



Simulation /Virtual Reality/ Digital Twin?

36.000 b.c.

HEASTER.

NORLEAN

One of the 18 companies world leaders in the DTO sector.

Gartner DTO Market Guide 2021

Vendor 🧅	Product, Service or Solution	Background 🧅		
Ardoq	Ardoq	Enterprise Architecture EBPA/Strategy to Execution IT Operating System		
Arrayworks	Transformation Acceleration Platform			
Bee360	Bee360			
Bi77design	Enterprise Studio and Hori77on	FBPA/Enterprise Architecture		
BOC Group	ADONIS	EBPA/Business Process Analysis		
DusinessOptix	DusinessOptix	EDPA/Strategy to Execution		
Celonis	Celonis Execution Management System	Process Mining		
Corporater	Corporater Business Management Platform	Enterprise Performance Managemer		
Cosmo Tech	Cosmo Tech Simulation Digital Twin platform	Manufacturing Digital Twin		
EOV	SPHERAes	Enterprise Risk Management EBPA/Strategy to Execution		
Holocentric	Holocentric Business Management System (BMS)			
iGrafx	iGrafx Dusiness Transformation Platform	EDPA/Business Process Analysis		
Interfacing Technologies	Enterprise Process Center (EPC)	EBPA/Strategy to Execution		
Mavim	Mavim Intelligent Transformation Platform	EBPA/Strategy to Execution		
Norlean	Norlean Operations Analyzer (NOA)	Manufacturing Digital Twin		
Ortelius	Ortelius Continuum DTO platform	EBPA/Strategy to Execution		
Signavio	Signavio Business Transformation Suite	EBPA/Business Process Analysis		
Software AG	ARIS	EBPA/Strategy to Execution		

The background refers to the market where the vendor is coming from. The EBPA market has been further specified along the use case, showing EBPA/use case.

Source: Gartner (July 2021)

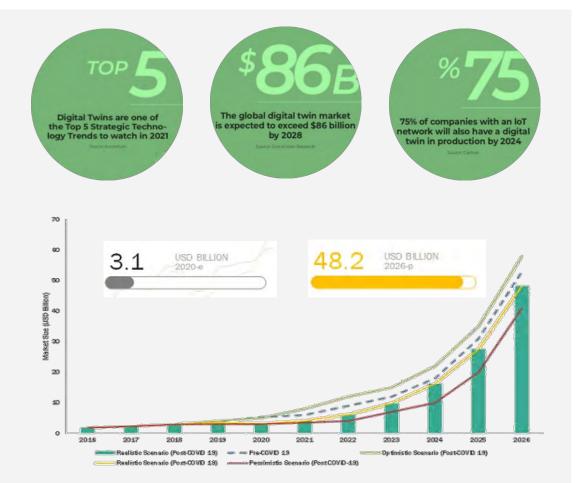
Gartner

Market Guide for Technologies Supporting a Digital Twin of an Organization

Published 13 July 2021 - ID G00742227 - 43 min read By Analyst(s): Marc Kerremans, Tushar Srivastava





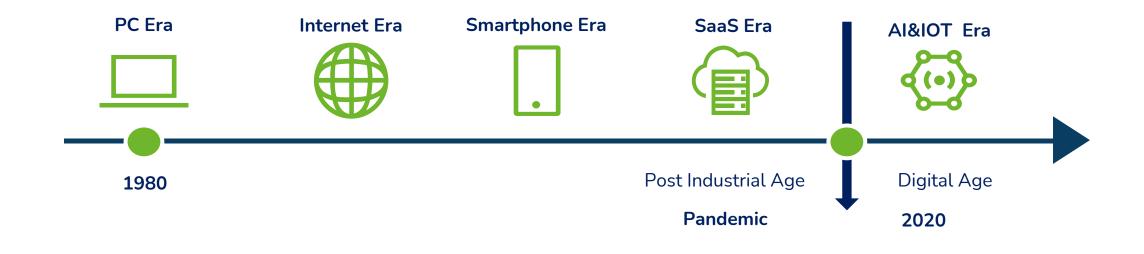


Source: Investor Presentation, Expert Interview, Industry Journal, Magazine, and MarketsandMarkets Analysis

WHAT IS THE PROBLEM?

The advance of de digitalization doesn't stop

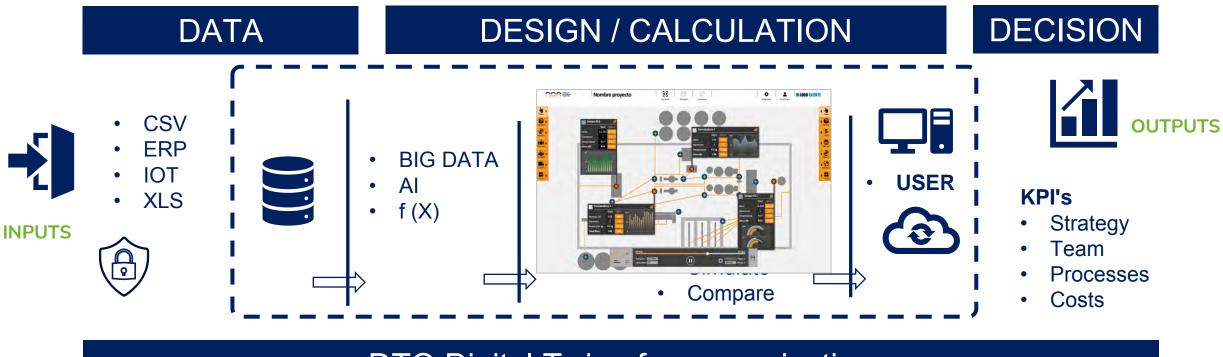




How do I work with 50% of the staff due to the Covid situation?
How do I manufacture if I lack raw material?
What happens if I change the Layout of my organization?
How do I manufacture if the price of electricity goes up?

SOLUTION Digital TWIN of an Organization - DTO





DTO Digital Twin of an organization

Ability to align business strategy to objectives quickly and easyly





Clients (+30) SERVIZO GALEGO de SAÚDE SPB CITROËN Schneider Electric Facsa ciclo integral del agua Estrella Galicia BF GAICTECH FRIGOLOURO () dominguez **egalsa** HR Megatech vitralba Rotogal RECENSI porexaal JICHICOLINO

AUTO Results & Benefits

- Easy Onboarding
- Flexible Solution
- High increase in productivity
- Payback < 1 year

GROUPE



grupo marsan coating applications for the future

Megatech



COMPETITORS/VALUE PROPOSITION Legacy, PLM, 2D





Complex

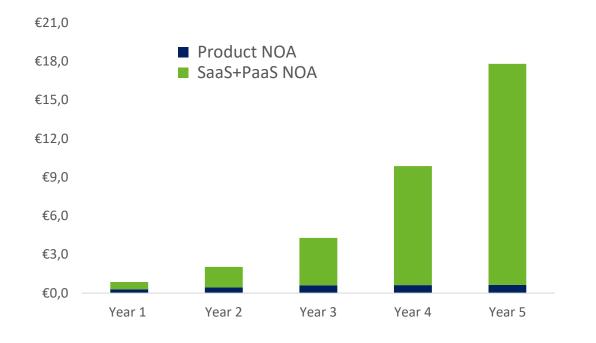
BUSINESS MODEL PASS - SAAS



PASS

Use of the platform to create solutions.

Turnover Mill €



SECTORIAL SASS

Quick implementation of the solution with minimal impact. First SaaS already working.

Users Vs Staff



Recurrent revenue in 3- 4 years : 5.000.000 €

GO TO MARKET STRATEGY

From where we are and towards where are we going.

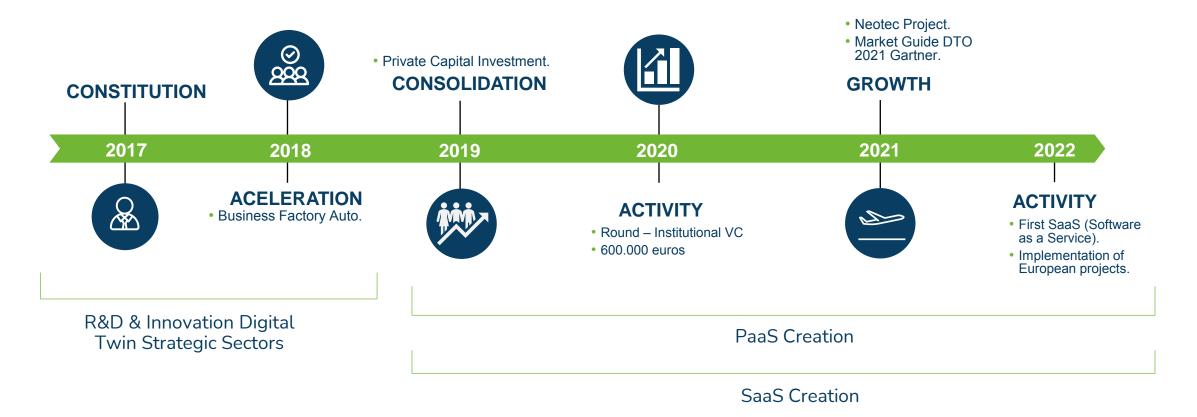








Digital twin **NOA** generate **multiple scenarios** to improve your decisions.









Daniel Prieto CEO - PhD Engineer Co-founder, 20 years creating and managing technological business.



Héctor Arias CTO Industrial Engineer, experience in simulation projects in industry.



Mónica Lopez CFO Economics 20 years of financial management in middle market companies.



Angelo Eca COO Data Scientist, 15 years of simulation and optimization projects.



Maite Gomez Business Development Market Expert, 30 years of experience commercial strategy



Cristina Gil Business Development Market Expert, 10 years of experience commercial strategy



Guillermo Thomás de Carranza Economics Department of Administration



Javier Fernandez Engineer of simulation and optimization projects.



Cristina Fernandez Industrial Engineer Expertise on industrial processes



Alejandro González Engineer of simulation and optimization projects.



Cristina Pardo Industrial Engineer Expertise on industrial processes



SOME SUCCESS CASSES AND THEIR PRICES*

*The prices presented in this document are estimates; they may vary depending on the amount of data to be studied, scenarios to be analyzed or other variables previously defined and negotiated *



2023

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SUCCESS CASES MEGATECH

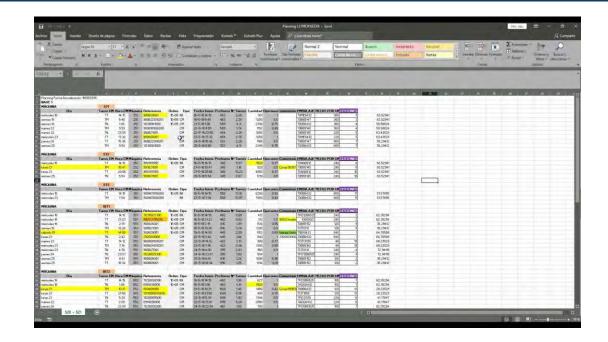


NEED:

The company needs to **establish a cycle time** to the line 3 of the logistics train that **picks up full baskets of parts** and **replenish them with empty baskets** to **fill a third newly installed line**.

SOLUTION:

Digital twin NOA for the optimization of the internal logistics train



- 1. Best train cycle time with new baskets 20 minutes
- 2. Reasonable number of cycles where the train breaks (6).
- 3. KPIs:
 - I. Maximum baskets waiting to be picked up.







NEED:

The company needed to know, simulate and improve its internal logistics planning in its intermediate warehouse in order to size the number of AGVs necessary for its correct operation.

SOLUTION

Digital twin of the warehouse with all its flows, highlighting the material inputs from the supply trucks, and outputs in synchronism with the production lines by means of logistic trains, etc.

VALUE CONTRIBUTION:

- 1. Permanent analysis of production flows. Simulation platform.
- 2. Optimization of the number of AGVs.
- 3. Simulation of warehouse distribution.
- 4. KPIs:
 - I. Number of warehouse movements
 - II. Measurement of AGV battery charge.



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Reduction of AGVs : **30%**







NEED:

Have "**optimal**" **planning / sequencing** of the work to be performed on all machines in the workshop.

Turn Experience into Know How!

SOLUTION

Digital Twin NOA for planning and simulation of tool shop production.

VALUE CONTRIBUTION:

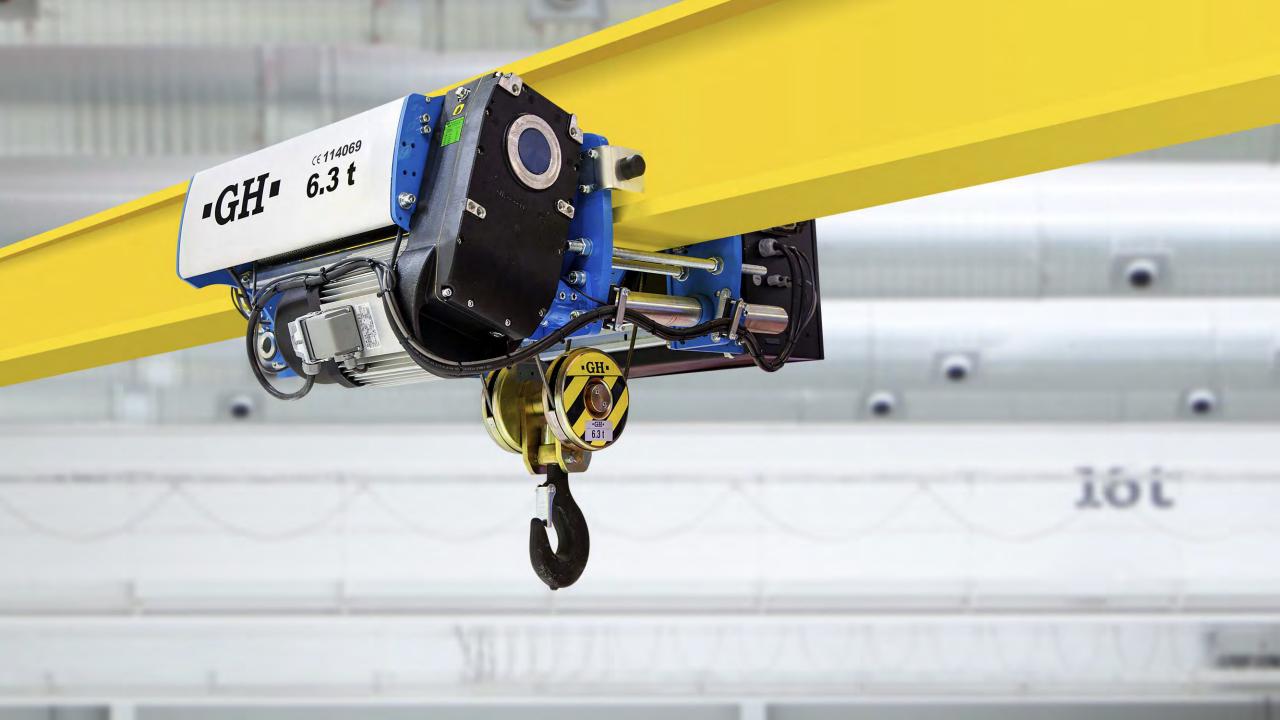
- 1. Demand management
- 2. KPIs:
 - I. Operational Efficiency (OEE)
 - II. Production turnaround time



Improvement THEORETICAL PLANNING

5-10%





SUCCESS CASES GH Cranes



NEED:

Improve and automate your planning process, high complexity

300 basic customizations!

SOLUTION:

Digital Twin NOA for **weekly** and **daily planning** of the **hoist assembly cell** and its **simulation**

- 1. Process Improvement.
- 2. Planning tool.
- 3. KPIs:
 - I. Operational Efficiency (OEE).
 - II. Lead Time Improvement









SUCCESS CASES MARSAN



NEED:

The company needs production planning to improve its productivity and customer delivery times, as well as to organize the various customer and maintenance activities.

SOLUTION:

Digital twin NOA of production planning



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VALUE CONTRIBUTION:

- **1.** Production planner
- 2. Maintenance control and organization.
- 3. Simulation of warehouse layout.
- 4. KPIs:
 - I. Reduction of production times.



ESTIMATED PRICE:

30.000,00€





NEED:

The company needs to **improve the prediction** of hams by type of pig, **establish a relationship** by breed, type, quantity and **weight range and reports to contrast with customer orders.**

SOLUTION:

Digital twin NOA for production planning.



- 1. Production planning platform.
- 2. Simulation platform.
- 3. Simulation platform.
- 4. KPIs:
 - I. Kilos/hour processed.
 - II. Percentage of meat yield.



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SUCCESS CASES FACSA

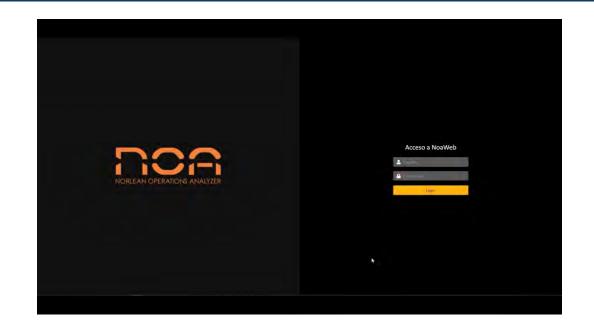


NEED:

The company needs to simulate the sludge line to understand the impact of introducing new cosubstrates, sludge and iron salts, as well as energy efficiency and the availability of heat and power generation.

SOLUTION:

Digital twin NOA for the simulation of the sludge line of a WWTP



- 1. Cost and energy vision
- 2. Flexibility to new substrates
- 3. KPIs:
 - I. Cost-effectiveness of cosubstrates
 - II. Evaluation of self-consumption.
 - **III.** Cosubstrates and sludge analysis





SUCCESS CASES LOGARITME



NEED:

The company needs to **optimize the procurement planning** of the **items it manages** within its **warehouse and optimize the staffing** required to **execute the various operational** activities.

SOLUTION:

Digital twin NOA for decision making in logistics warehouses.





- 1. Detailed view of the receiving, storage and dispatch part.
- 2. Decision support and possibility of generating multiple scenarios.
- 3. KPIs:
 - I. Maximum and safety stocks.
 - II. Supplier delivery lead times.





SUCCESS CASES SCHNEIDER ELECTRIC



NEED:

The company needs to know the daily and weekly planning of production lines and auxiliary workshops. High variability and multiple relationships between auxiliary workshops and main lines.

SOLUTION:

Digital twin NOA for production planning of the switchgear hall

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- **1.** Production order and personnel planning
- 2. Smoothing of the workload over the two weeks of production.
- 3. KPIs:
 - I. Visibility of saturation and bottlenecks.
 - II. Generation of 2-week planning







NEED:

The company needs to optimize the performance and utilization of several of its lines and optimize their planning, taking into account production costs.

SOLUTION:

Digital twin NOA to optimize performance and utilization of multiple line





- 1. Detailed view of production and costs.
- 2. Help in **decision making**
- 3. KPIs:
 - I. Main costs
 - II. Total production costs
 - III. Cost of storage.
 - IV. Cost per factory area



NORLEAN OPERATIONS ANALYZER

