

4 Data Challenges To **Address First Before** Capitalizing On The Digital Twin In Your **Factory**



data, manufacturing execution, and real-time streaming data — so plant managers and decision makers have the context they need to understand product models, can simulate the impact of variation in key assets and stages in your production process, and can implement realistic mitigation routines to address intrinsic system unpredictability. Having a Digital Twin of your smart factory sounds promising; however, you cannot create a Digital Twin without solving these 4 data challenges.

A Digital Twin of your smart factory can give you a real-time representation of its physical

attributes, systems, and processes — based on enterprise and site-specific transactions, historical

CHALLENGE

A Digital Twin relies entirely on digitized data. If data processing remains inefficient, then it is difficult to have a

Data Processing

Efficient data processing can be accomplished by using artificial intelligence and predictive models to sort through noise and resolve

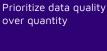
Accelerate execution for Uncover hidden meaning

conflicts between records. The traditional process analytics, Al can:

Digital Twin.







CHALLENGE

Missing data or values due to faulty sampling or restrictions can lead to poor decision making. Conflicting data or even redundant

Cleansing, Integration, and Contextualization

Data Acquisition,

Manufacturers need to ensure that they have the following processes locked down:

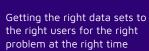
data creates bias in the analysis results.



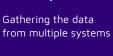
various and often

disparate sources

Merging the data from



Data contextualization



Data acquisition

Data cleansing

Ensuring the data

is clear of errors,

inaccuracies, and

redundancies





Choosing the right data storage option is crucial since a fully connected smart factory generates an enormous amount of data.

Data Storage

CHALLENGE





A database designed for



In order to create a Digital Twin of your smart factory, you must

A database designed for

managing huge sets of varied

and often-updated data in distributed systems

find out which storage option is right for your needs:



combination of both

CHALLENGE

The following carry a strict latency requirement:

smart factory's digital twin.

Data Processing Time

Data processing takes time and can be one of the most critical elements in creating your



Real-time monitoring

Create Your Smart Factory's Digital Twin

MDH enables you to:

pre-configured dashboards



Prediction



Real-time control

and the built-in Jupyter Notebook Give ALL permissioned users access to the right data, in the right place, all the time.

data challenges and create your smart factory's Digital Twin now.

Mareana's Manufacturing Data Hub (MDH) uses a schema-independent Artificial Intelligence (AI) and Machine Learning (ML) core to solve these 4 data challenges.

Plug-and-play data from different systems and vendors, and of varying levels of structure

Empower your data scientists to test, tweak, and develop in real-time using Python libraries

Minimize upskilling and maximize effectiveness by giving your operational users

Contact one of our data experts to learn how MDH can help you solve your

About Mareana Mareana is a leader in AI and data science with enterprise software generating insights for manufacturing, supply chain, and sustainability. Our core artificial intelligence rewrites the rules on connecting data and delivers superior outcomes because we effortlessly harness all data and its full potential. We drastically improve visibility and control in your organization so you can proactively sense and respond to dynamic changes in real-time.

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Our commitment to continuous innovation has been recognized by Gartner, who named us a "Cool Vendor in AI" and we have been featured as a thought leader in Silicon Review and Manufacturing Insights

We have delivered over \$1 billion in economic value to global leaders in life science, consumer goods,



chemical, food & beverage, and general manufacturing industries.



Mareana

Mareana included in list of 50 Most Valuable brands by The Silicon Review.

Mareana named as one of the Top 10 Smart Factory Solution Providers 2020 by Manufacturing Technology

Insights Magazine.



Gartner

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Liquid Data. Deep Insights.



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