

FOCUS

PYME Y EMPRENDIMIENTO
Comunitat Valenciana

Alcoi
10/11

Gemelos digitales para la industria 4.0 en tiempo real

Grupo Ceteck

FINANCIA:



GENERALITAT
VALENCIANA

TOTS
A UNA
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ivACE
INSTITUT VALENCIÀ DE
COMPETITIVITAT EMPRESARIAL

ORGANIZA:



Centro Europeo de
Empresas e Innovación
de Alcoy-Valencia



UNIVERSITAT
POLITÀCNICA
DE VALÈNCIA

CAMPUS D'ALCOI



Ajuntament d'Alcoi

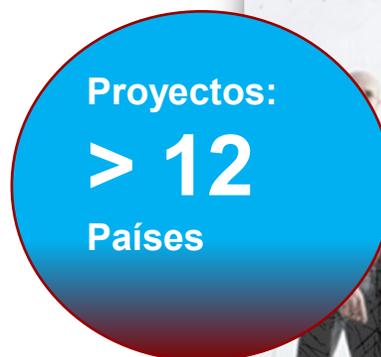
.... Grupo Ceteck

- Monitorización, Operación y Mantenimiento en Tiempo Real para **Industria 4.0**
- **Inteligencia Operacional**
- **Gemelos digitales**
- **IA for Industria**



➤ **13**
Sectores Industriales

- Power Energy
- Oil&Gas
- Pharma
- Food&Beverage
- Mining
- Steel
- Smart Facilities
- Agriculture
- Cement
- Pulp&Paper
- Automotive
- Chemical, logistics, telco...



Proyectos:
> 12
Países

- Portugal
- España
- EEUU
- Libano, Noruega, SudAfrica
- Marruecos, Palestina
- México, Israel, Argentina, Brasil...

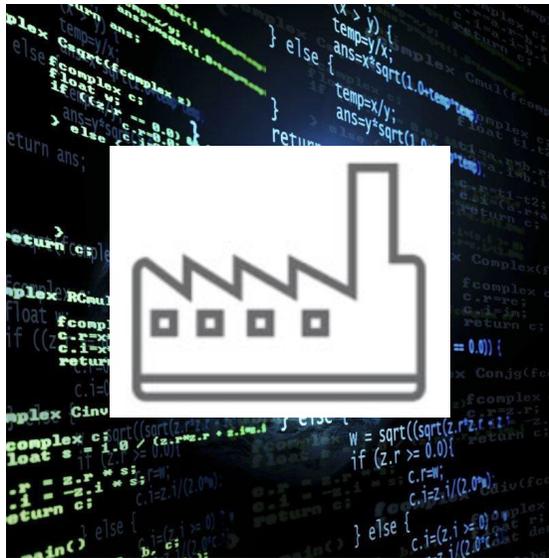


Clientes:
> 35
Multinacionales activos



Modelado digital de la industria. *Digital Twin (Gemelo Digital)*

- *Qué es un Gemelo Digital? Tipos? Operacional y 3D*



- Representación VIRTUAL de la realidad operacional de la Fábrica
 - Réplica digital virtual operacional de la planta industrial
 - Representa Activos (máquinas), procesos, productos, trabajadores, emplazamientos, etc
 - Estructura y caracterización de planta
 - Ejecutandose en tiempo real y paralelo a la real
 - Posibilidad de simulación
- Representación 3D interactivo



GEMELO DIGITAL

- An asset represents a logical or physical component of a process.



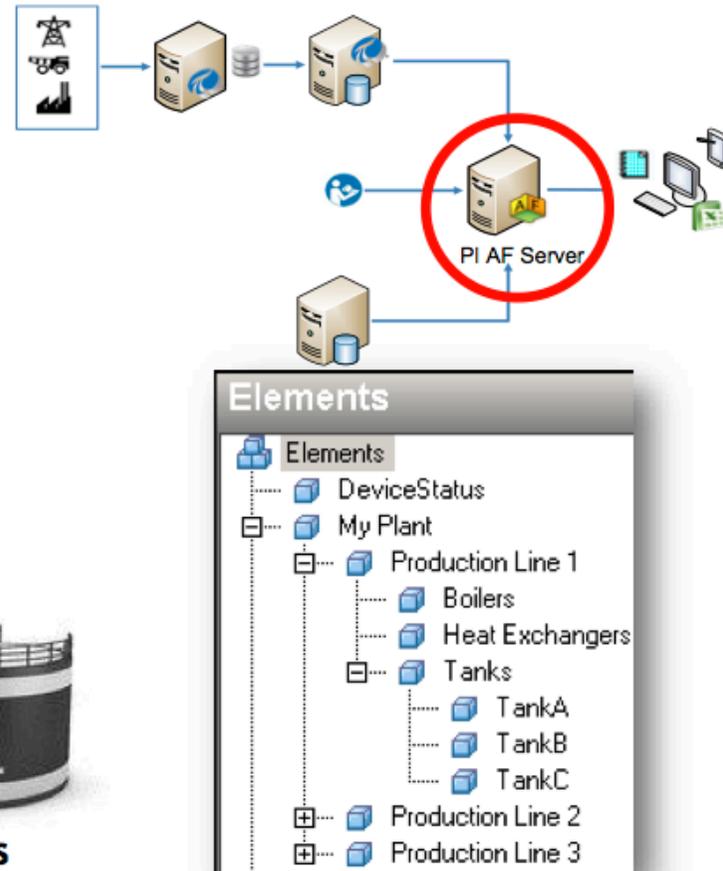
Boilers



Heat Exchanger



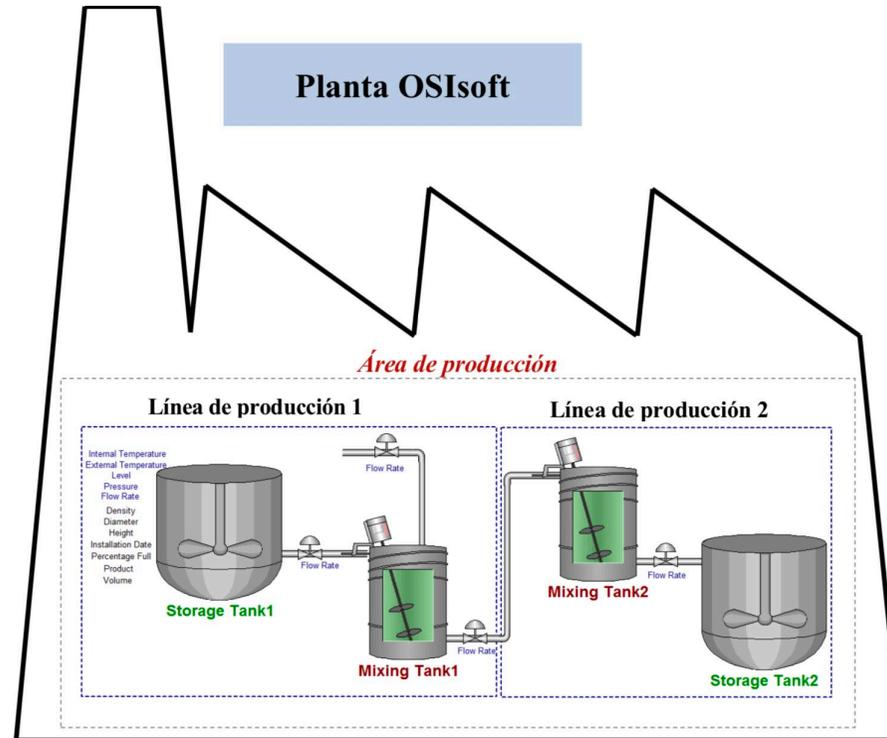
Tanks



Gemelo Digital de planta

3.2 Modelado digital de la industria.

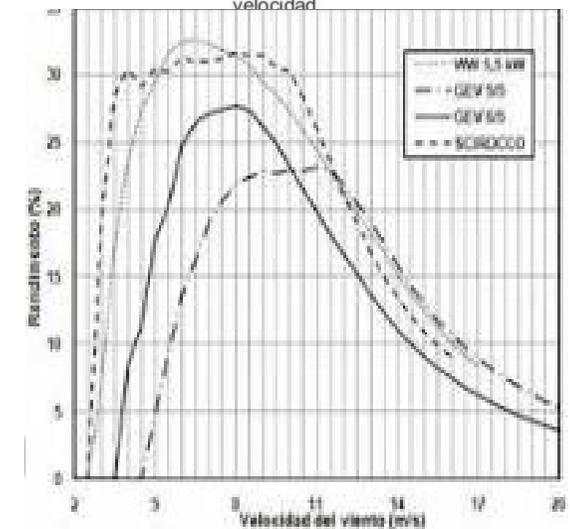
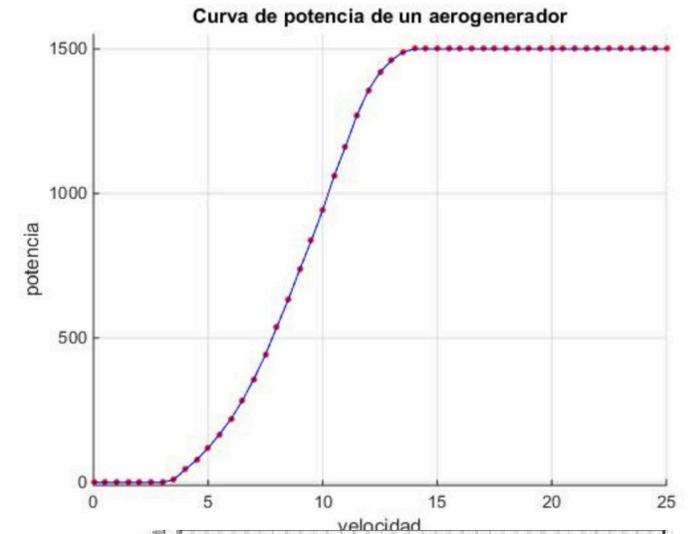
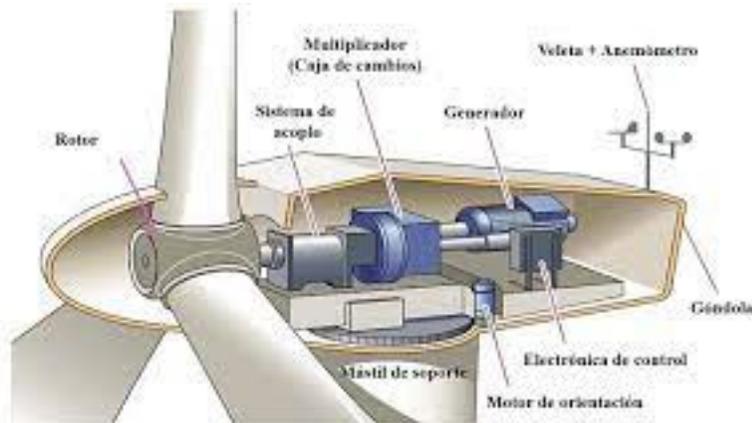
Ejemplo sencillo de planta *Digital Twin (Gemelo Digital)*



Gemelo Digital Industrial

3.2 Modelado digital de la industria.

Modelos físicos. Curvas de Fabricante y procesos. Construcción del *Digital Twin (Gemelo Digital)*



...Motores, bombas, generadores, procesos industriales, etc

Herramienta de Modelado de Gemelo Digital (Asset Framework)

The screenshot displays the PI System Explorer (Administrator) interface. The main window shows the configuration for 'Mixing Tank1'. The left sidebar contains a tree view of the system structure, including 'Production Area', 'Production Line1', 'Mixing Tank1', 'Storage Tank1', 'Production Line2', 'Mixing Tank2', and 'Storage Tank2'. The main area is divided into a table of variables and a properties panel on the right.

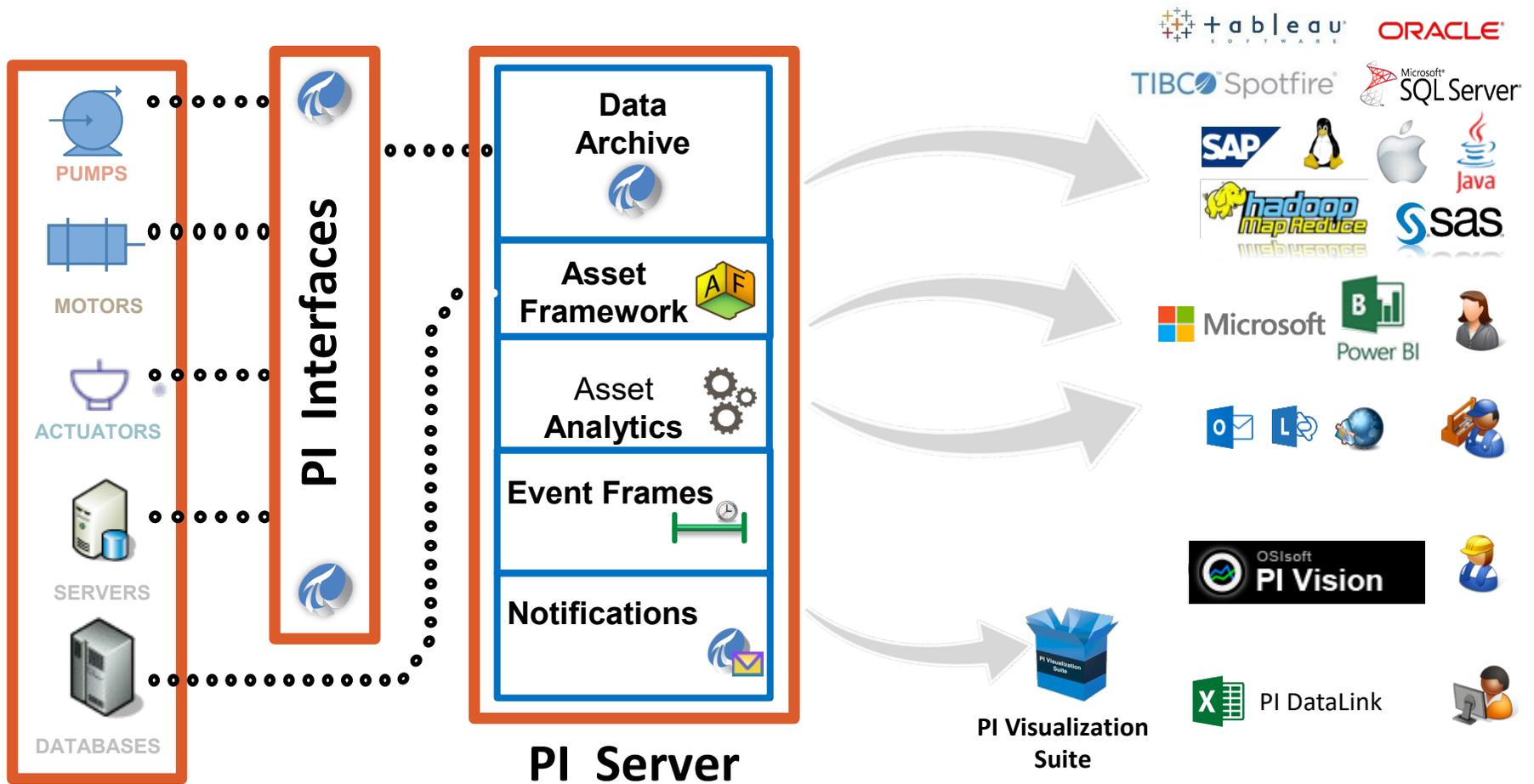
Table of Variables:

Category	Name	Value
Category: Future Data	Level_Forecast	5,5099 ft
Category: Process Variables	External Temperature	140,24 °F
Category: Process Variables	Flow Rate	48,183 US gal/min
Category: Process Variables	Internal Temperature	198,32 °F
Category: Process Variables	Level	2,966 ft
Category: Process Variables	Percentage Full	29,66 %
Category: Process Variables	Pressure	29,873 kPa
Category: Process Variables	Status	Normal Operation
Category: Process Variables	Tank Status	1
Category: Product Properties	Density	4321 g/L
Category: Product Properties	Product	BCS1717
Category: Tank Physical Properties	Asset Location	Production Line1
Category: Tank Physical Properties	Asset Name	Mixing Tank1
Category: Tank Physical Properties	Diameter	5 ft

Properties Panel (Right):

- Name: Level_Forecast
- Description: [Empty]
- Properties: <None>
- Categories: Future Data
- Default UOM: foot
- Value Type: Single
- Value: 3,4004 ft
- Data Reference: PI Point
- Display Digits: -5
- Settings... [Button]
- Path: \\PISRV\WPSD.OSIsoftPlant.PL1.MXTK1.Level_Forecast
- Links: Limits Forecasts

3. Arquitectura típica de Plataforma habilitadora de GEMELO DIGITAL



Herramienta de Visualización de Gemelo Digital PI VISION

