

JULIO 31 DE 2019

# XI JORNADAS TECNICAS ABB – CHILE

## Enterprise Software

### Gestión Conectada de Activos / Ciclo de vida de los activos

## Agenda

ABB Ability™ Ellipse®

Alcance de la solución:

ISO 55000 (EAM)

APM

EAM

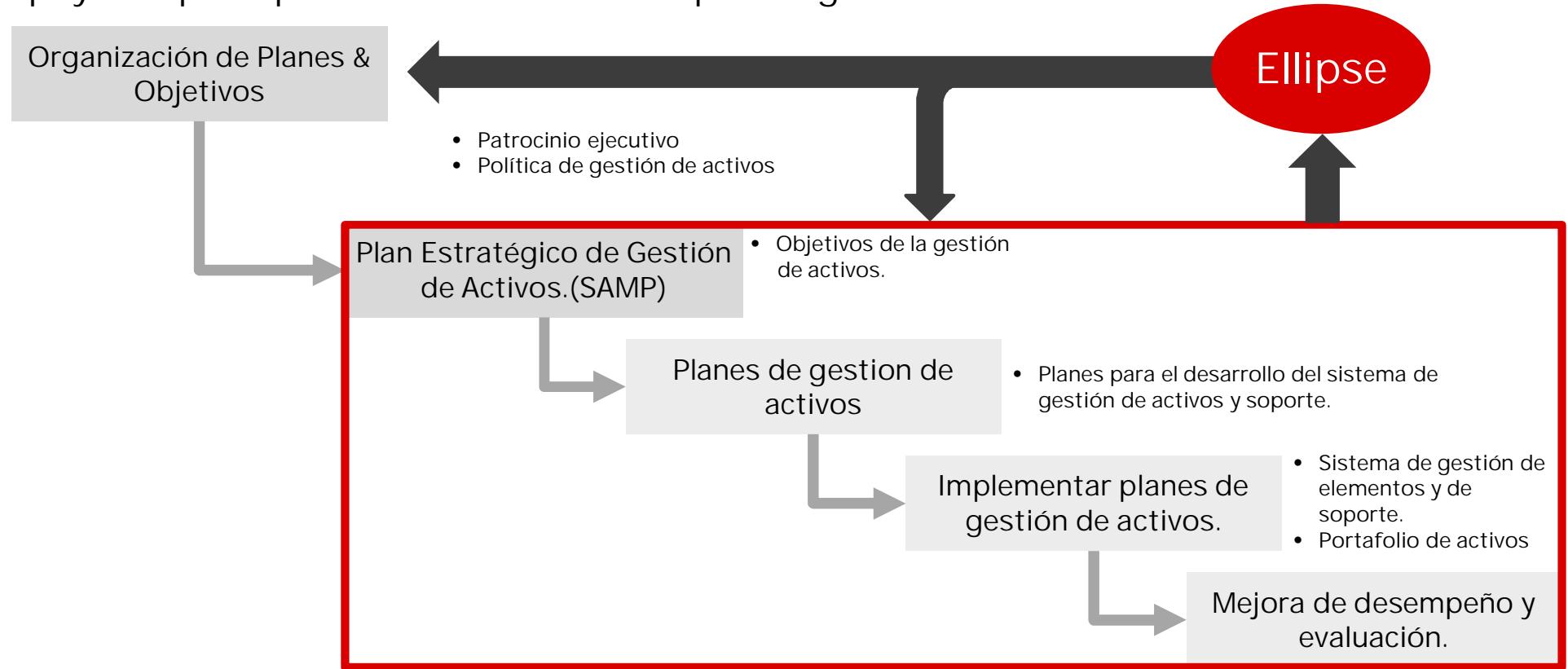
WFM

Digital Enterprise

Conclusión

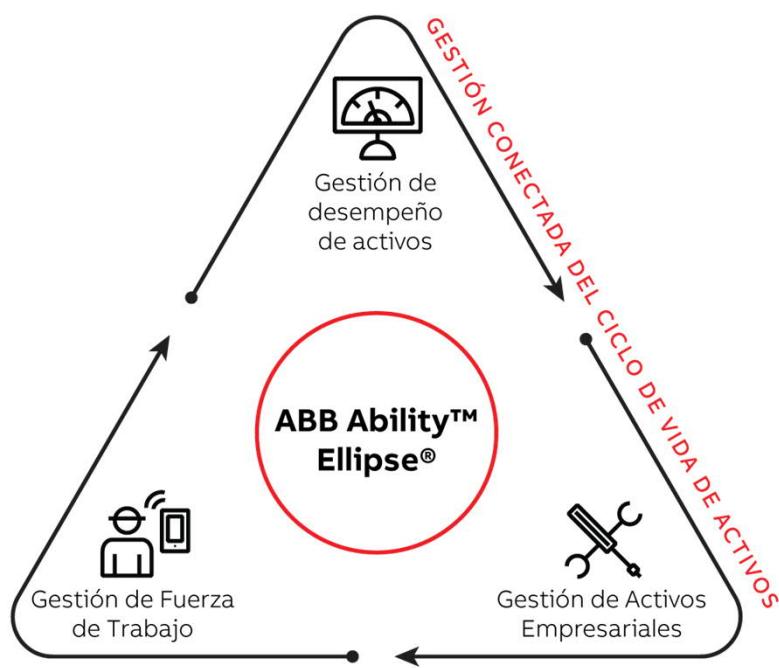
## ABB Ability™ Ellipse®

Apoya los principios de "Línea de visión" para la gestión de activos



# ABB Ability™ Ellipse®

Gestión conectada del ciclo de vida de activos



# ABB Ability™ Ellipse®

## Soluciones principales

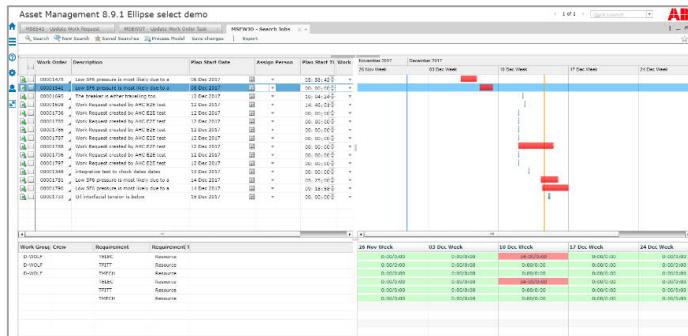
### Asset Performance Management (APM)

(Diagnóstico predictivo de activos)



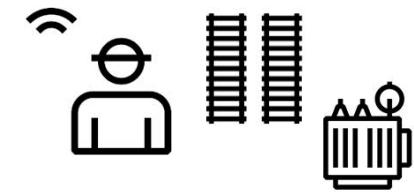
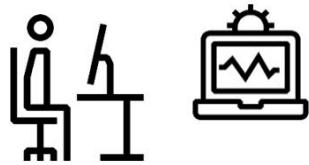
### Enterprise Asset Management (EAM)

(Gestión de activos empresariales)



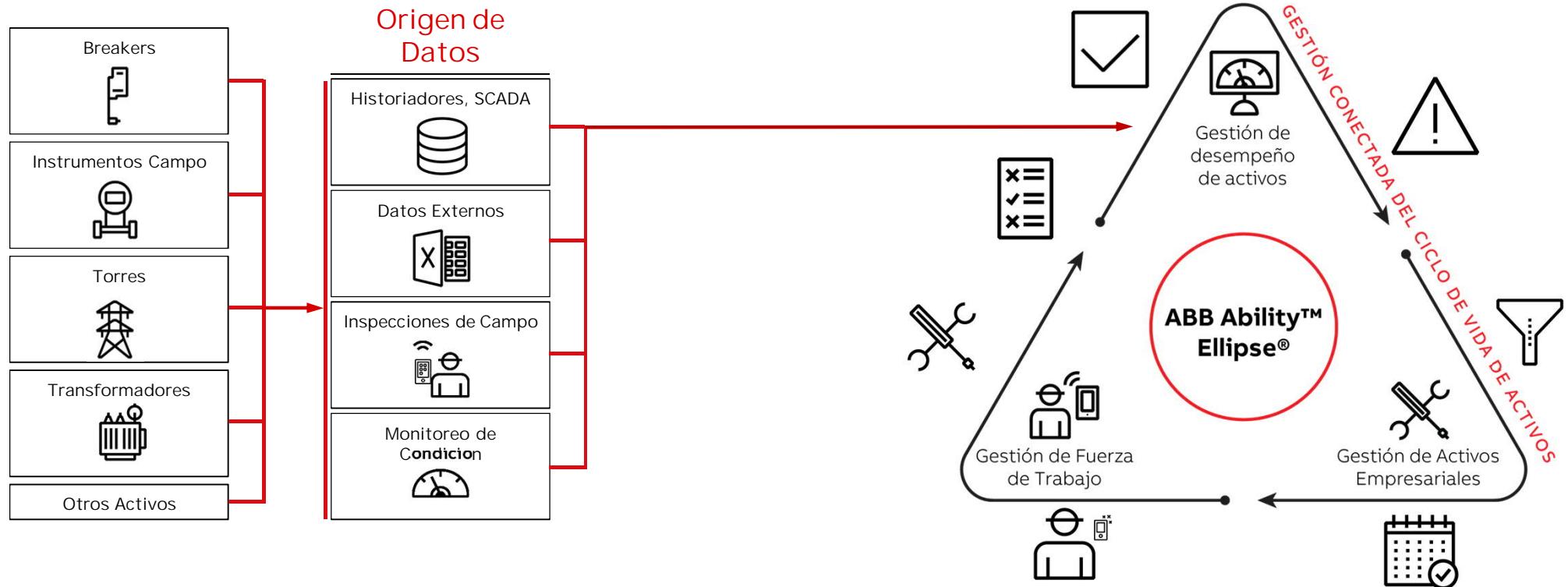
### Workforce Management (WFM)

(Gestión de fuerza de trabajo)



La gestión efectiva de activos requiere que la ingeniería, el mantenimiento y las operaciones funcionen en conjunto

# Conexión a sus Activos





# FirstEnergy

## Asset Performance Management with ABB Ability™ Ellipse

6 Millones Usuarios  
10 compañías en 6 estados  
+24k millas líneas de transmisión  
+260k líneas de distribución  
2400 Subestaciones  
270.000 Millas en Líneas  
+500.000 Activos a controlar



11 estados  
5.1 millones usuarios  
40k líneas de transmisión  
215k líneas distribución eléctrica  
8,846 transformadores (33% mas de 50 años)  
20,572 breakers  
3,384 baterías

**ABB**

**UTE**

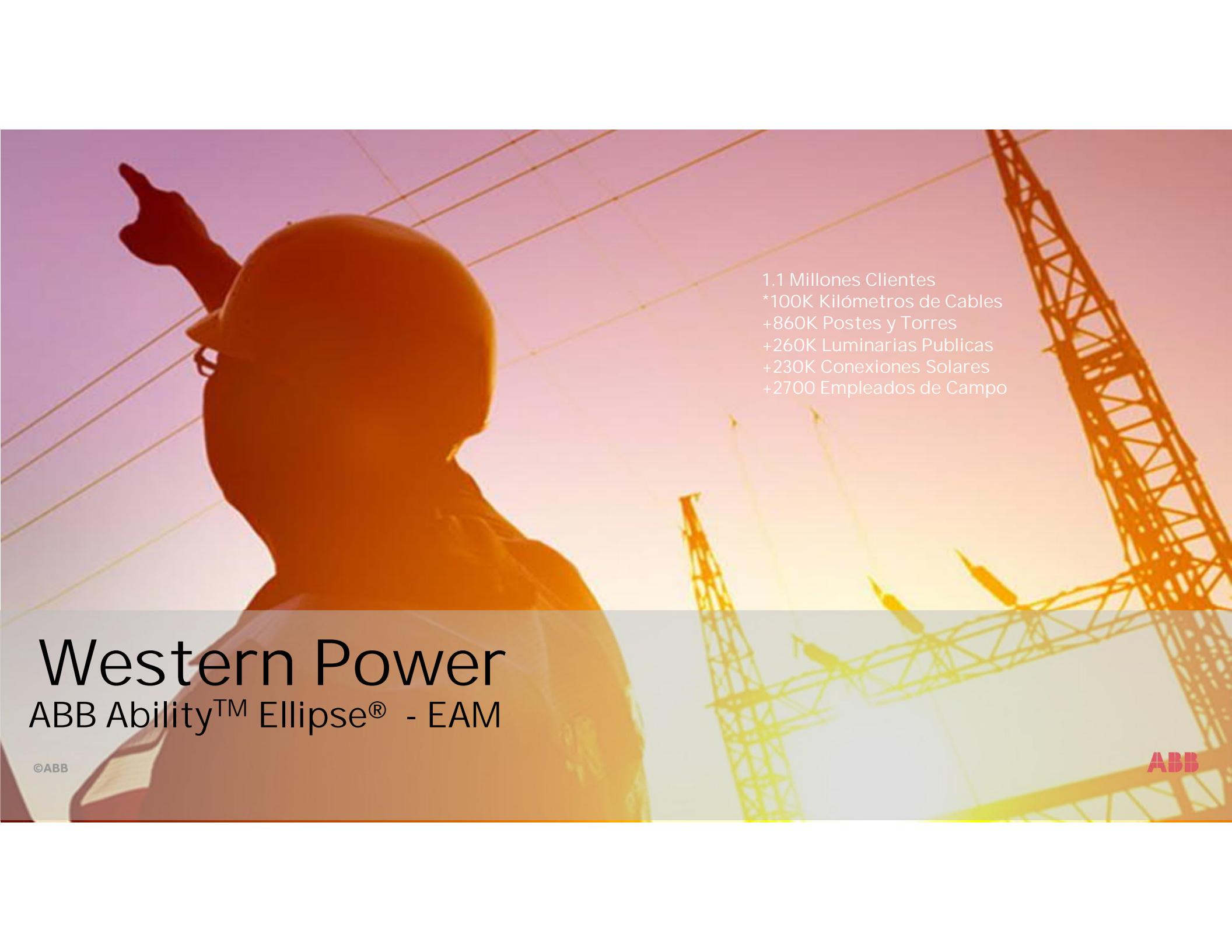
Actionable Intelligence with ABB Ability™ Ellipse



80 Millones Usuarios  
+3000 Subestaciones  
+87K en Líneas de Transmisión

# Jiangsu Electric Power

## Asset Performance Management with ABB Ability™ Ellise



1.1 Millones Clientes  
\*100K Kilómetros de Cables  
+860K Postes y Torres  
+260K Luminarias Publicas  
+230K Conexiones Solares  
+2700 Empleados de Campo

# Western Power

## ABB Ability™ Ellipse® - EAM

©ABB

ABB



Control total de carga de flota  
Buses Eléctricos  
Mantenimiento de la flota

# Transports Publics Genevois (TPG)

Optimizing Electric Bus Maintenance with ABB Ability™ Ellipse EAM  
Control and Monitoring with ABB Ability™ Network Manager SCADA



ABB

+270 Estaciones  
+410 Kilómetros de vías



London Underground  
ABB Ability™ Ellipse® - EAM



+20.000 Kilómetros  
18 Estaciones Centrales  
Transportan anualmente:  
1.300 Millones de pasajeros  
100 Millones de Toneladas

# Network Rail

ABB Ability™ Ellipse® - EAM



ABB

# Collahuasi

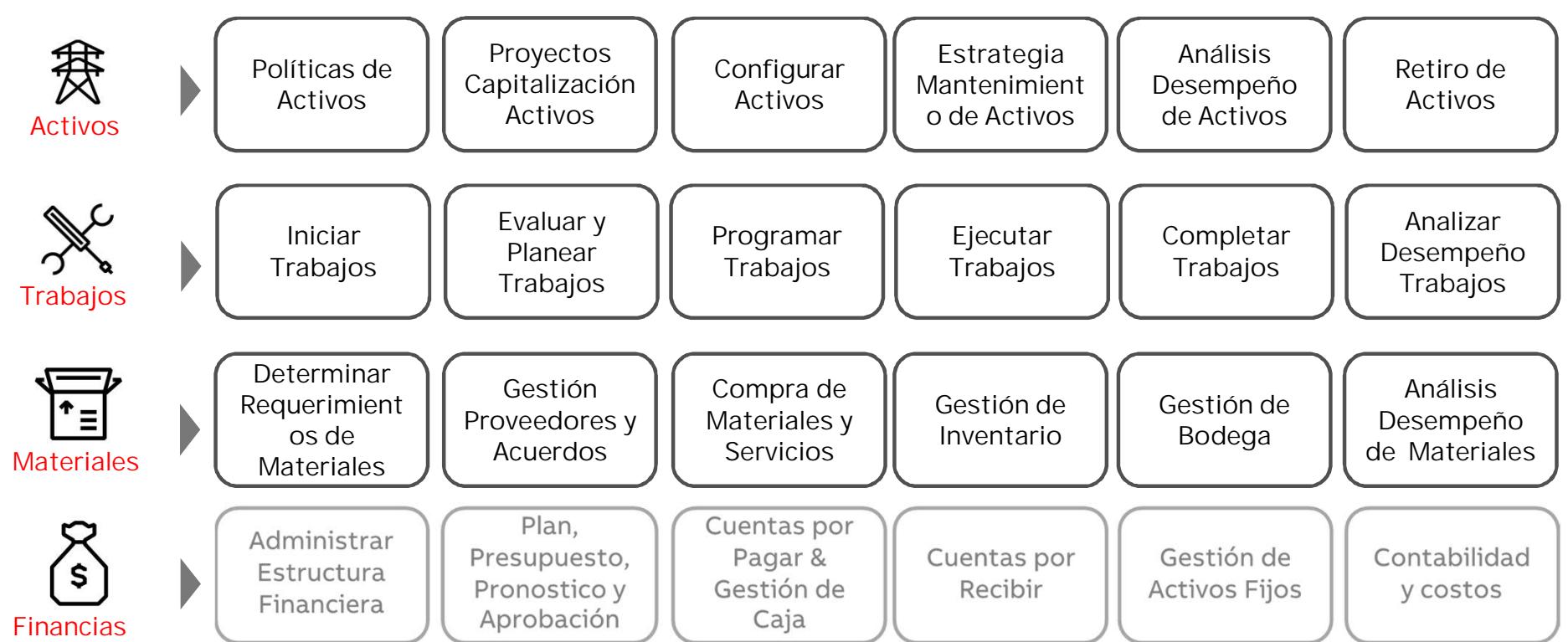
ABB Ability™ Ellipse® - EAM

+1.800 Mantenedores  
+ 500.000 toneladas de Cobre  
+ 3000 Equipos  
Produce el 10% del cobre en Chile



# Alcance de la solución ABB - EAM

Pre configurado con las buenas prácticas definidas por la ISO 55000



# Alcance de la solución ABB - EAM

Pre configurado con las buenas prácticas definidas por la ISO 55000



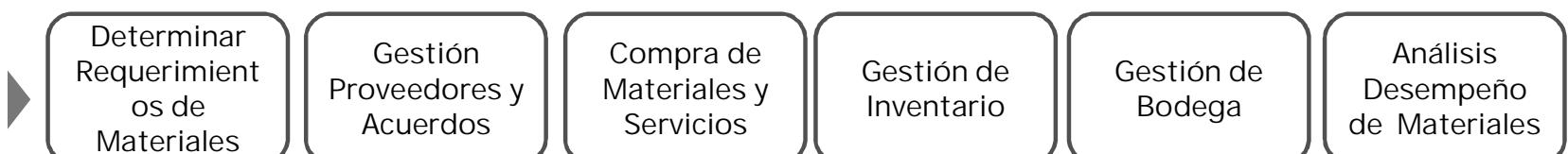
Activos



Trabajos

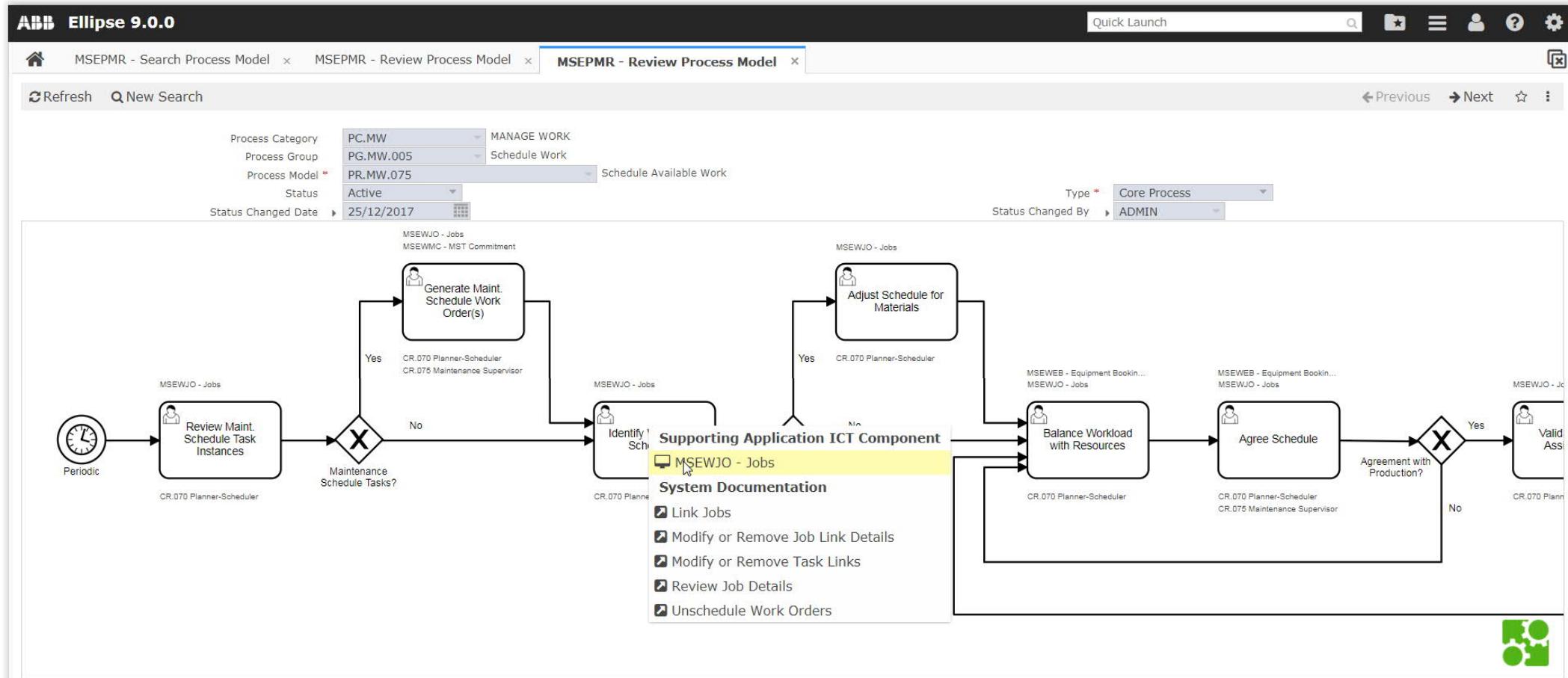


Materiales



Financias





# Alcance de la solución ABB – EAM

Pre configurado con las buenas prácticas definidas por la ISO 55000

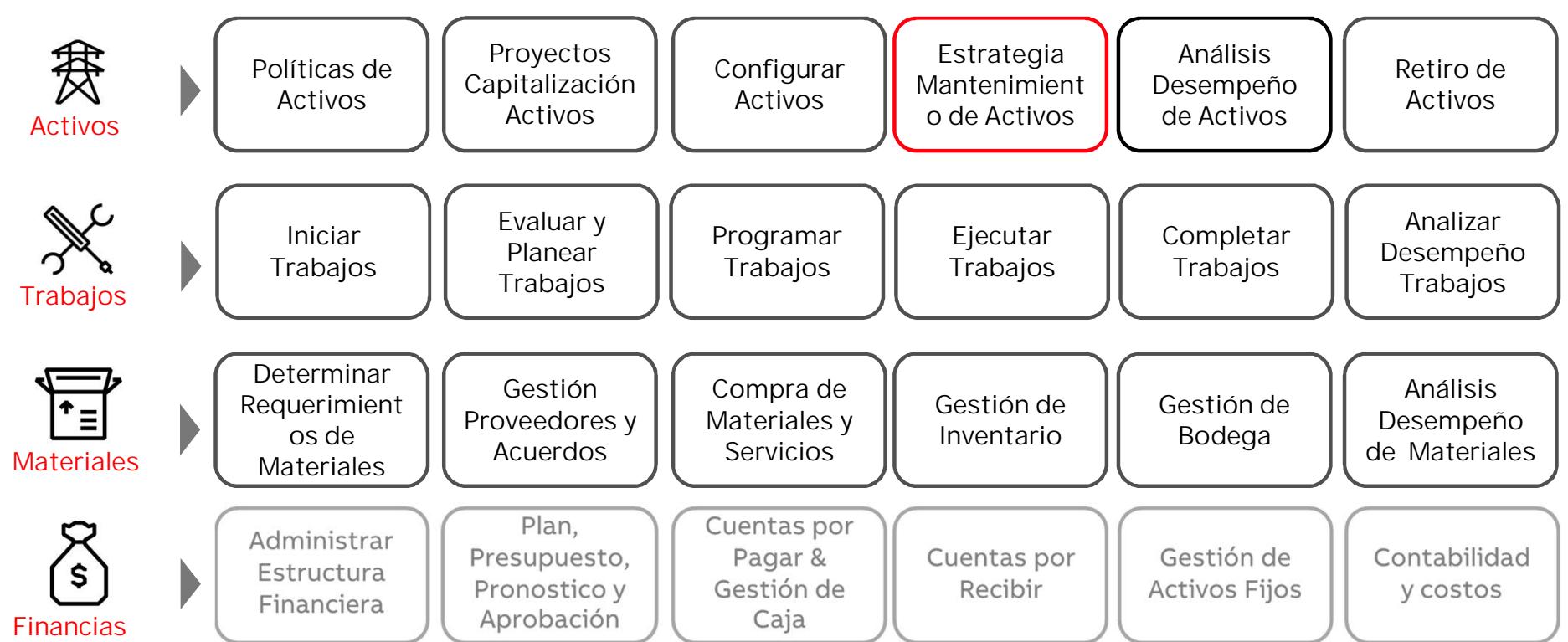


ABB Ellipse 9.0.0

ABB

ABB

MSEMSA - Search Maintenance Strategy Adjustment x MSE600 - Update Equipment Register x MSEMSA - Update Maintenance Strategy Adjustment x

Submit Refresh + New New Search Previous Next

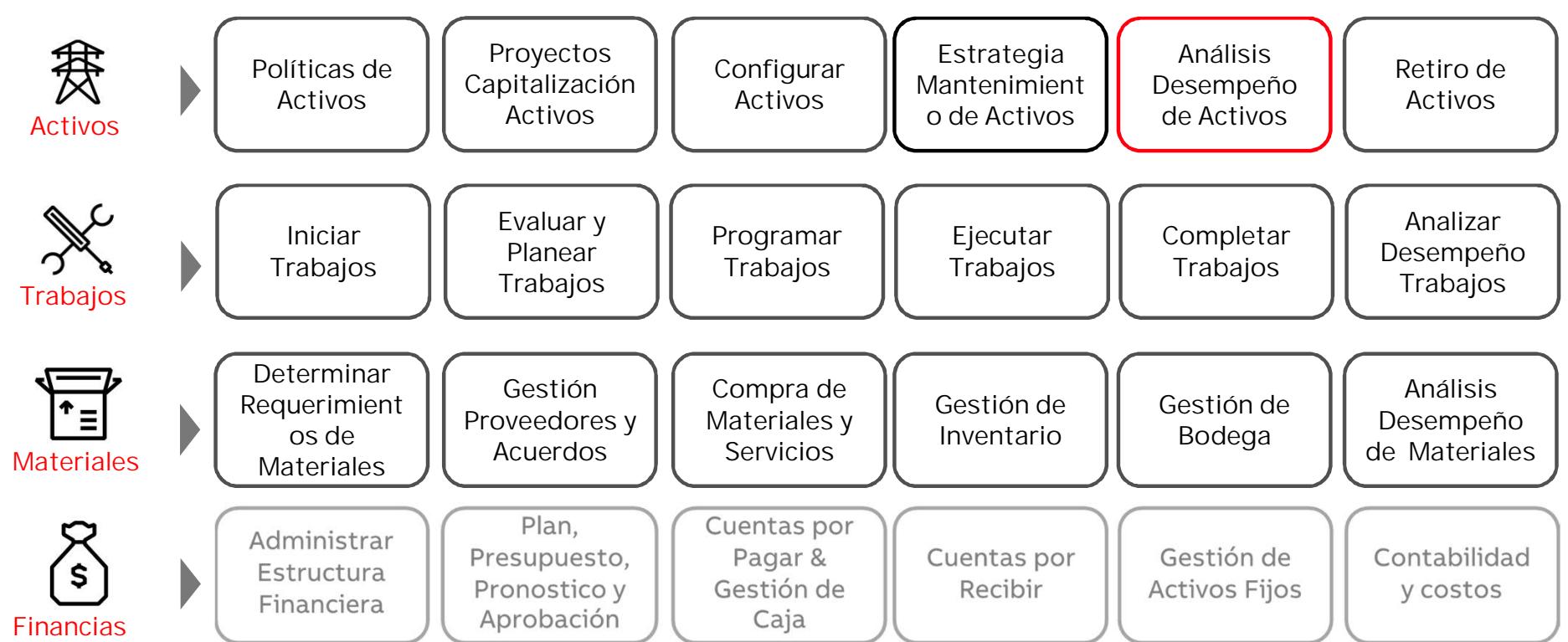
Strategy Type	Equipment Group Identifier	Strategy Change	EQMD	MSTs diverge from Strategy
Equipment Reference	WPM-120	Equipment Group Id	WPM-120	WATER PUMP - MULTIFLOW 120 - USC
Component		Component Modifier		
Action Status		Creation Date	04/10/2018	
Created By	NINES	Last Modified Date	04/10/2018	
Last Modified By	NINES			
Description				

+ Add Apply Adjustment No Action

Adjustment Type	Equipment Reference	Equipment Group Id	Component	Component Modifier	MST Task Number *	Frequency 1	Existing Frequency 1	Frequency 2	Existing Frequency 2
Create		WPM-120 - WATER PUMP - MULTIFLOW 120 - USC			0005	23			
Create		WPM-120 - WATER PUMP - MULTIFLOW 120 - USC			2222	60			
Create		WPM-120 - WATER PUMP - MULTIFLOW 120 - USC			2223	60			
Create		WPM-120 - WATER PUMP - MULTIFLOW 120 - USC			2224	1,000			
Create		WPM-120 - WATER PUMP - MULTIFLOW 120 - USC			2225	5,000		30	
Create		WPM-120 - WATER PUMP - MULTIFLOW 120 - USC			C900	30			

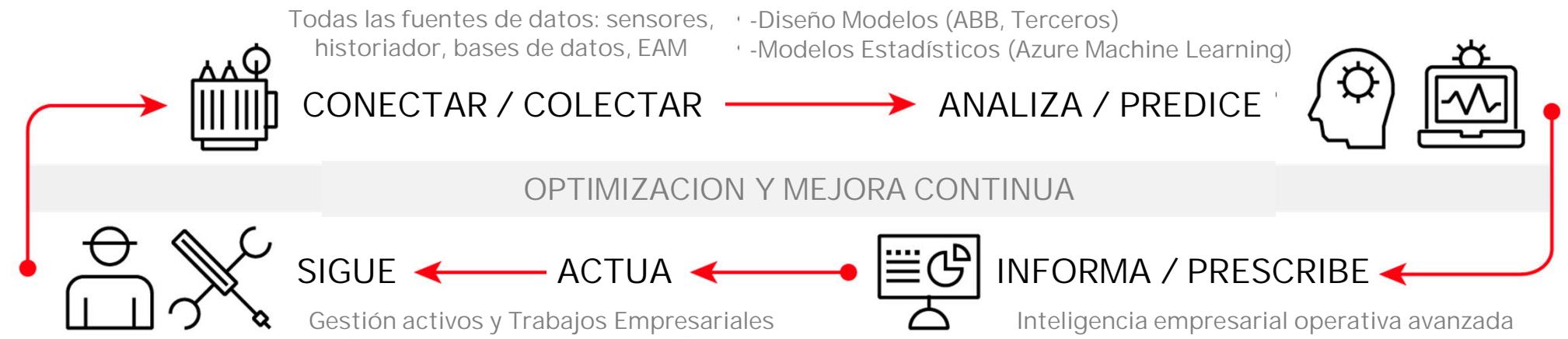
# Alcance de la solución ABB - EAM

Pre configurado con las buenas prácticas definidas por la ISO 55000



# ABB Gestión del rendimiento de activos (APM)

Una plataforma de análisis de toda la flota para mejorar los procesos a través de la optimización basada en el riesgo.

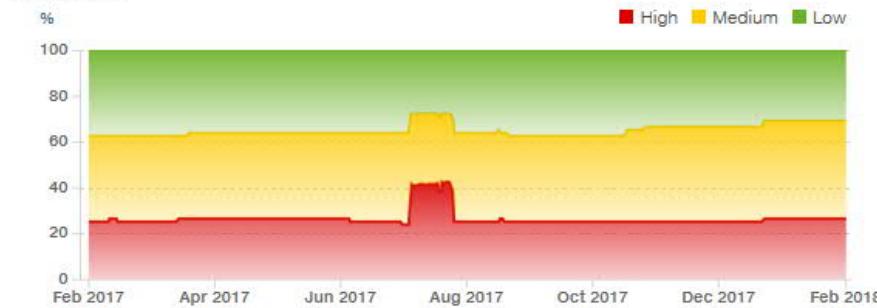


# Fuentes de datos

## Dispositivos IoT



## Asset risk



12  
locations covered

6  
asset types

75  
assets monitored

0  
assets not monitored

766h  
last data updated

## Spatial view



## Issues



New No actions On track  
Completed At risk Overdue

## Most important issues

Subsystem Accessory Alert

CBK.GLD142825 5 months ago

Subsystem Dielectric Alert

CBK.GLD142825

Subsystem Mechanical Alert

CBK.GLD142825 5 months ago

Subsystem Wear Information

CBK.889909

Subsystem Mechanical Warning

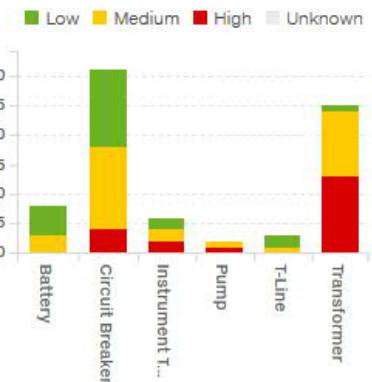
CBK.889909

Explore →



## Analytics

## Assets by Type



← ⏪ ⏩ →

## Key risk changes

Increased

Decreased

XFM.GLD1629568 - GLD1629568

Risk



Parameters

7/17

Data Quality

1

Remaining useful life

Coming Soon

More Detail

Analytics

## Nameplate

DESCRIPTION Chicago Station 765 KV | TRANSFORMER | XFM.GLD1629568

ORGANIZATION Illinois

LOCATION Chicago, Illinois, United States

LONGITUDE -88.058

LATITUDE 41.8

MODEL ID ABB.TransformerStandard

CONSTRUCTION TYPE Three Limb Core

LTC BREATHING CONFIGURATION Sealed

MODEL NUMBER G88-0098

PHASE COUNT 3

ASSET TYPE Transformer

INSTALL DATE 12/31/1982

MANUFACTURER AE

IS OBSOLETE No

EAM EQUIPMENT NUMBER GLD1629568

CORETEC <http://bit.ly/CoreTec>

LTC SAMPLE COMPARTMENT Selector

OIL PRESERVATION SYSTEM Gas Space Air

PUMP TYPE Old Sleeve Bearing

ASSET SUBTYPE generator\_step\_up

ASSET VOLTAGE 765kV (UHV)

IMPORTANCE 65

MANUFACTURER EXPECTED LIFE 60

ABB INSPECTION ROBOT <http://bit.ly/2v0EWQZ>LINKONE <http://bit.ly/2u5JoOe>

MECHANISM TYPE GSU

PAPER INSULATION Kraft

WINDING METAL Copper

last month ON TRACK

Oil quality issue detected

last month OVERDUE

Oil quality issue detected

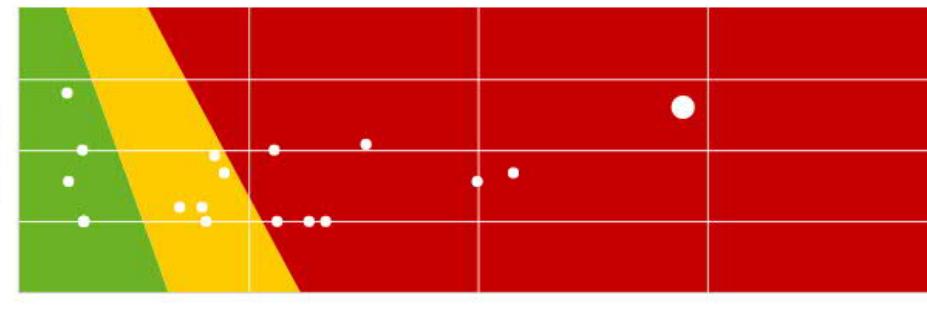
2 years ago ON TRACK

DGA miscellaneous issue(s)

2 years ago OVERDUE

DGA issue(s) / Duval Triangle diagnostic

## Risk Matrix



Condition 10.9

Importance 65

Last update last month

## Risk Trend

XFM.GLD1629568 - GLD1629568

Risk



Parameters

7/17

Data Quality

1

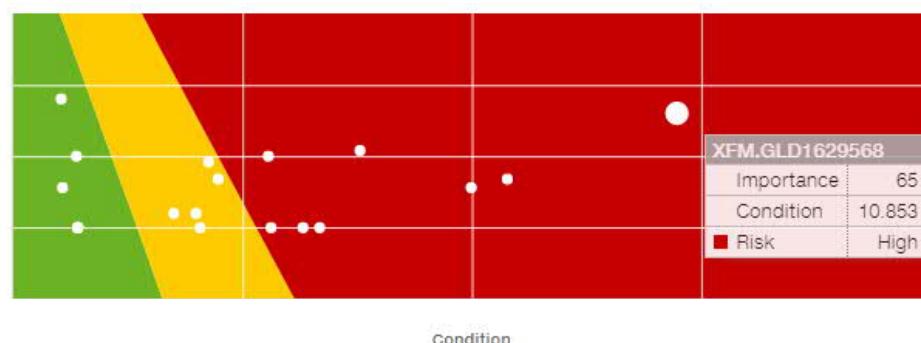
Remaining useful life

Coming Soon

More Detail

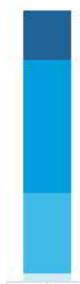
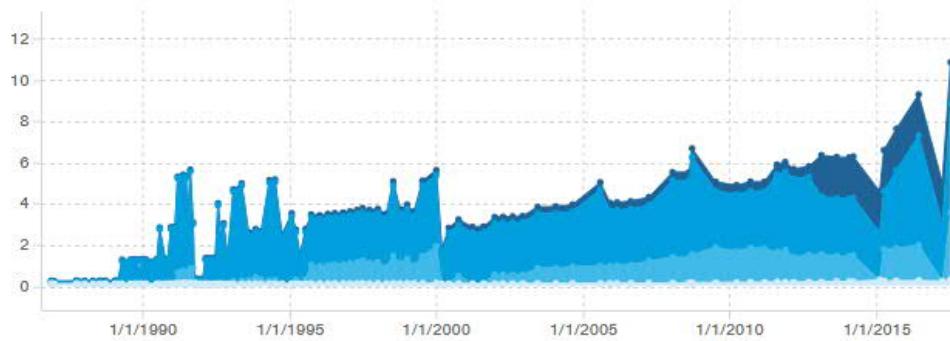
Analytics

## Risk Matrix



Condition	10.9
Importance	65
Last update	last month

## Risk Trend



## Action Plan

last month ON TRACK

Oil quality issue detected

last month OVERDUE

Oil quality issue detected

2 years ago ON TRACK

DGA miscellaneous issue(s)

2 years ago OVERDUE

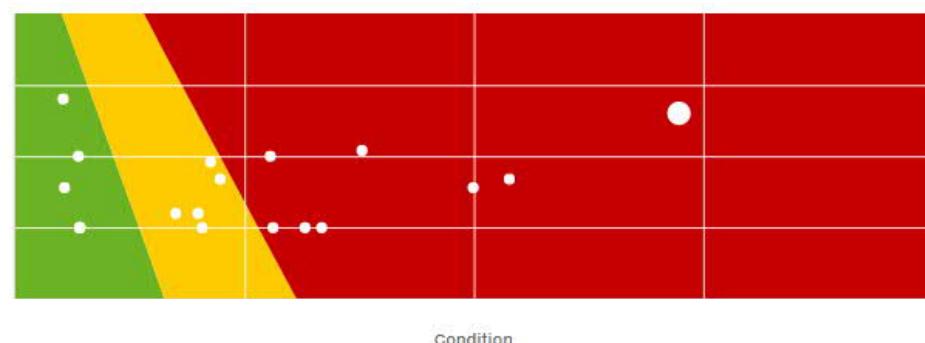
DGA issue(s) / Duval Triangle diagnostic

XFM.GLD1629568 - GLD1629568

Risk

Parameters  
7/17Data Quality  
1Remaining useful life  
Coming SoonMore Detail  
Analytics

## Risk Matrix



Condition	10.9
Importance	65
Last update	last month

## Action Plan



last month	ON TRACK
▲	Oil quality issue detected
last month	OVERDUE
▲	Oil quality issue detected
2 years ago	ON TRACK
▲	DGA miscellaneous issue(s)
2 years ago	OVERDUE
▲	DGA issue(s) / Duval Triangle diagnostic

## Risk Trend

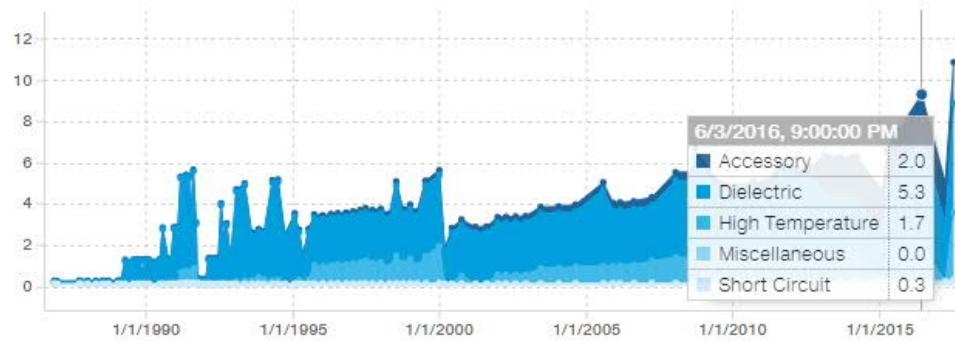


ABB Ellipse APM

Dashboard ▼

Assets

Issues

Risk

Parameters

Data Quality

Remaining useful life

Analytics

External links ▼

◀ XFM.GLD1629568 - GLD1629568

10/35

12

Coming Soon

+

Active History

Risk Matrix

Importance

Condition

12.2 Condition

65 Importance

last month Last update

A Risk Matrix plot showing the relationship between Condition (X-axis) and Importance (Y-axis). The matrix is divided into four quadrants: Green (Low Condition, Low Importance), Yellow (High Condition, Low Importance), Red (High Condition, High Importance), and Orange (Low Condition, High Importance). A single data point is plotted in the Red quadrant, indicating a high-risk issue.

Risk Trend

A line chart showing the trend of a risk metric over time. The Y-axis ranges from 0 to 14, and the X-axis shows dates from 11/13/1986 to 4/7/2018. The trend shows significant fluctuations, with a major peak reaching approximately 12 in early 2018.

▶ Action Plan

last month ON TRACK

▲ Oil quality issue detected

Oil acidity is above acceptable level although interfacial tension is still within limits. This is still an indication of an aged oil which may need reclaiming soon. Elevated acidity favors accelerated aging of solid insulation whose breakdown also forms water; thus increasing operational risk of the transformer.

Recommendation

Bringing the oil back to acceptable conditions through processing/reclamation is highly recommended. Before addressing the oil quality itself; take another sample to assess Furan levels in order to help determine the condition of the solid insulation.

Recommended actions should be taken as soon as possible.

Comments

No comments

Urgency Unknown

Maintenance priority 13th out of 505

Actions

Oil acidity is above acceptable level although Status: Requested  
interfacial tension is still within limits. This is (Scheduled: -)

XFM.GLD1629568 - GLD1629568

Risk



7/17

1

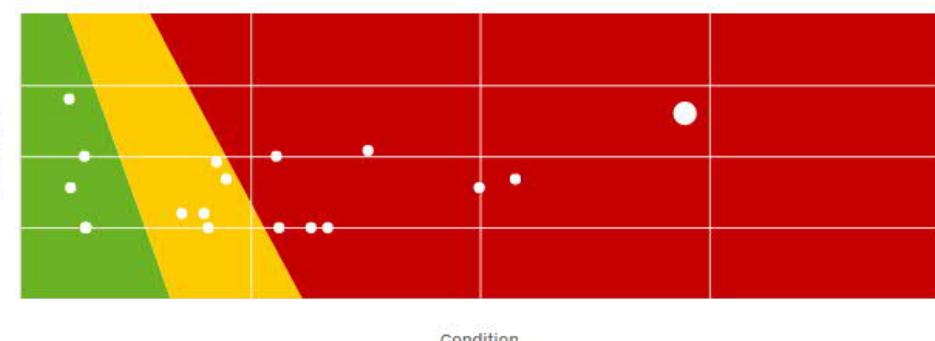
Remaining useful life

More Detail

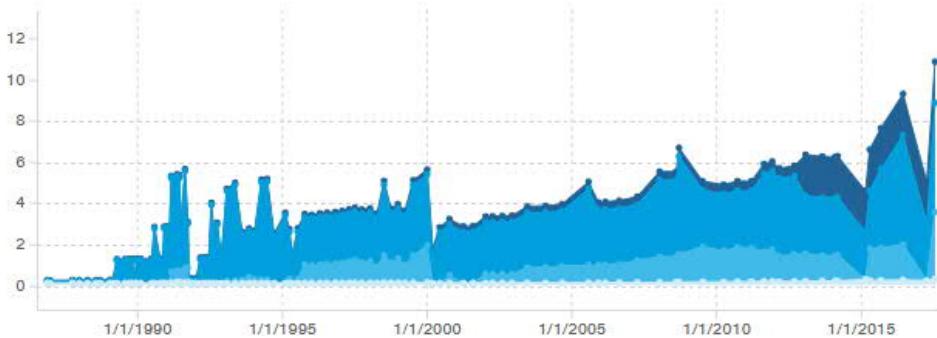
Coming Soon

Analytics

## Risk Matrix



## Risk Trend



## Action Plan



last month ON TRACK

▲ Oil quality issue detected

Indication of high moisture content in the oil and solid insulation although not confirmed by reduction in oil dielectric strength nor by oil power factor tests.

Recommendation

An offline DFR test to double check the issue is recommended. If confirmed; oil processing is recommended.

Recommended actions should be taken as soon as possible.

Comments

No comments

Urgency

Maintenance priority

Unknown

2nd out of 156

Actions

0002/00006448

Indication of high moisture content in

Status: Work order created  
(Scheduled: -)

⊕ Add Work Request

 No further action required

last month OVERDUE

▲ Oil quality issue detected

2 years ago ON TRACK

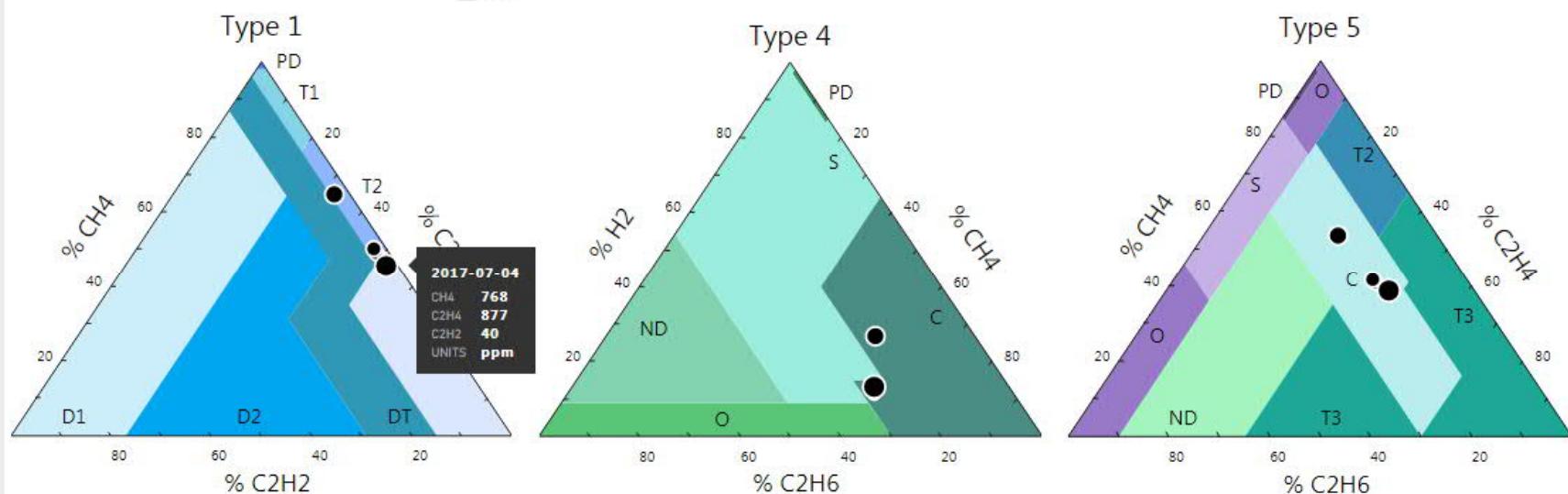
▲ DGA miscellaneous issue(s)

2 years ago OVERDUE

▲ DGA issue(s) / Duval Triangle diagnostic

XFM.GLD1629568

Filters



PD = Corona partial discharges  
 D1 = Electrical discharges of Low energy  
 D2 = Electrical discharges of High energy  
 T1 = Thermal faults; Temp <300°C  
 T2 = Thermal faults; Temp >300°C & <700°C  
 T3 = Thermal faults; Temp >700°C  
 DT = Mixtures of electrical & thermal faults

PD = Corona partial discharges  
 S = Stray Gassing of mineral oil; Temp <200°C  
 C = Hot spots with carbonization of paper; Temp >300°C  
 O = Overheating; Temp <250°C  
 ND = Not determined

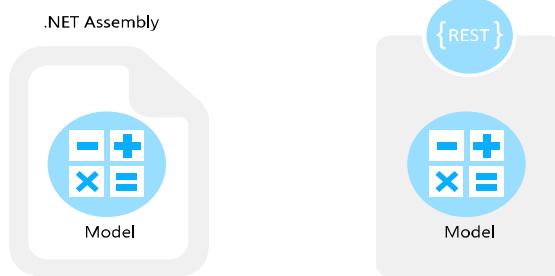
PD = Corona partial discharges  
 S = Stray Gassing of mineral oil; Temp <200°C  
 C = Hot spots with carbonization of paper; Temp >300°C  
 O = Overheating; Temp <250°C  
 T2 = Thermal faults; Temp >300°C & <700°C  
 T3 = Thermal faults; Temp >700°C  
 ND = Not determined

# Ellipse APM

Modelos expertos

1. Transformadores de alta tensión y reactores de aceite.
2. Disyuntor / GIS
3. Breakers
4. Batería
5. Líneas Transmisión
6. Batería de condensadores
7. CCVT (transformador de voltaje de capacitancia)
8. Cables subterráneos

## 9. Interfaz de modelo abierto



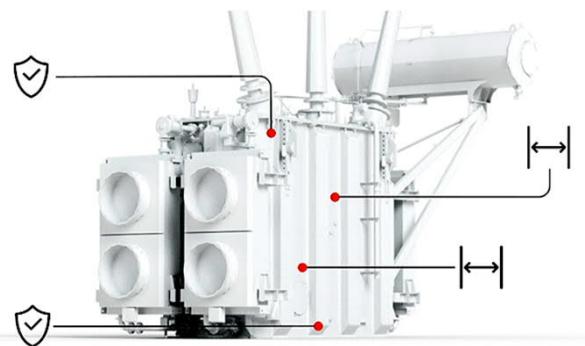
## 10. Machine Learning



Azure ML

# ABB TRES Transformer Model

## Included Algorithms

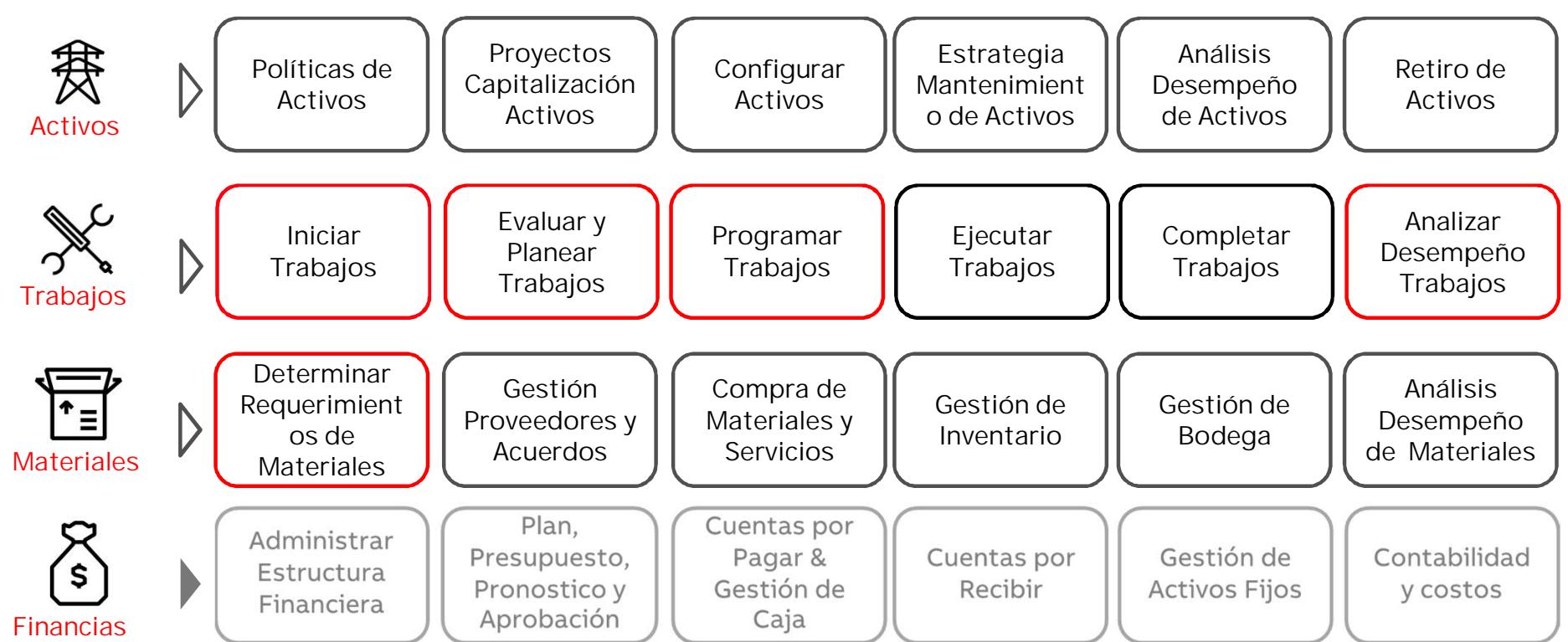


Análisis de gas  
Análisis de humedad  
Análisis de bujes  
LTC  
Térmico  
Enfriamiento  
Recuento de partículas  
Furanos  
Descargo parcial  
MTMP  
Experto en Sistemas

**Totales de  
Riesgos a Falla**

# Alcance de la solución ABB - EAM

Pre configurado con las buenas prácticas definidas por la ISO 55000





## System Message

Presales EL9.0.5

Version: EL9.0.5\_.2499.1.45

Date: 27-February-2019 12:48 AM

## History

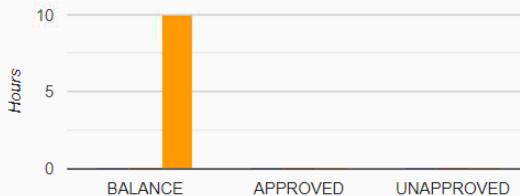
- ▶ ⏪ Today
- ▶ ⏪ Yesterday
- ▼ ⏪ Last 7 days [MSEWSC](#)
- ▶ ⏪ This month
- ▶ ⏪ Last month
- ▶ ⏪ Earlier

## Outstanding Approval Requests

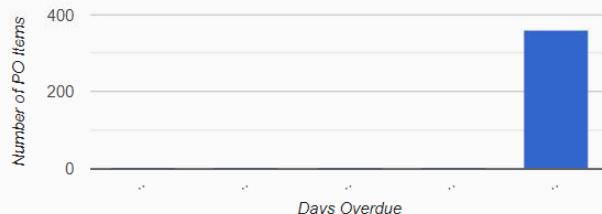


- IF - Field Release Invoice Item
- IR - Issue Requisition
- PR - Purchase Requisition
- SI - Service Order...

## Employee Leave Balance



## Overdue PO Items



## POs Awaiting Approval



MSEWJO - Search Jobs X MSEWOU - Search Outages X MSEWOU - Update Outages \* X
Submit Refresh + New Save As Delete Q New Search
Affected Plant Notes
Employee 0000000097 Paul Walk

## Status

Shutdown Type: MT Monthly Shutdown  
 Fault Code: 01 No Fault  
 Oper Mode: 01 Not Applicable  
 Region: NTH North

Asset Classification:    
 Maintenance Type: MP Preventative  
 Outage Type: 03 Planned  
 Equipment Location:  

## Actual Dates

Actual Start  Actual Finish  

## Flags

Failed to Start:   
 Notify Company:   
 Description: OUTAGE No 06

In Turn:   
 Company Plant:

## Dates

Outage Start Date: 10/02/2019 08:50:12    
 Outage Finish Date: 15/02/2019 18:50:17    
 Work Start Date: 09/02/2019 15:50:51    
 Work Finish Date: 16/02/2019 14:51:25    
 Recall Time Hours: 0.00

Maintain Durations:   
 Move Work Dates and Jobs with Outage Dates:   
 Work Dates must be within Outage Dates:   
 Job Dates must be within Work Dates:

## Job Details

+ Add Lookup MSEWJO Move Jobs

			Equipment Reference	District	Reference	Description	Shutdown Type	Recall Time Hours	Estimated Duration
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DWP301	0002 - WORLD WIDE CORPORATION	00006727 ▶	REPLACE DRIVE		0.00	9.80
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	000000000331	0002 - WORLD WIDE CORPORATION	00006697 ▶	INSPECT SWITCH MECHANISMS		0.00	6.75
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	S2192071 PWOOD	0002 - WORLD WIDE CORPORATION	00006723 ▶	Mobile Inspection Bundled Pole, (MWS)		0.00	10.00
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DWP300	0002 - WORLD WIDE CORPORATION	00006726 ▶	DRIVE FAILURE		0.00	6.00
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DWP300	0002 - WORLD WIDE CORPORATION	00006722 ▶	REPLACE DRIVE		0.00	9.80
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	S517279 PWOOD	0002 - WORLD WIDE CORPORATION	00006724 ▶	Mobile Inspection Bundled Pole, (MWS)		0.00	3.00

MSEWOU - Search Outages x MSEWOU - Update Outages x MSEWJO - Search Jobs x MSEWRA - Search Requirement Availability x

Search New Search Screen Defaults Export Submit



Equipment Reference					Maintenance Type	Job Mat Status	Work C	10 Feb 2019									
								Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	
	▼	►	DWP301	MC - Corrective	⚠	236 - M			Yellow								
	▼	►	000000000331	MR - Reactive		236 - M											
	▼	►	S2192071 PWOOD	MP - Preventative		236 - M											
	▼	►	DWP300	MP - Preventative	✗	236 - M											
	▼	►	DWP300	MC - Corrective		236 - M											
	▼	►	S517279 PWOOD	MP - Preventative		236 - M											
	▼	►	S517274 PWOOD	MC - Corrective		236 - M											

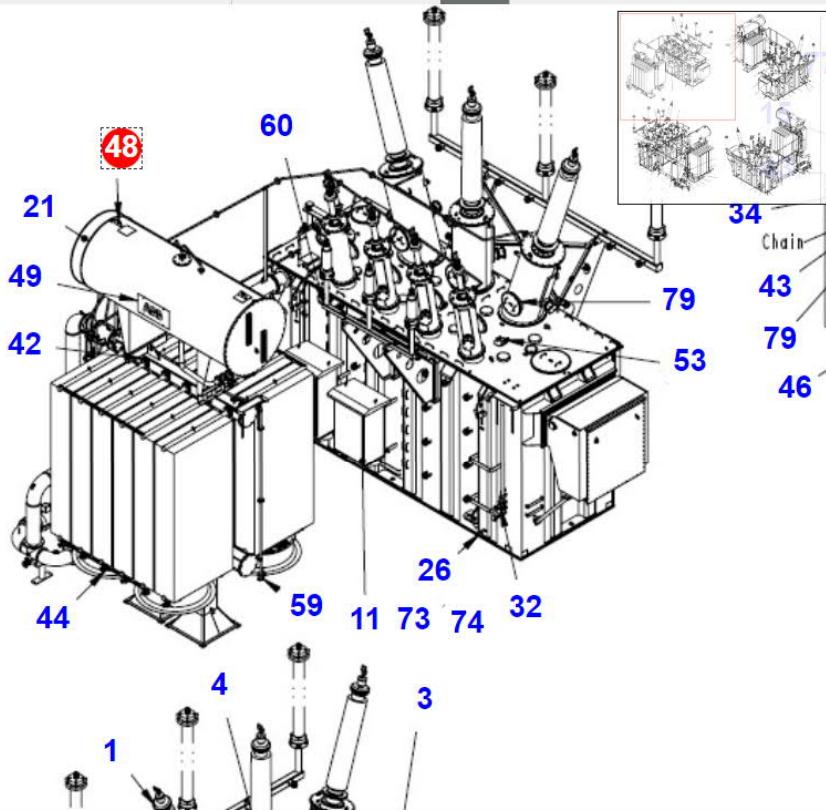
Requirement				Requirement Type		Showing 7 results										
Work Group	Crew	Requirement	Requirement Type			Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Su	
236		TAPP	Resource							5:00/ 0:00						
236		TELEC	Resource							0:00/15:30	1:00/15:30	0:00/15:30	5:00/15:30	0:00/15:30		
236		TINSP	Resource								6:00/ 0:00					
236		TMECH	Resource							0:00/15:30	0:00/15:30	0:00/15:30	0:00/15:30	0:00/15:30		
236		TSET	Resource								2:00/ 0:00					
236		25TON	Equipment							0:00/30:00	0:00/30:00	0:00/30:00	0:00/30:00	0:00/30:00	0:00/30:00	0:00/30:00
236		CRANE	Equipment							2:00/ 0:00			2:00/ 0:00			
236		TE	Equipment								3:00/ 0:00					

## GSU Transformer Serial # 515138-1



## GSU Transformer Serial # 515138-1

Item	Part No	Description	Qty
48	ALTH-45126-B	Lifting Lug for Oil Conservator (Without Oil)	2
49	IZBA294007-H	Plate of Group Mark "ABB"	1
50	ALTH-45127-A	Core-Tank Earthing Block	1
51	IZTH 566000-A	Gas Receiver	1
52	ALTH-45128-J	ManHole	1
53	ALTH-45157-E	Uni-Anchor Plate with Tie-off Anchor	3
54	ALTH-45129-B	Lifting Lug for Completed Transformer	4
55	IZTH 652000-C	Pressure Relief Device for Main Tank	2
56	ALTH-45131-Z	Inspection Hole	5
57	ALTH-45132-C	Inspection Hole	1
58	ALTH-45133-H	Drain Valve for Botton Header	1
59	ALTH-45134-M	Filter Valve for Top Header	1



Checkout



Manuf Code

Part Number

Description

Requested

Units

Comments

 ABB

ALTH-45126-B

Lifting Lug for Oil Conservator (Without Oil)

1

## Maintenance Schedule Forecast



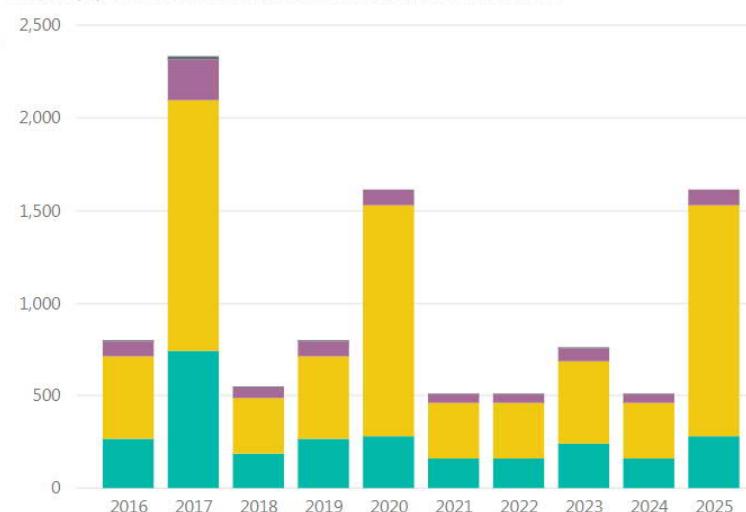
- Work Group
- Electrical Maintenance
  - Maintenance Workshop
  - Secondary Crushing Mechanical
  - Substation West**
  - Transmission North

**11.36K**

Est Total Cost

Forecast Costs by Category and Year

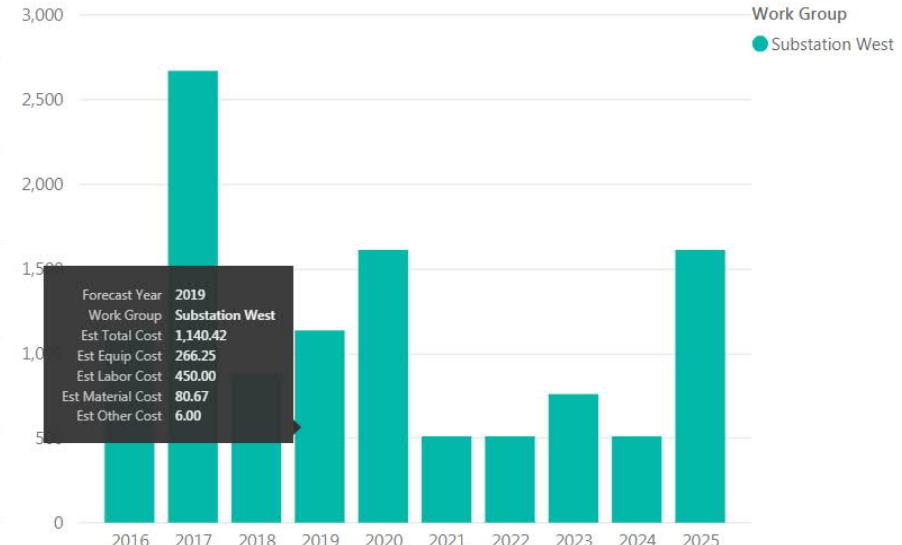
● Est Equip Cost ● Est Labor Cost ● Est Material Cost ● Est Other Cost



Forecast Costs by Work Group and Year

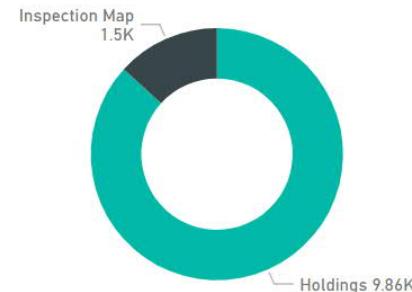
Work Group

- Substation West**



Work Group	Forecast Year	Equip Class	Equipment No	MST Description	Est Total Cost
Substation West	2016	Holdings	00000000331	Monthly Inspection	765.00
Substation West	2016	Inspection Map	00000000442	Inspection Of Fire Hydrants In Nor...	375.42
Substation West	2017	Holdings	00000000331	2 Year Track Inspection	255.00
Substation West	2017	Holdings	00000000331	300 Hr Track Inspection	255.00
Substation West	2017	Holdings	00000000331	Monthly Inspection	1,785.00
Substation West	2017	Inspection Map	00000000442	Inspection Of Fire Hydrants In Nor...	375.42
Substation West	2018	Holdings	00000000331	300 Hr Track Inspection	510.00
Substation West	2018	Inspection Map	00000000442	Inspection Of Fire Hydrants In Nor...	375.42
<b>Total</b>					<b>11,361.88</b>

Forecast Costs by Equipment Class



Costs by Category

2,745.20  
Est Equip Cost  
6,400.00  
Est Labor Cost  
810.68  
Est Material Cost  
56.00  
Est Other Cost

MSE600 - Update Equipment Register

MSE345 - Search Condition Monitoring Measurements

MSE345 - Update Condition Monitoring Measurements

Submit Refresh New Search

Process Model

Create or Open Measurements

Create Work Order

Previous Next

Equipment Reference

DWP300

WATER PUMP - MULTIFLOW

Component Code

Position Code

PROD - 1 MSV-120-USV

Modifier Code

WP Pump Performance

Condition Monitoring Set Measurements

Condition Monitoring History

Chart

Start Date

SP

SPEED

End Date

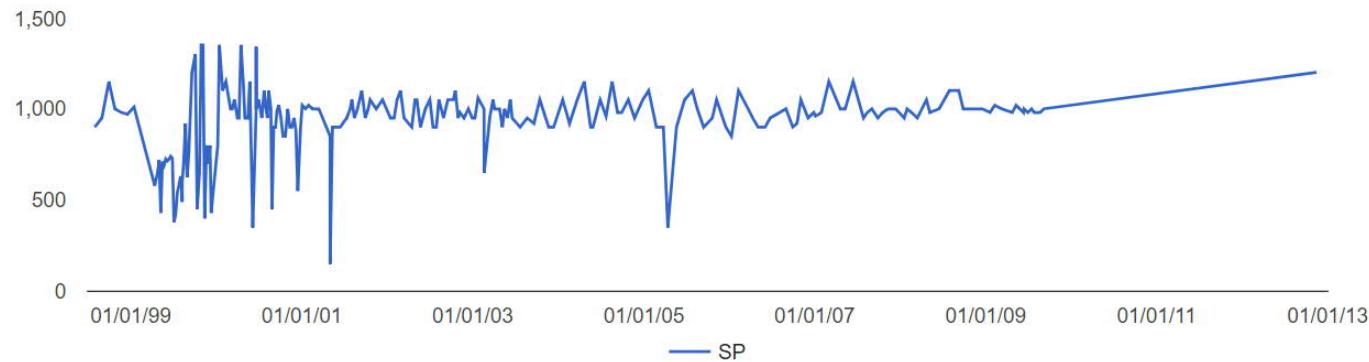
L - Line

Measurement Type

Show Standard Deviations

Chart Type

Show Caution/Danger Levels



## Equipment Component Tracing Analysis



### Equipment Group Filter

Year Filter

### Period Filter

2012-01 2012-02 2012-03 2012-04 2012-05 2012-06 2012-07 2012-08 2012-09 2012-10 >

## Component Code Filter

- \*PRIMARY EQUIPMENT
  - BASE
  - COUPLING
  - MOTOR
  - PUMP ASSEMBLY

### Component Equipment Filter

(PERKINS104-19ENGINE) Multiflo Pump Engine

Total Component Costs against Primary Equipment by Year / Period

### Primary Equip Desc

● (DWP300) Water Pump - Multiflow

### Meter Hours

- (DWP301) Multiflo Skid Mounted Water Pump No. 5
- (DWP302) Multiflo Skid Mounted Water Pump No. 6



### Primary Equipment Filter

- (DWP300) Water Pump - Multiflow
  - (DWP301) Multiflo Skid Mounted Water Pump ...
  - (DWP302) Multiflo Skid Mounted Water Pump ...

## Category Costs by Component Equipment

● Labor Costs ● Material Costs ● Equipment Costs ● Fuel and Oil Costs ● Other Costs

6K



## Constructive Unit Work Order Costs

Construction Unit      Equipment Class      EGI

All      All      All

Constructive Unit	Labour Hours Actual	Labour Costs Actual	Material Costs Actual	Equipment Costs Actual	Other Costs Actual
UC0001	23,991.42	1,311,496.22	1,605,745.55	430,757.60	286,745.00
UC0002	80.50	4,990.00	0.00	0.00	0.00
UC0003	8.00	520.00	211.20	0.00	0.00
UC0007	0.00	0.00	15,000.00	0.00	0.00
UC0011	19,853.35	1,067,182.75	453,954.79	346,440.50	73,755.00
<b>Total</b>	<b>43,933.27</b>	<b>2,384,188.97</b>	<b>2,082,411.54</b>	<b>777,198.10</b>	<b>360,500.00</b>

Closed Date

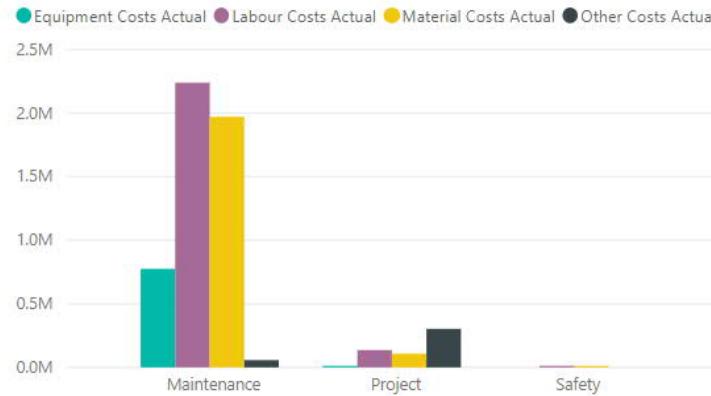
12/06/1998      21/04/2011

**5.60M**

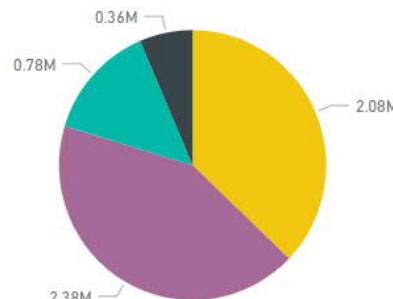
Total Cost



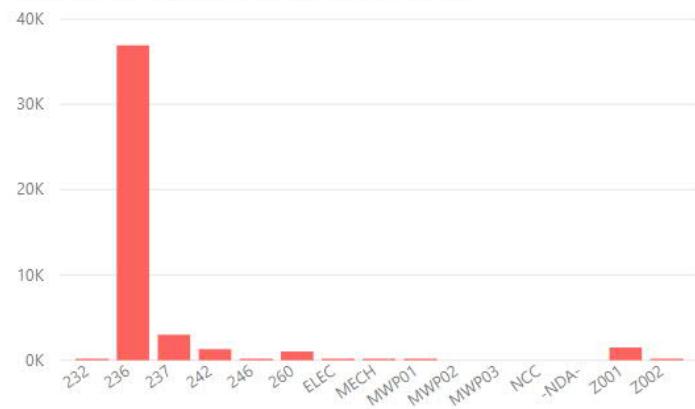
### Work Order Costs by Work Order Type



### Work Order Costs



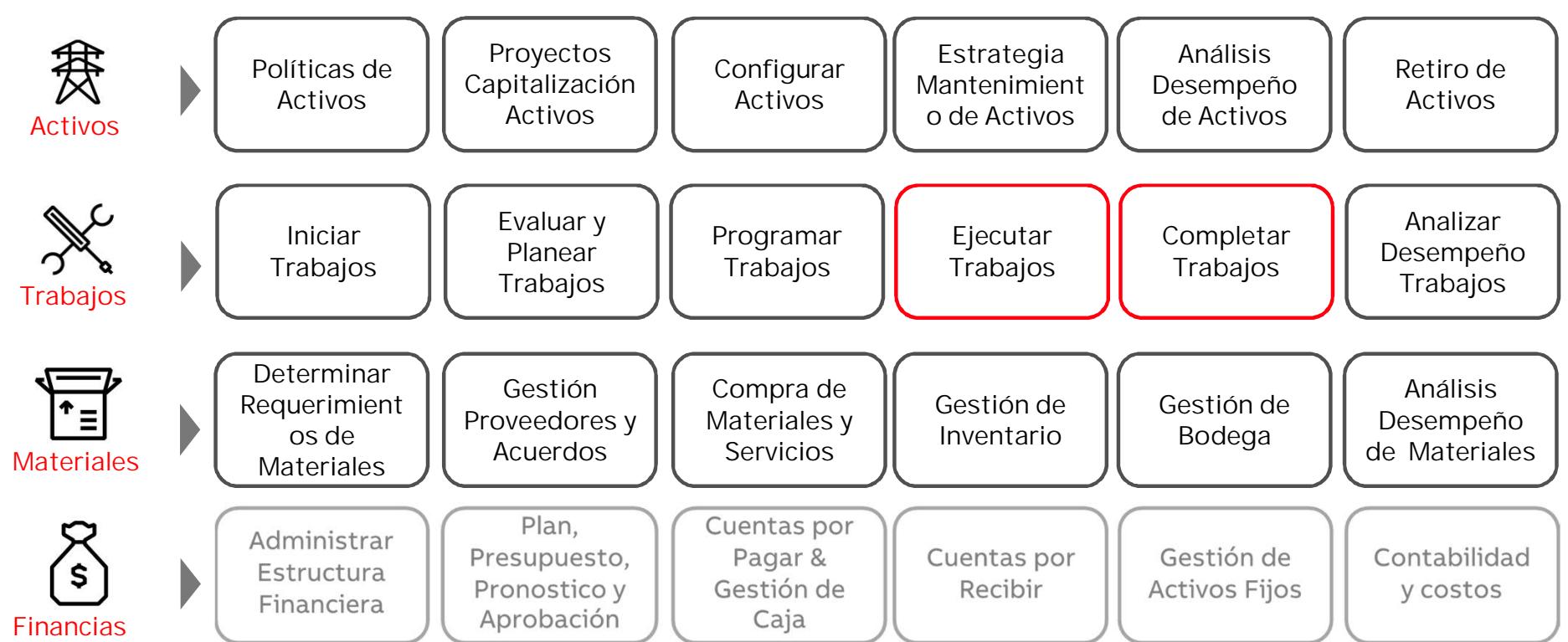
### Work Order Labour Hours by Work Group



Equipment Costs      Work Order Costs

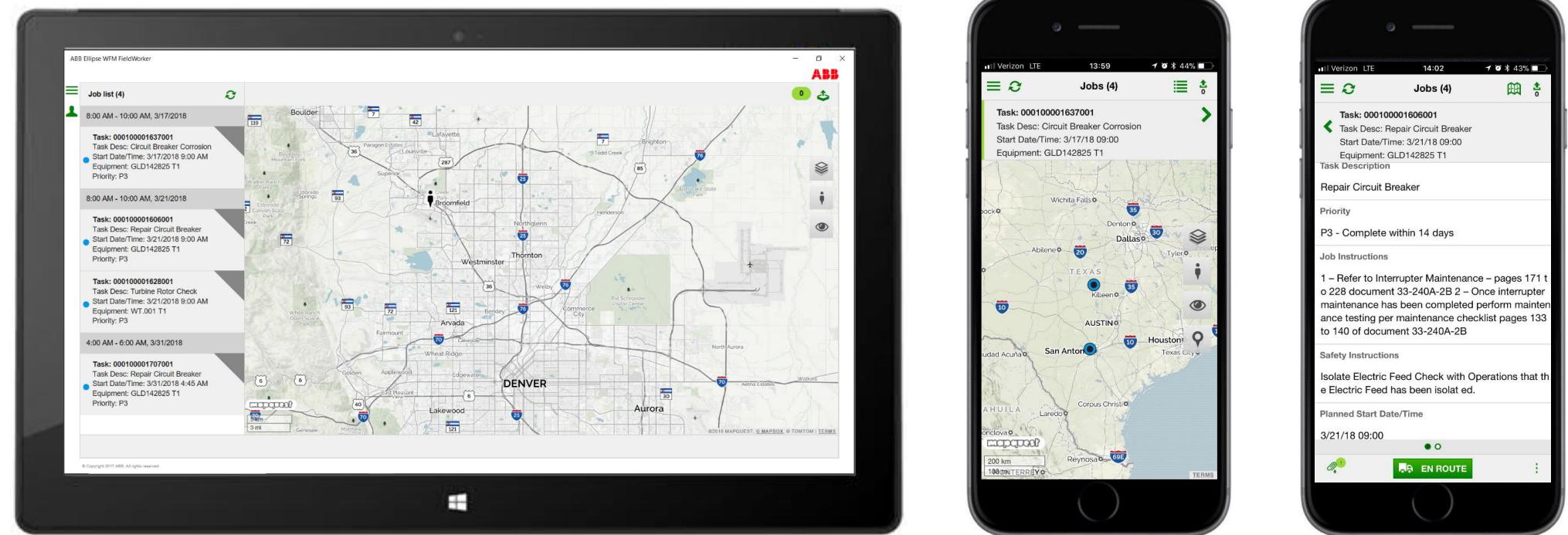
# Alcance de la solución ABB - EAM

Pre configurado con las buenas prácticas definidas por la ISO 55000



# Trabajo -> Ejecución móvil (WFM)

Ejecución del trabajo de campo a través de la aplicación móvil



# Trabajo -> Ejecución móvil

Ejecución del trabajo de campo a través de los lentes HMT-1



**ABB**

ABB Ability WFM  
FieldWorker HFI

Chat Bot

Order Details      Live Chat

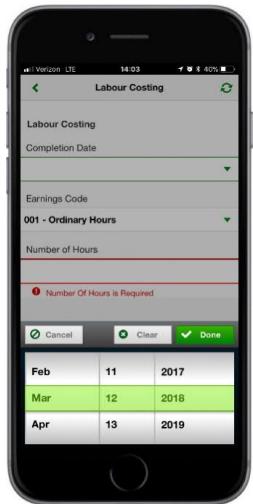
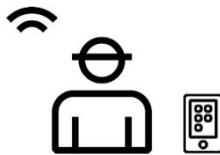
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Sign Out      Show Help

NAVIGATION BY VOICE COMMAND

# Trabajo -> Ejecución móvil

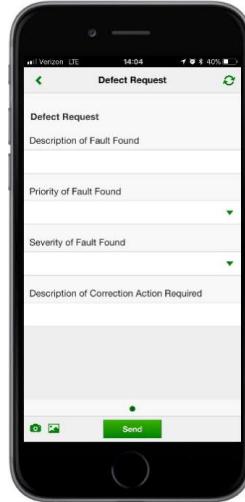
Actualizaciones de órdenes de trabajo desde el campo



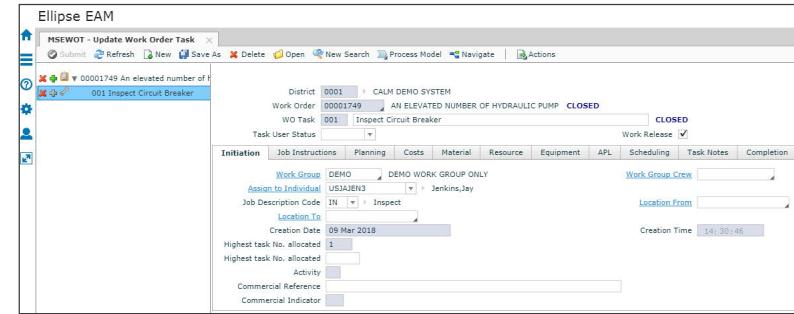
Detalles de finalización



Adjuntar fotografías



Solicitud de defecto



LOS RESULTADOS DE LA ORDEN DE TRABAJO SE ALMACENAN EN EL SISTEMA EAM

Jobs (2)

Emergency Regular 2

00:00 - 02:00, 8/26/17

00006505  
Latest Onsite - 8/26/17 00:00  
EllOrder  
Service Address:

20:00 - 22:00, 8/31/17

DSP1000000000002348  
Latest Onsite - 8/31/17 20:00  
AHCTrfxIns  
Service Address: av contorno

EN ROUTE

Jobs (2)

00006505  
Latest Onsite - 8/26/17 00:00  
EllOrder  
Service Address:

**Header**

Order Number  
00006505

Task  
Dielectric Frequency Response Test

Job Code  
EllOrder - Ellipse Order Job Code

Priority  
4 - Medium

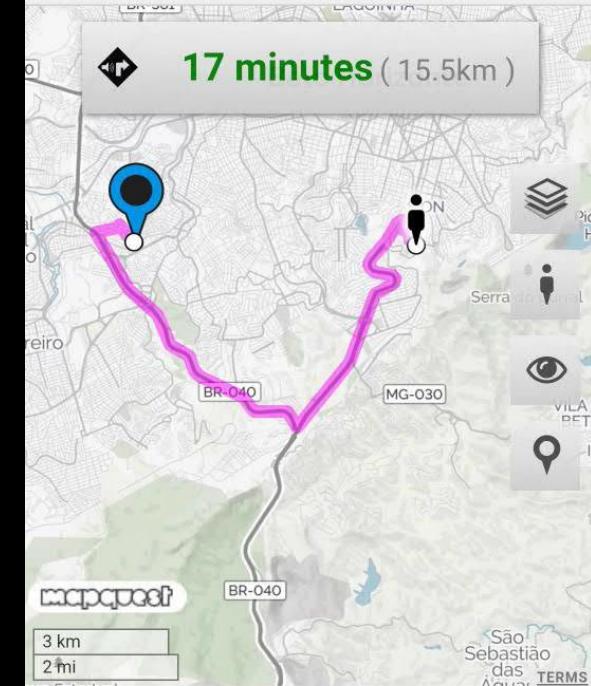
Earliest On Site At  
8/21/17 10:00

EN ROUTE

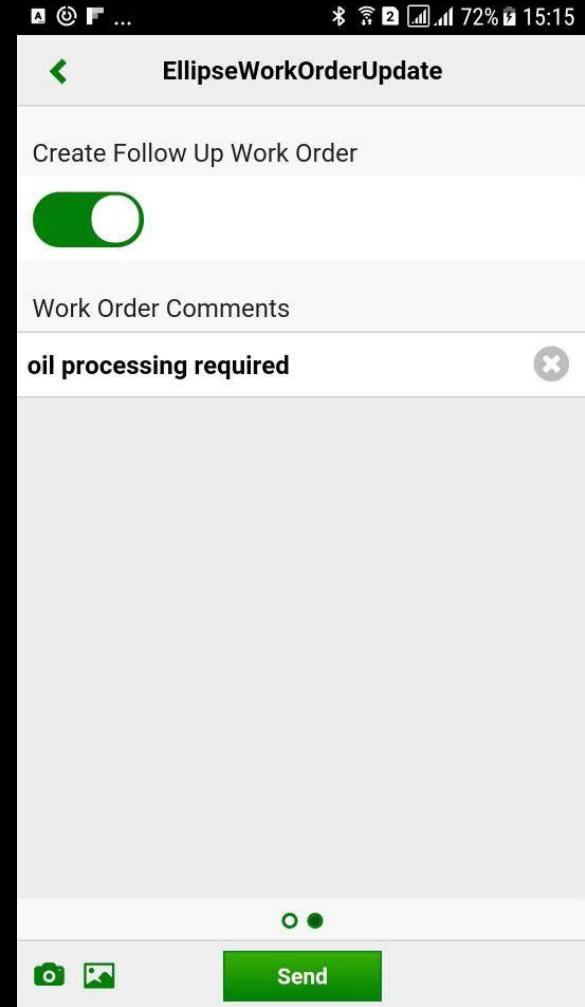
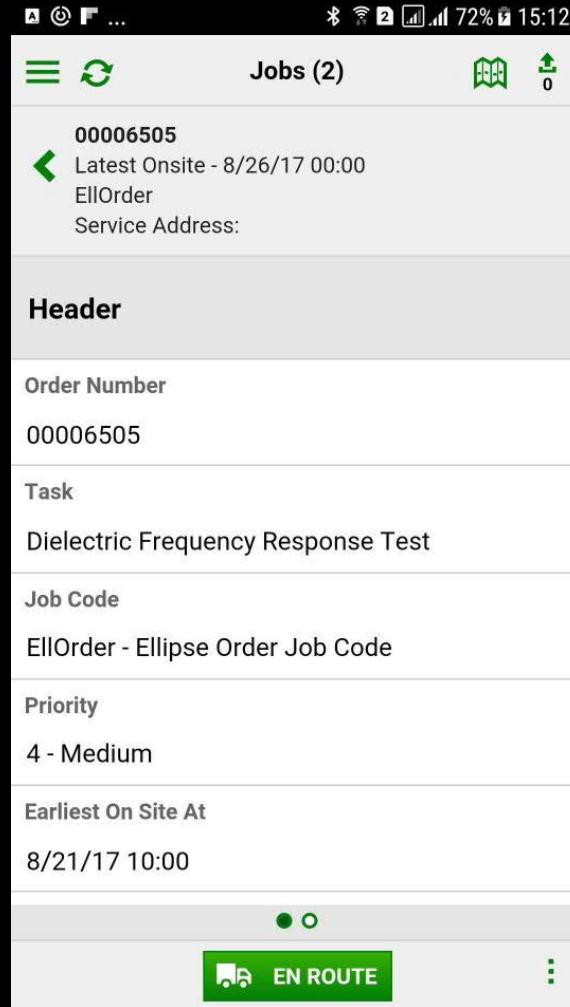
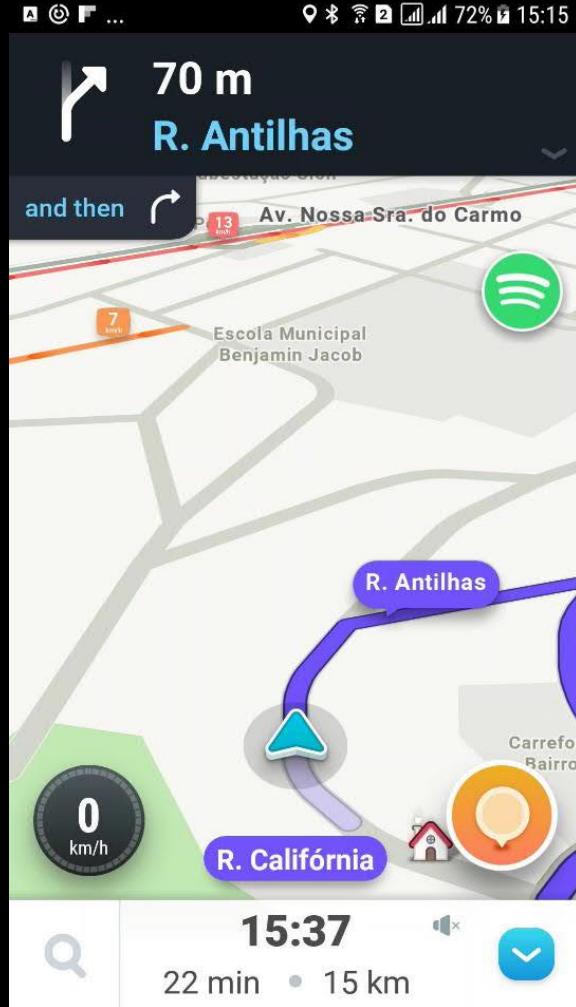
Jobs (2)

00006505  
Latest Onsite - 8/26/17 00:00  
EllOrder  
Service Address:

**Mapquest**  
17 minutes (15.5km)

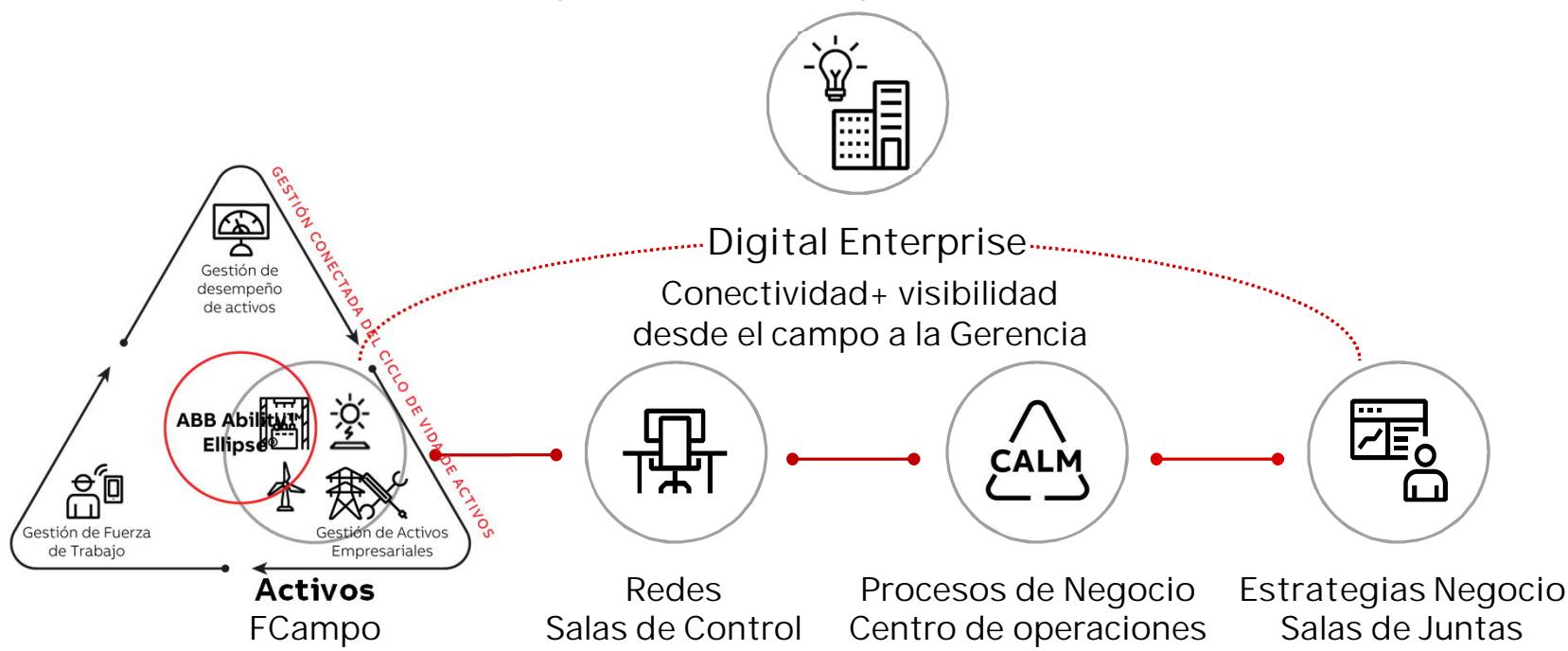


ON SITE



Conectando todos los aspectos de la empresa desde la sala de juntas al campo.

Proporcionar acceso, respuestas y acción, cuando y donde lo necesite.



# ABB Ability Digital Enterprise

Visión Multicapa = un modelo holístico de la empresa que permite la visibilidad, acceso y la acción



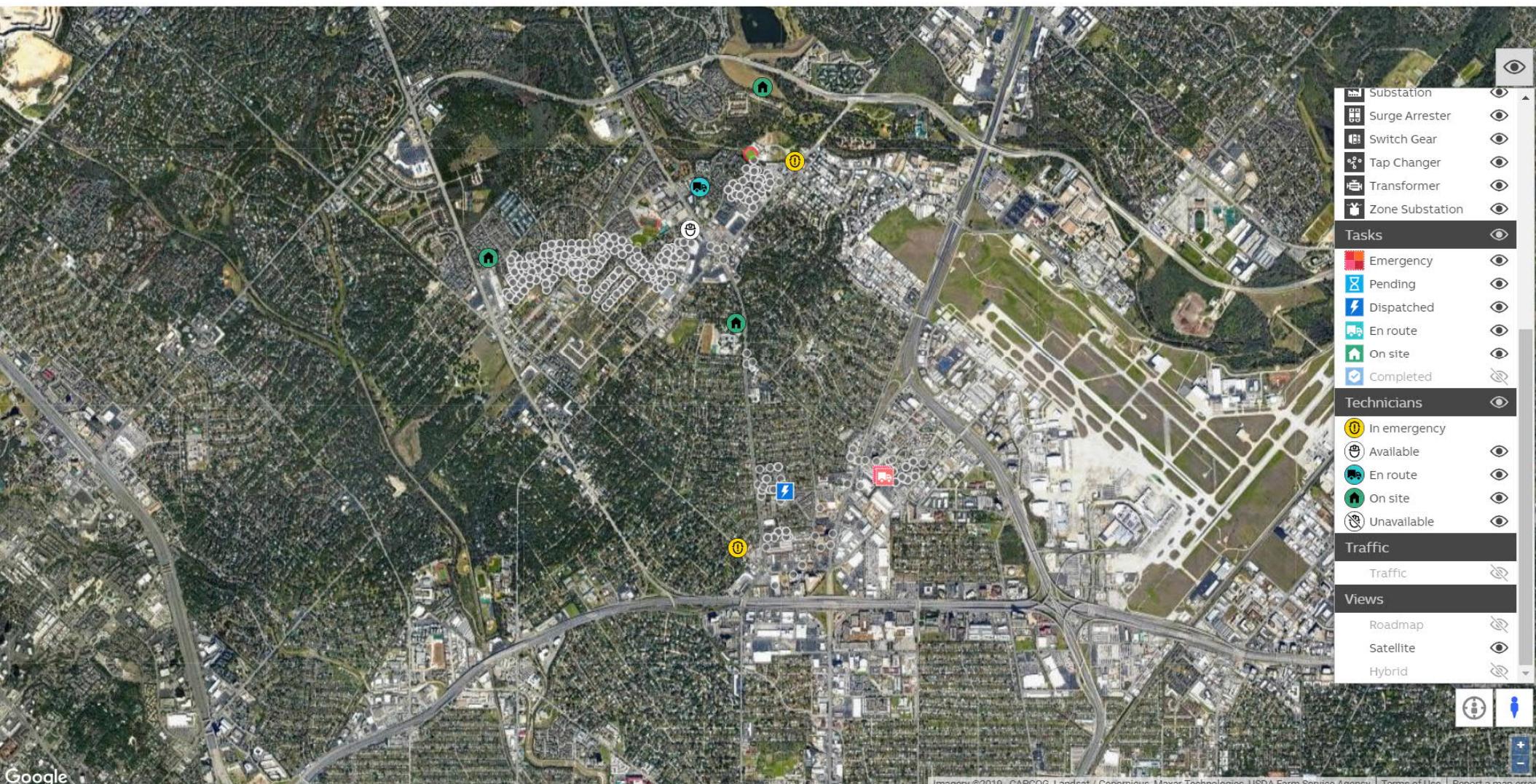
# Mapa Digital Enterprise

Una simple vista para datos de IT/OT y toma de acciones

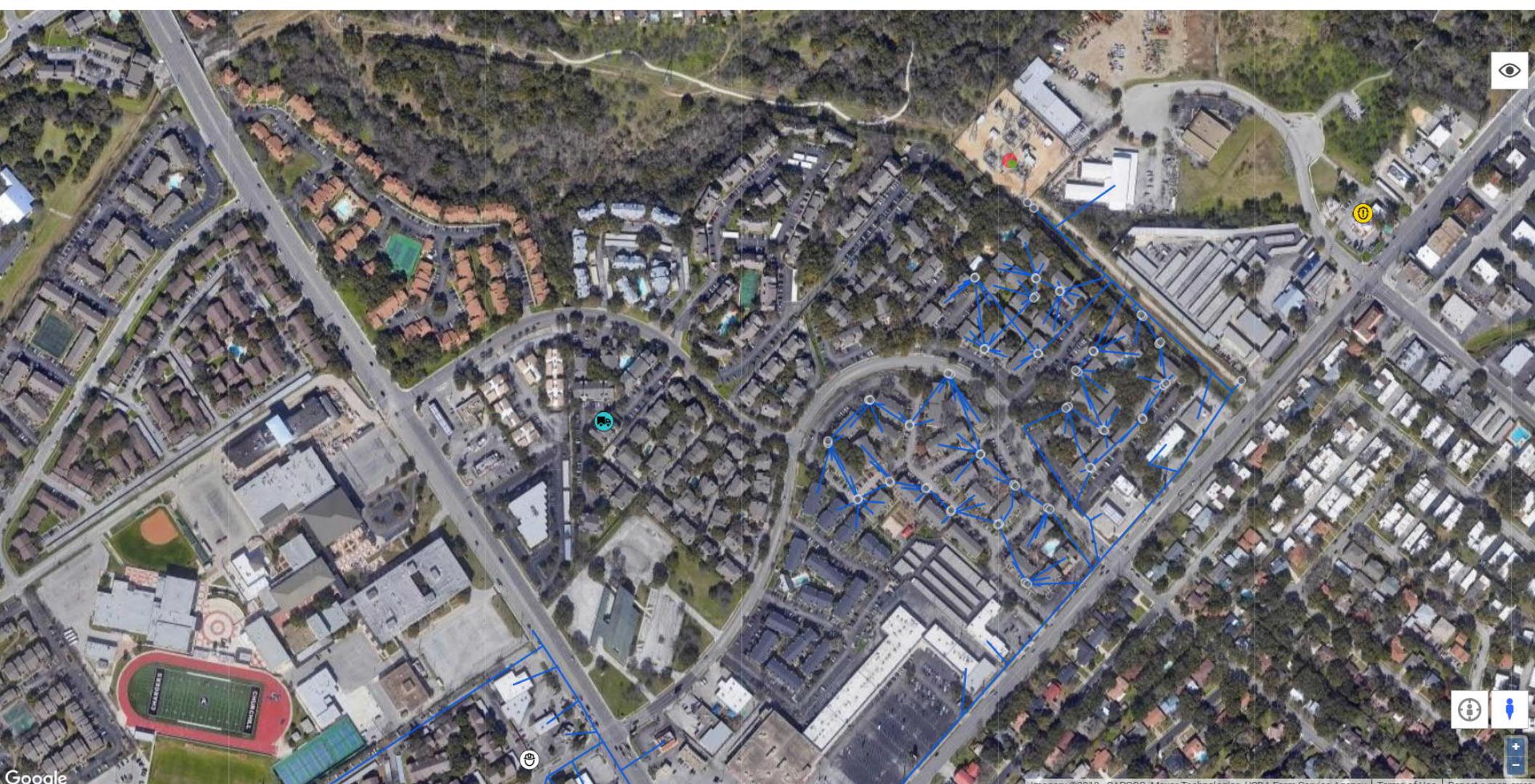
Facil visibilidad de el peso de los riesgos costos, impacto y seguridad, para tomar acciones inmediatamente.



Search



Search



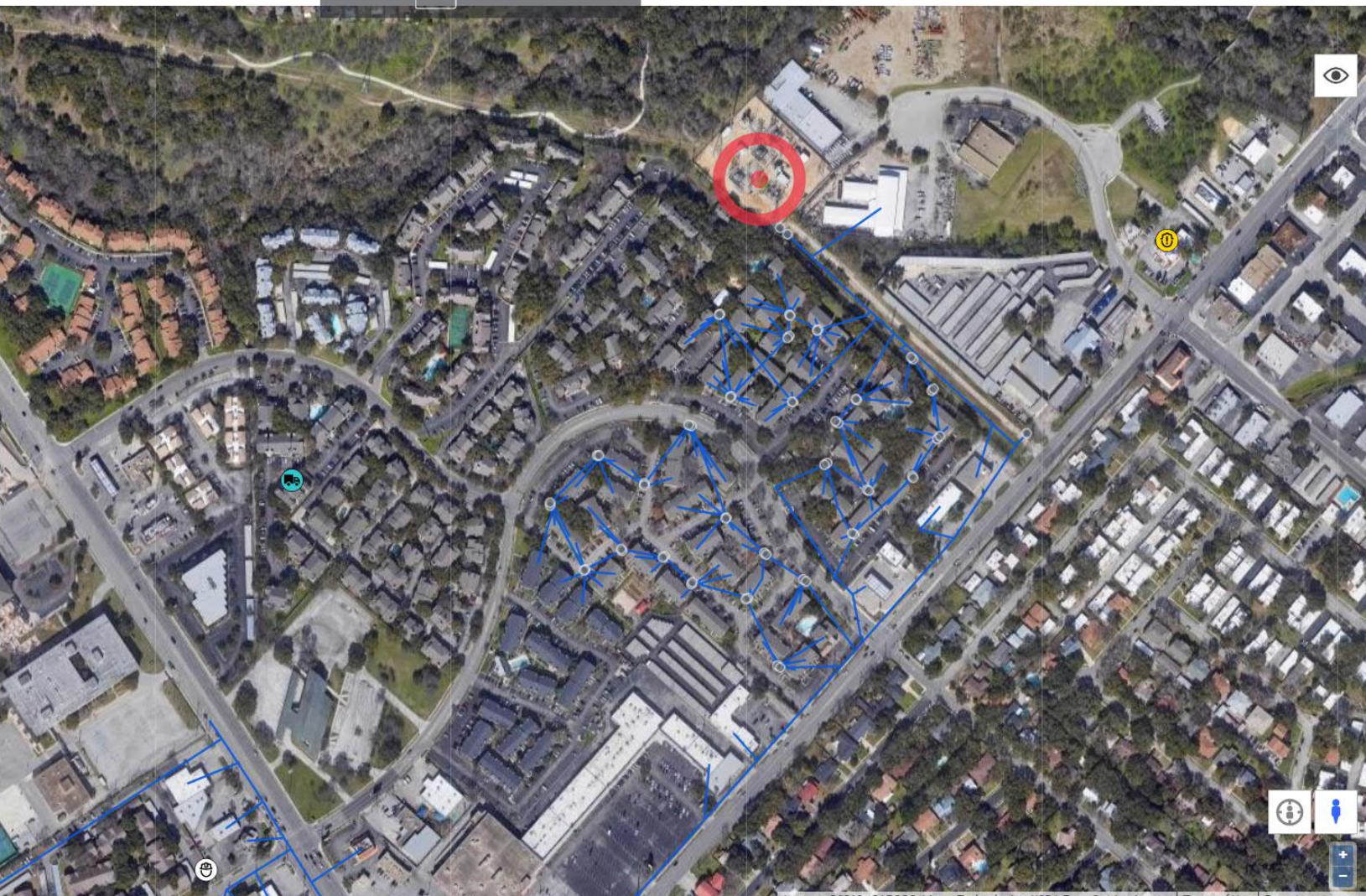


**CBJ433 - High Risk**  
Circuit Breaker

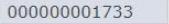
Trace   Copy Link   Directions

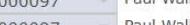
**Id** [CBJ433](#)    
Health Score 49.2  
Reference [LinkOne](#)  
Description CBJ433 | Circuit Breaker  
138kV | Alamo Station  
Type CircuitBreaker  
Sub-Type ADMS  
Manufacturer GE  
Age 6  
Organization An inc  
Risk Level 1  
Importance 40  
Maintenance 19.2  
Score  
Replacement 23.8  
Score

Press **F11** to exit full screen



 MSE600 - Update Equipment Register  Submit  Refresh  New  Save As  Delete  Open  New Search  Process Model  Disposal  EGI APL  Equipment APL  

Equipment Number  000000001733  
Description  Alamo Substation 138kV TRFR 1 Breaker  
Associated Equipment Item 

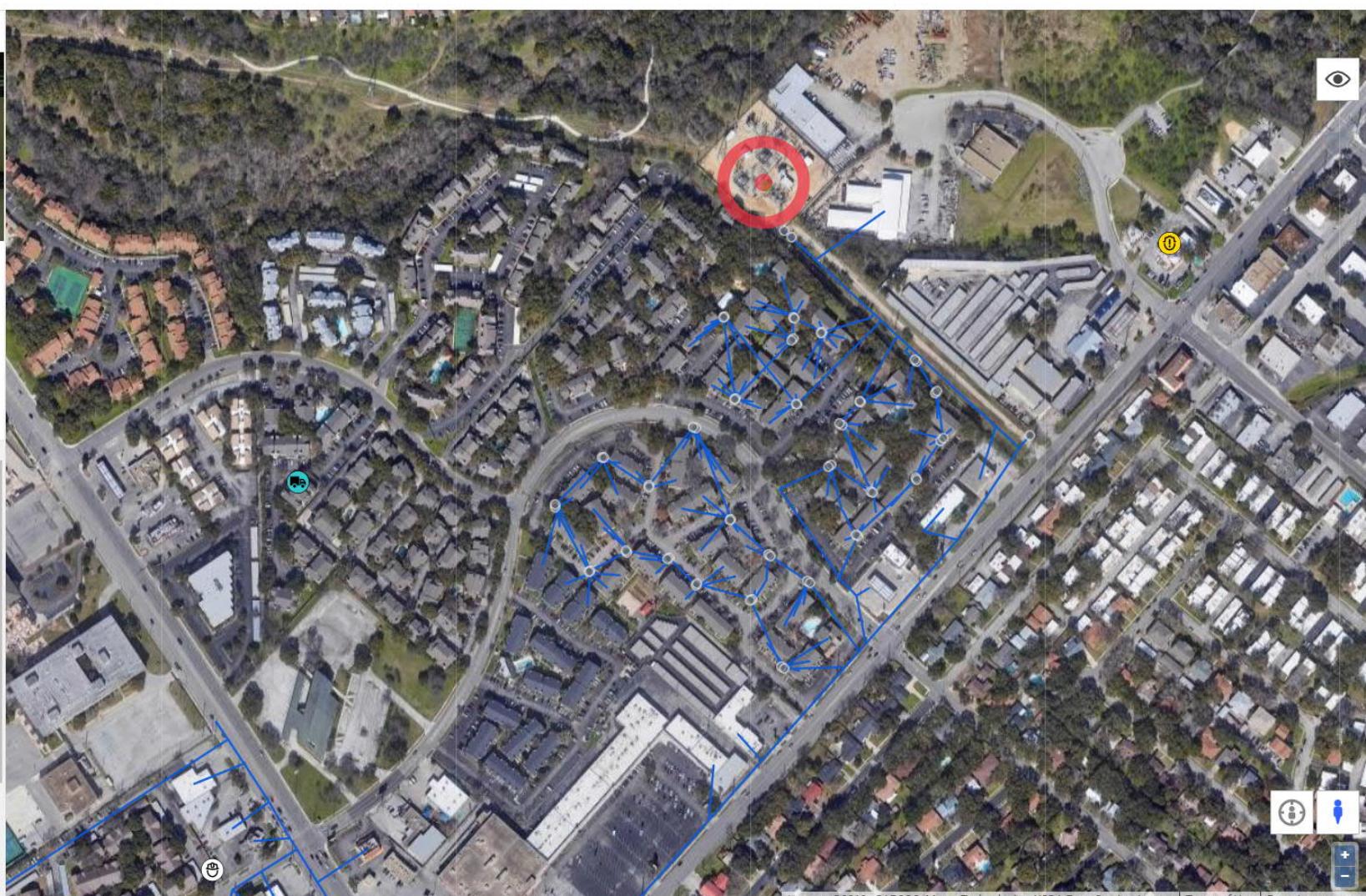
General	Costing	Tracing	Condition	Classifications	Map Location	Location	Extended Desc	Nameplate	Alternate References	Continuous Asset Segments	Associated Equipment	
<p>Equipment Class  CB  Circuit Breaker</p> <p>Plant Number  CBJ433 </p> <p>Status  02  In Service</p> <p><u>Productive Unit</u>  000000001703  ALAMO SUBSTATION TRFR 1 138/22KV TRFR</p> <p><u>Custodian</u> </p> <p><u>Custodian Position</u> </p> <p><u>Operator Id</u> </p> <p><u>Operator Position</u> </p> <p><u>Input By</u> </p> <p><u>Customer Number</u> </p> <p><u>Shutdown Equip</u> </p> <p>Warranty Stat. Type </p> <p>Warranty Date  </p> <p>Name Code </p> <p>Active </p> <p><u>Equipment Pool ID</u> </p> <p>Created By  0000000097  Paul Walk</p> <p>Modified By  0000000097  Paul Walk</p>	<p>Equipment Type  CBTX  Transformer Circuit Breaker</p> <p>Equipment Group Identifier  CB132  Circuit Breaker 132kV</p> <p>Equipment Location </p> <p>Warranty Stat. Value </p> <p>District Code  0002  WORLD WIDE CORPORATION</p> <p>Permit Required </p> <p>Creation Date  29/11/2018  03:24:09 </p> <p>Modified Date  09/04/2019  06:25:58 </p>											

Search   

≡

Asset  CBJ433 - High Risk  
Circuit Breaker Trace  Copy Link  Directions

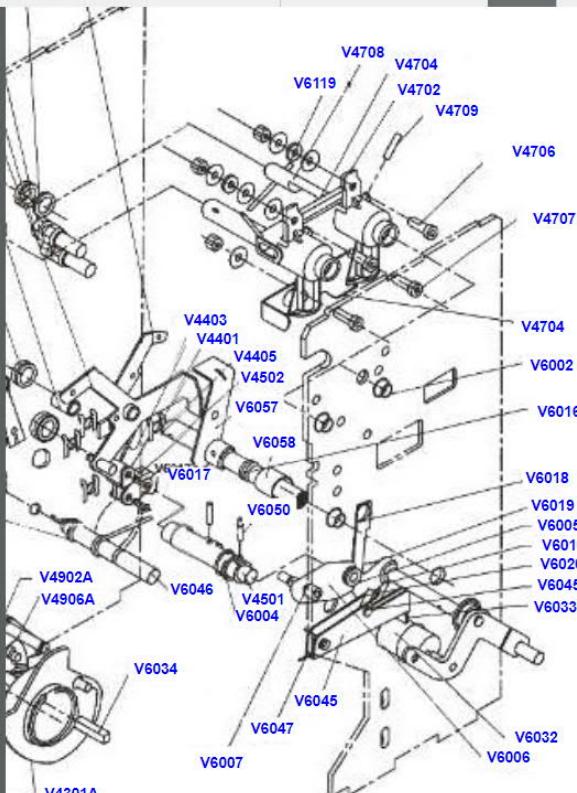
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Health Score 49.2  
Reference [LinkOne](#)  
Description CBJ433 | Circuit Breaker  
138kV | Alamo Station  
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Sub-Type ADMS  
Manufacturer GE  
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Risk Level 1  
Importance 40  
Maintenance 19.2  
Score  
Replacement 23.8  
Score



## 6B Operating Mechanism



Title	Page
VD4 Circuit Br...	TOC
Dimensions	200
Cut-Aways	300
Videos	500
Spare Parts	600
6B Operat...	603
6E Operati...	605
Manuals	900



6B Operating Mechanism			
ABB Enterprise Software - LinkOne			
Demonstration Content Only Not for Production Use			
	Item	Part No.	Description
+	V1001	V1001	POLE HOUSING
+	V1002	V1002	VACUUM BOTTLE ASSY.
+	V1003	V1003	OPERATING STUD
+	V1004	V1004	CONN. BAR (TOP)
+	V1005	V1005	CONN.BAR(BOTTOM)
+	V1006	V1006	BUSH
+	V1007	V1007	LABEL STICKER
+	V1008	V1008	FLEXIBLE CONDUCTOR
+	V1009	V1009	SUPPORTING PLATE
+	V1010	V1010	SUPPORTING PLATE
+	V1011	V1011	CONTACT TERMINAL

LinkOne - Right Part, First Time, Every Time

Page: 603



Manufacturer	Part Number	Description	Qty	Units	Fitted	Comments	Options
KOMATSU	6127-21-2221	O-RING (CENTER) (KIT)	1		6		
ABBPGES	V1003	OPERATING STUD	1		1		

Search 

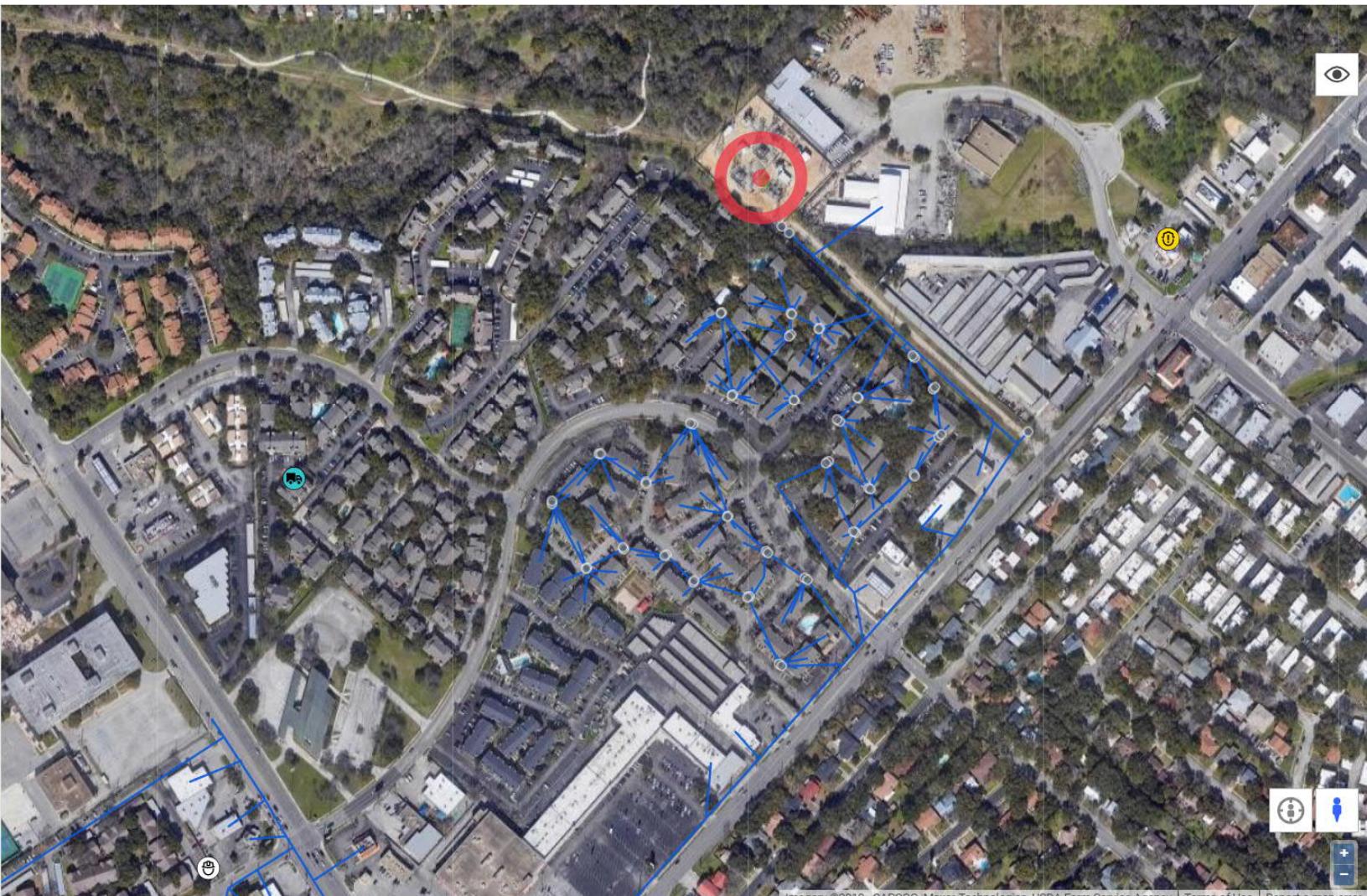
Asset 



CBJ433 - High Risk  
Circuit Breaker

 Trace  Copy Link  Directions

**Id** [CBJ433](#)  
**Health Score** 49.2  
**Reference** [LinkOne](#)  
**Description** CBJ433 | Circuit Breaker  
138kV | Alamo Station  
**Type** CircuitBreaker  
**Sub-Type** ADMS  
**Manufacturer** GE  
**Age** 6  
**Organization** An inc  
**Risk Level** 1  
**Importance** 40  
**Maintenance Score** 19.2  
**Replacement Score** 23.8



Search 

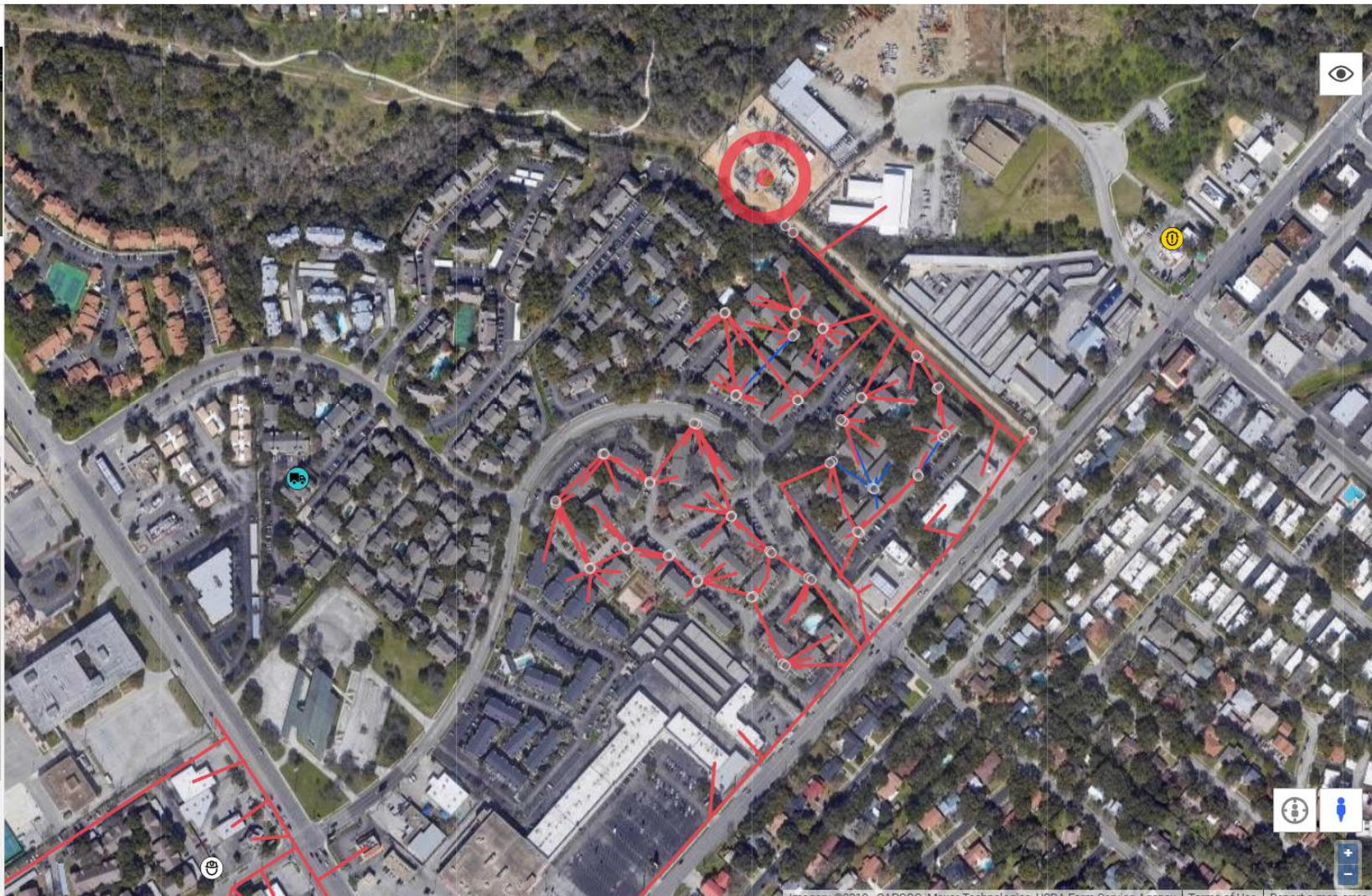
Asset 

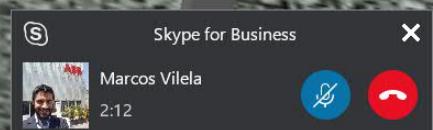
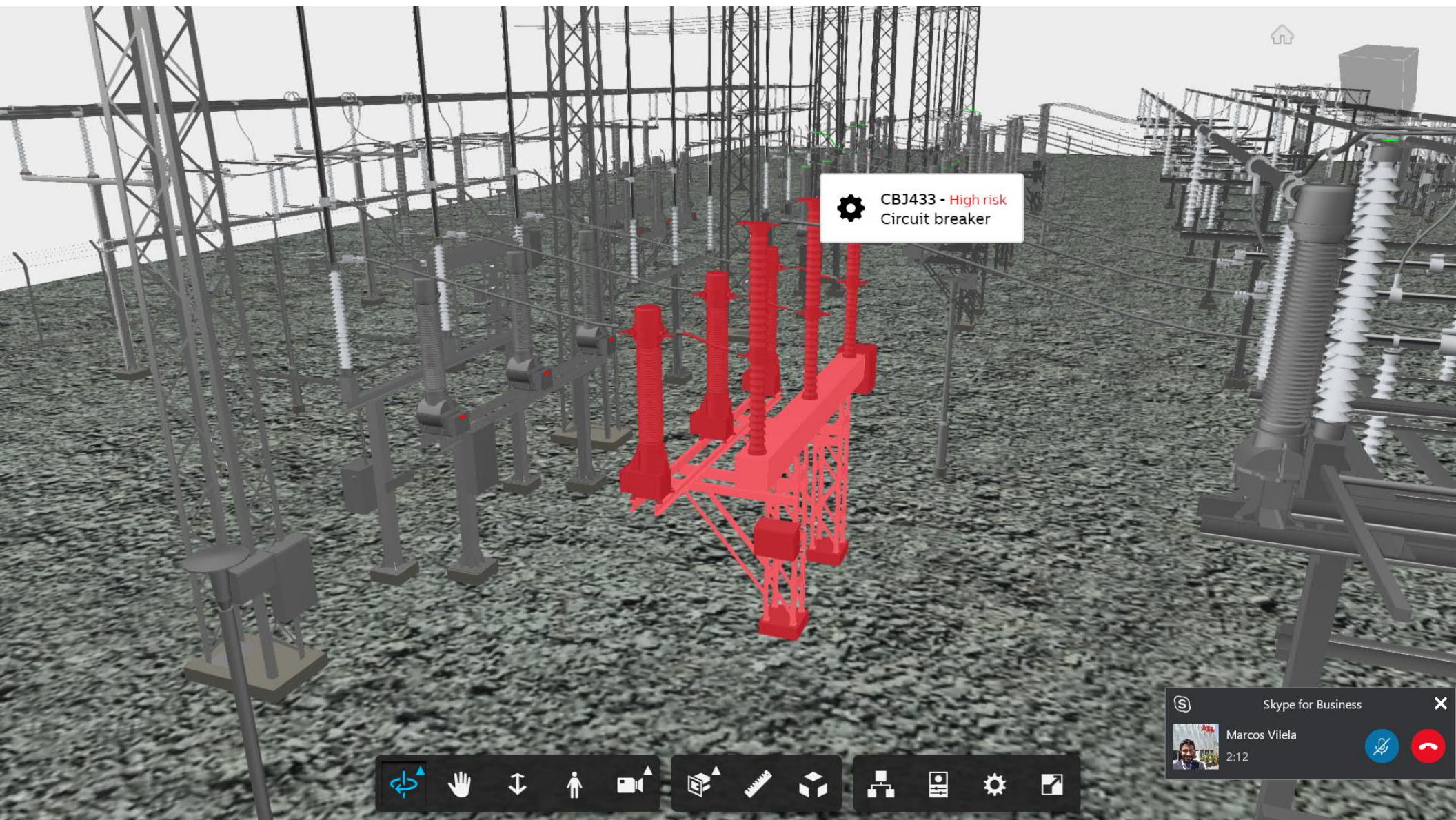


**CBJ433 - High Risk**  
Circuit Breaker

 Trace  Copy Link  Directions

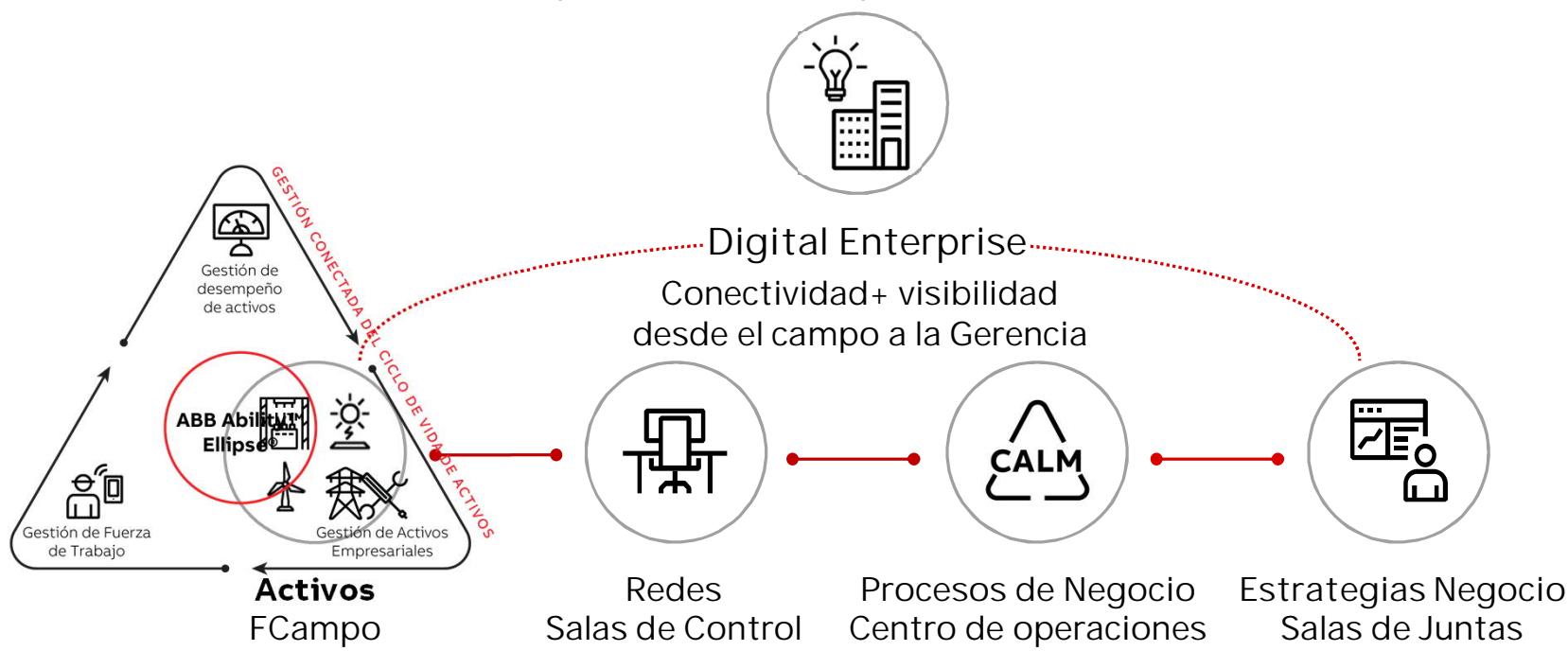
**Id** [CBJ433](#)  
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**Organization** An inc  
**Risk Level** 1  
**Importance** 40  
**Maintenance Score** 19.2  
**Replacement Score** 23.8





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# ABB: Su experto en Gestión de Activos

Mas de 1,000 clientes en industrias intensivas en activos

## Serv. Publicos & Renovables



## Transporte e Infraestructura



## Mineria



## Gobierno & Defensa





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Enterprise Software  
Senior Business Consultant  
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