
European BIM Summit Day

BIM: Un sistema colaborativo? La comunicació en el BIM

Las plataformas de comunicació en BIM

Sergi Ferrater, arqto.

25 de mayo, 2016



COL·LEGI D'APARELLADORS, ARQUITECTES TÈCNICS
I ENGINYERS D'EDIFICACIÓ DE BARCELONA

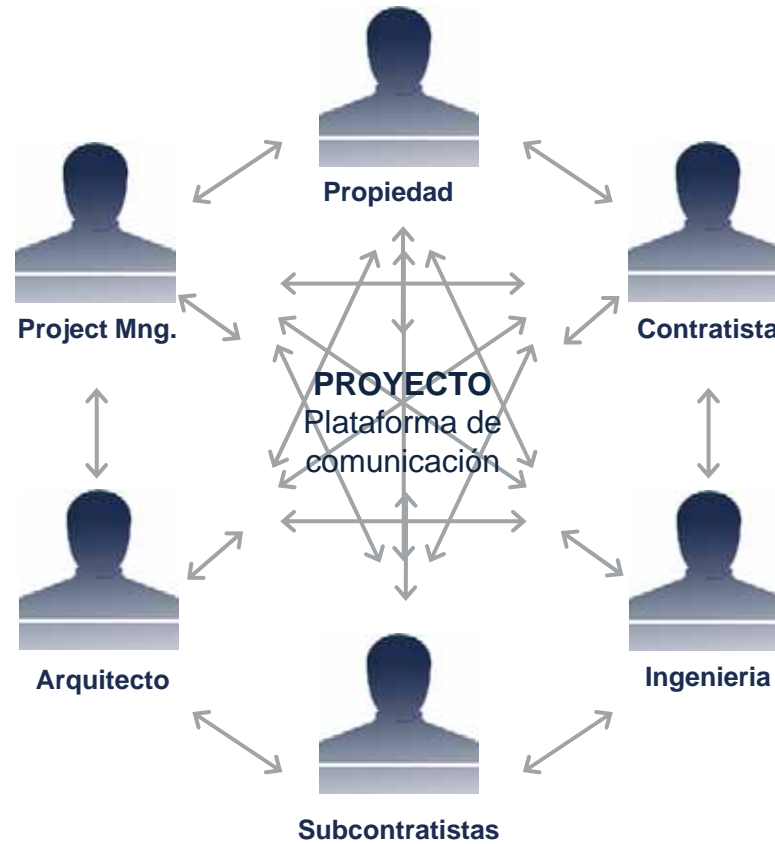


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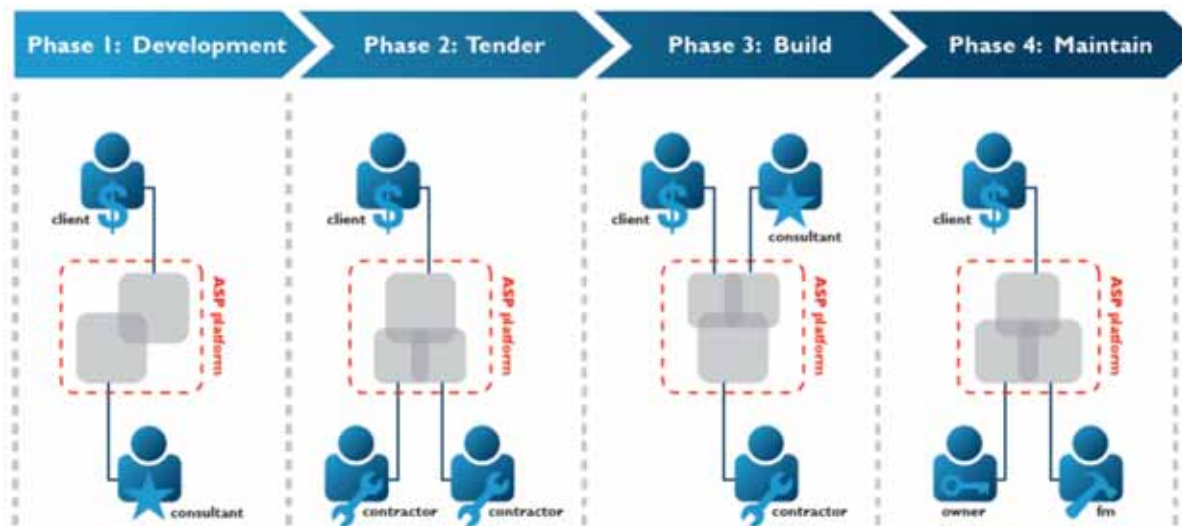


Main partner:





Soporte de todas las fases del proyecto, desde el concurso de ofertas hasta el diseño, construcción y explotación

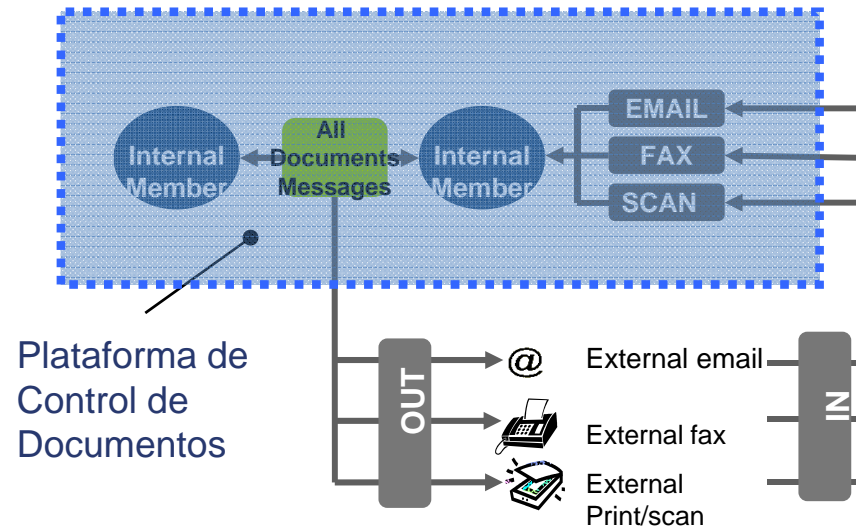


El documento de proyecto es la base de la comunicación

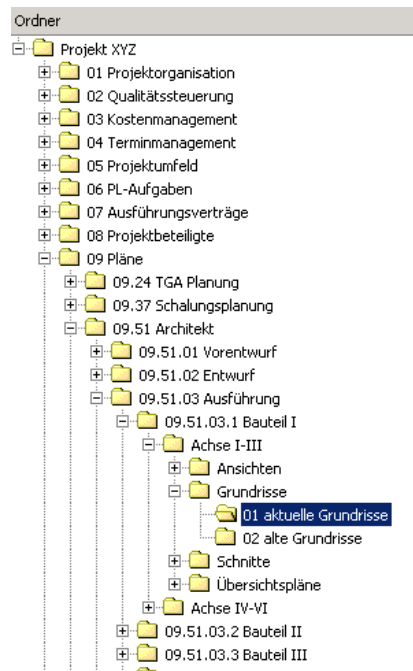
Capturar todas las comunicaciones tanto de usuarios como de colaboradores externos a través de los **Documentos**

Tenemos que asociar las comunicaciones a los **Documentos** y no al revés

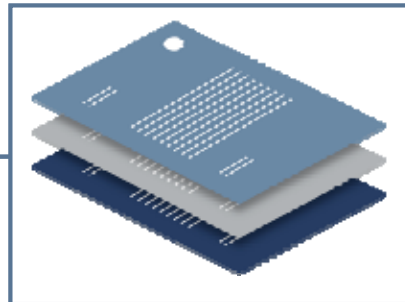
Los documentos tienen toda la información (estado, asignación de usuarios, ...)



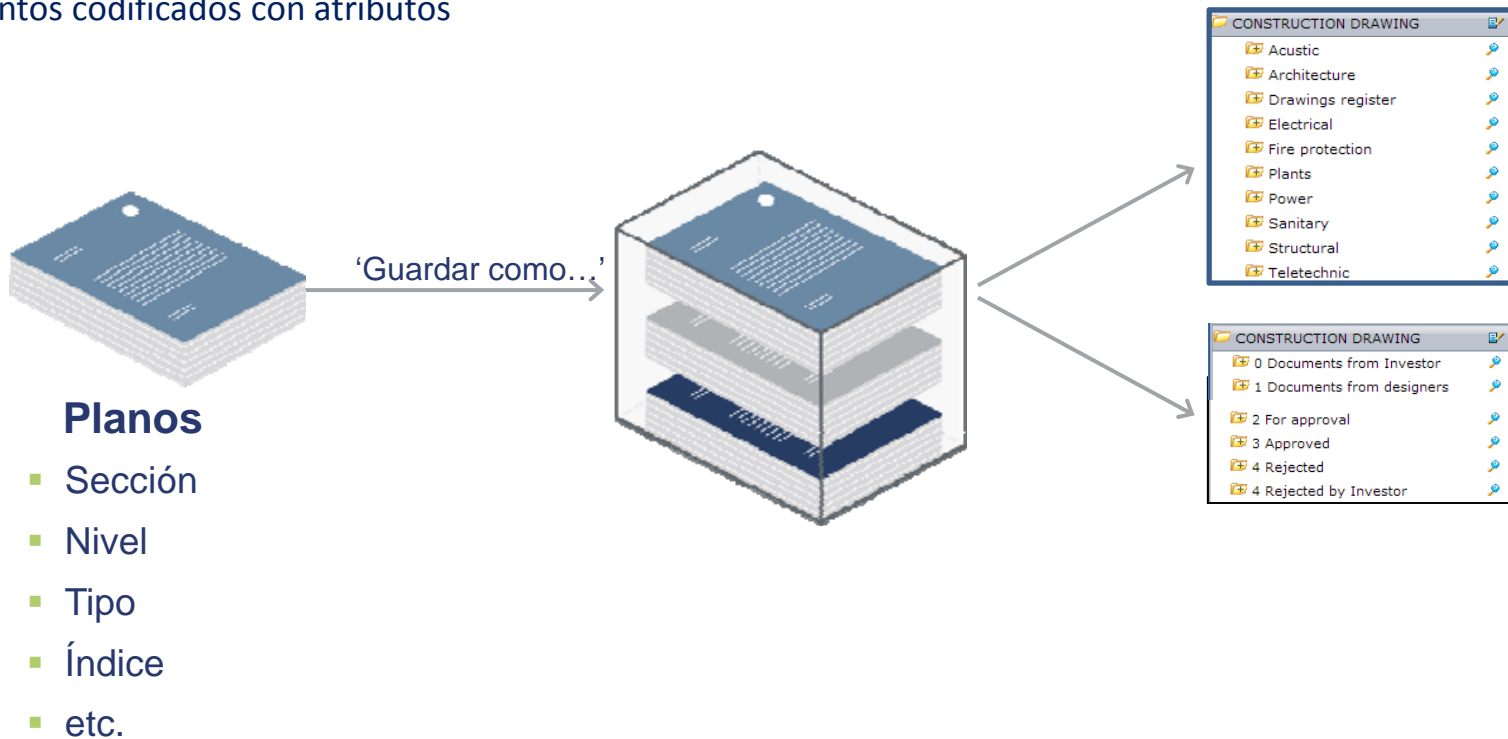
Organización tradicional (Exlorador de Windows)



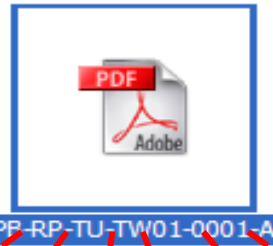
← 'guardar en...'



Documentos codificados con atributos



- El proyecto define una codificación (estándar para todo el proyecto)
- Al subir el archivo, los campos de la base de datos se rellenan automáticamente



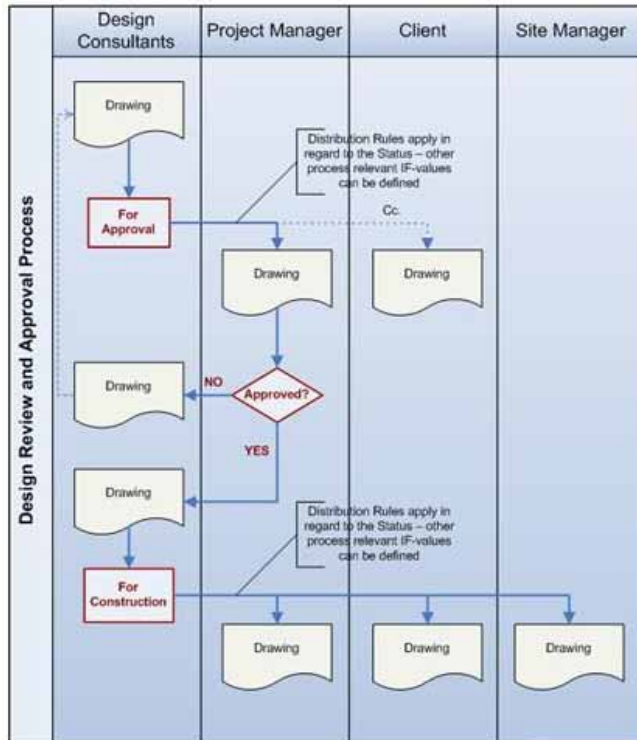
Document Originator	Document Type	Project Area	Design Element	Document Number	Revision

Drawings - Index of documents / drawing codes

1.	2.	3. Separator	4.	5.	6.	7. Separator	8.	9.	10. Separator	11.	12.	13. Separator	14.	15.	16.	17.	18. Separator	19.	20.	21. Separator	22.	23.
0	1	-	1	0	4	-	0	0	-	0	1	-	0	0	0	1	-	1	0	1	-	1

Originator	Content	Level	Design	Counter	Structures	Revision	Status
-------------------	----------------	--------------	---------------	----------------	-------------------	-----------------	---------------

01-Planning Association Federation Tower	--- Blind entries	-- Without classification	-- Without classification	0000-9999	0-totally built	00-99	1-Draft
02-Ebert engineers 03-Armo-group 04-GORPROJECT 05-STROYMONTAZH-DESIGN 06-YUANDA	Architecture 100-Shell 101-Facade 102-Interior finishing 103-Structural Design 104-Floor plan 105-Ceiling plan 106-Wall plan 107-General layout 108-List of doors 109-Details 110-Other Architecture	Foundation -9-Excavcation works -8-Foundation -7-Mat slab	Plans 01-Floor plan 02-Well Drawing	Elevator 01-B1-B6 02-B7-B11 03-B12-B14 04-B15 05-B16 06-B17 11-A1-A7 12-A8-A12	Page 01-99 01-99 01-99 01-99 01-99 01-99 01-99 01-99	1-Tower A 2-Tower B 3-Lens 4-Stylobate Tower A 5-Stylobate Tower B 6-Panoramic elevators mast 7-Bunker	2-Technical assignment 3-Basic diagram 4-Stage project 5-Tender documentation 6-Shop drawings 7-Approvals 8-Design project 9-Technical proposals 0-Other
08-TTG 09-OPB 10-OPB ANO Fire safety 11-ThyssenKrupp Elevators	130-Sections (distribution) and content 131-Landscaping 132-Roads and pedestrian paths 133-Location of underground utilities	Substructures -1-1. Substructure -2-2. Substructure -3-3. Substructure -4-4. Substructure -5-5. Substructure	Sections 10-Section 1-1 11-Section 2-2 12-Section 3-3 13-Section 4-4 14-Section 5-5 15-Vertical Section				
	Analysis of structures 150-Strengthening plan 151-Loading plan 152-Formwork plan 153-Structure 154-General instructions for retaining structures 155-Construction floor plans 156-Developed plans of central walls 157-Details for concrete structures strengthening	Levels 00-Zero level 01-1. From level to 93-93. Level 94-Roof plan	Facades 30-East façade 31-West façade 32-North façade 33-South façade 34-South-east façade 35-South-west façade 36-North-east façade 37-North-west façade				
			Developed elevations 50-Developed elevations				
			Details				



Utilización de reglas **IF / THEN** en los campos de la base de datos:

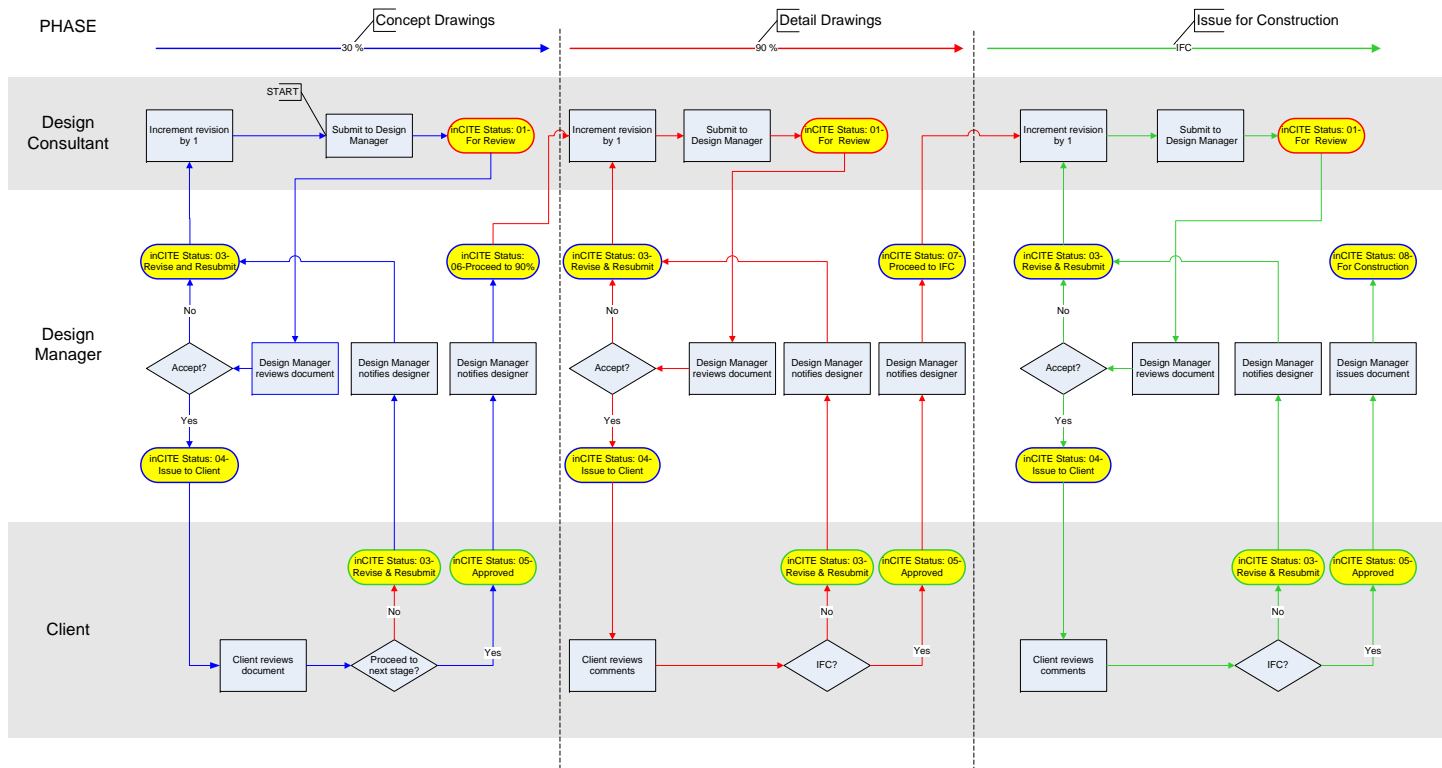
IF Estado = "Para revisión"

IF Área = "Zona 1"

IF Disciplina = "Civil"

IF Fase = "Previa"

THEN enviar al Project Manager



de la Guía Prados, Iván (de la Guía Prados, Iván) 27.05.2015 12:53 Soporte: Alejandro Sanz Hotline: +34 000 000 000
 DemoSP Proyecto Demo alejandro.sanz@thinkproject.com

Documentos **Contactos** Archivo temporal /

Participantes
 Todos
 Internos
 Invitados
 Externos
 Administradores
 Ocultos
 Todos (por fecha de entrada)
 Lista de distribución
 Empresas reg.
 Roles

thinkproject! [encontrado: 10]

#	Proyecto	Nombre	Empresa	Cargo	Teléfono	Móvil	Fax	E-mail
1	DemoSP	Bachmaier, Thomas	baulogis	Geschäftsführer	/+498993083920			T.Bachmaier@DemoSP.thinkproject.es
2	DemoSP	de la Guía Prados, Iván	think project! Spain					I.de-la-Guia-Prados@DemoSP.thinkproj
3	DemoSP	García Fajardo, Alfonso	Proyecta	Director General	/+34913519559	/+34629106662		A.García-Fajardo@DemoSP.thinkproject.
4	DemoSP	Guía, Iván	think project!					I.Guia@DemoSP.thinkproject.es
5	DemoSP	Herranz, Araceli	Proyecta					J.A.Villalon@DemoSP.thinkproject.es
6	DemoSP	Morán, Angel	Proyecta	Account Manager				A.Moran@DemoSP.thinkproject.es
7	DemoSP	Sanz, Alejandro	think project!	Consultor				A.Sanz@DemoSP.thinkproject.es
8	DemoSP	systemaec	aec-on					systemaec@DemoSP.thinkproject.es
9	DemoSP	Villamor, Miguel	aec-on					M.Villamor@DemoSP.thinkproject.es
10	DemoSP	Lopez, Antonio *	Dragados					glnjardo@telefonica.net (privado)

think project!® v10
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The screenshot displays a software interface for document management. At the top, it shows user information (Dex, John), a date (27/02/20XX 10:48 AM), and project details (Office and Administration Building, Hotline: + 49 89 930839-300). A sidebar on the left lists various management functions like Documents, Contacts, and Drawing Management. The main area features a table with columns for Revision, drawing status, Branch, Drawingtype, Number, PDF-file, CAD-file, Drawingcode, and Stage. Below the table, a detailed view of a drawing is shown, including project information and a digital signature workflow. A green box highlights the 'approved' status in the table, and a green arrow points from this box to a digital signature box in the drawing view. Another green arrow points from a signature box in the drawing view to a QR code, indicating the digital approval process.

Revision	drawing status	Branch	Drawingtype	Number	PDF-file	CAD-file	Drawingcode	Stage
1	approved	Load Bearing	Reinforcement	002	[PDF icon]	[CAD icon]	TRA-S0-EG-BP-BB-002-c-04	Execution C
2	approved	Load Bearing	Reinforcement	002	[PDF icon]	[CAD icon]	TRA-S0-EG-BP-BB-002-b-04	Execution C
3	TO Approve	Load Bearing	Reinforcement	002	[PDF icon]	[CAD icon]	TRA-S0-EG-BP-BB-002-a-04	Execution C
4	Preliminary	Architecture	Floor Plan	003	[PDF icon]	[CAD icon]	ARC-S0-EG-GR-BB-003-a-04	Execution C
5	TO Approve	Fire Safety	Ceiling Plan	001	[PDF icon]	[CAD icon]	BRS-S0-EG-DS-DL-001-a-04	Execution C

	Document Number	Revision	Review Date	Status	Independent Engineer	Client approved	PDF Files	Mark up	CAD-File
1	DR-S2-CV-DXS-10AX12	04	-29	For Review					-/-
2	DR-S1-CV-DXS-110809	02	-15	Resubmit to Client					-/-
3	DR-S2-CV-DXS-50AV20	03	-15	Approved with comments					-/-
4	DR-CB-BD-DKR-471102	04	-15	For Review					-/-
5	DR-CB-BD-DKR-123456	10	-8	For Review					-/-
6	DR-S2-CV-DXS-10AX20	01	-5	Revised for Review					
7	DR-S1-CV-DXS-471101	02	12	Forward for Approval					
8	DR-S1-CV-DXS-10AX20	02	12	Forward for Approval					
9	DR-CB-BD-DKR-240374	02	15	Forward for Approval					
10	DR-CB-BD-DKR-557777	03	16	Resubmit to Client					
11	DR-CB-BD-DKR-558899	02	16	Resubmit to Client					
12	DR-CB-BD-DKR-667778	08	16	Forward for Approval					
13	DR-CB-BD-DKR-667779	07	16	Forward for Approval					
14	DR-S2-CV-DXS-60AV20	02	23	Approved with comments					

Fecha de revisión / Hitos

	Document Number	Revision	Status	Independent Engineer	Client approved	PDF Files	Mark up	CAD-File
1	DR-CB-BD-DKR-240374	02	Approved with comments					
2	DR-CB-BD-DKR-240374	02	Forward for Approval					
3	DR-CB-BD-DKR-240374	02	For Review					
4	DR-CB-BD-DKR-240374	01	Revised for Review					
5	DR-CB-BD-DKR-240374	01	For Review					

Visualización de versiones de planos (combinación de versión + status)

The screenshot displays a software interface for document management. At the top, it shows the project name "Office and Administration Building" and a hotline number. A navigation menu on the left includes options like "Documents", "Contacts", and "Temporary Store / Clipboard". The main area features a table with columns for "Revision", "drawing status", "Branch", "Drawingtype", "Number", "PDF-file", "CAD-file", "Drawingcode", and "Stage". A green box highlights the "approved" status in the first row of the table.

Revision	drawing status	Branch	Drawingtype	Number	PDF-file	CAD-file	Drawingcode	Stage
1	approved	Load Bearing	Reinforcement	002	[icon]	[icon]	TRA-S0-EG-BP-BB-002-c-04	Execution C
2	approved	Load Bearing	Reinforcement	002	[icon]	[icon]	TRA-S0-EG-BP-BB-002-b-04	Execution C
3	TO Approve	Load Bearing	Reinforcement	002	[icon]	[icon]	TRA-S0-EG-BP-BB-002-a-04	Execution C
					[icon]	[icon]	ARC-S0-EG-GR-BB-003-a-04	Execution C
					[icon]	[icon]	BRS-S0-EG-DS-DL-001-a-04	Execution C

Below the table, there is a "Document Management" section with a table showing document details:

Document Number	Revision	Status	Approved	Closed	Rev. MPP	Approved	Rev. ETC
DR-01-EG-001-10000	01	Approved	[checkbox]	[checkbox]	[checkbox]	[checkbox]	[checkbox]
DR-01-EG-001-10111	01	Approved	[checkbox]	[checkbox]	[checkbox]	[checkbox]	[checkbox]
DR-01-EG-001-10200	01	Revise and Resubmit	[checkbox]	[checkbox]	[checkbox]	[checkbox]	[checkbox]
DR-01-EG-001-10300	01	Approved	[checkbox]	[checkbox]	[checkbox]	[checkbox]	[checkbox]

To the right, a pie chart titled "Analysis of Level / Status" shows the distribution of document statuses:

Status	Percentage
Approved	44.2%
TO approve	35.2%
to completion	15.2%
Revise	15.2%
Revise	10.2%

The image displays two overlapping screenshots of a software interface, likely a CAD or BIM application, demonstrating dynamic search capabilities.

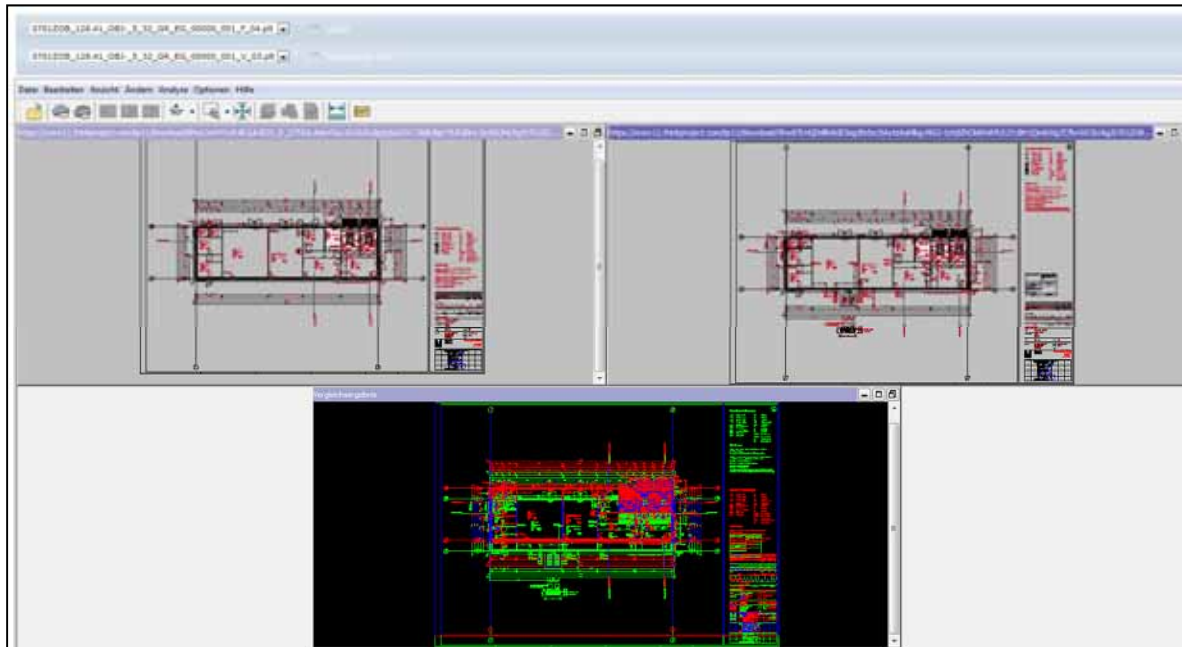
Left Screenshot: Dynamic Search Filters

- PLT-File:** A text input field.
- Title of Drawing:** A text input field.
- Participant:** A dropdown menu with a "Quick selection" button. The list includes: XXX-comprehensive, HPP-architect D, 10M-architect RO, SP--awarding authority, BIP-project management D.
- Type of Plan:** A dropdown menu with a "Quick selection" button. The list includes: FP-floor plan, VI-view, SD-sectional drawing, SM-structural module, QF-outside facilities.
- Phase:** A dropdown menu with a "Quick selection" button. The list includes: comprehensive, concept design.
- Content of Plan:** A dropdown menu with a "Quick selection" button. The list includes: XX-comprehensive, B3-basement 3, B2-basement 2, B1-basement 1, GF-ground floor.
- Status:** A dropdown menu with a "Quick selection" button. The list includes: comprehensive, preliminary, released, - w/o Status -.
- Code complete:** A text input field.
- phase+no. (kk):** A text input field.
- Previous search will be removed.** A greyed-out message box.
- Buttons:** Cancel, Save as sub-filter, Show.

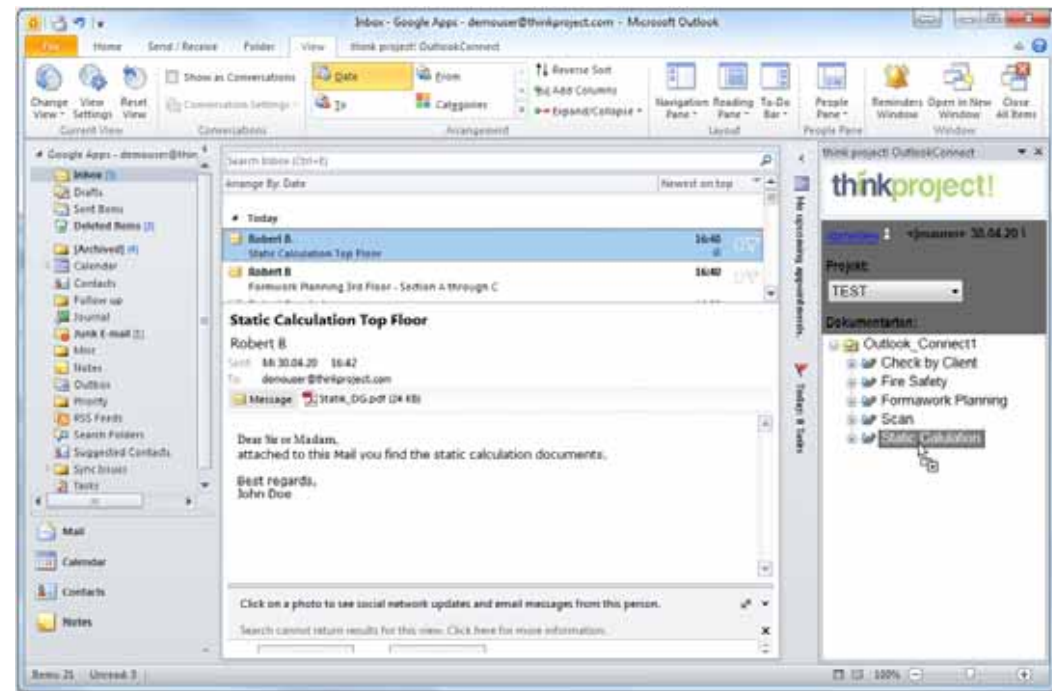
Right Screenshot: Email Selection Dialog

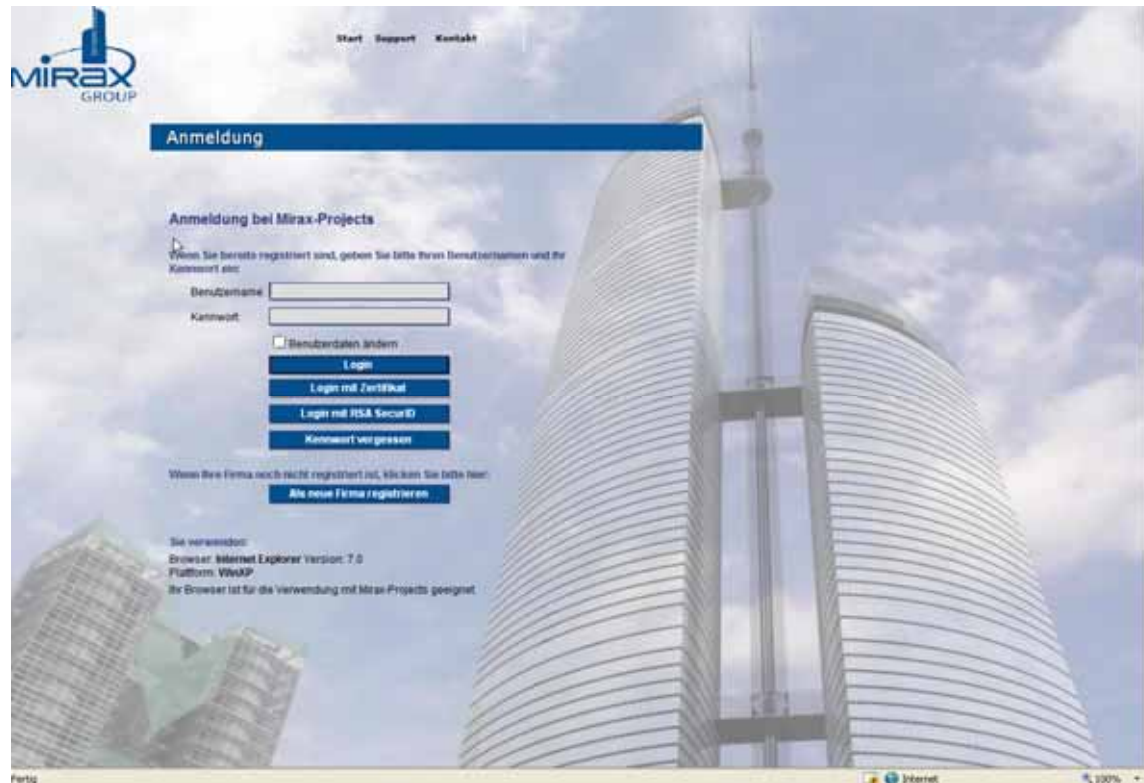
- From/To/Cc:** A dropdown menu with a "Quick selection" button. The list includes: ADMIN Pitz, baugolis, BMW; Althammer, Walburga, BMW; Baumann, Andreas, BMW; Baumeister, Florian, DRS.
- Add member:** A button.
- Selected members:** A list box containing: Althammer, Walburga, BMW; Baumann, Andreas, BMW.
- Delete selections:** A button with a red 'X' icon.
- Selection:** Radio buttons for All (selected), Unread, Sent, Hidden, Received.
- Subject:** A text input field.
- Message text:** A text input field.
- Received (date or date range):** A dropdown menu with a "Quick selection" button. The list includes: today - 14 to today; e.g. '15/3/2002' or 'to 15/3/2002' or 'from 15/3/2002' or '21/1/2002 to 15/3/2002' or 'today' or 'from yesterday'.
- Info:** A text input field.

Visualizar planos de las diferentes versiones y disciplinas y mostrar diferencias



- Los emails se pueden transferir desde Outlook a la plataforma online vía ‘arrastrar y soltar’ incluyéndose en la organización estructurada del proyecto, sin salir de Outlook.
- Ideal para compañías que no quieren renunciar al uso de Outlook, pero desean que las comunicaciones relativas a un proyecto se documenten completamente en una única plataforma





Compose Preview Close

Insert Edit Actions View Send options

Send Add document Add file(s)

Message

Document Drawings

PDF file *
» Add file(s)

Cad file

Attached files
» Add file(s)

only doc, docx, xls, xlsx and pdf files allowed

Drawing name *

Approval data

Status *
 for Internal review
 with comments Wideurope
 with comments internal

Review Date
12/07/2011

Next >

Archivo pdf

Archivo dwg

Otros archivos adjuntos

Nombre del plano

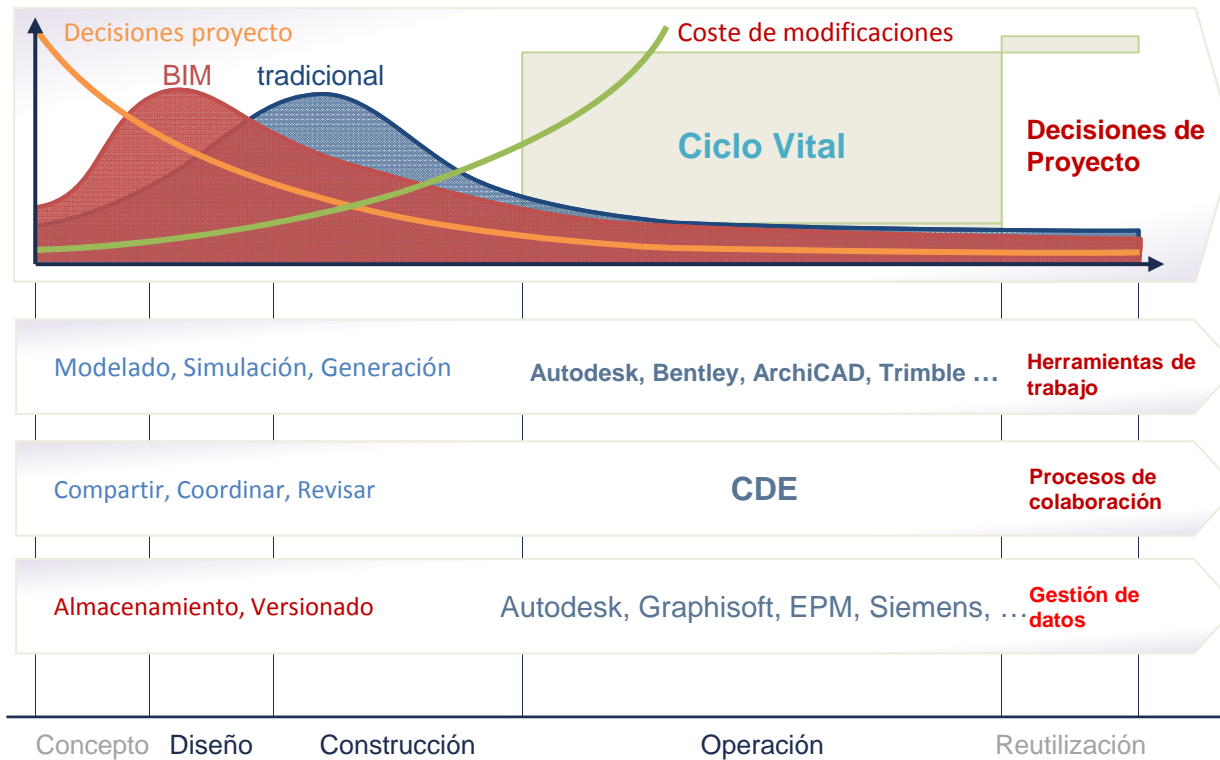
Fecha de Revisión

Estado del plano

Trazabilidad mediante código QR que incluye la URL al portal. Disponible desde cualquier dispositivo móvil.

Revision	drawing status	Branch	Drawingtype	Number	PDF-File	CAD-File	Drawingcode	Stage
1	Index c	approved	Load Bearing	Reinforcement	002	[PDF icon]	TRA-10-EG-04-08-002-c-04	Execution C
2	Index c	approved	Load Bearing	Reinforcement	002	[PDF icon]	TRA-10-EG-04-08-002-b-04	Execution C
3	Index e	TO Approve	Load Bearing	Reinforcement	002	[PDF icon]	TRA-10-EG-04-08-002-a-04	Execution C
4	Index e	Preliminary	Architecture	Floor Plan	003	[PDF icon]	AEC-10-EG-04-08-003-a-04	Execution C
5	Index e	TO Approve	Fire Safety	Ceiling Plan	001	[PDF icon]	SES-10-EG-04-01-001-a-04	Execution C

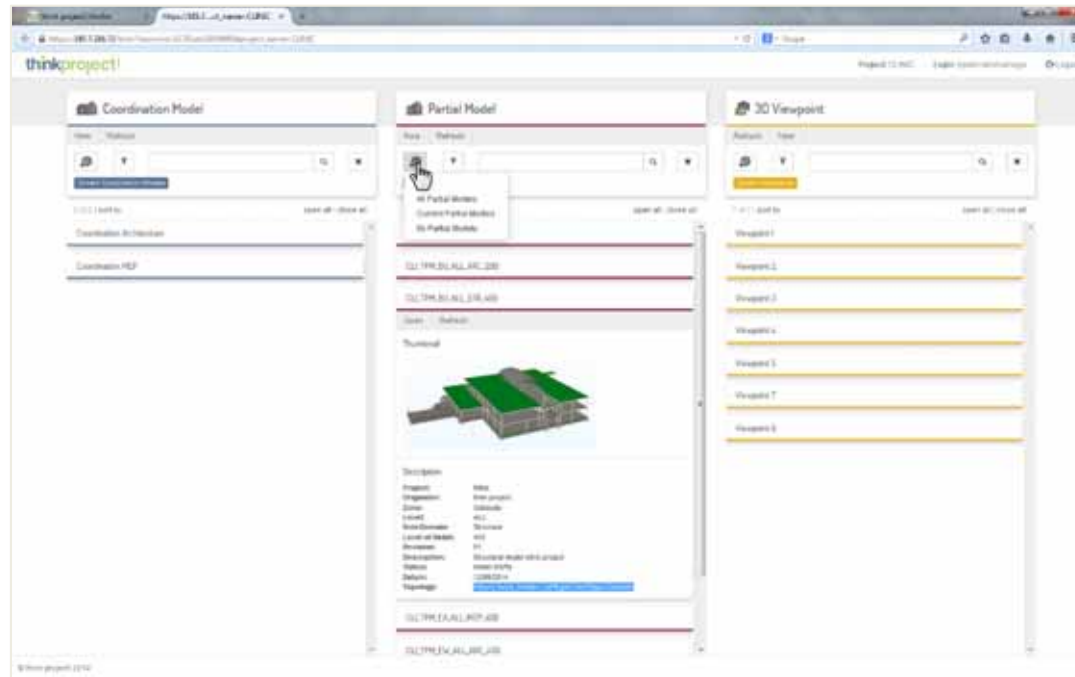
La comunicación en BIM

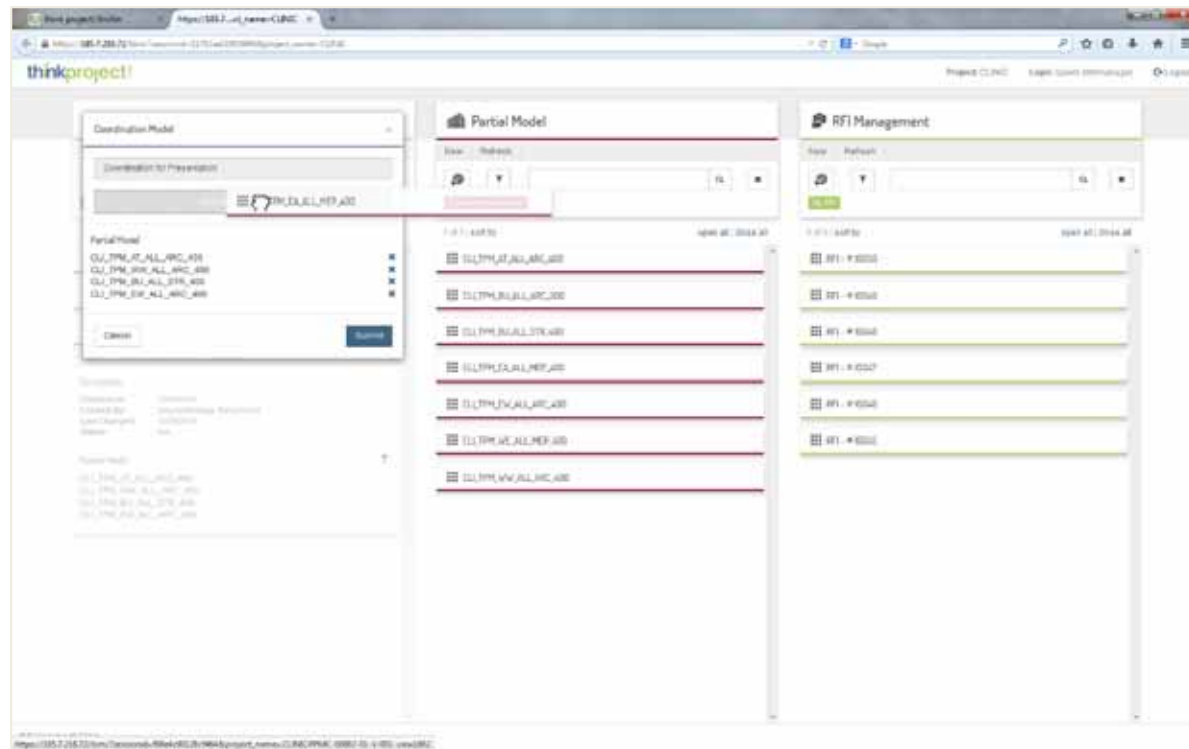


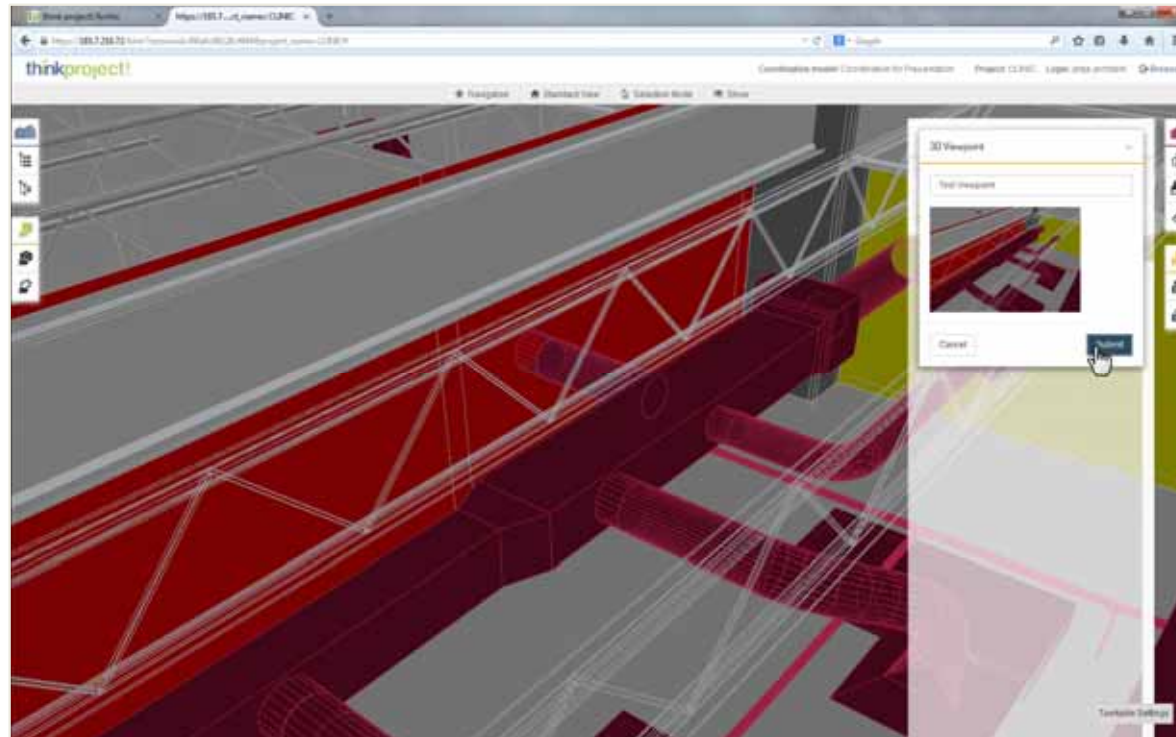
The screenshot shows the thinkproject! software interface. On the left is a navigation pane with categories like 'Documents', 'Messages', and 'Building Model Information'. The main area displays a table of BIM models with columns for Model ID, Status, Originator, Date, Template, Level, App Domain, Revision, Level of Detail, and Description.

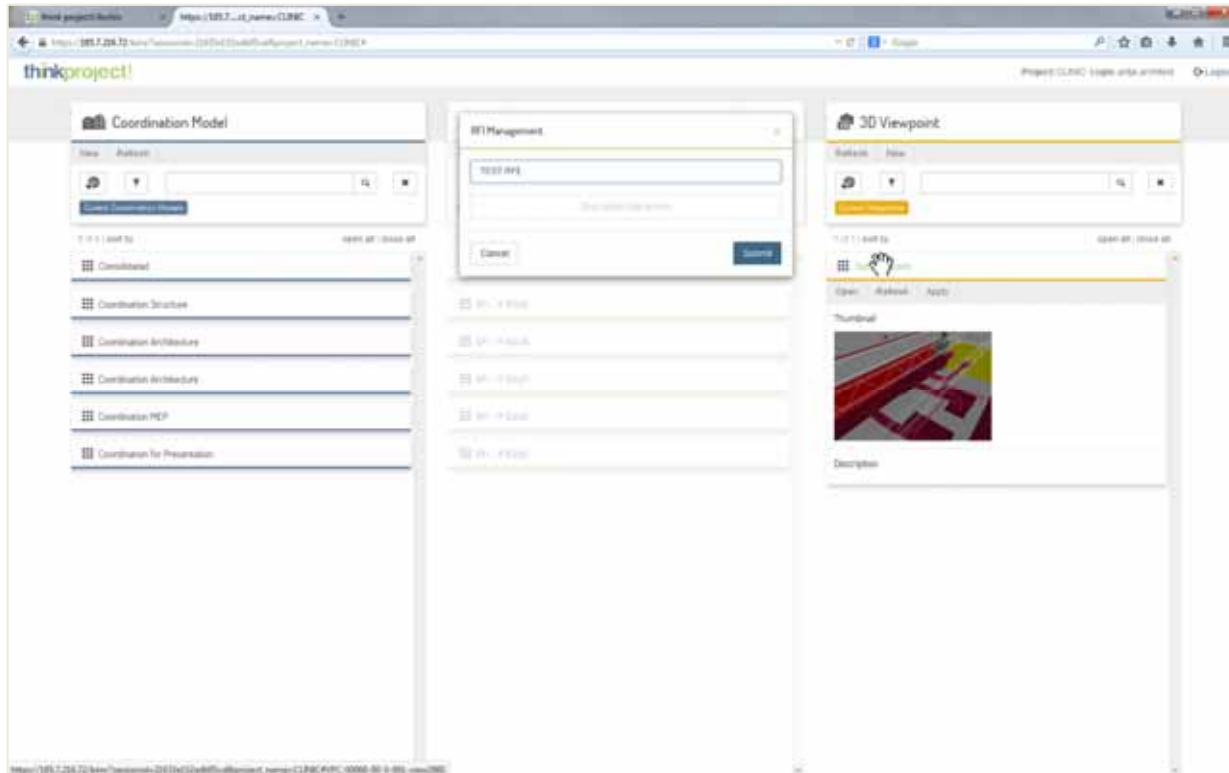
Model ID	Status	Originator	Date	Template	Level	App Domain	Revision	Level of Detail	Description
01_000001_01_01_01_01_01	published	think project	2016-01-01	01_000001	ALL	Architecture	01	400	Architecture model for whole section
01_000001_01_01_01_01_02	published	think project	2016-01-01	01_000001	ALL	Architecture	02	200	Space model for whole project
01_000001_01_01_01_01_03	published	think project	2016-01-01	01_000001	ALL	Structure	03	400	Structural Model
01_000001_01_01_01_01_04	published	think project	2016-01-01	01_000001	ALL	MEP	04	400	MEP model for whole section
01_000001_01_01_01_01_05	published	think project	2016-01-01	01_000001	ALL	MEP	05	400	MEP model for each wing section
01_000001_01_01_01_01_06	published	think project	2016-01-01	01_000001	ALL	MEP	06	400	MEP model for each section
01_000001_01_01_01_01_07	published	think project	2016-01-01	01_000001	ALL	Architecture	07	400	Architecture model for each wing section

Overlaid on the interface are two diagrams. The 'Zone' diagram shows a 3D block being divided into smaller sections. The 'Domain' diagram shows a 3D model with different colored regions (blue, green, red, yellow) representing different functional areas or domains.







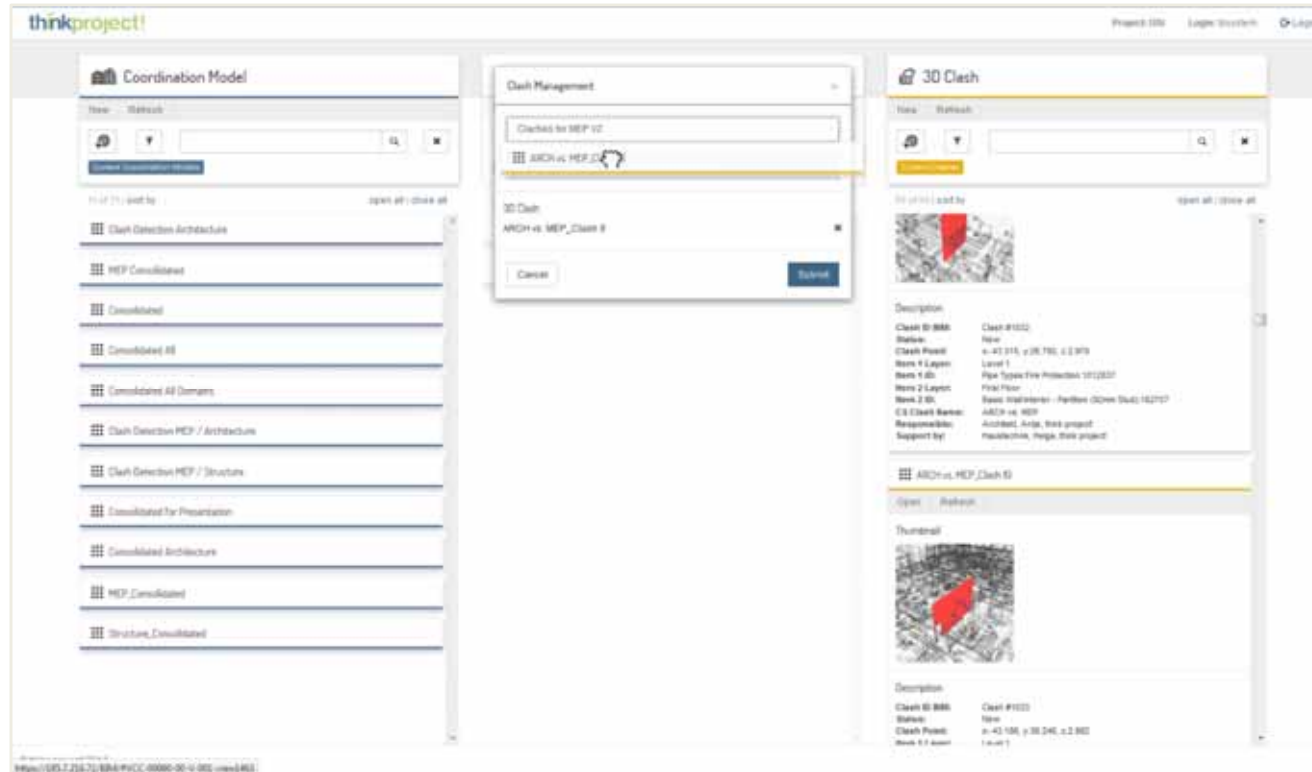


The screenshot displays the thinkproject! software interface, which is organized into three main vertical panels:

- Coordination Model:** This panel on the left contains a search bar and a list of model elements. The list includes items such as 'Clash Detection Architecture', 'MEP Architecture', 'MEP Consolidated', 'Architecture Consolidated', 'Consolidated All Domains', 'Consolidated Architecture', 'Clash Detection MEP / Structure', 'Consolidated for Presentation', 'Clash Detection MEP / Architecture', 'MEP_Consolidated', 'Consolidated', 'Consolidated All', and 'Structure_Consolidated'.
- Partial Model:** The middle panel shows a 3D architectural model of a building section. Below the model, there is a 'Description' section with the following details:

Project:	Alba
Organization:	Alba project
Zone:	Alba
Level:	All
Rule Domain:	Architecture
Level of Detail:	LOD
Revision:	01
Description:	Architecture model for alpha section
Status:	model 01/01
Setback:	2010/02/14
- Clash Management:** The rightmost panel features a search bar and a section titled 'Clashes for Architecture'.

The interface also includes a top navigation bar with the 'thinkproject!' logo, user information ('Project: CLM01'), and a 'Logout' button. A copyright notice '© thinkproject 2014' is visible in the bottom left corner.

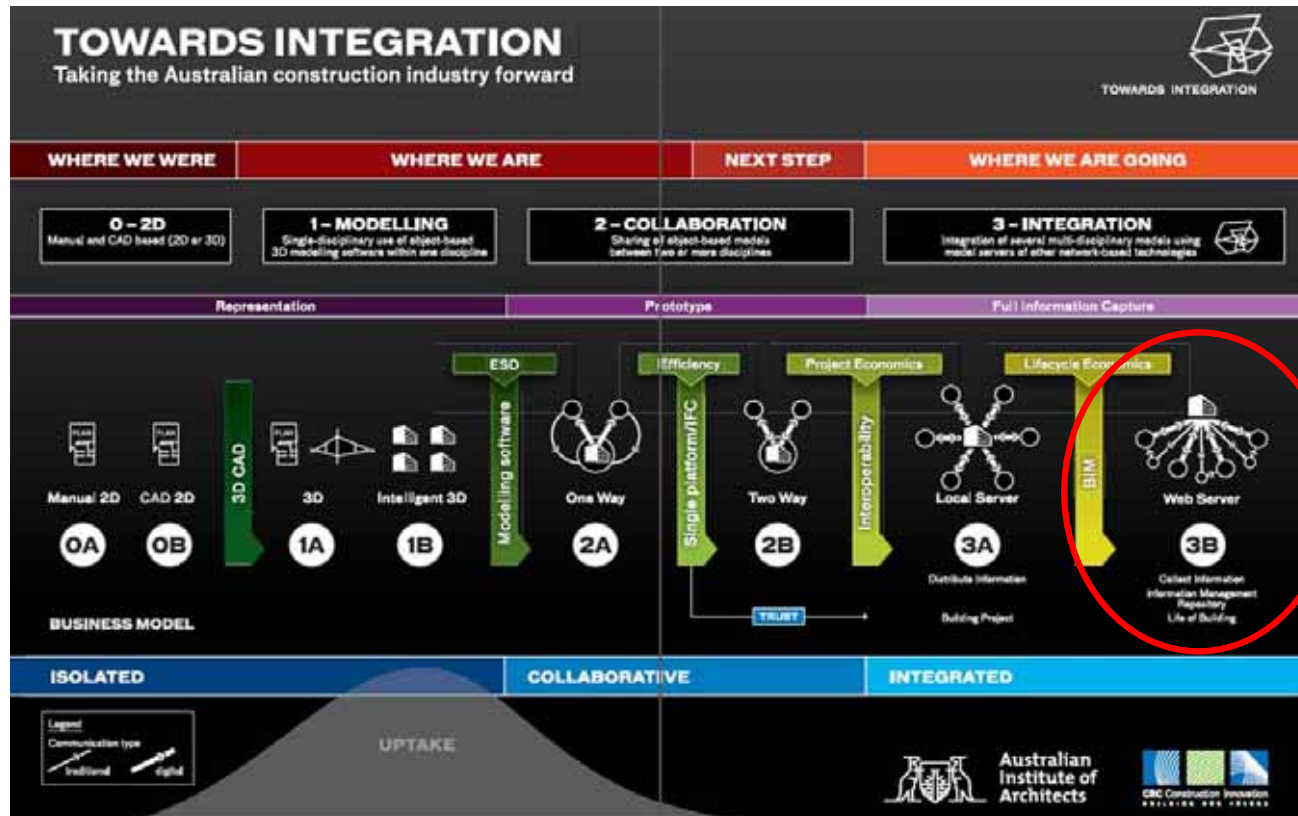


The screenshot displays the thinkproject! software interface, which is used for managing BIM coordination models. The interface is divided into several panels:

- Coordination Model:** Located on the left, it features a search bar and a list of various clash detection and consolidation tasks, such as "Clash Detection Architecture", "MEP Consolidated", and "Consolidated All".
- Clash Management:** A central dialog box is open, showing a search for "Clashed for MEP_V2" and a list of results including "ARCH vs MEP_Class 8". It includes a "3D Clash" preview and buttons for "Cancel" and "Select".
- 3D Clash:** On the right, this panel provides a detailed view of a specific clash. It includes a 3D model thumbnail with a red arrow pointing to the conflict, a description table, and a "Thumbnail" section with another 3D view.

Clash ID:	Clash #1022
Status:	New
Clash Point:	x=42.315, y=38.790, z=2.979
Item 1 Layer:	Level 1
Item 1 ID:	Pipe Top/Fire Protection 1012007
Item 2 Layer:	Floor Floor
Item 2 ID:	Basic Insulation - Partition (Open Stud) 102107
Clash Reason:	ARCH vs MEP
Responsibility:	ARCH, Arch, this project
Support by:	mechanics, mep, this project

Clash ID:	Clash #1023
Status:	New
Clash Point:	x=42.156, y=38.245, z=2.982
Item 1 Layer:	Level 1



European BIM Summit Day

BIM: Un sistema colaborativo? La comunicación en el BIM

Muchas gracias por su atención



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I ENGINYERS D'EDIFICACIÓ DE BARCELONA



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Main partner:

