



OMNES: Predicción de incidencias en relación con desvíos y aparatos de vía

SIEMENS

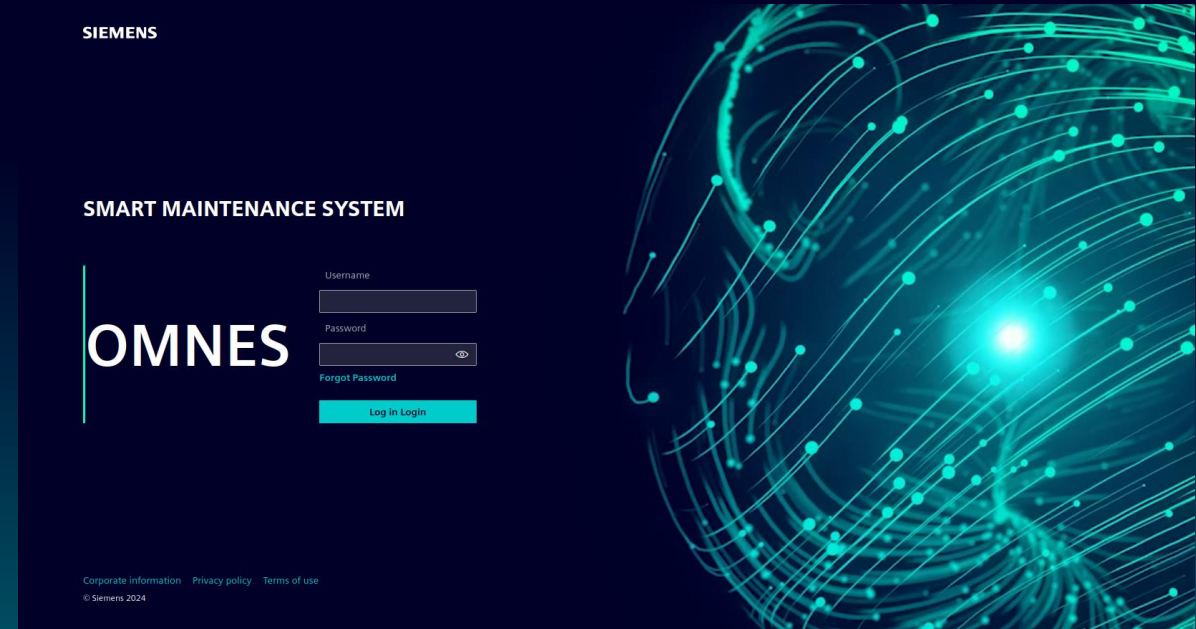
OMNES

***Suite* de aplicaciones que busca la unificación de los sistemas de monitorización y alarmas de cualquier fuente de datos:**

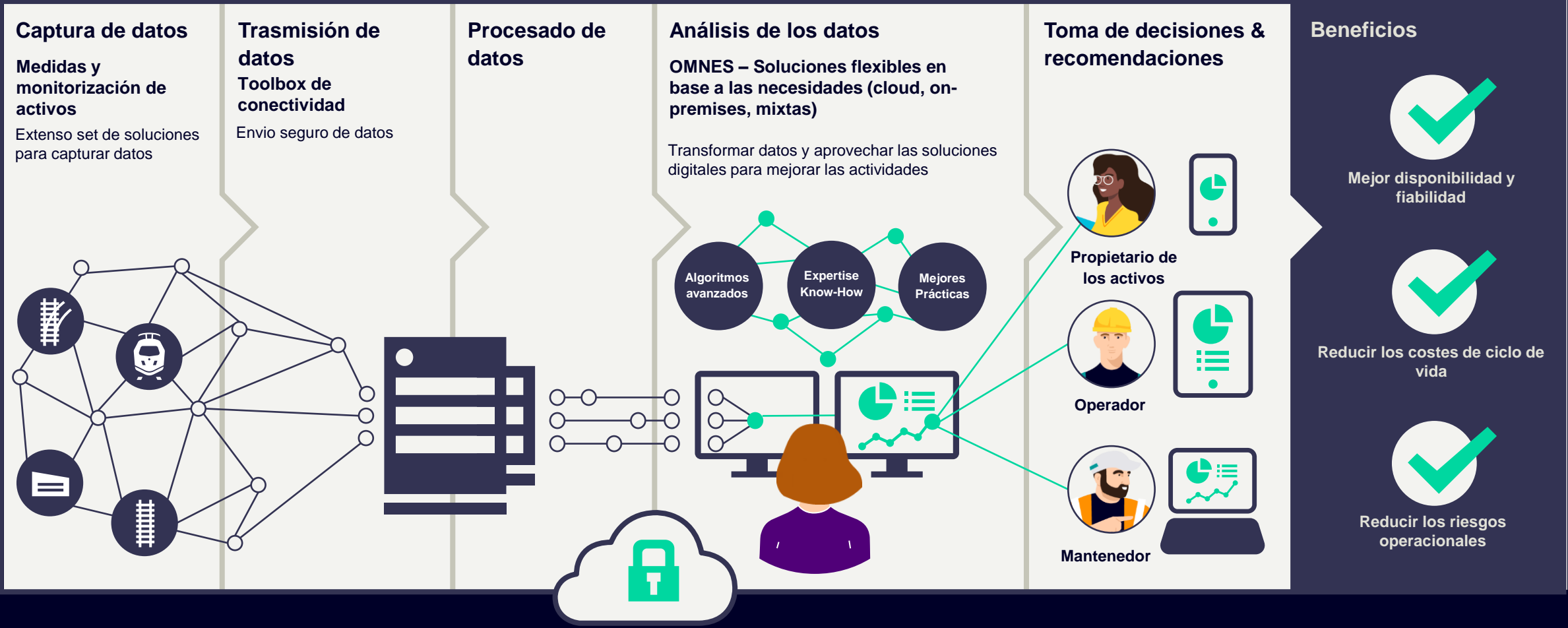
- Señalización
- Redes y comunicaciones
- ATS/CTC
- Sistemas de Energía
- Equipos embarcados
- Etc

Beneficios / Objetivos

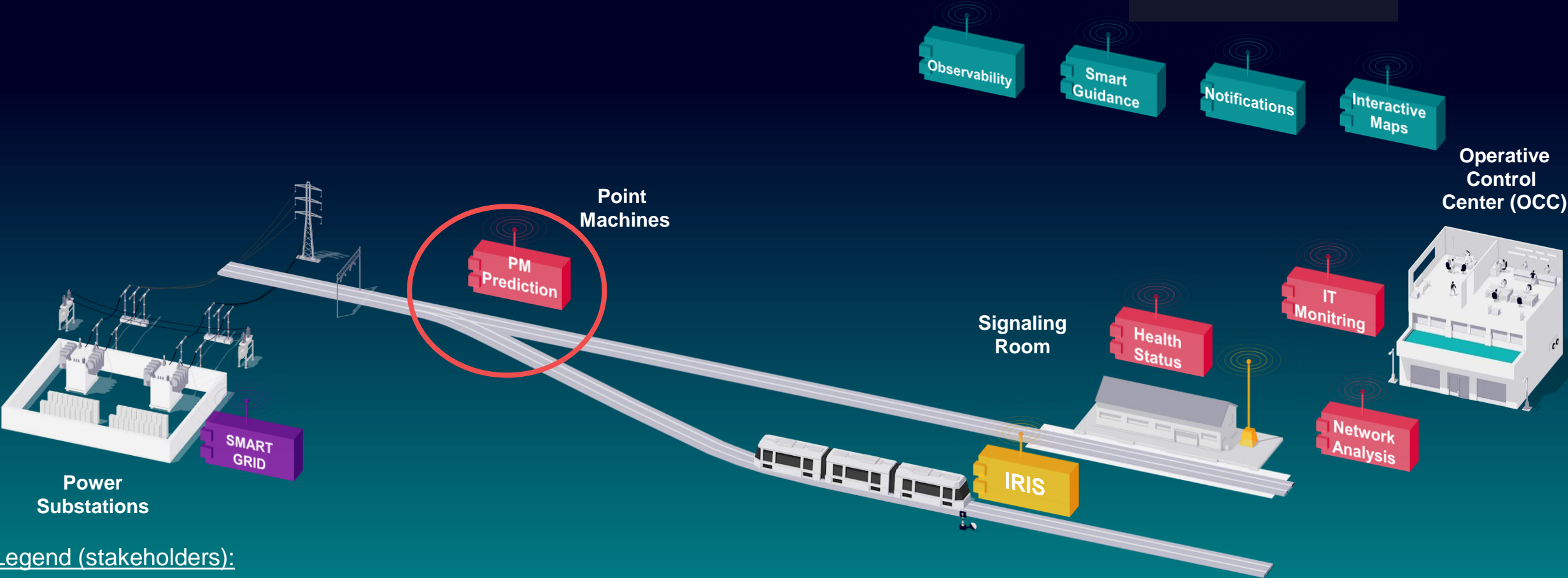
- Monitorización mínimamente invasiva
- Ventanilla única de alarmas
- Cuadros de mando útiles y adaptados a la necesidad del negocio
- Reportes avanzados
- Umbrales inteligentes de alarma basados en el histórico
- Algoritmos predictivos sobre valores analógicos
- Altas capacidades de integración
- Optimización de la asistencia remota



Visión General



OMNES Vista General de Portfolio



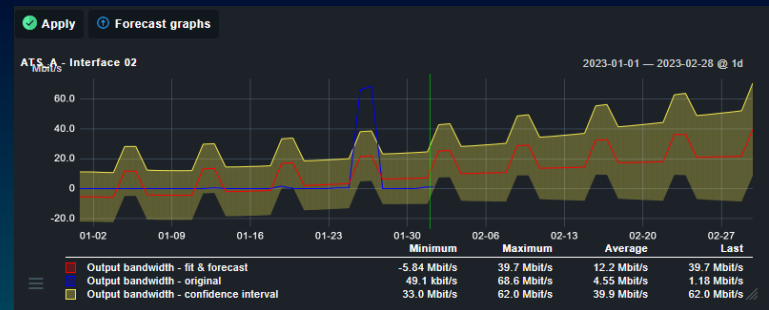
Legend (stakeholders):

- General Use
- Signalling or track devices
- On-Board
- Other technologies

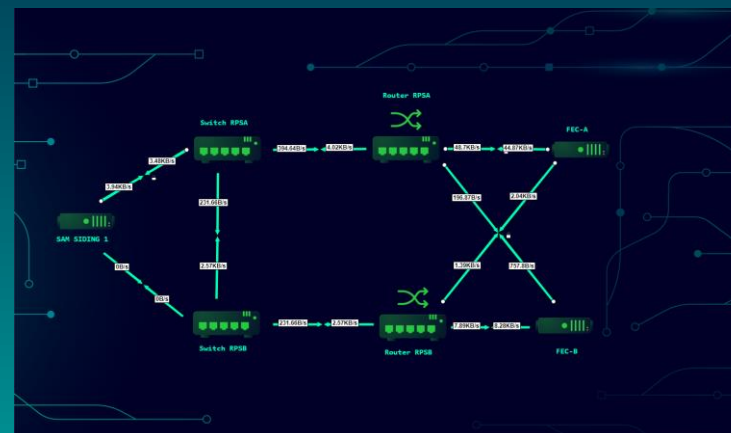
Características

- SUPERVISIÓN EN TIEMPO REAL
- NOTIFICACIÓN EN TIEMPO REAL
- ANÁLISIS DE RED
- MAPAS EN VIVO
- GESTIÓN DE INVENTARIO IT
- FÁCIL INTEGRACIÓN (REST API, TERCEROS, ETC)

- CAPACIDADES PREDICTIVAS SOBRE VALORES ANALÓGICOS
- ANÁLISIS DE TENDENCIAS
- HERRAMIENTAS DE REPORTE INTELIGENTES
- FLEXIBILIDAD



Interface	Description	Admin	Oper	Speed	State	Speed	Physical Address (MAC)	Type
1	eth0	up	up	10 Gbps	up	10 Gbps	92:18:32:78:18:18	ethernet
2	eth1	up	up	10 Gbps	up	10 Gbps	92:18:32:78:18:18	ethernet
3	eth2	up	up	10 Gbps	up	10 Gbps	92:18:32:78:18:18	ethernet
4	eth3	up	up	10 Gbps	up	10 Gbps	92:18:32:78:18:18	ethernet
5	eth4	up	up	10 Gbps	up	10 Gbps	92:18:32:78:18:18	ethernet
6	eth5	up	up	10 Gbps	up	10 Gbps	92:18:32:78:18:18	ethernet
7	eth6	up	up	10 Gbps	up	10 Gbps	92:18:32:78:18:18	ethernet
8	eth7	up	up	10 Gbps	up	10 Gbps	92:18:32:78:18:18	ethernet
9	eth8	up	up	10 Gbps	up	10 Gbps	92:18:32:78:18:18	ethernet
10	eth9	up	up	10 Gbps	up	10 Gbps	92:18:32:78:18:18	ethernet
11	eth10	up	up	10 Gbps	up	10 Gbps	92:18:32:78:18:18	ethernet
12	eth11	up	up	10 Gbps	up	10 Gbps	92:18:32:78:18:18	ethernet
13	eth12	up	up	10 Gbps	up	10 Gbps	92:18:32:78:18:18	ethernet
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100	eth99	up	up	10 Gbps	up	10 Gbps	92:18:32:78:18:18	ethernet
101	eth100	up	up	10 Gbps	up	10 Gbps	92:18:32:78:18:18	ethernet



SIEMENS

Predicción y supervisión de motores de desvío basado en valores analógicos

Motivación

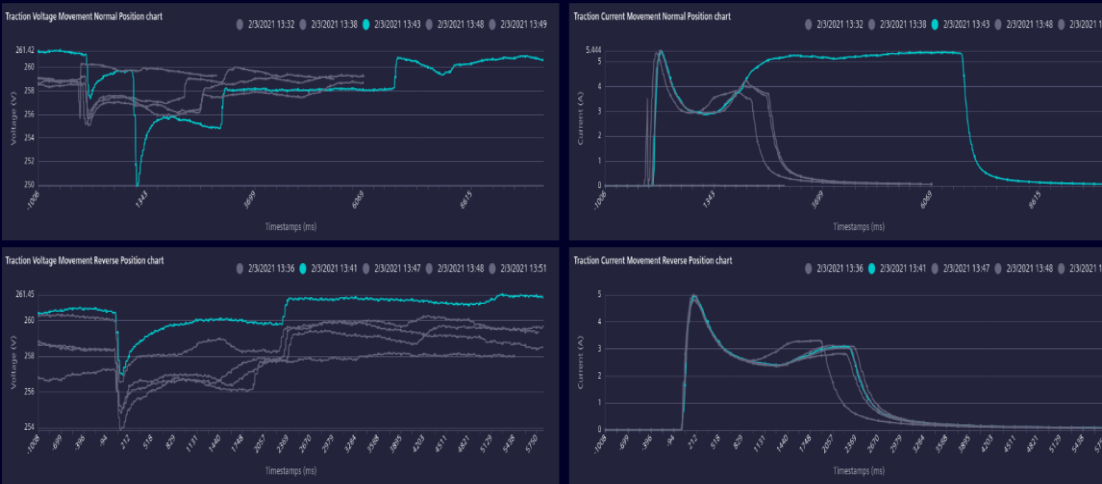
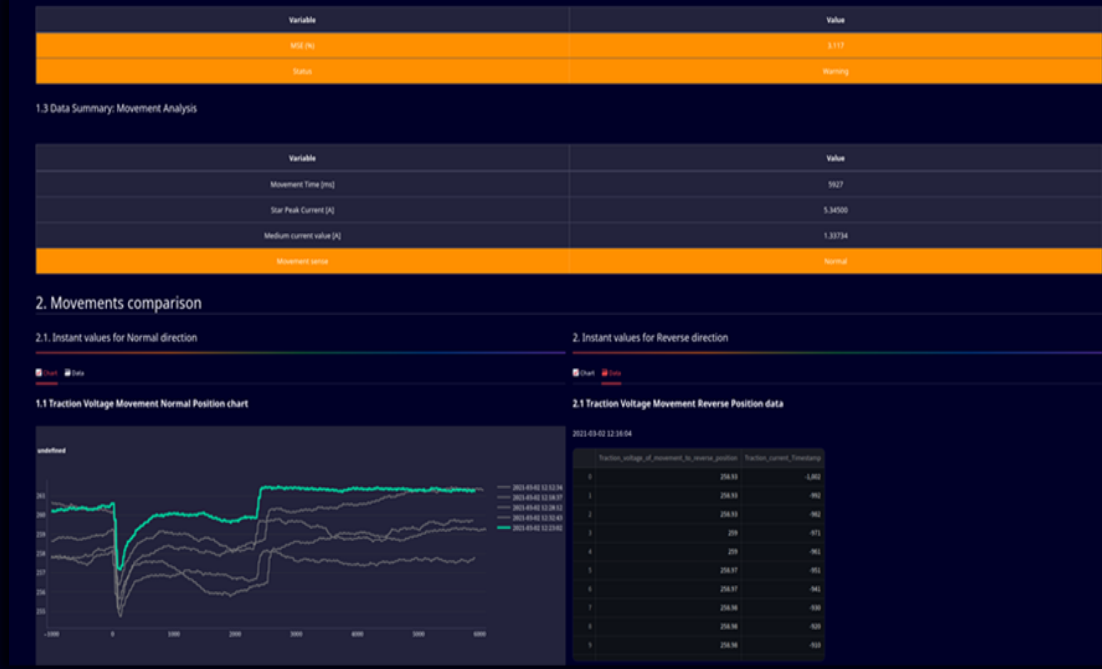
- Los desvíos son elementos clave para el mundo ferroviario.
- El estudio del rendimiento de los motores que componen los desvíos es un tema muy interesante para el mundo del mantenimiento.

Aproximación

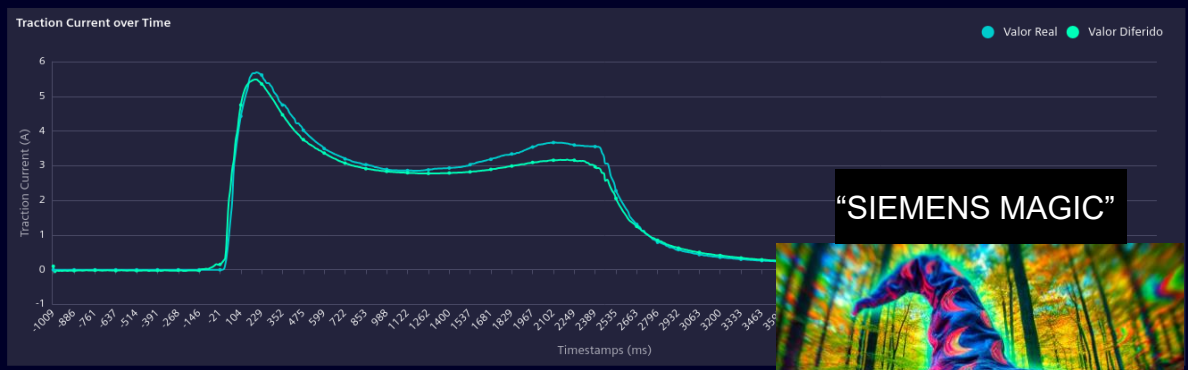
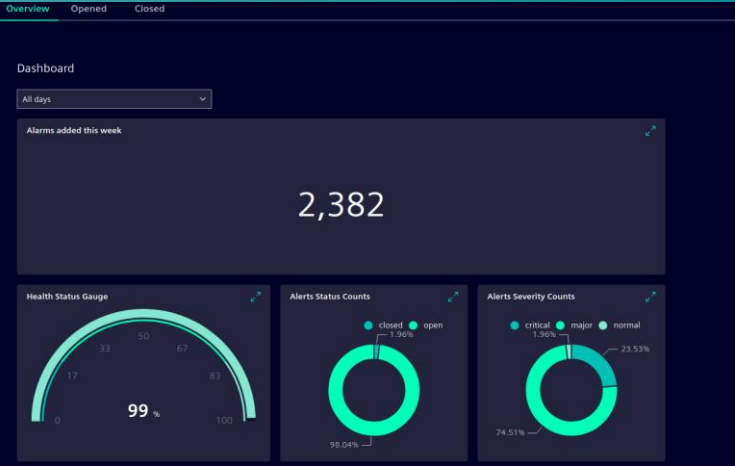
- Basada en gemelo digital con aprendizaje automático profundo.
- Permite añadir tantas variables como el sistema disponga (tensión, corriente etc.)

Beneficios

- Posibilidad de uso en cualquier tipo de motor con características similares.
- Sistema poco intrusivo
- Mejora de las tareas preventivas y su planificación, predicción de fallos



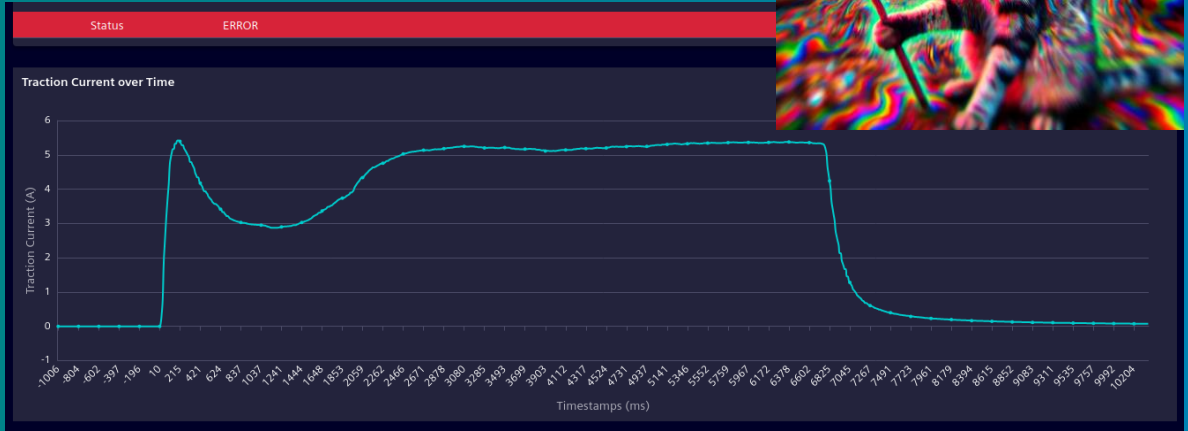
Resultados



Overview Opened Closed

Severity	Timestamp	Actions
major	22:42:21 17/5/2021	Close
critical	21:36:15 17/5/2021	Close
major	21:31:10 17/5/2021	Close
major	21:26:25 17/5/2021	Close
major	21:21:53 17/5/2021	Close
major	21:16:10 17/5/2021	Close
critical	21:10:56 17/5/2021	Close
major	21:07:54 17/5/2021	Close

< 1 2 3 4 5 6 7 >



OMNES en el mundo

