



V CONGRESO EDIFICIOS INTELIGENTES

Madrid, 14 mayo 2019

“MANTENIMIENTO AVANZADO DE EDIFICIOS”

Abigail Rocasolano

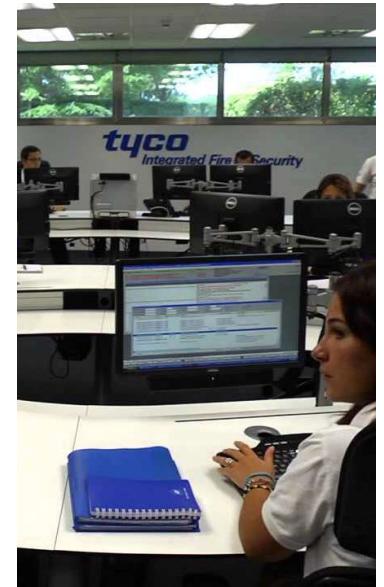
Directora técnica



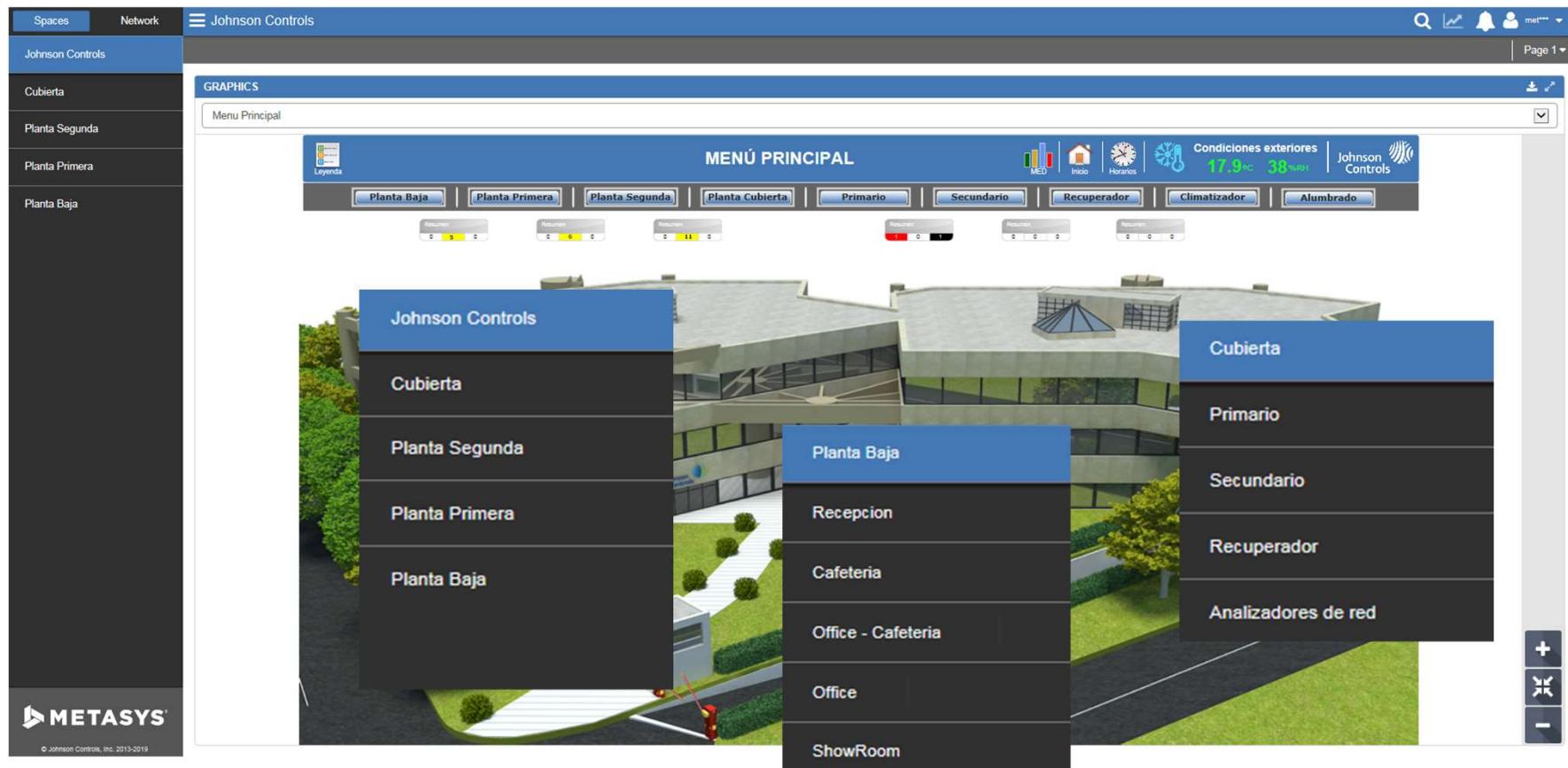
¿QUÉ DEBE HACER UN SISTEMA DE CONTROL?



METASYS 10 + CONEXIÓN CRA



METASYS 10 – ESPACIOS DE USO



ESPACIO DE USO – ACCEDIENDO A TODA LA INFORMACIÓN

Planta Primera

Johnson Controls

Planta Primera

Admon. Retail (5)

Admon. Retail (6)

Admon. Ventas (11)

Admon. Ventas (12)

Dpcho. Soria

Anexo a Admon. Ventas (15)

Comercial Retail (10)

Comercial Retail (9)

Ingenieria Tetrica (18)

Ingenieria Tetrica (19)

Ingenieria Tetrica (20)

Dpcho. Pepe Riquelme

Taller Proyectos

Sala Proyectos

Dpcho. Pilar Toledo

EQUIPMENT SUMMARY

FANCOIL

EQUIPMENT #	SPACE(S)	CON_TEM_EFE	SEN_TEM_AMB	EST_VEL_MED	CON_MOD_DES_FRI	CON_MOD_DES_CAL	COMM_MOD_HVAC	MOD_EFE_HVAC	COMM_MOD_OCU
TUC_005	Admon. Retail (5)	25.0 deg C	26.2 deg C	On	28.0 deg C	16.0 deg C	Auto	Cool	Occupied
TUC_006M	Admon. Retail (6)	25.0 deg C	26.0 deg C	Off	28.0 deg C	16.0 deg C	Auto	Cool	Occupied
TUC_007	Dpcho. Pilar Toledo	24.0 deg C	24.0 deg C	Off	28.0 deg C	16.0 deg C	Auto	Heat	Occupied
TUC_008	Dpcho. Carlos Gomez	27.0 deg C	27.7 deg C	Off	28.0 deg C	16.0 deg C	Auto	Heat	Occupied
TUC_009	Comercial Retail (9)	25.0 deg C	26.3 deg C	Off	28.0 deg C	16.0 deg C	Auto	Cool	Occupied
TUC_010M	Comercial Retail (10)	25.0 deg C	26.0 deg C	Off	28.0 deg C	16.0 deg C	Auto	Cool	Occupied
TUC_011M	Admon. Ventas (11)	25.0 deg C	26.0 deg C	Off	28.0 deg C	16.0 deg C	Auto	Cool	Occupied
TUC_012	Admon. Ventas (12)	25.0 deg C	26.0 deg C	Off	28.0 deg C	16.0 deg C	Auto	Cool	Occupied
TUC_013	Dpcho. Soria	22.0 deg C	—	Off	28.0 deg C	16.0 deg C	Auto	Heat	Occupied

SCHEDULE

02/25/2019

ACTIONS

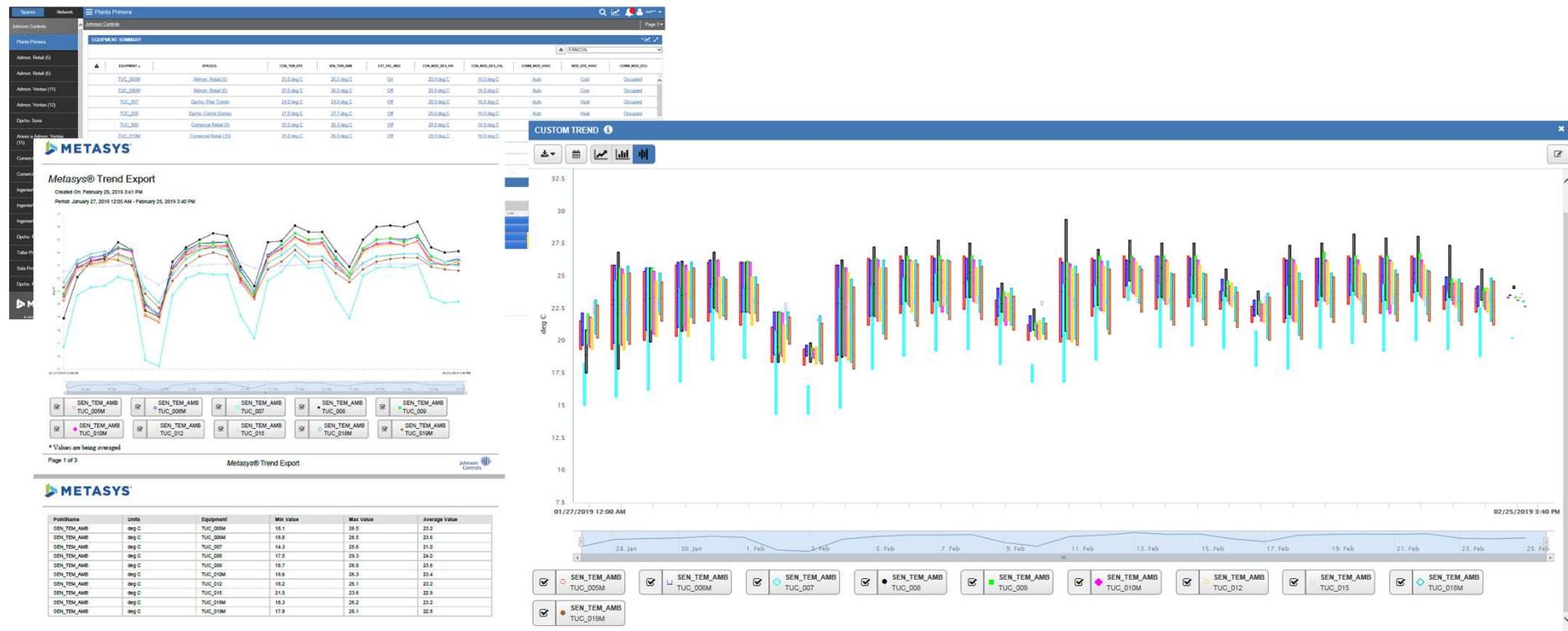
SHOW DISABLED

12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM
Off	Auto																						
Off	Auto																						
Off	Auto																						
Off	Auto																						

METASYS

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ESPACIO DE USO – ACCEDIENDO A TODA LA INFORMACIÓN



PANEL DE CONTROL DE ALARMAS

ALARM MANAGER

Viewing 37 alarm(s)

ACTIONS ▾ FILTER ▾

Priority: [] to []

Start Date: MM/DD/YYYY to End Date: MM/DD/YYYY

Filter By Space & Equipment: Planta

Equipment Category: SELECT... ▾

STATUS	NEW	PRIORITY	TYPE	TRIGGER VALUE	EQUIPMENT	NAME	SPACE	#	_OCCURRED_
■	■	5	ALARM	ALARM	ZETTLER PANEL	ALA_PAN	CUBIERTA...	68	02/25/2019 3:35 PM
■	■	1	ALARM	YES	CCF_INC	ALARMA INCENDIOS	PLANTA BAJA...	57	02/25/2019 3:35 PM
■	■	10	ALARM	CLOSE	CCF_INC	EST_CCF_IMP_PLB	PLANTA BAJA...	38	02/25/2019 3:35 PM
■	■	10	ALARM	CLOSE	CCF_INC	EST_CCF_RET_PLB	PLANTA BAJA...	38	02/25/2019 3:35 PM
■	■	106	NORMAL	ONLINE	TUC_006M	TUC_006M	ADMON. RETAIL (6)	176	02/25/2019 7:08 AM
■	■	106	NORMAL	ONLINE	TUC_008	TUC_008	DPCHO. CARLOS GOMEZ	156	02/25/2019 7:08 AM
■	■	106	NORMAL	ONLINE	TUC_010M	TUC_010M	COMERCIAL RETAIL (10)	180	02/25/2019 7:08 AM
■	■	106	NORMAL	ONLINE	TUC_024M	TUC_024M	SOPORTE TECNICO	210	02/25/2019 7:08 AM
■	■	106	NORMAL	ONLINE	TUC_016	TUC_016	SALA DE CONTROL	156	02/25/2019 7:08 AM
■	■	106	NORMAL	ONLINE	TUC_019M	TUC_019M	INGENIERIA TECNICA (19)	174	02/25/2019 7:08 AM
■	■	106	NORMAL	ONLINE	TUC_020	TUC_020	INGENIERIA TECNICA (20)	166	02/25/2019 7:08 AM
■	■	106	NORMAL	ONLINE	TUC_021	TUC_021	TALLER PROYECTOS	138	02/25/2019 7:08 AM
■	■	106	NORMAL	ONLINE	TUC_013	TUC_013	DPCHO. SORIA	172	02/24/2019 3:53 PM
■	■	106	NORMAL	ONLINE	TUC_015	TUC_015	ANEXO A ADMON. VENTAS (15)	146	02/24/2019 3:53 PM
■	■	106	NORMAL	ONLINE	TUC_023	TUC_023	BUNKER	156	02/24/2019 8:11 AM

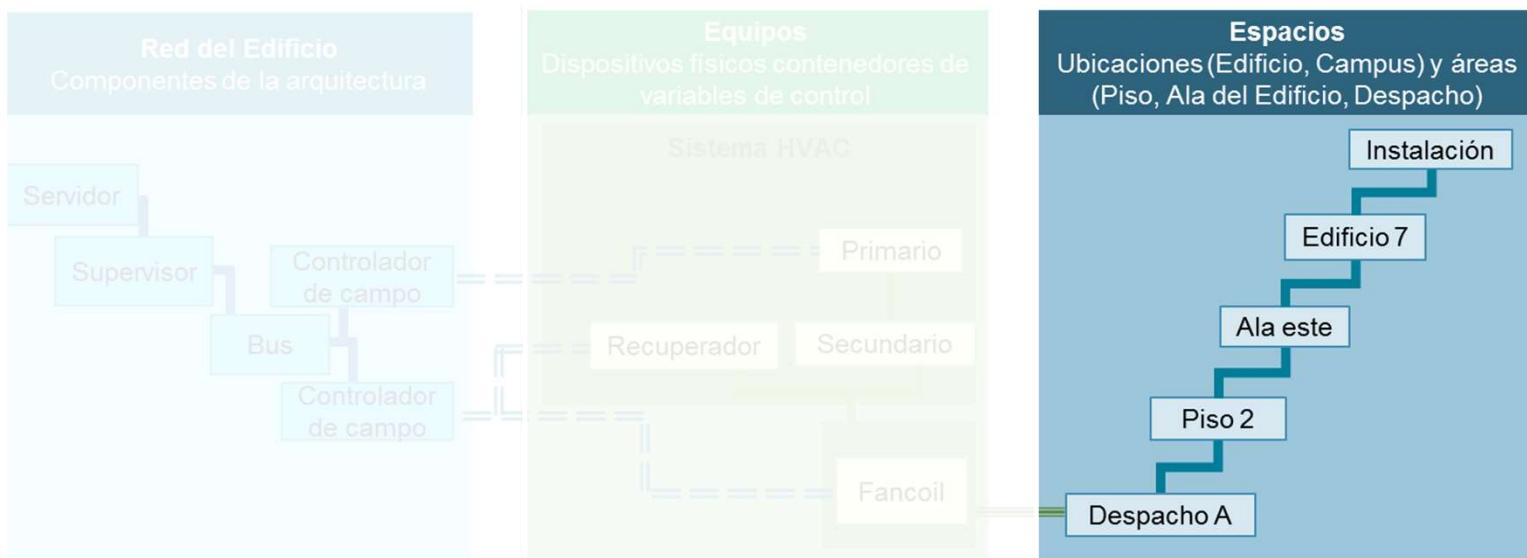
ALARM SUMMARY

37 Total Alarm(s)

35 Unacknowledged | 2 Acknowledged

Priority: 0-39, 40-79, 80-139, 140-255

METASYS 10 – RELACIONES DE DEPENDENCIA



DIAGNÓSTICO REAL – EDIFICIO TYCO LAS ROZAS

The screenshot displays the Metasys software interface for Johnson Controls. The left sidebar shows a navigation tree with categories like Spares, Network, Johnson Controls, Planta Segunda, and various departmental nodes such as Comercial Residencial Televenta (20), Comercial Residencial Televenta (21), Comercial Residencial Televenta (24), Comercial Residencial Televenta (25), Comercial Residencial Televenta (26), Finanzas (10), Finanzas (21), Finanzas (7), Finanzas (6), Finanzas (9), Legal, Sala Jurídica, and Opex. A 'METASYS' logo is at the bottom.

The main window has two main sections:

- EQUIPMENT SERVING SPACE:** Shows data for TUC_026, specifically:
 - TUIC_026 CONSIGNA EFECTIVA: Normal 24.0 deg C
 - WY_100_001 SENSOR TEMPERATURA AMBIENTE: High Warning 29.4 deg C
 - WY_100_002 ESTADO DE VELOCIDAD MEDIA: Normal ON
- POTENTIAL PROBLEM AREAS:** A table showing a single entry:

ITEM	VALUE	EQUIPMENT	SPACES
WY_100_001 SENSOR TEMPERATURA AMBIENTE	HIGH WARNING 29.4 deg C	TUIC_026	Comercial Residencial Televenta (26)

Se recibe una llamada desde el departamento de Televenta de la planta segunda advirtiéndonos de que los trabajadores están pasando calor

DIAGNÓSTICO REAL – EDIFICIO TYCO LAS ROZAS

Spaces Network Comercial Residencial Televenta (26) Page 1 ▾

Johnson Controls Johnson Controls > Planta Segunda

EQUIPMENT SERVING SPACE

TUC_026

CON_TEM_EFE CONSIGNA EFECTIVA	Normal 24.0 deg C
SEN_TEM_AMB SENSOR TEMPERATURA AMBIENTE	High Warning 29.4 deg C
EST_VEL_MED ESTADO DE VELOCIDAD MEDIA	Normal On

> MORE 1 of 1

RECUPERADOR

MARCHA PARO GENERAL MARCHA PARO GENERAL	Normal On
TEMPERATURA IMPULSION TEMPERATURA IMPULSION	Normal 18.2 deg C

> MORE

SECUNDARIO

TEMPERATURA RETORNO FRIO PS TEMPERATURA RETORNO FRIO PB	Normal 6.7 deg C
TEMPERATURA RETORNO FRIO PI TEMPERATURA RETORNO FRIO P1	Normal 6.7 deg C

> MORE

PRIMARIO

MARCHA PARO GENERAL	Normal
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POTENTIAL PROBLEM AREAS

Data Generated: 20min ago

ITEM VALUE EQUIPMENT SPACE(S)

SEN_TEM_AMB SENSOR TEMPERATURA AMBIENTE	HIGH WARNING 29.4 deg C	TUC_026	Comercial Residencial Televenta (26)
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FILTER ▾

DIAGNÓSTICO REAL – EDIFICIO TYCO LAS ROZAS

The screenshot displays the Johnson Controls Metasys software interface for the Comercial Residencial Televenta (26) building, specifically for the Planta Segunda. The left sidebar shows a navigation tree with various building sections. The main window is divided into two main panels: 'EQUIPMENT SERVING SPACE' and 'POTENTIAL PROBLEM AREAS'.

EQUIPMENT SERVING SPACE:

- TUC_026:**
 - CON_TEM_EFE CONSIGNA EFECTIVA:** Normal 24.0 deg C
 - SEN_TEM_AMB SENSOR TEMPERATURA AMBIENTE:** High Warning 29.4 deg C
 - EST_VEL_MED ESTADO DE VELOCIDAD MEDIA:** Normal On
- RECUPERADOR:**
 - MARCHA PARO GENERAL:** Normal On
 - TEMPERATURA IMPULSION:** Normal 18.2 deg C
- SECUNDARIO:**
 - TEMPERATURA RETORNO FRIO PS:** Normal 6.7 deg C
 - TEMPERATURA RETORNO FRIO PB:** Normal 6.7 deg C
- PRIMARIO:**
 - MARCHA PARO GENERAL:** Normal

POTENTIAL PROBLEM AREAS:

ITEM	VALUE	EQUIPMENT	SPACE(S)
SEN_TEM_AMB SENSOR TEMPERATURA AMBIENTE	HIGH WARNING 29.4 deg C	TUC_026	Comercial Residencial Televenta (26)

Data Generated: 20min ago

DIAGNÓSTICO REAL – EDIFICIO TYCO LAS ROZAS

The screenshot displays the Metasys software interface for the Comercial Residencial Televenta (26) building, specifically for the Planta Segunda. The left sidebar shows a navigation tree with various building sections. The main window is divided into two main panels:

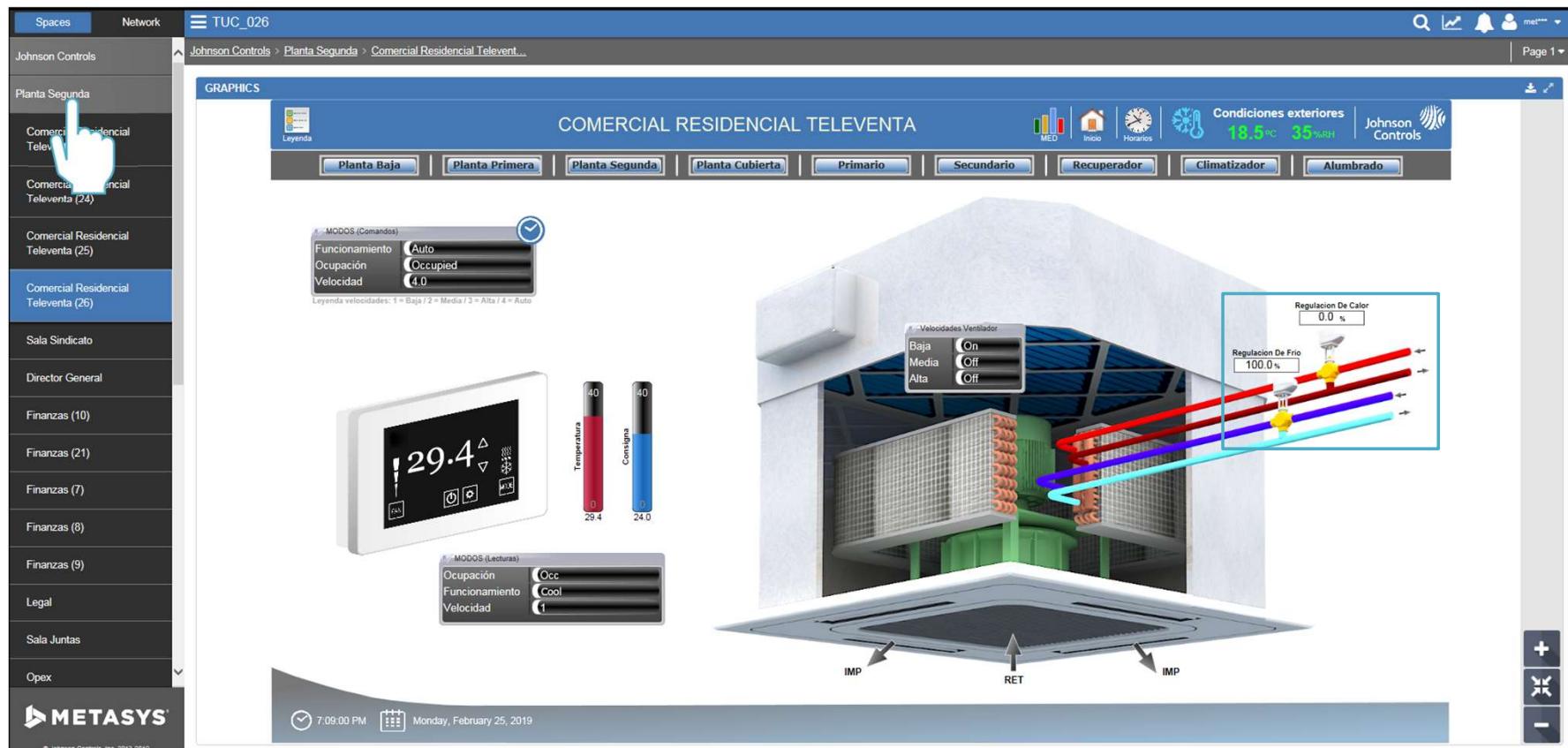
- EQUIPMENT SERVING SPACE:** This panel lists the equipment serving the space TUC_026. It includes the following data:

ITEM	VALUE
CON_TEM_EFE CONSIGNA EFECTIVA	Normal 24.0 deg C
SEN_TEM_AMB SENSOR TEMPERATURA AMBIENTE	High Warning 29.4 deg C
EST_VEL_MED ESTADO DE VELOCIDAD MEDIA	Normal On

 A hand icon points to the row for the ambient temperature sensor (SEN_TEM_AMB).
- POTENTIAL PROBLEM AREAS:** This panel shows a table of potential problem areas generated 20 minutes ago. It includes the following data:

ITEM	VALUE	EQUIPMENT	SPACE(S)
SEN_TEM_AMB SENSOR TEMPERATURA AMBIENTE	HIGH WARNING 29.4 deg C	TUC_026	Comercial Residencial Televenta (26)

DIAGNÓSTICO REAL – EDIFICIO TYCO LAS ROZAS



DIAGNÓSTICO REAL – EDIFICIO TYCO LAS ROZAS

EQUIPMENT SUMMARY

	EQUIPMENT	SPACE(S)	CON_TEM_EFE	SEN_TEM_AMB	EST_VEL_MED	CON_MOD_DES_FRI	CON_MOD_DES_CAL	COMM_MOD_HVAC	MOD_EFE_HVAC	COMM_MOD_OCU
TUC_021	Finanzas (21)	23.0 deg C	23.2 deg C	Off	28.0 deg C	16.0 deg C	Auto	Heat	Occupied	
TUC_022	Residencial	24.0 deg C	23.8 deg C	Off	28.0 deg C	16.0 deg C	Auto	Heat	Occupied	
TUC_023	Comercial Residencial Televenta (23)	23.0 deg C	24.0 deg C	Off	28.0 deg C	16.0 deg C	Auto	Fan Only	Occupied	
TUC_024	Comercial Residencial Televenta (24)	24.0 deg C	25.1 deg C	Off	28.0 deg C	16.0 deg C	Auto	Off	Occupied	
TUC_025	Comercial Residencial Televenta (25)	26.0 deg C	25.8 deg C	On	28.0 deg C	16.0 deg C	Auto	Heat	Occupied	
TUC_026	Comercial Residencial Televenta (26)	23.0 deg C	29.2 deg C	Off	28.0 deg C	16.0 deg C	Auto	Cool	Occupied	
TUC_027	VST	25.0 deg C	27.6 deg C	Off	28.0 deg C	16.0 deg C	Auto	Cool	Occupied	
TUC_028	CPD	22.0 deg C	26.7 deg C	Off	28.0 deg C	16.0 deg C	Auto	Cool	Occupied	
TUC_029	VP Retail	23.0 deg C	27.5 deg C	Off	28.0 deg C	16.0 deg C	Auto	Cool	Occupied	

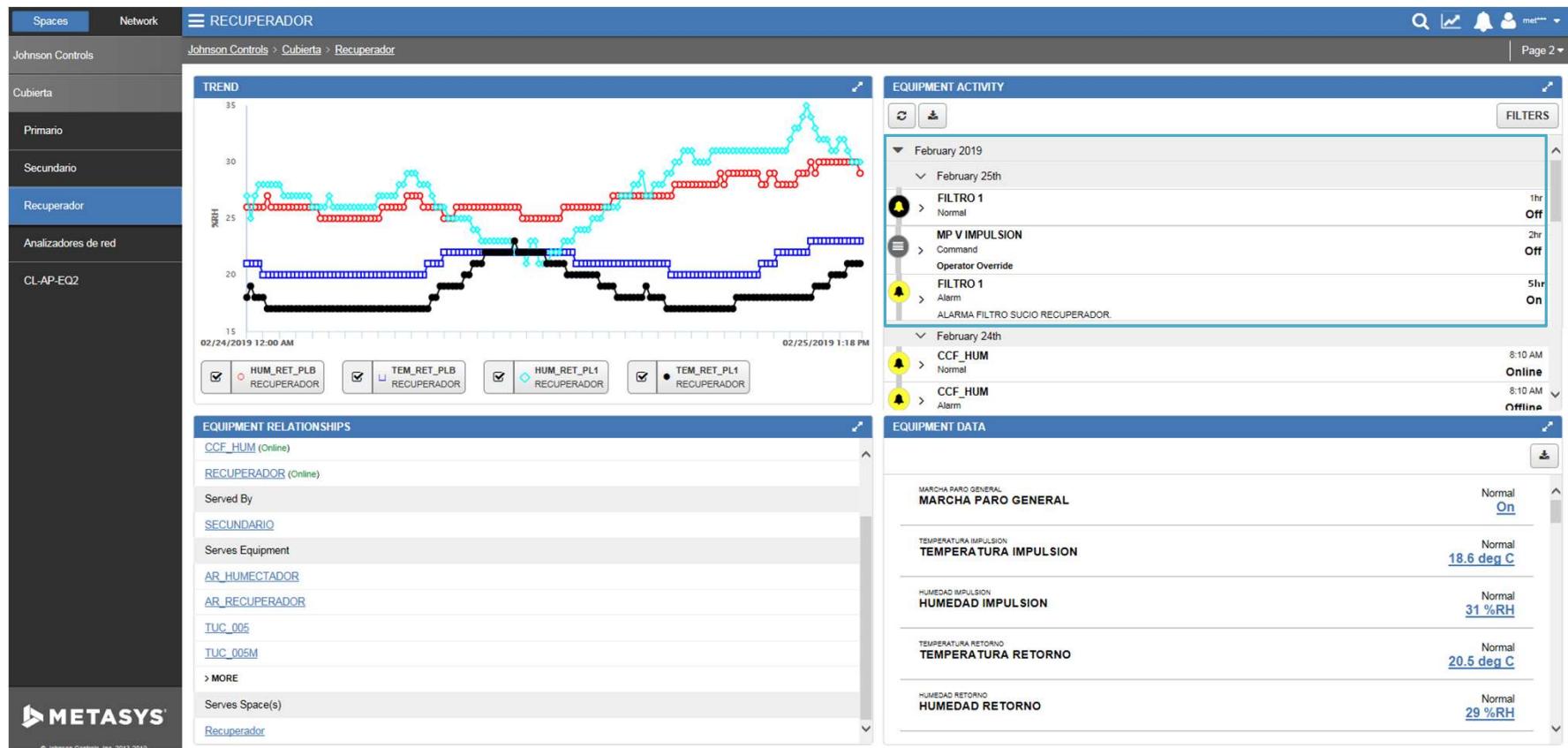
SCHEDULE

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM
Horario Zona Comun Pr...	Off																							
Horario Zona Despacho...																								

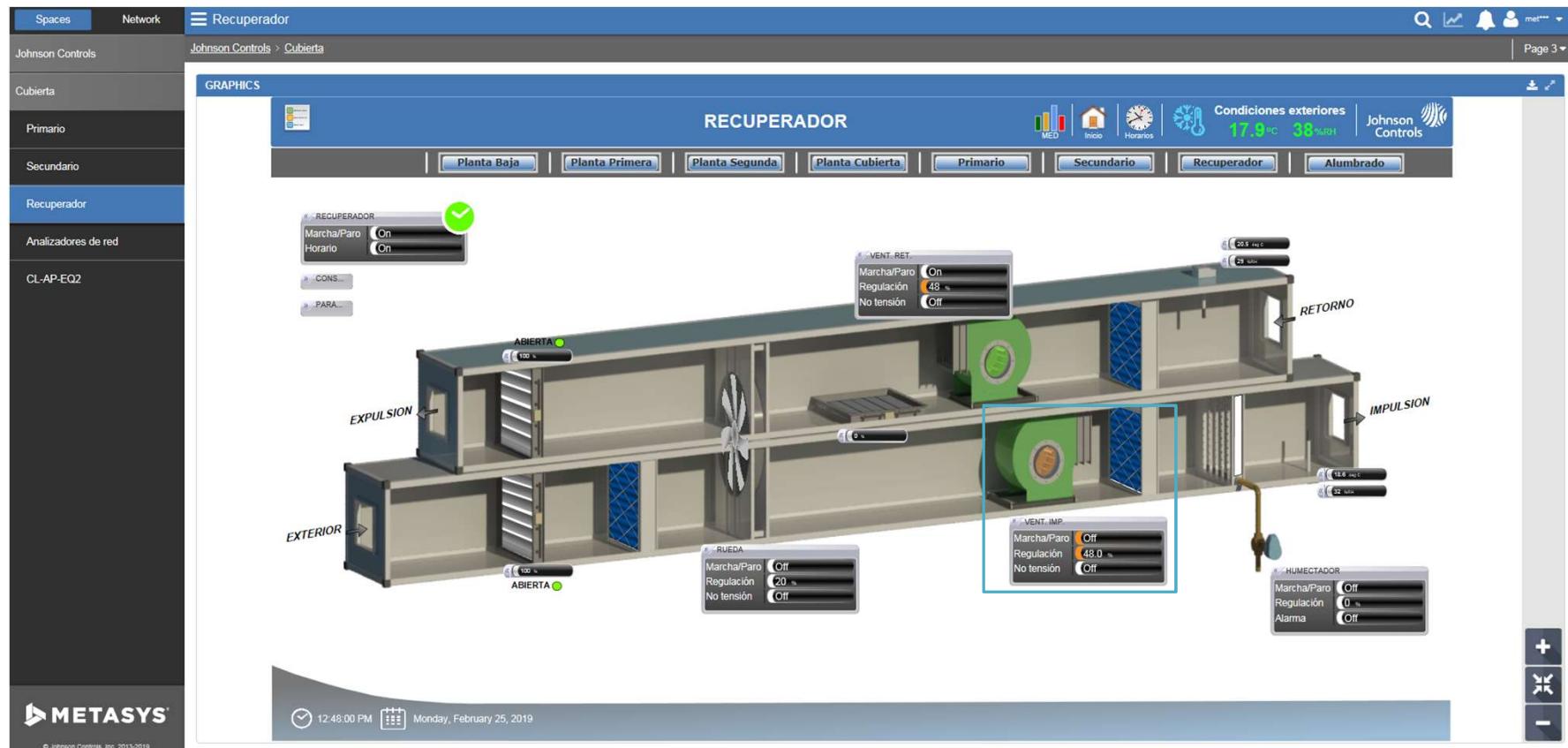
DIAGNÓSTICO REAL – EDIFICIO TYCO LAS ROZAS



DIAGNÓSTICO REAL – EDIFICIO TYCO LAS ROZAS

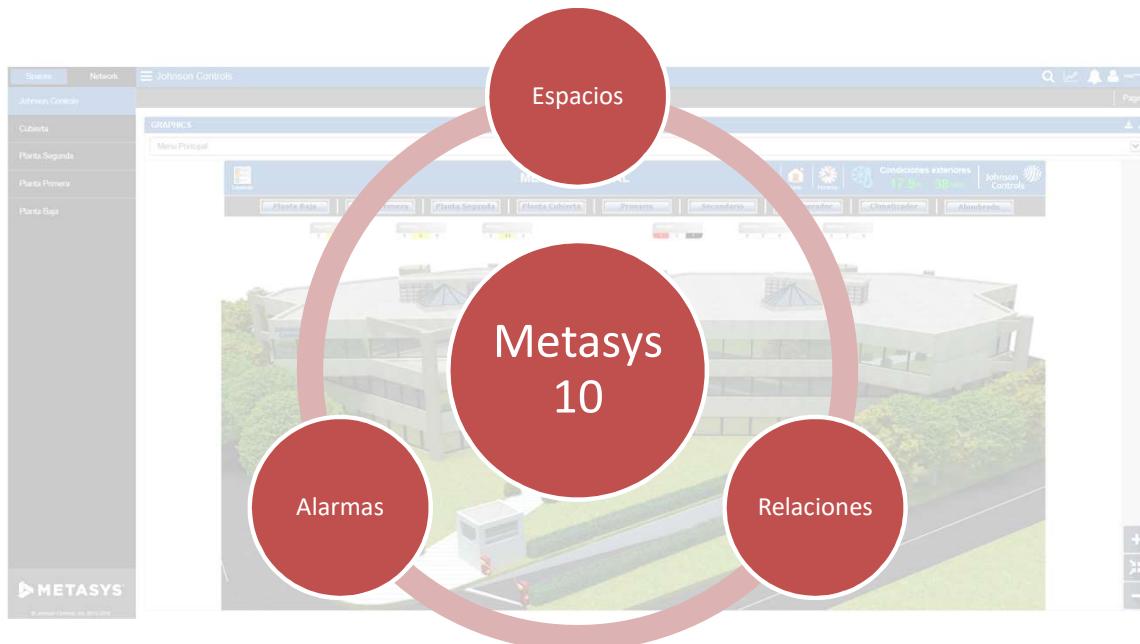


DIAGNÓSTICO REAL – EDIFICIO TYCO LAS ROZAS



DIAGNÓSTICO REAL – EDIFICIO TYCO LAS ROZAS

El mal funcionamiento del clima en la planta segunda ha sido producido por una maniobra de intervención sobre la máquina para el cambio de filtro y un olvido por parte del operador, que debió haber puesto el ventilador de nuevo en automático tras resetear la alarma de filtro.



CONEXIÓN A UNA CENTRAL RECEPTORA DE ALARMAS



GENERACIÓN DE UN EVENTO



TRANSFERENCIA Y GESTIÓN DEL EVENTO EN CRA

Event History - SYSLOG CS# P005094208								
Start Date	Time	End Date	Time	Group by	Alarm Incidents			
Service Type	Zone	To Zone	Area	<input type="radio"/> CS#	<input type="checkbox"/> Log Order	<input checked="" type="radio"/> Site		
Event Class	Event (1)			<input checked="" type="radio"/> Only	<input type="radio"/> Except			
19/02/2019 14:02:45	Tuesday	P005094208	W9981 A	MTS991-WATCHDOG-LOG	*OOS		OOS Action Taken: log, Priority: Alarm, Watchdog Mastermind NAE351, WatchDog Mastermind NAE351, WATCHDOG-LOG	
19/02/2019 13:55:43	Tuesday	P005094209	W99&1 A	MTS991-WATCHDOG-LOG	*OOS		OOS Action Taken: log, Priority: Alarm, Watchdog Mastermind NAE352, WatchDog Mastermind NAE352, WATCHDOG-LOG	
19/02/2019 13:54:41	Tuesday	P005094210	W15&4 A	MTS154-PUMPS-CLIENTE	*OOS		OOS Action Taken: call client, Priority: Alarm, ESTADO BOMBA SECUNDARIO FRIO P1_1, MAL FUNCIONAMIENTO O PUESTA EN MANUAL DE BOMBA SECUNDARIO FRIO P1_1, PUMPS-CLIENTE	
19/02/2019 13:53:36	Tuesday	P005094210	W15&2 A	MTS152-PUMPS-MAIL	*OOS		OOS Action Taken: send email, Priority: Alarm, ESTADO BOMBA SECUNDARIO FRIO P1_1, MAL FUNCIONAMIENTO O PUESTA EN MANUAL DE BOMBA SECUNDARIO FRIO P1_1, PUMPS-MAIL	
19/02/2019 13:52:34	Tuesday	P005094210	W15&1 A	MTS151-PUMPS-LOG	*OOS		OOS Action Taken: log, Priority: Alarm, ESTADO BOMBA SECUNDARIO FRIO P1_1, MAL FUNCIONAMIENTO O PUESTA EN MANUAL DE BOMBA SECUNDARIO FRIO P1_1, PUMPS-LOG	
19/02/2019 13:50:07	Tuesday	P005094210	W99&1 A	MTS991-WATCHDOG-LOG	*OOS		OOS Action Taken: log, Priority: Alarm, Watchdog Mastermind NIE49, WatchDog Mastermind NIE49, WATCHDOG-LOG	
19/02/2019 13:47:34	Tuesday	P005094208	W99&1 A	MTS991-WATCHDOG-LOG	*OOS		OOS Action Taken: log, Priority: Alarm, Watchdog Mastermind NAE351, WatchDog Mastermind NAE351, WATCHDOG-LOG	
19/02/2019 13:39:32	Tuesday	P005094209	W99&1 A	MTS991-WATCHDOG-LOG	*OOS		OOS Action Taken: log, Priority: Alarm, Watchdog Mastermind NAE352, WatchDog Mastermind NAE352, WATCHDOG-LOG	

TRANSFERENCIA DEL EVENTO A CRA



REDES



METASYS 10 + CONEXIÓN CRA





V CONGRESO EDIFICIOS INTELIGENTES

Madrid, 14 mayo 2019

Muchas gracias por su atención

