assure it

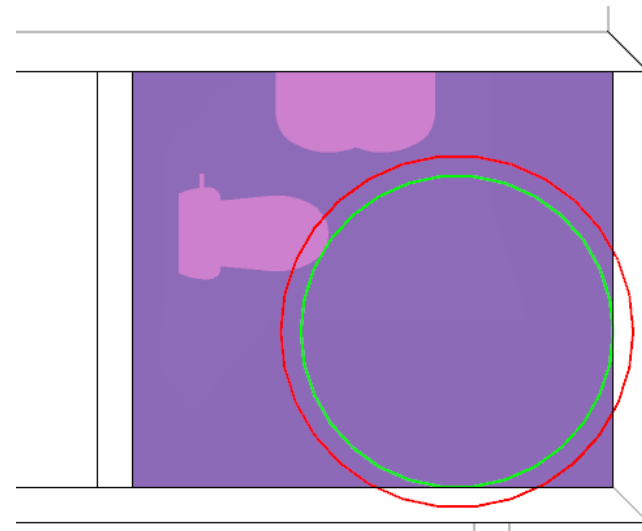
Reglas de acceso

- Los baños deben tener un diámetro de giro de silla de ruedas con un diámetro de 1,5 metros



(a)
60-in (1525-mm)-Diameter Space

- Círculo rojo muestra lo que se requiere - verde muestra el máximo posible actual



Sectorización de incendios



Describe it
Check it
Assure it

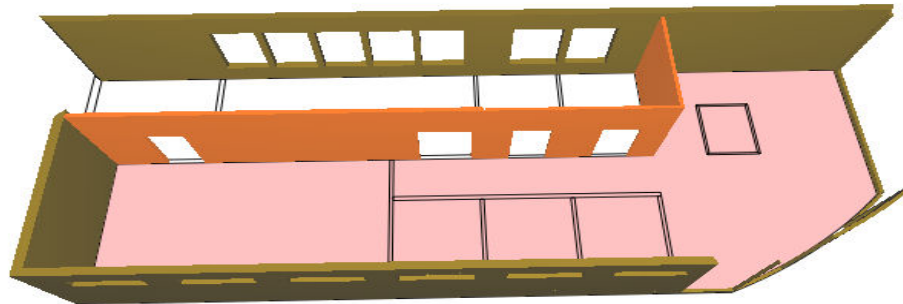
Solemnity US - Solibri Model Checker
File Checking 3D Tools Window Help

Checking Model Tree

Constraint Set

- BIM Validation Process
 - Visualization
 - Model Integrity
 - Space Measurement
 - Quantity Take-off
 - Egress Analysis and Zone Management
 - Escape Routes
 - Fire Compartment Requirements
 - Fire Wall Requirements
 - Doors Must Be Connected to Spaces
 - Minimum Door Dimensions
 - Fire Compartments and Spaces
 - Spaces Must Have an Access
 - Building Codes
 - Component Type Code
 - Space Code
 - Drawing Layer Code
 - Organization's Best Practices

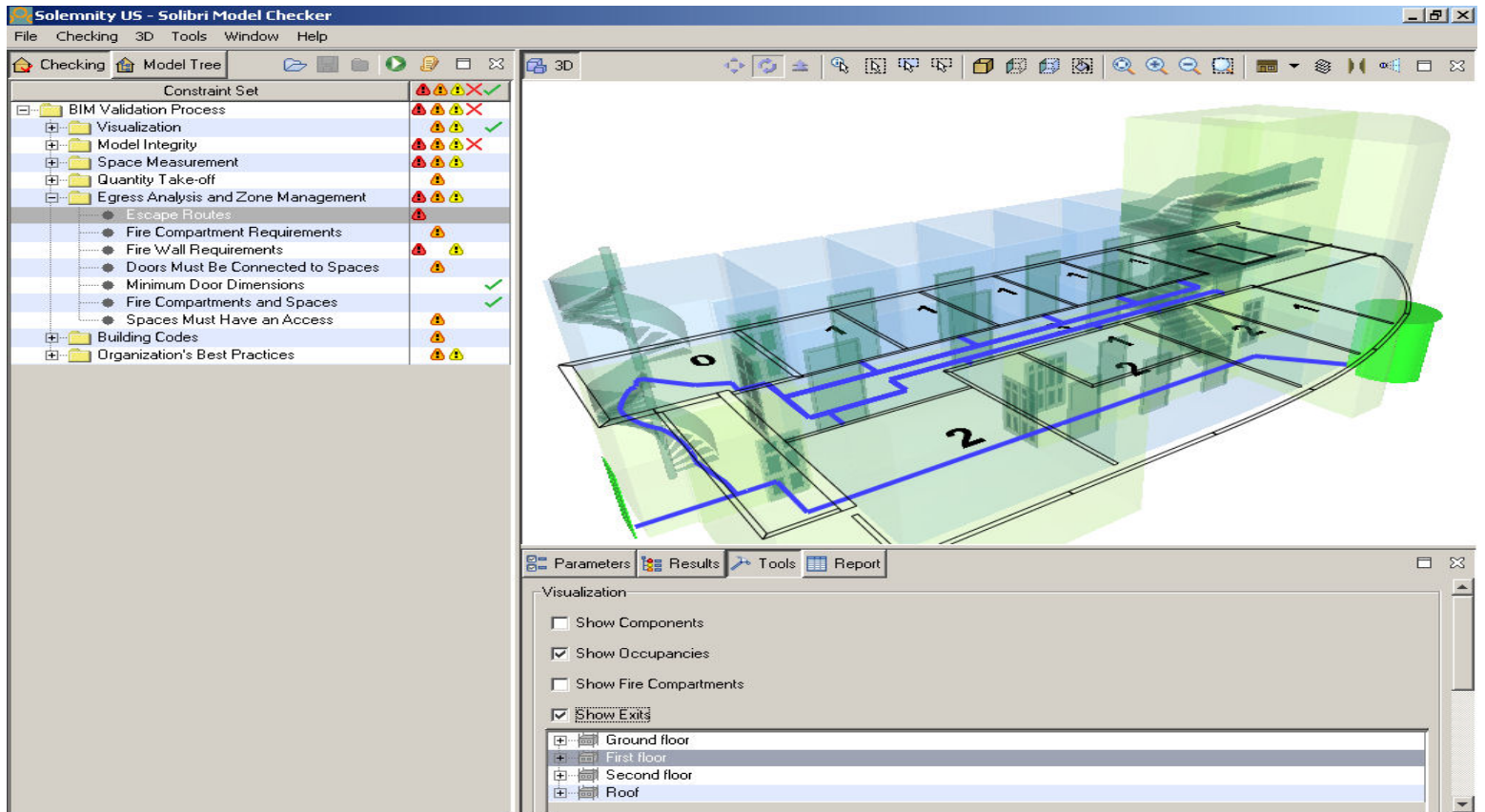
3D



Parameters Results Tools Compartmentation Info

Compartment	Storey	Area	...
Gross Areas			
Fire Compartments			
Fire Compartment.0.1	Ground floor	85,852.6 sq in	...
Fire Compartment.0.2	Ground floor	182,325.3 sq in	...
Fire Compartment.1.1	First floor	86,178.9 sq in	...
Fire Compartment.1.2	First floor	204,776.3 sq in	...
Fire Compartment.2.1	Second floor	86,167.3 sq in	...
Fire Compartment.2.2	Second floor	204,793.2 sq in	...
Fire Compartment.3.1	Roof	18,212.6 sq in	...
Secure Compartments			

Rutas de escape y población por uso



Solibri Model Checker - Consult Exam Room Solibri ADB Demo

File Model Checking Communication Information Takeoff COBie Work Packages +

3D

Checking

Ruleset

- ADB Compliance
 - ADB Equipment check by ADB Room Code

Result Summary

Issue Count	2	0	3	0	0
Issue Density	10	0	15	0	0

Results

No Filtering Transparent

- (Arch) P10 [0/5]
 - C0235 [0/5]
 - (Arch) Space.0.1 : Consult/Exam 1[F123] [0/2]
 - (Arch) Space.0.2 : Consult/Exam 3[F123] [0/3]
 - No 'DIS030'-components
 - Not enough 'CHA318'-components (1/2)
 - (Arch) Furniture.0.2.6
 - (Arch) Space.0.2 : Consult/Exam 3[F123]
 - Too many 'CAL007'-components (2/1)

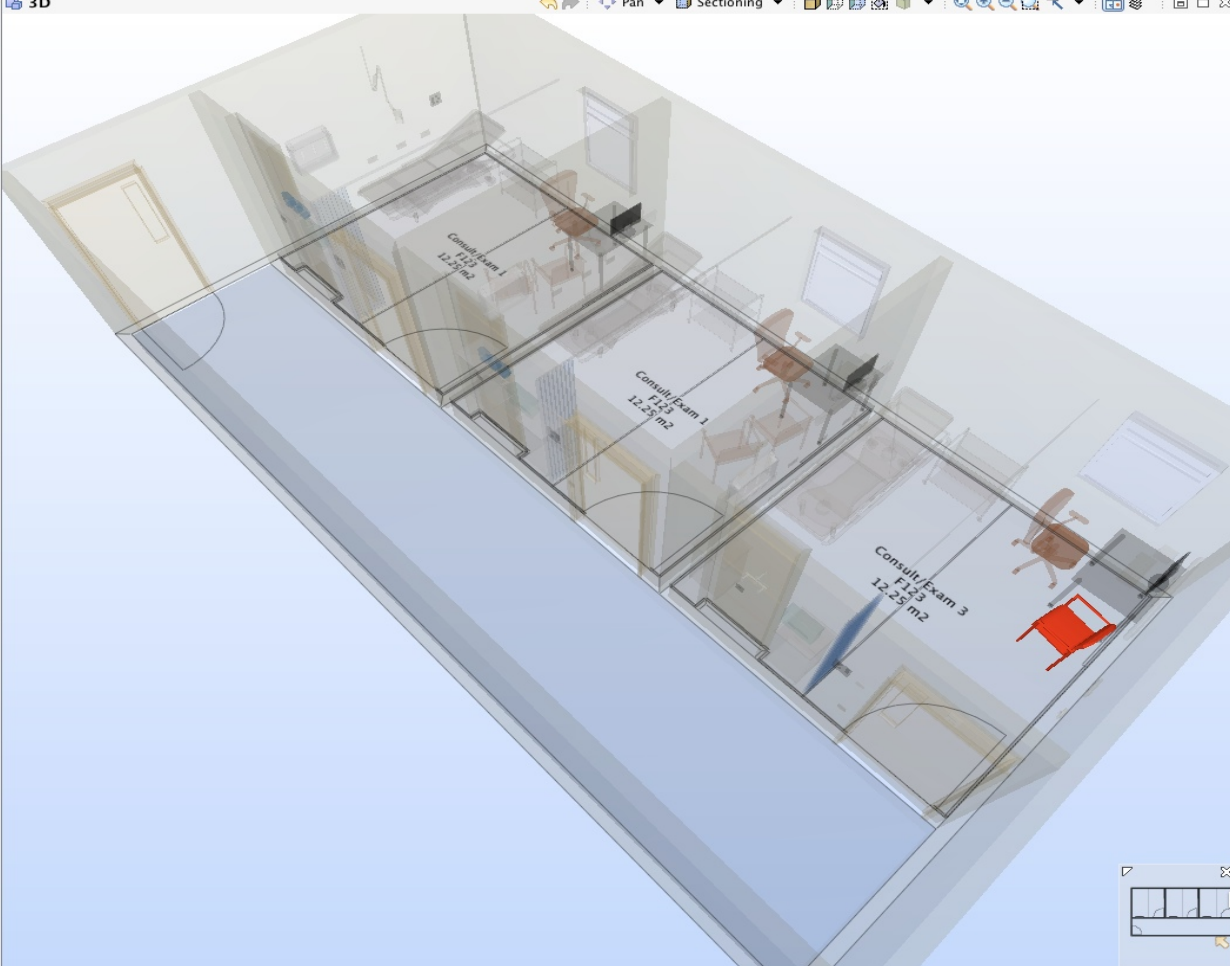
Info

(Arch) Furniture.0.2.6

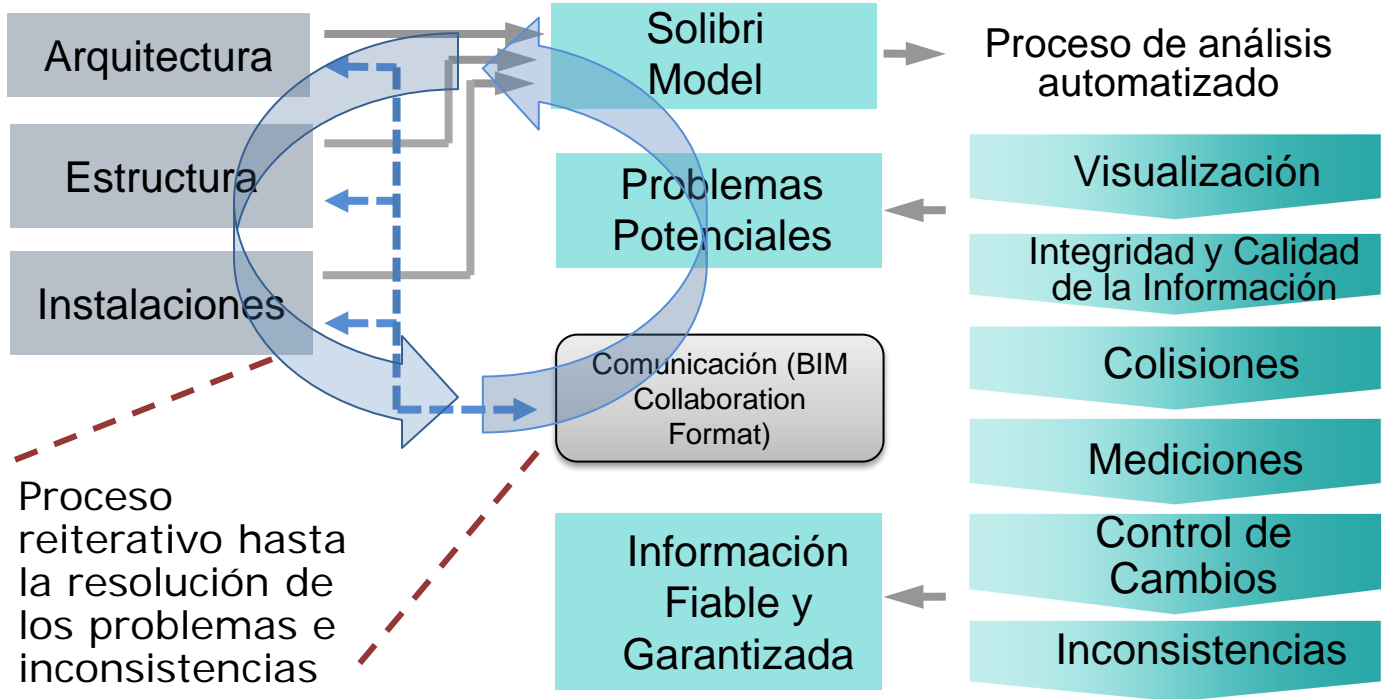
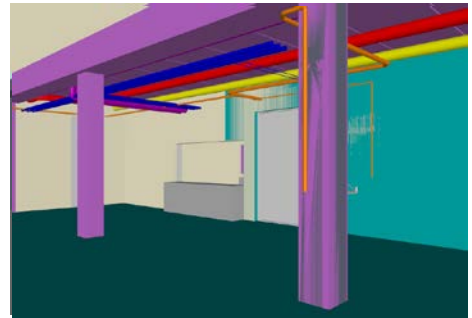
Identification	Location	Quantities	Material	Relations
Property	Value			
Model	(Arch) Consult Exam Room Solibri ADB Demo			
Discipline	Architectural			
Name	CHA318			
Type	Chair 06 15			
Material	Background			
Layer	810P Group 3 FFE			
Geometr	Boundary Representation			

Drag with mouse left button down to pan.

Selected: 0



Solibri Model Checker Flujo de Trabajo



Issue Details

Title **Wall.3.14 (EW-1 240) and Wall.3.7 (EW-1 240) are inside each**

Description
COMPROBAR ESTE MURO

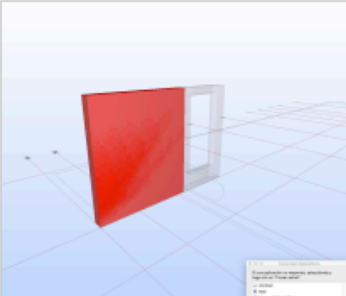
Set Default

Issue Details | Coordination | Components

Title Wall.3

Description COMPROBAR

Viewpoint



Update
Remove

Checking Decision

Accepted ✓
 Rejected ✗
 Undefined
 Don't change

Comments

Add
Edit
Remove

Location
Roof
Technical[401]

Use in presentation

OK Cancel

Issue Details

Title **Wall.3.14 (EW-1 240) and Wall.3.7 (EW-1 240) are inside each**

Description
COMPROBAR ESTE MURO

Set Default

Issue Details | Coordination | Components

Date 2/13/15 9:25 AM

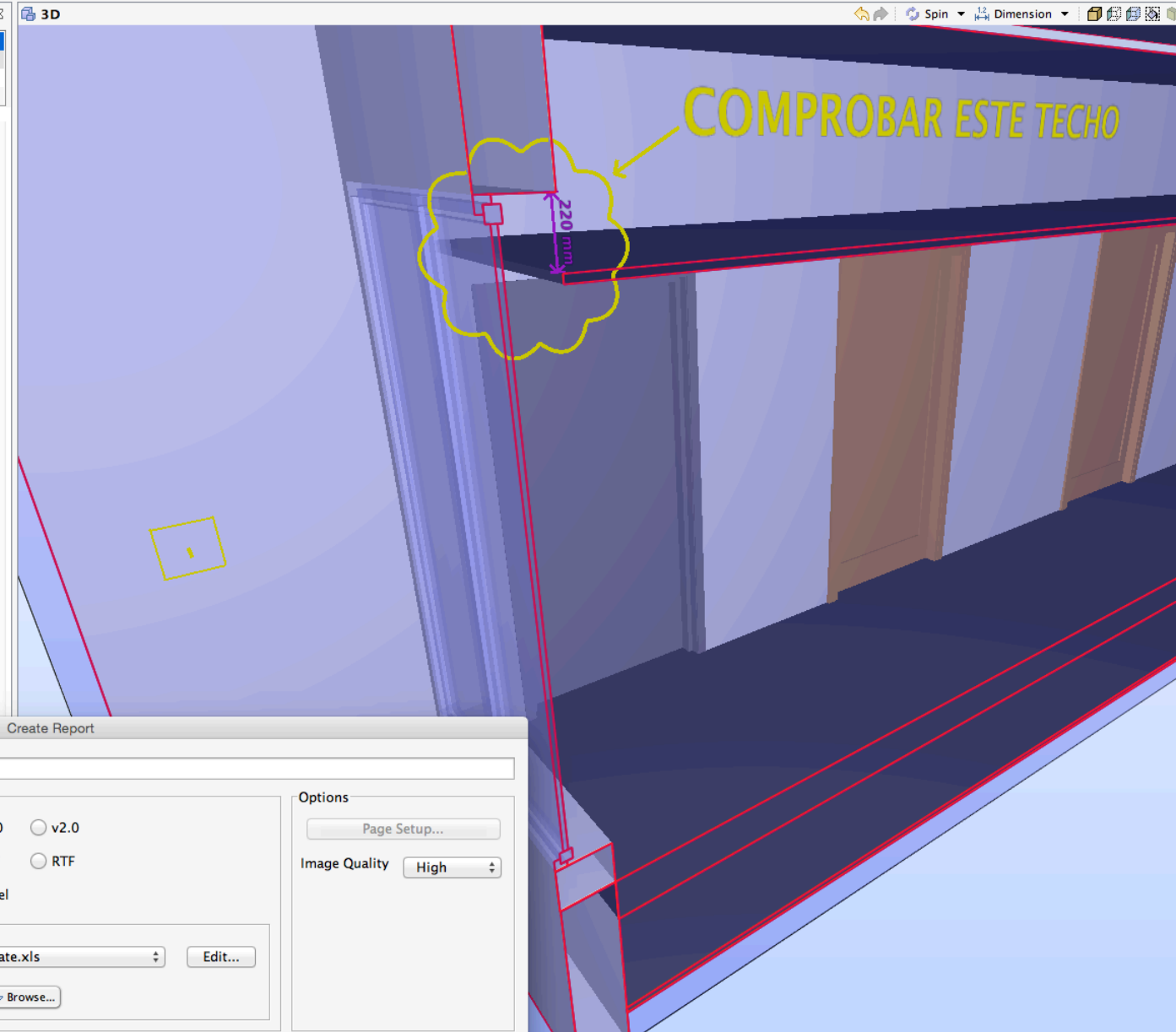
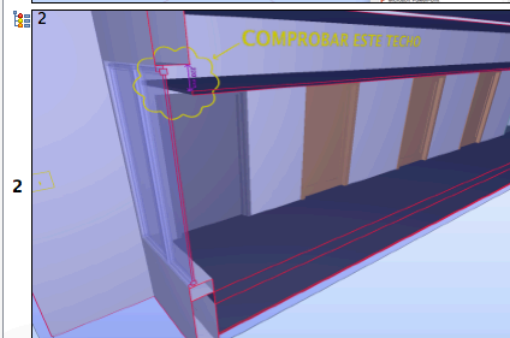
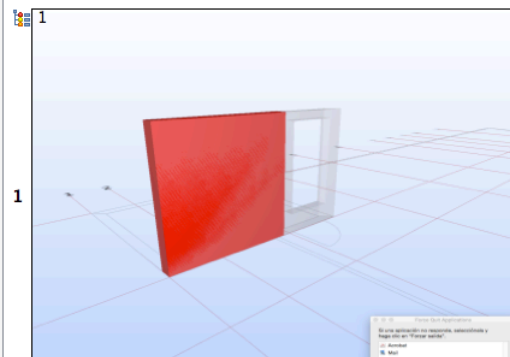
Author ALO

Status Assigned

BCF Status Error

Responsibilities ARC

OK Cancel



Create Report

Report Title: Presentation 1

Content

- Report All
- Report Only Selected (0)

Status

- Assigned

Report Type

- BCF Report (BCFZIP) v.1.0 v.2.0
- General Report PDF RTF
- Coordination Report Excel

Template

CoordinationReportTemplate.xls

Options

Image Quality: High

COBie

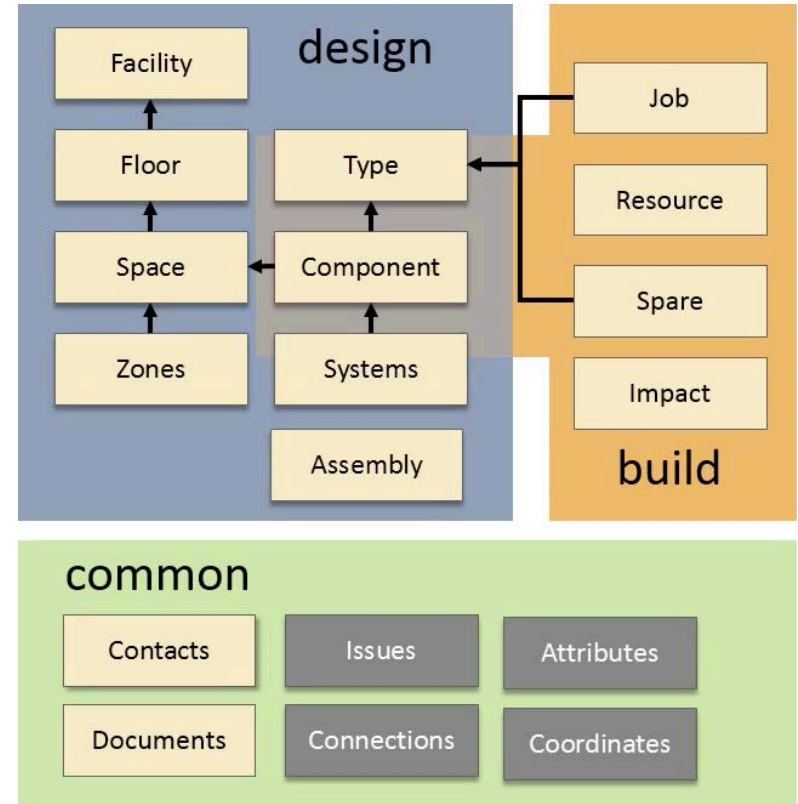
Construction

Operations

Building

Information

Exchange

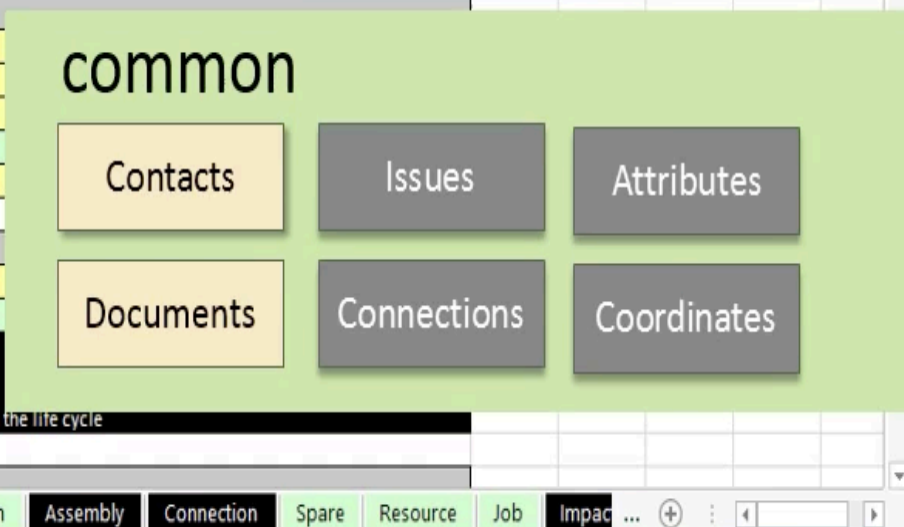
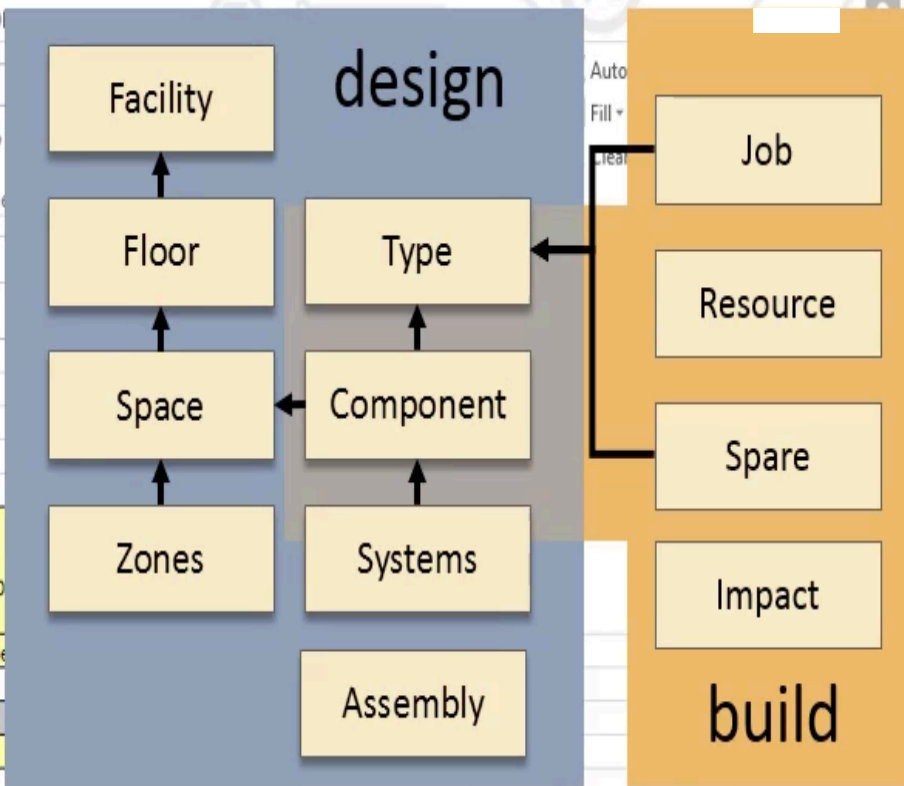


Creado para facilitar la entrega de edificios para:

- Operaciones
- Mantenimiento
- Gestión de patrimonio

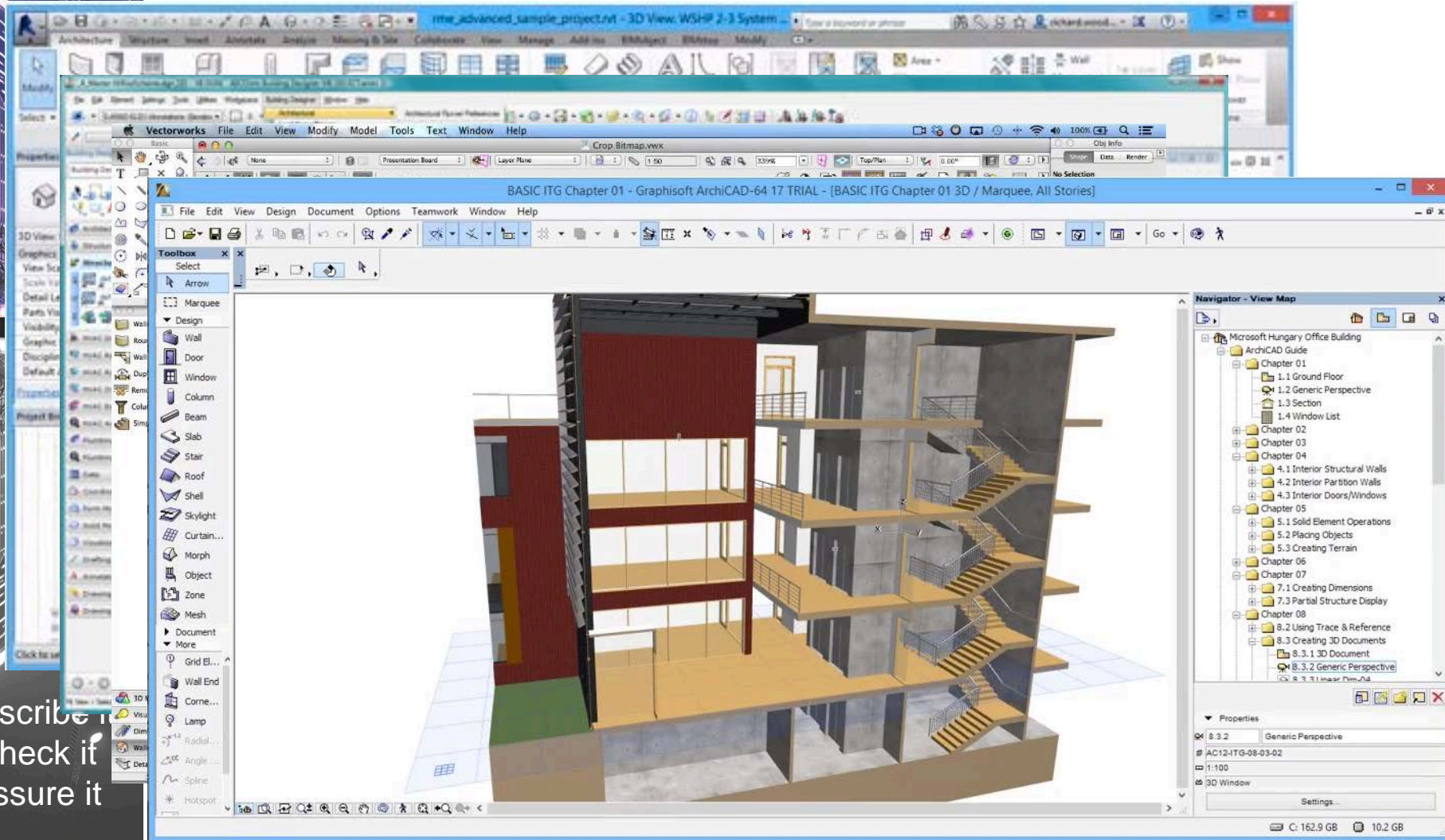
Describe it
Check it
Assure it

	A	B	C
1	Title	COBie2	
2	Version	2	
3	Release	4	
4	Status	IFC2x3	
5	Region	en-US	
6	Purpose	This example COBie file was produced for use during the COBie 2013 handover stage.	
7	Outline	Individual worksheets are organized by project phase as shown below:	
8			
9	All Phases	Sheet	Contents
10		Contact	People and Companies
11			
12	Early Design Worksheets	Sheet	Contents
13		Facility	Project, Site, and Facility
14		Floor	Vertical levels and exterior areas
15		Space	Spaces
16		Zone	Sets of spaces sharing a specific attribute
17		Type	Types of equipment, products, and materials
18			
19	Detailed Design Worksheets	Sheet	Contents
20		Component	Individually named or schedule items
21		System	Sets of components providing a service
22		Assembly	Constituents for Types, Components and others
23		Connection	Logical connections between components
24		Impact	Economic, Environmental and Social Impacts at various stages in the life cycle
25			
26	Construction Worksheets	Sheet	Contents



Plataformas BIM y COBie

- Diversas plataformas BIM que han emprendido el proceso exportación a COBie.



Describe it
Check it
Assure it

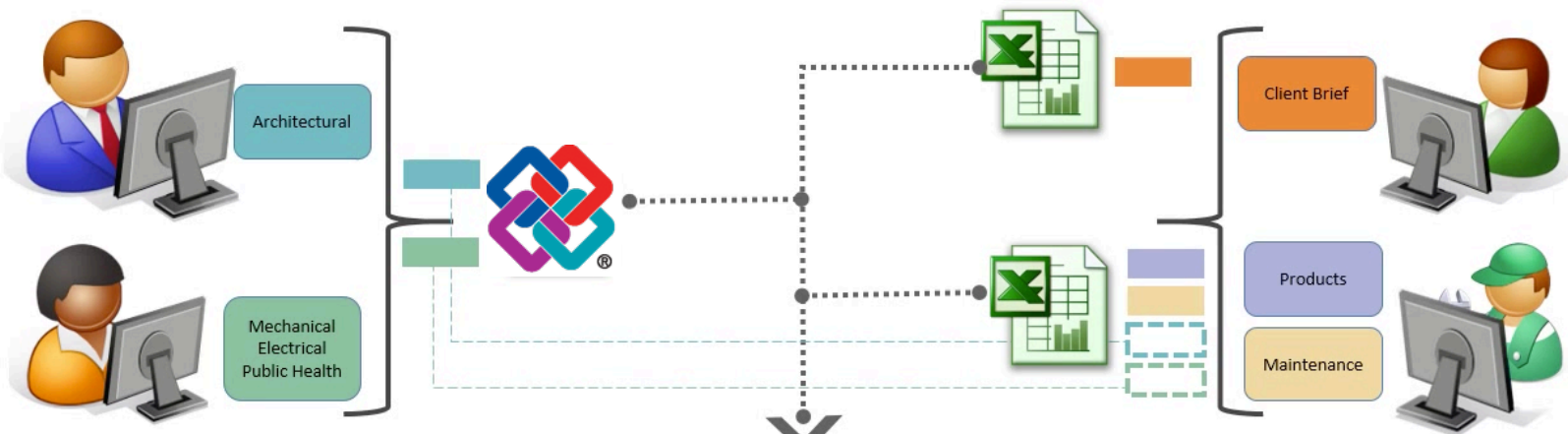
Plataformas BIM y COBie

- Existen diversas plataformas BIM que han emprendido el proceso exportación a COBie.
- El nivel de calidad de la información y grado de profundidad de los datos varía.
- Se ha sugerido que se genere toda la información desde un sistema, pero es un reto importante el importar todos los datos y mantener actualizados.



Plataformas BIM y COBie

- La información proviene de distintas fuentes
- El IFC permite un vehículo común a todos



Incidencias en Datos

- Duplicación
- Entradas inválidas
- Entradas sin rellenar
- Falta de datos descriptivos

Datos modificados por diferentes agentes

- Codificación de espacios
- Códigos de componentes
- Duplicaciones
- Incoherencia de atributos

Describe it
Check it
Assure it

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA Developer REVIEW VIEW ACROBAT TEAM

Clipboard Font Alignment Number Styles Cells Editing

Calibri 10 A⁺ A⁻ Wrap Text General

B I U Merge & Center % +.00 -.00

Conditional Formatting Table Cell Insert Delete Format AutoSum Fill Clear Sort & Find & Filter Select

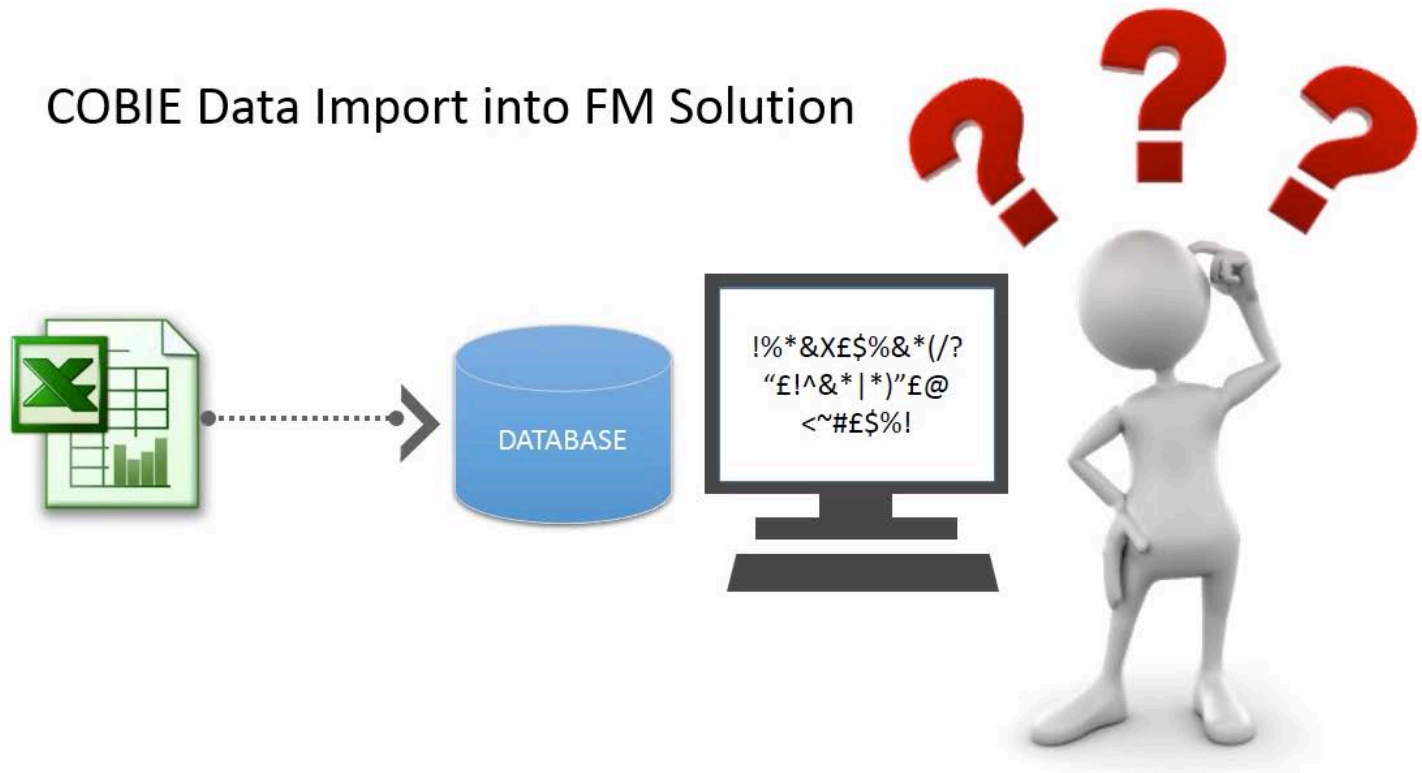
A1 Title

	A	B	C	D	E	F	G	H
1	Title	COBie2						
2	Version	2						
3	Release	4						
4	Status	IFC2x3						
5	Region	en-US						
6	Purpose		This example COBie file was produced for use during the COBie 2013 Challenge Event Preparations. This is a compliant COBie file for the handover stage.					
7	Outline		Individual worksheets are organized by project phase as shown below					
8								
9	All Phases	Sheet	Contents					
10		Contact	People and Companies					
11								
12	Early Design Worksheets	Sheet	Contents					
13		Facility	Project, Site, and Facility					
14		Floor	Vertical levels and exterior areas					
15		Space	Spaces					
16		Zone	Sets of spaces sharing a specific attribute					
17		Type	Types of equipment, products, and materials					
18								
19	Detailed Design Worksheets	Sheet	Contents					
20		Component	Individually named or schedule items					
21		System	Sets of components providing a service					
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23		Connection	Logical connections between components					
24		Impact	Economic, Environmental and Social Impacts at various stages in the life cycle					
25								
26	Construction Worksheets	Sheet	Contents					

COBie y FM

- Alguien tendrá que dar por válido los datos en COBie..
- No es deseable que los datos no sean correctos al trasladar a una plataforma FM

COBIE Data Import into FM Solution



Describe it
Check it
Assure it

Volcado de información filtrada y fidedigna para la entrega del edificio y FM a través de COBie

Una vez que la información está asegurada, el flujo de trabajo continúa con el volcado de la misma (COBie, Excell, etc)



Solibri Model Checker - NBS Lakeside Restaurant_AC_version2

File Model Checking Communication Information Takeoff COBie + To-Do (1/3)

Model Tree

- NBS Lakeside Restaurant_AC_version2
 - NBS Site
 - Zone

Checking

Ruleset

- BIM Validation
- COBie Category Check
- Spaces
- Building Component
 - Components Mu
 - Component Cat
 - COBie Component Che
 - COBie Floor Check
 - COBie Space Check

Info

Wall.0.48

Identification	Location	Quantities
Property	Value	
Model	NBS Lakeside Restaurant...	
Discipline	Architectural	
Name	WALL-043	
Type	Wall	
Material	nb1_AggregateConcreteBl...	
Layer	A210 - Structural Walls	
Geometry	Extrusion	

3D

COBie

	A	B	C	D	E	
1236	WALL-037	AR	28-09-2012T04:40:02	Partition wall	20WC.04	WALL-0
1237	WALL-038	AR	28-09-2012T04:40:02	Partition wall	20BOH.01.20B...	WALL-0
1238	WALL-039	AR	28-09-2012T04:40:02	Wall	20BOH.07.20IN...	WALL-0
1239	WALL-040	AR	28-09-2012T04:40:02	Wall	20BOH.01.20B...	WALL-0
1240	WALL-041	AR	28-09-2012T04:40:02	Wall	20BOH.05.20B...	WALL-0
1241	WALL-042	AR	28-09-2012T04:40:02	Wall	20BOH.10.20B...	WALL-0
1242	WALL-043	AR	28-09-2012T04:40:02	Wall	20WC.03	WALL-0
1243	WALL-044	AR	28-09-2012T04:40:02	Partition wall	20WC.03	WALL-0
1244	WALL-045	AR	28-09-2012T04:40:02	User-defined	20WC.03	WALL-0
1245	WALL-046	AR	28-09-2012T04:40:02	User-defined	20WC.03	WALL-0
1246	WALL-047	AR	28-09-2012T04:40:02	User-defined	20WC.03	WALL-0
1247	WALL-048	AR	28-09-2012T04:40:02	User-defined	20WC.03	WALL-0
1248	WALL-049	AR	28-09-2012T04:40:02	Partition wall	20WC.03	WALL-0
1249	WALL-050	AR	28-09-2012T04:40:02	User-defined	20WC.03	WALL-0
1250	WALL-051	AR	28-09-2012T04:40:02	User-defined	20WC.03	WALL-0
1251	WALL-052	AR	28-09-2012T04:40:02	User-defined	20WC.02	WALL-0
1252	WALL-053	AR	28-09-2012T04:40:02	User-defined	20WC.04	WALL-0

Space Zone Type Component System Assembly Connection Spare Resource Job Impact Document Attribute Coordinate Issue PickLists

Drag with mouse left button down to pan.

Rel: COBie Selected: 0

Describe it
Check it
Assure it

Windows 7 64 Bit – Parallels Desktop

Solibri Model Checker - SMC Building

File Model Checking Communication Information Takeoff COBie +

To-Do (4/11)

Model Tree

- (A) SMC Building
- (M) HVAC with COBie Data

Selection Basket

No Selection Sets

- (A) SMC Building

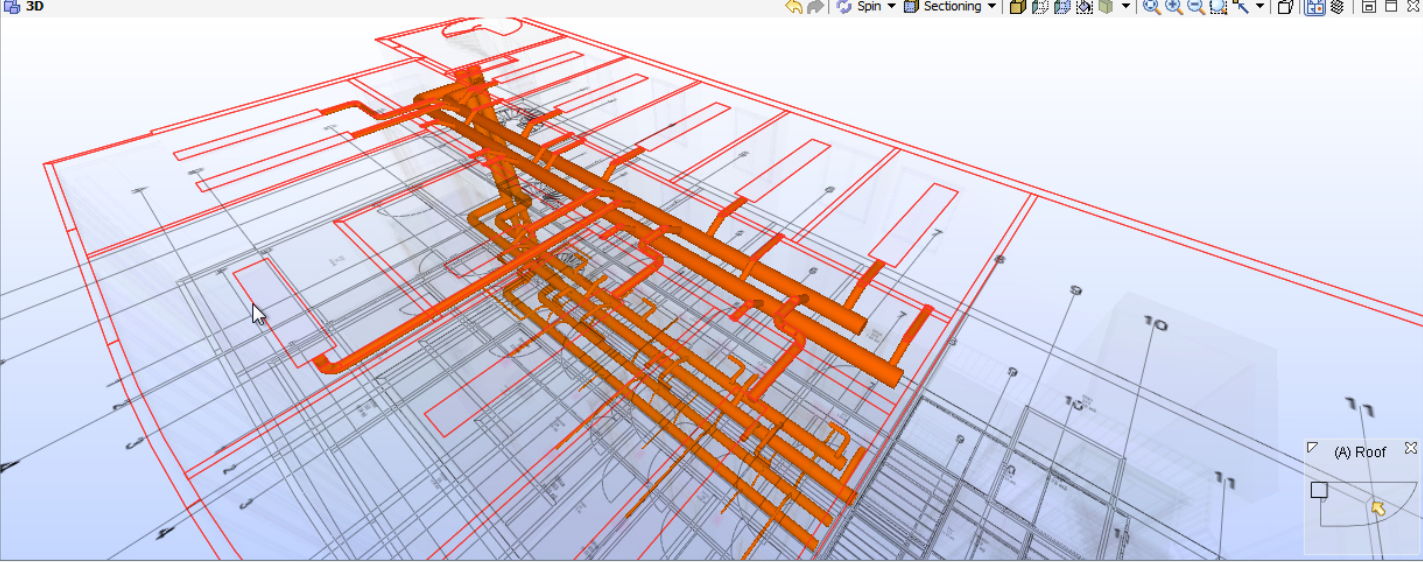
Classification

- Model Components
- Models
- Zone Category Rule
- Zone Classification Space Check
- Building Elements - Uniformat
- COBie Assembly Components
- COBie Component - AssetIdentifier
- COBie Component - BarCode
- COBie Component - Description

Info

(M) Duct.2.35

3D



COBie

	A	B	C	D	E
	Name	CreatedBy	CreatedOn	Category	Description
1	Basin 17	simon.gilbert@solibri.com	13-05-2014T01:32:08	PR_40_35_79_63 : Pedestal wash basins	Basin 17
2	C-1 240 x 240	simon.gilbert@solibri.com	13-05-2014T01:32:08	PR_20_85_15_15 : Concrete columns	C-1 240 x 240
3	C-2 D300	simon.gilbert@solibri.com	13-05-2014T01:32:08	PR_20_85_15_15 : Concrete columns	C-2 D300
4	C-2 D350	simon.gilbert@solibri.com	13-05-2014T01:32:08	PR_20_85_15_15 : Concrete columns	C-2 D350
5	C-4 D200	simon.gilbert@solibri.com	13-05-2014T01:32:08	PR_20_85_15_15 : Concrete columns	C-4 D200
6	Door 17	simon.gilbert@solibri.com	13-05-2014T01:32:08	PR_30_59_23 : Door frames and leaves	Door 17
7	Double Door with Transom 17	simon.gilbert@solibri.com	13-05-2014T01:32:08	PR_30_59_23 : Door frames and leaves	Double Door with Transom 17
8	Double Sash Window 17	simon.gilbert@solibri.com	13-05-2014T01:32:08	PR_30_59_98 : Windows	Double Sash Window 17
9					

Information Takeoff

Corrected Type Name	Name	CreatedBy	CreatedOn	Category	Description	AssetType	Manufacturer	ModelNumber	WarrantyGuarantorParts	WarrantyDurationParts	WarrantyGuarantorLabor	WarrantyDurationLabor
Basin 17	Basin 17			PR_40_35_...	Basin 17	n/a	n/a	n/a	n/a	n/a	n/a	n/a
C-1 240 x 240	C-1 240 x 240			PR_20_85_...	C-1 240 x 240	n/a	n/a	n/a	n/a	n/a	n/a	n/a
C-2 D300	C-2 D300			PR_20_85_...	C-2 D300	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Click component surface to create section plane. Move selected section planes: Shift + Mouse left button or Shift + Mouse wheel.

Role: COBie - Uniclass 2.0 Selected: 36

8:40 PM 7/14/2014

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Solibri Model Checker - SMC Building

File Model Checking Communication Information Takeoff COBie +

To-Do (4/11)

Model Tree

- (A) SMC Building
- (M) HVAC with COBie Data

Selection Basket

No Selection Sets

- (A) SMC Building

Classification

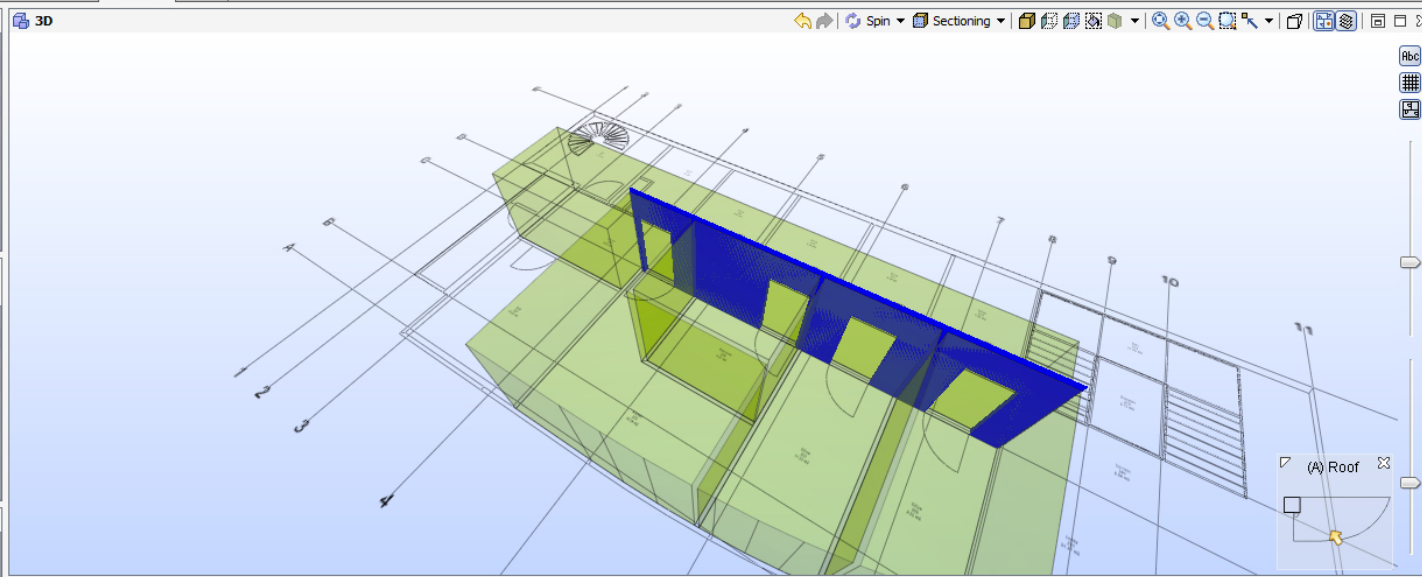
- Model Components
- Models
- Zone Category Rule
- Zone Classification Space Check
- Building Elements - Uniformat
- COBie Assembly Components
- COBie Component - AssetIdentifier
- COBie Component - BarCode
- COBie Component - Description

Info

(A) Wall. 1.14

AC_Pset_RenovationAndPhasing	BaseQuantities					
Classification	Hyperlinks					
AC_Pset_Name	AC_Pset_Name					
Identification	Location	Issues	Quantities	Material	Profile	Relations
Property	Value					
Model	(A) SMC Building					
Discipline	Architectural					
Name	Wall-51					
Type	IW-2 150					

3D



COBie

	A	B	C	D	E	
2	Wall-09	simon.gilbert@Solibri.com	13-05-2014T01:32:08	IW-2 150	102,106,107,108	Unclass
3	Wall-14	simon.gilbert@Solibri.com	13-05-2014T01:32:08	IW-2 150	107,108	Unclass
4	Wall-15	simon.gilbert@Solibri.com	13-05-2014T01:32:08	IW-2 150	102,103,104,105	Unclass
5	Wall-41	simon.gilbert@Solibri.com	13-05-2014T01:32:08	IW-2 150	207,240	Unclass
6	Wall-48	simon.gilbert@Solibri.com	13-05-2014T01:32:08	IW-2 150	207,208,299	Unclass
7	Wall-51	simon.gilbert@Solibri.com	13-05-2014T01:32:08	IW-2 150	202,203,204,205,240	Unclass
8	Wall-80	simon.gilbert@Solibri.com	13-05-2014T01:32:08	IW-2 150	307,320	Unclass
9	Wall-88	simon.gilbert@Solibri.com	13-05-2014T01:32:08	IW-2 150	307,308,399	Unclass
10	Wall-89	simon.gilbert@Solibri.com	13-05-2014T01:32:08	IW-2 150	302,303,304,305,3...	Unclass

Information Takeoff

Corrected Type Name	Name	CreatedBy	CreatedOn	Category	Description	AssetType	Manufacturer	ModelNumber	WarrantyGuarantorParts	WarrantyDurationParts	WarrantyGuarantorLabor	WarrantyDurationLabor
IW-2 150	IW-2 150			PR_20_93...	IW-2 150	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Role: COBie - Uniclass 2.0 Selected: 1

8:44 PM 7/14/2014

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Solibri Model Checker - SMC Building

File Model Checking Communication Information Takeoff COBie +

To-Do (4/11)

Model Tree

- (A) SMC Building
- (M) HVAC with COBie Data

Selection Basket

No Selection Sets

- (A) SMC Building

Classification

- Model Components
- Models
- Zone Category Rule
- Zone Classification Space Check
- Building Elements - Uniformat
- COBie Assembly Components
- COBie Component - AssetIdentifier
- COBie Component - BarCode
- COBie Component - Description

Info

(M) System.b.7 : Mechanical Exhaust Air 3

Hyperlinks Data Mechanical Mechanical - Flow

Identification	Location	Relations	Classification
Property			Value
Model			(M) HVAC with COBie Data
Discipline			Building Services
Name			Mechanical Exhaust Air 3
Type			Exhaust Air
Description			

3D

COBie

	A	B	C	D	E	F	G	H
1	Name	CreatedBy	CreatedOn	Category	ComponentNames	ExtSystem	ExtObject	ExtIdentifier
2	Architecture - External Fa...	simon.gilbe...	13-05-2014T01:32:08	SS_15 : General Structural Systems	Wall-71,Wall-114,Wall-01,Wall-29,Wall-122,Wall-94,Wall-118,...	ArchiCAD-64	IfcProperty...	3KJf5sF3t...
3	Architecture - FFE	simon.gilbe...	13-05-2014T01:32:08	SS_35 : Fittings Furnishings And Equipme...	Obj.-586,Obj.-586,Obj.-587,Obj.-587,Obj.-587	ArchiCAD-64	IfcProperty...	0u6hHUJT...
4	Architecture - Internal Fa...	simon.gilbe...	13-05-2014T01:32:08	SS_15 : General Structural Systems	Wall-80,Wall-94,Wall-89,EW-3,Wall-84,Wall-81,Wall-98,Wall-1...	ArchiCAD-64	IfcProperty...	0bhtozX9p...
5	Mechanical Exhaust Air 1	mep@solibr...	20-03-2014T05:07:26	Unclassified	(M) Duct.1.32,(M) Duct Fitting.1.29,(M) Duct.1.34,M_Extract...	Autodesk R...	IfcProperty...	2uCH1CO...
6	Mechanical Exhaust Air 2	mep@solibr...	20-03-2014T05:07:26	Unclassified	(M) Duct Fitting.0.1,(M) Duct Fitting.0.2,(M) Duct Fitting.0.3,(...	Autodesk R...	IfcProperty...	1FkSz8ir0...
7	Mechanical Exhaust Air 3	mep@solibr...	20-03-2014T05:07:26	Unclassified	(M) Duct.1.19,(M) Duct.1.21,(M) Duct Fitting.1.18,(M) Duct Fit...	Autodesk R...	IfcProperty...	2uCH1CO...
8	Mechanical Exhaust Air 4	mep@solibr...	20-03-2014T05:07:26	Unclassified	(M) Duct Fitting.1.13,(M) Duct Fitting.1.14,(M) Duct.1.15,(M) ...	Autodesk R...	IfcProperty...	2uCH1CO...
9	Mechanical Exhaust Air 5	mep@solibr...	20-03-2014T05:07:26	Unclassified	(M) Duct Fitting.1.27,(M) Duct.1.30,(M) Duct.1.31,M_Extract...	Autodesk R...	IfcProperty...	2uCH1CO...

Information Takeoff

Takeoff Selected | COBie System 2.0

Related System	Name	Name 1	COBie System - Name (Related System)	CreatedBy	CreatedOn	Category	ExtIdentifier	Description
(A) System.2 : Arc...	Architecture - Extern...	Architecture - Extern...	Architecture - External Fabric			SS_15 : General Stru...	3KJf5sF3tGw5zSfEe...	n/a
(A) System.3 : Arc...	Architecture - FFE	FFE System	FFE System			SS_35 : Fittings Furni...	0u6hHUJTGOgej07...	FFE System
(A) System.1 : Arc...	Architecture - Intern...	Architecture - Intern...	Architecture - Internal Fabric			SS_15 : General Stru...	0bhtozX9pWJ9RWO...	n/a

Role: COBie - Uniclass 2.0 Selected: 1

8:47 PM 7/14/2014

Solibri Model Checker - Work Packages

File Model Checking Communication Information Takeoff COBie + To-Do (4/12)

Model Tree

- (A) SMC Building
 - (M) HVAC with COBie Data

More Capture Types

Selection Basket

- WP Supply and Extract
 - (M) HVAC with COBie Data

Classification

- Space Usage
 - Uniclass2 - En - Entities
 - Uniclass2 - Pr - Products
 - Uniclass2 - Sp - Spaces
 - Uniclass2 - Ss - Systems
 - UniFormat Classification
 - WP - Internal Doors
 - WP - Sanitary Ware
 - WP - Supply and Extract**
 - ZoneType

Info

WP - Supply and Extract

Classification Hyperlinks

Reference	Name	Source	Count
WP - Supply...		From Classifi...	55

3D

COBie

Calculate 'WP Supply and Extract' Report

	A	B	C	D	E	F
	Name	CreatedBy	CreatedOn	Category	Description	AssetI
1	PMLc 100+ALSc 80-100	mep@solibri.com	20-03-2014T05:07:26	PR_40_65 : Ventilation and air conditioning FF&E...	PMLc 100+ALSc 80-100	Fixed
2	KSO-V-100+DBL	mep@solibri.com	20-03-2014T05:07:26	PR_40_65 : Ventilation and air conditioning FF&E...	KSO-V-100+DBL	Fixed
3	EHC-300-150+TE-A	mep@solibri.com	20-03-2014T05:07:26	PR_40_65 : Ventilation and air conditioning FF&E...	EHC-300-150+TE-A	Fixed
4	USR-0-200-100+TGE-200-100	mep@solibri.com	20-03-2014T05:07:26	PR_40_65 : Ventilation and air conditioning FF&E...	USR-0-200-100+TGE-200-100	Fixed
5	TKB-100(R1)	mep@solibri.com	20-03-2014T05:07:26	PR_40_65 : Ventilation and air conditioning FF&E...	TKB-100(R1)	Fixed
6	IQFC-240-1-X+IQAZ-01-0-02	mep@solibri.com	20-03-2014T05:07:26	PR_40_65 : Ventilation and air conditioning FF&E...	IQFC-240-1-X+IQAZ-01-0-02	Fixed
7	IQFC-240-1-X+IQAZ-01-0-02	mep@solibri.com	20-03-2014T05:07:26	PR_40_65 : Ventilation and air conditioning FF&E...	IQFC-240-1-X+IQAZ-01-0-02	Fixed
8	RON 1-100	mep@solibri.com	20-03-2014T05:07:26	PR_40_65 : Ventilation and air conditioning FF&E...	RON 1-100	Fixed
9						

Instruction Contact Facility Floor Space Zone **Type** Component System Assembly Connection Spare Resource Job Impact Document

Information Takeoff

Name	CreatedBy	CreatedOn	TypeName	Nearest Space	Space	Description	ExtSystem	ExtObject	ExtIdentifier	SerialNumber	InstallationDate	WarrantyStartDate	TagNumber	BarCode	AssetIdent

Takeoff All COBie Component Report

Role: COBie - Uniclass 2.0 Selected: 55



[Home](#)
[Account](#)
[Information](#)
[About](#)
[Logout](#)

Select Space: |< < 108 > >|

COBie Component Data:
 Project: Project_1234
 WorkPackage: WP Supply And Extract

Name	Type Name	Space	Serial Number	Installation Date	Warranty Start Date	Tag Number	Bar Code	Asset Identifier	Length	Area
100(R1):725098										
M_Exhaust Grill:PMLc 100+ALSc 80-100:743012	PMLc 100+ALSc 80-100	108	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
M_Exhaust Grill:PMLc 100+ALSc 80-100:732893	PMLc 100+ALSc 80-100	108	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
M_Supply Diffuser:TKB-100(R1):724716	TKB-100(R1)	108	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
✓ Component Status:: CompletedOriginal; Components in Space:: 108										
M_Supply Diffuser:TKB-100(R1):724874	TKB-100(R1)	108	1234567	01/04/2015	01/04/2015	777877	54645	11111	1000	1000

[Edit Component](#)
 [Edit Type](#)
 [\(Un\)Delete](#)
 [Replace](#)
 [Refresh](#)
 [Toggle Expand](#)

Seguimiento de obra – ampliación de datos

Ampliación de datos con información fidedigna para la retroalimentación, comprobación y extracción





Home Account Information About Logout

Select Space: |< < 108 > >|

COBie Component Data:

Name	Type Name	Status
100(R1):725098		
M_Exhaust Grill:PMLc 100+ALSc 80-100:743012	PMLc 100+ALSc 80-100	
M_Exhaust Grill:PMLc 100+ALSc 80-100:732893	PMLc 100+ALSc 80-100	
M_Supply Diffuser:TKB-100(R1):724716	TKB-100(R1)	
Component Status:: CompletedOrig		
M_Supply Diffuser:TKB-100(R1):724874	TKB-100(R1)	

EDIT COMPONENT x

Component Name: M_Supply Diffuser:TKB-100(R1):724874


Type Name: TKB-100(R1)


Component GUID (ExtIdentifier): 1fjt_KLxz2bf1pwDMSWa\$x

Space: 108

Serial Number:

Tag Number:

Bar Code: Installation Date: Today 

Asset Identifier: Warranty Start Date: Today 

Length:

Area:

Save

Length	Area
n/a	n/a
n/a	n/a
n/a	n/a
1000	1000

Edit Component

Toggle Expand



Admin Home Account Information About Logout

WorkPackage Manager

COBie 4 Export

Portal Admin

WorkPackage Schedule

Select Project

Project_1234

Add Config Delete

Select Work Package

WP Supply And Extract

Add Edit Delete

Select Sub Contractor

SubCon1

Add Edit Delete

Select Start

02/04/2015

Select End

30/07/2015

Current Allocation

Work Package Name	Total Items	Completed Items	Start Date	End Date	Allocated User
Internal Doors	38	0	31/12/9999 00:00:00	31/12/9999 00:00:00	
WP External Doors	7	0	31/12/9999 00:00:00	31/12/9999 00:00:00	
WP Supply And Extract	63	0	02/04/2015 00:00:00	30/07/2015 00:00:00	SubCon1

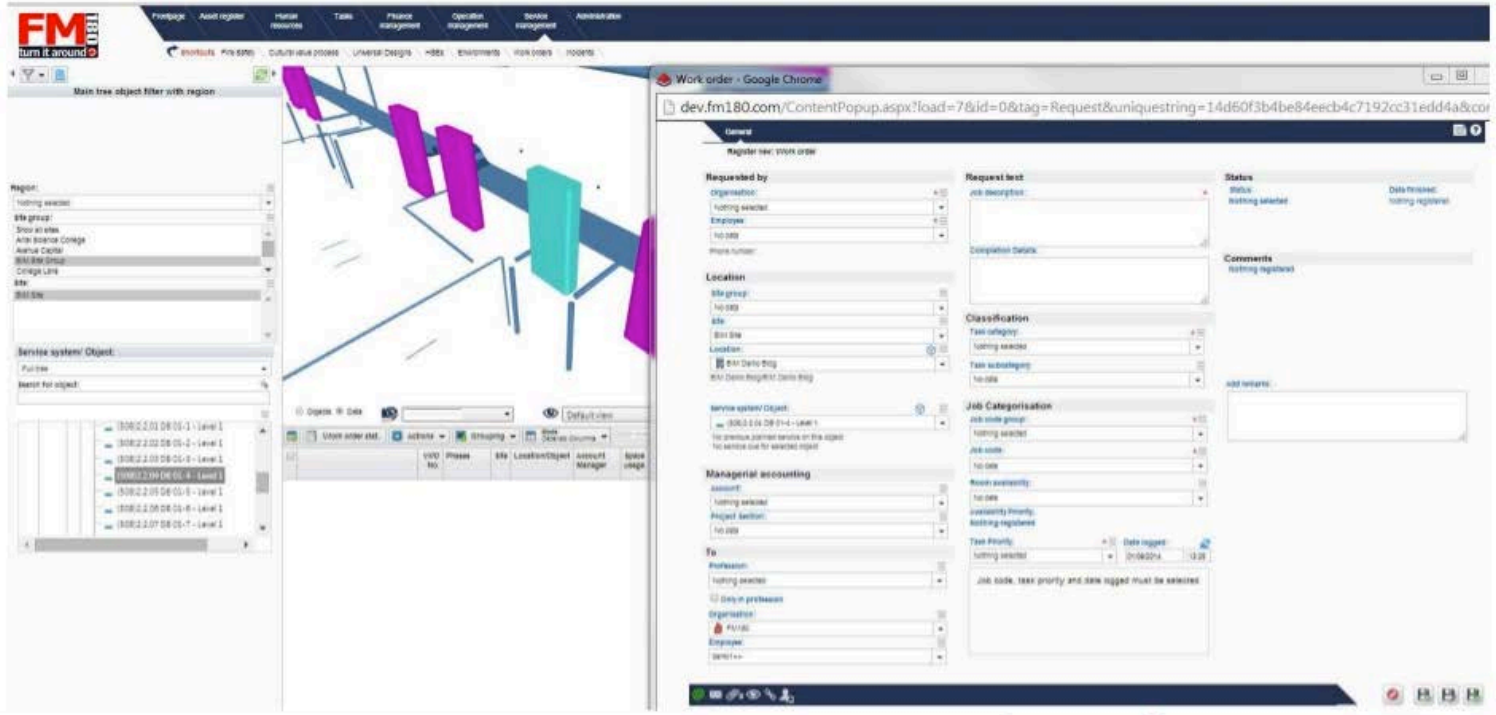
Allocate WP

Deallocate WP

Volcado de información filtrada y fidedigna para FM



ADD WORKORDERS AND MAINTENANCE SCHEDULES AT ANY LEVEL



The screenshot displays the MainManager software interface. On the left, there is a 'Main tree object filter with region' panel showing a hierarchical tree of objects, including 'Region', 'Site group', and 'Site'. The central part of the interface shows a 3D visualization of a building structure with colored blocks representing different levels or zones. On the right, a 'Work order' form is open, containing various fields for registration, location, classification, and managerial accounting. The form includes sections for 'Requested by', 'Request text', 'Status', 'Location', 'Classification', 'Managerial accounting', and 'To'. The interface is clean and professional, with a dark blue header and a white main content area.

Describe it
Check it
Assure it



Describe it
Check it
Assure it

La relación del coste de arreglar un problema en el tiempo

Fase de Diseño - 1

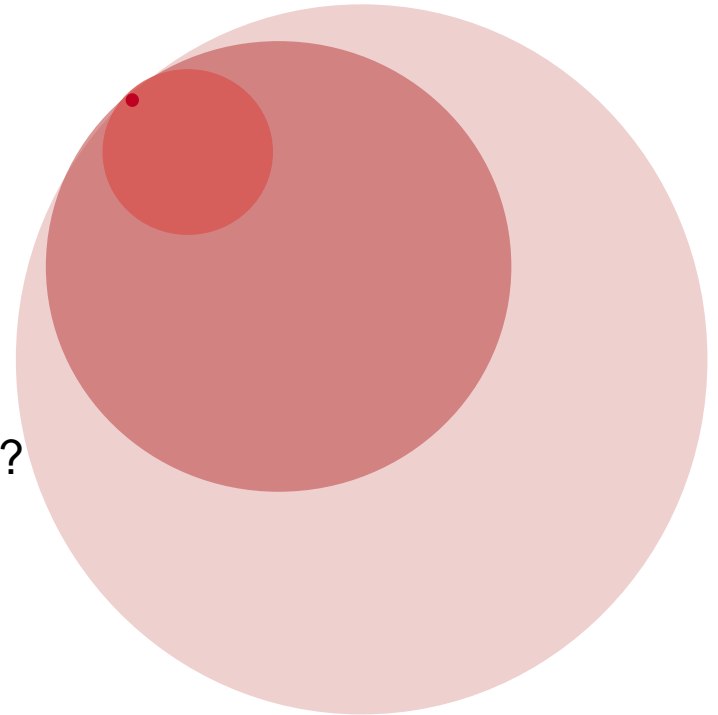
Revisión del Proyecto - 10

Producción - 100

Fase de instalación – 1000

...

.. Y si se llega un proceso judicial - ??



Fuente : Skanska Construction

Encontrar los problemas lo antes posible en el modelo virtual



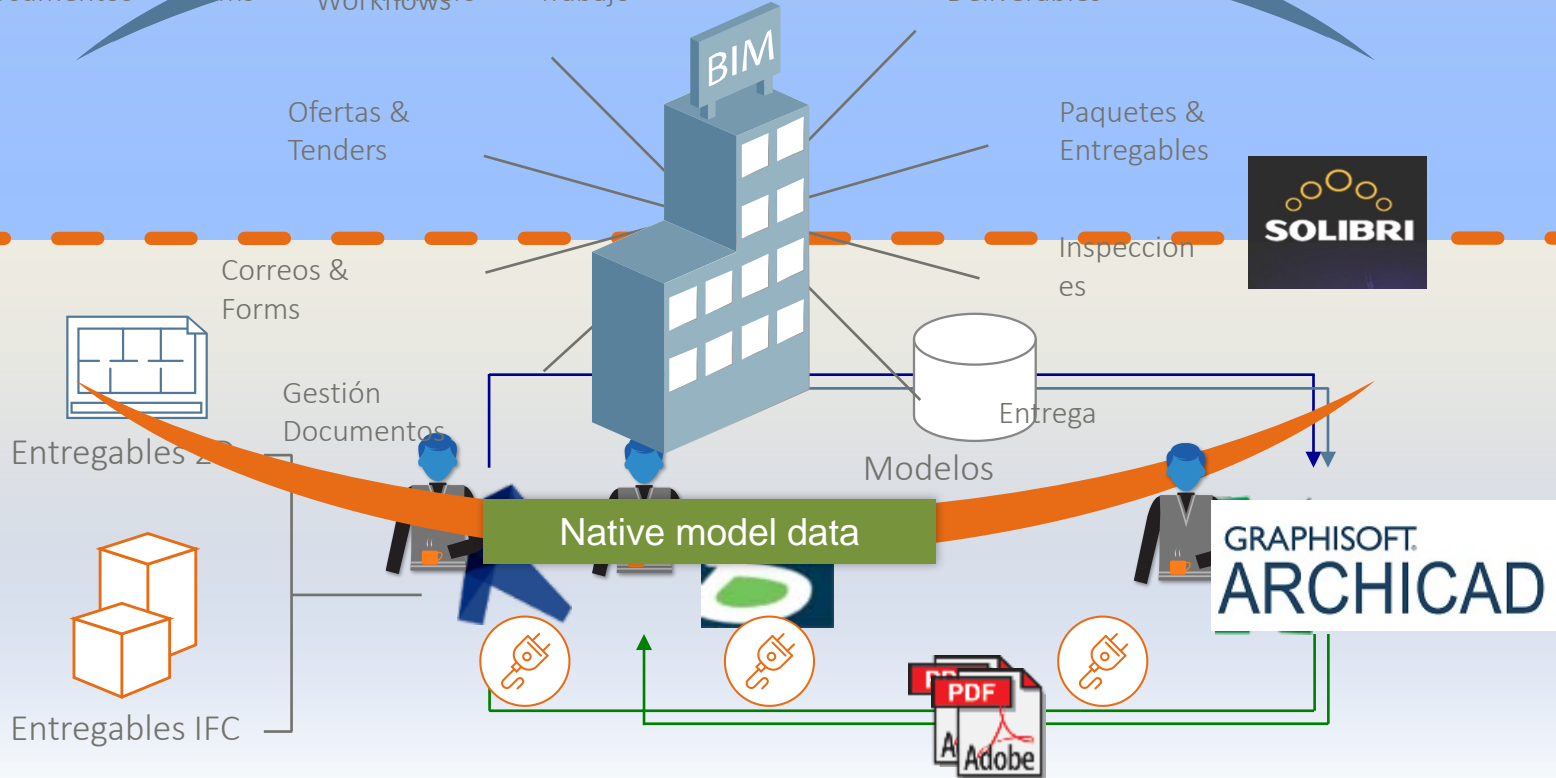
“Usar el ratón en vez del martillo neumático”

Comely BIM BPO Efficient systems and stakeholders are connected

Rest of the project team
Project collaboration



Design Team
Design coordination



Solibri - Valor Añadido a los datos BIM...

Datos precisos...

Gestión del riesgo



Garantía de los datos

Mejora el beneficio



Retroalimentación de calidad

Mantenga el control



El proceso queda auditado

Control de responsabilidades





Describe it
Check it
Assure it



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www.youtube/results?search_query=solibri

Andrew López – 626 487 991