LUMEN

WEB PLATFORM

GROUPE bySNEF

LUMEN
WEB PLATFORM

A platform for
Process Optimization and **Digital Control**.

Here, the physical world of production approaches the virtual world of information technology.

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Lumen IOT Connect
APP for
OSISoft integration, OPC UA/DA, Flat-File, SOA, rest-api, SAP-PI/PO, BIM-IFC format, among others

Lumen Analytics
Analyze your KPIs, metrics, and goals. Create and share reports with real-time data.

Lumen Cognitive
App for Predictive control and process optimization

Lumen Explorer
App for Digital Twin in 3D
AR - VR - SR

Lumen DOCS
App for knowledge management based on Data and Document Searching Engine

Lumen Live
Communicate and collaborate using team chat and switch to video or audio calls

3D
MANUFATURA ADITIVA

IA
INTELIGÊNCIA ARTIFICIAL

IoT
INTERNET DAS COISAS

SynBio
BIOLOGIA SINTÉTICA

CPS
SISTEMAS CIBER-FÍSICOS

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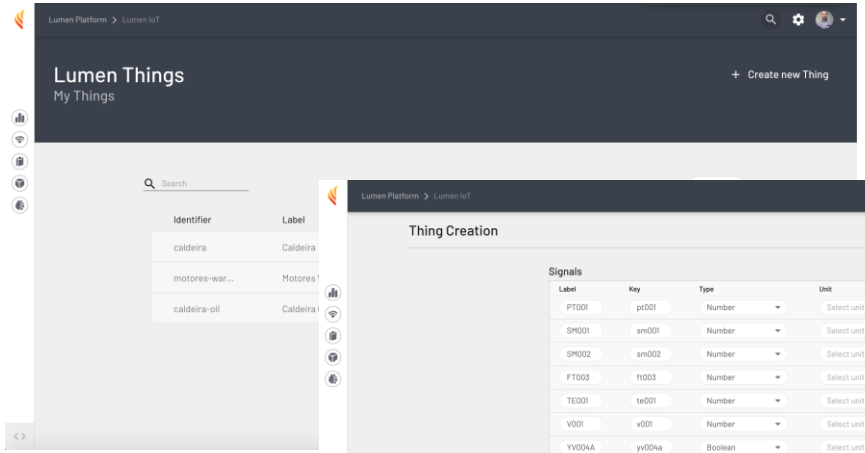
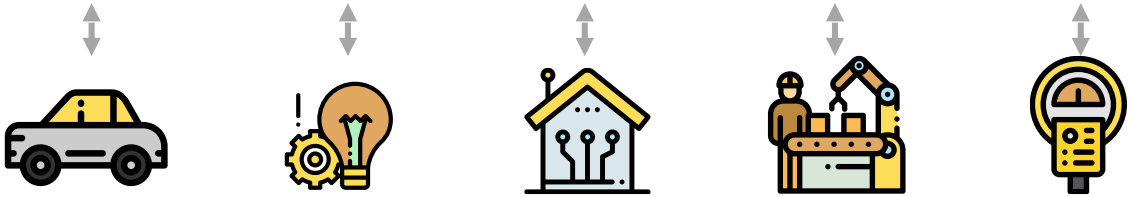


Lumen IOT Connect

APP for
OSISoft integration, OPC UA/DA, Flat-File, SOA, rest-api, SAP-PI/PO, BIM-IFC format, among others

The Lumen IoT Connect is a service manager that allows easy and secure connection of devices to applications and other devices.



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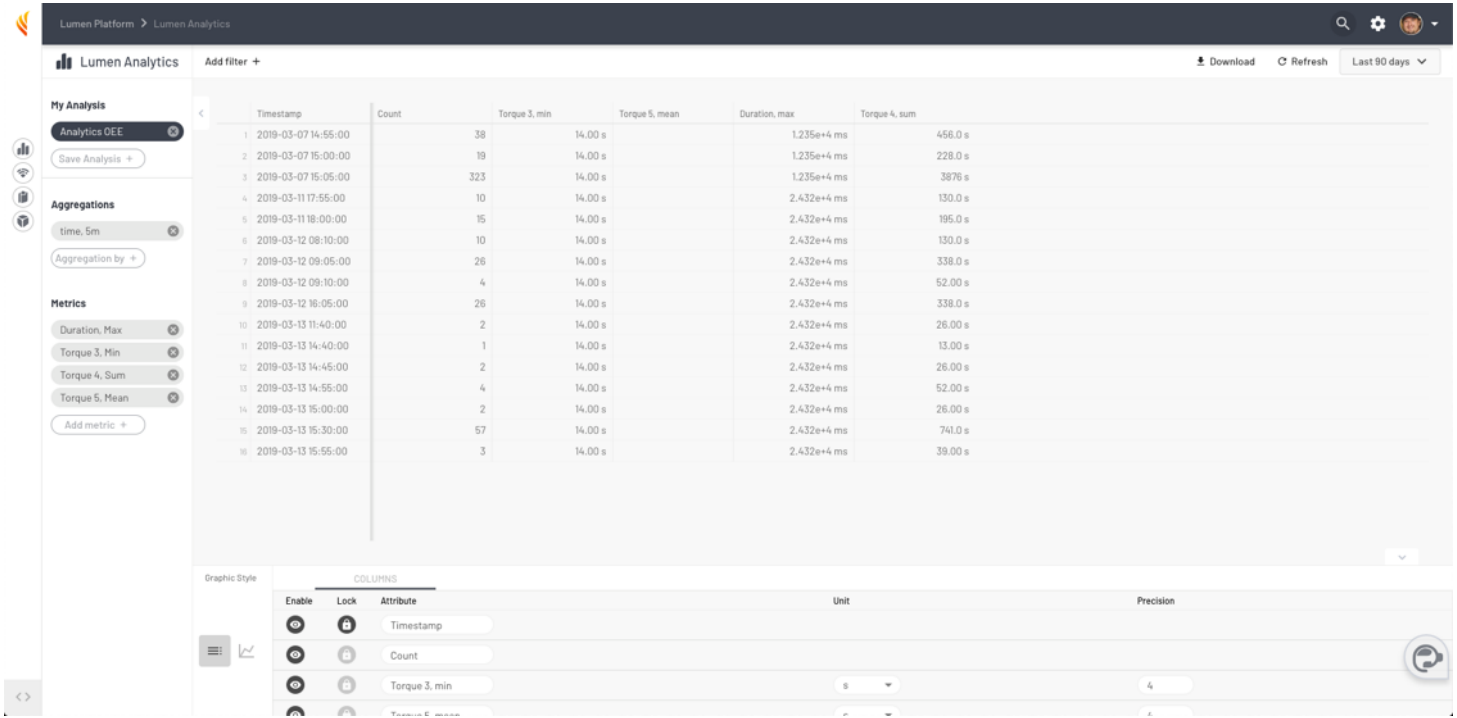
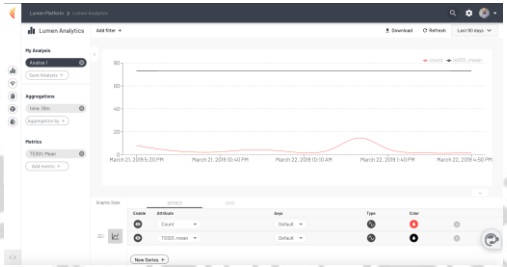
Lumen Analytics

Analyze your KPIs, metrics, and goals. Create and share reports with real-time data.

Understand the behavior of your data to better evaluate performance, production, and more.





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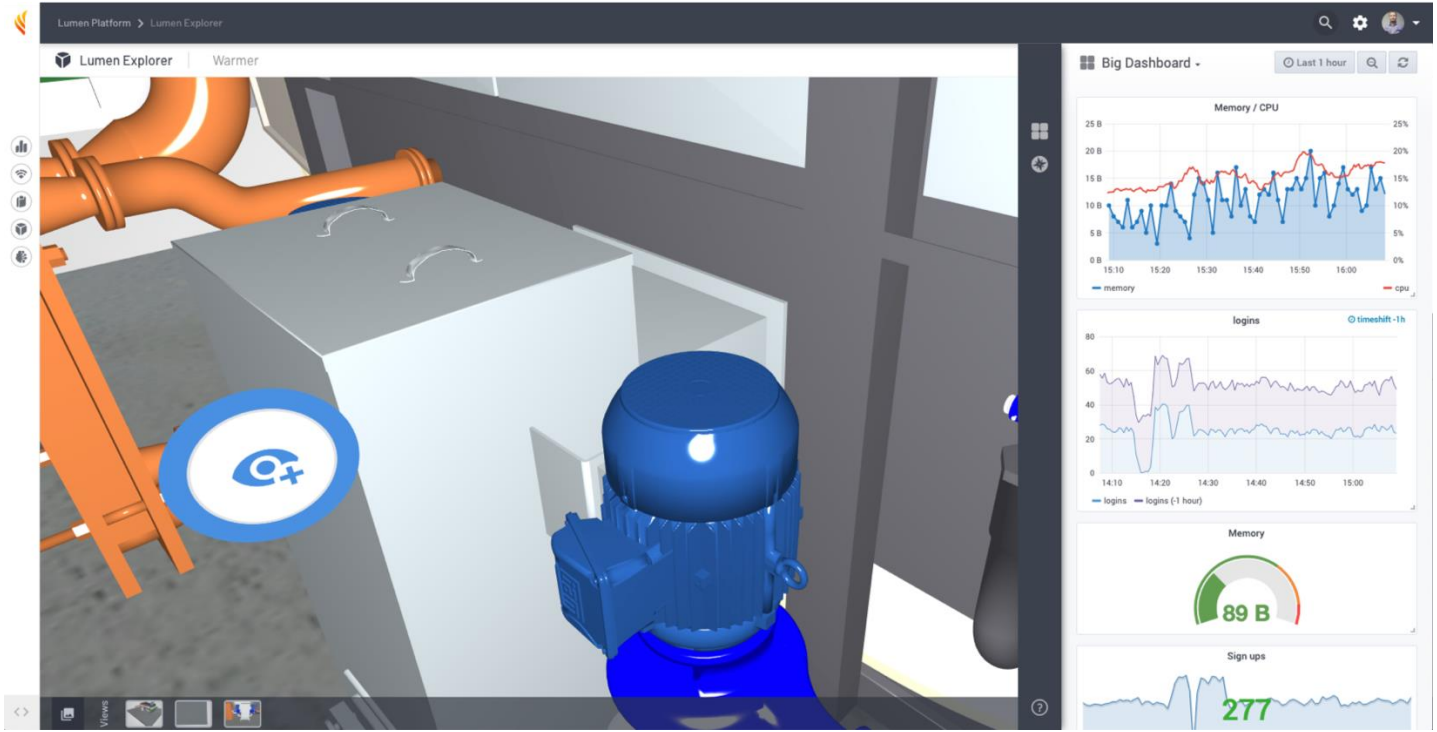
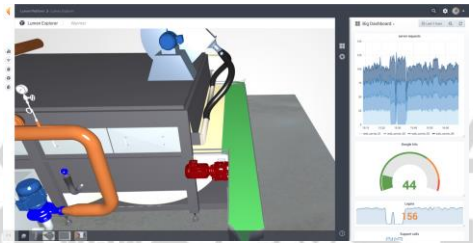
Lumen Analytics

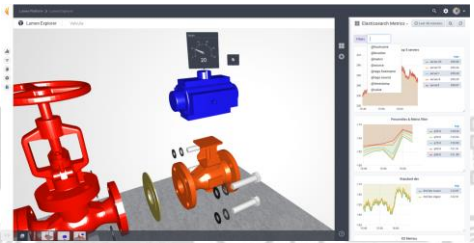
Analyze your KPIs, metrics, and goals. Create and share reports with real-time data.

Lumen Analytics allows you to query, visualize, alert on and understand your metrics no matter where they are stored. Create, explore, and share dashboards with your team and foster a data driven culture.

Grafana and Kibana Integration







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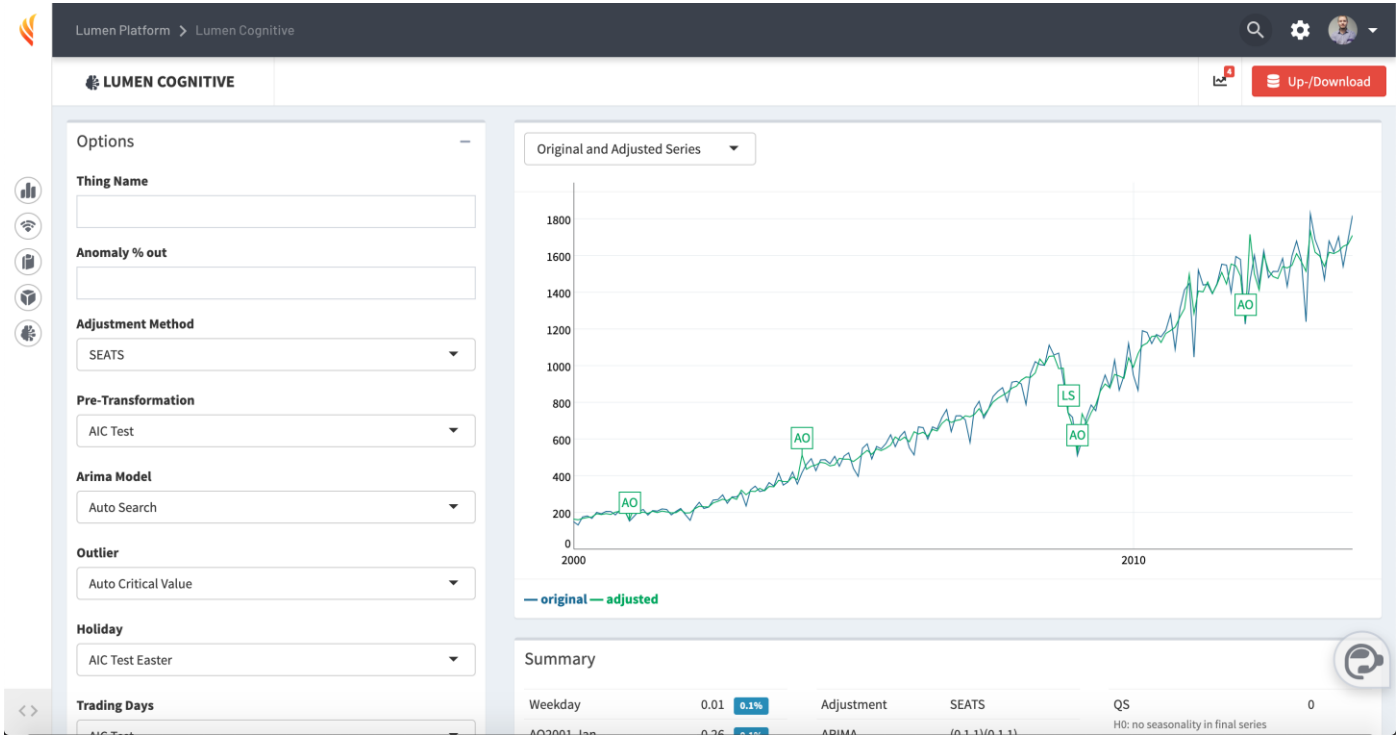
Lumen Cognitive
App for Predictive control and process optimization

The Time Series Forecasting is closely integrated with the **Lumen Cognitive**. The data are extracted from the Lumen Cognitive for analysis and the results of the anomalies are displayed in the Lumen panels.



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1. Data collection with constant periods
2. Analysis of autocorrelation and correlation between variables
3. Stationary Research
4. Using the ADF method, Augmented Dickey-Fuller
5. Correction of the faces (p, d, q) (P, D, Q) of ARIMA
6. Assume positive correlation of gains and opportunities
7. Analysis of results
8. Support for decision making
9. Search for correlation and autocorrelation in the
    1. Presentations of the Standards
    2. Additive Outlier (AO)
    3. Innovation Outlier (IO)
    4. Level Shift (LS)
    5. Temporary change (TC)
    6. Seasonal Level Shift (SLS)
    7. Possible changes:
    8. Equipment Adjustment
    9. Control mesh, e.g. PID
    10. Cleaning and / or exchange of equipment, e.g. Filter, or total exchange of equipment
    11. Change of parameters for seasonality in the process, eg Schedules of the Day, energy use, human resources, calibrations or equipment calibrations
    12. Entropy, e.g. underutilized equipment (misuse), wear.

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Understanding the outliers is critical in a data analysis for at least two aspects:

Outliers can bias the entire result of an analysis;

- The behavior of outliers may be just what is being sought.
- Outliers have several other names, such as: discrepant data, out-of-curve points, unusual observations, anomalies, atypical values, among others.

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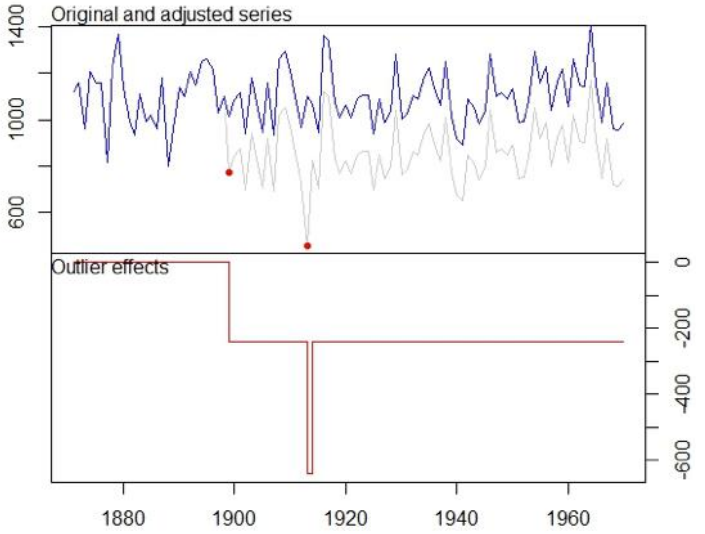
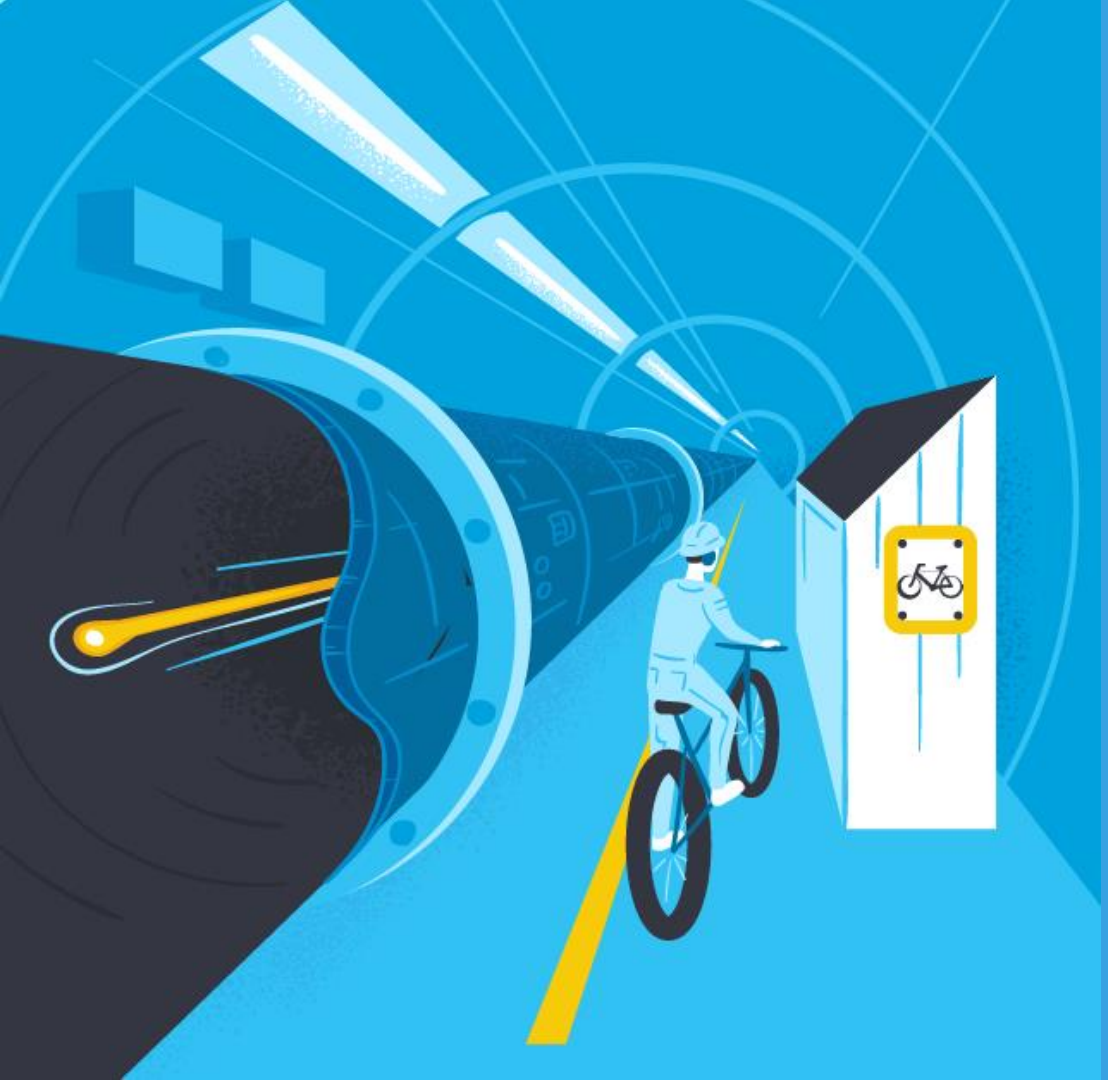


Modelo	Série	Parâmetro	Estimativa(1)	Teste t(2)
ARIMA (1,1,4)	IPR	ϕ_1	0,24031 (0,08261)	2,91
		θ_4	0,19528 (0,08202)	2,38
	$INT10/69_t$	ω_0	37,00175 (7,09651)	5,21
	$INT05/76_t$	ω_0	25,37457 (7,02618)	3,61
	$INT03/77_t$	ω_0	72,79553 (7,10295)	10,25
		ω_2	59,14859 (7,24424)	8,16
		ω_3	27,92952 (7,34389)	3,80
		ω_4	17,22035 (7,26869)	2,37

(1) Erro padrão da estimativa.
(2) Significativo ao nível de 5%.



elastic

Elasticsearch is a distributed RESTful search and analysis engine capable of solving a growing number of use cases. Like the heart of Elastic Stack, it stores your data centrally so you can discover what's expected and discover the unexpected.

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Lumen Explorer
App for Digital Twin in 3D
AR - VR - SR

Several factors have now converged to bring the concept of the digital twin to the front line as a disruptive trend that will have an increasingly broader and deeper impact over the next five years.

- Maintenance 4.0
- Operator 4.0
- Simulation & O
- BIM
- SE - Searching Engine

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Lumen Explorer
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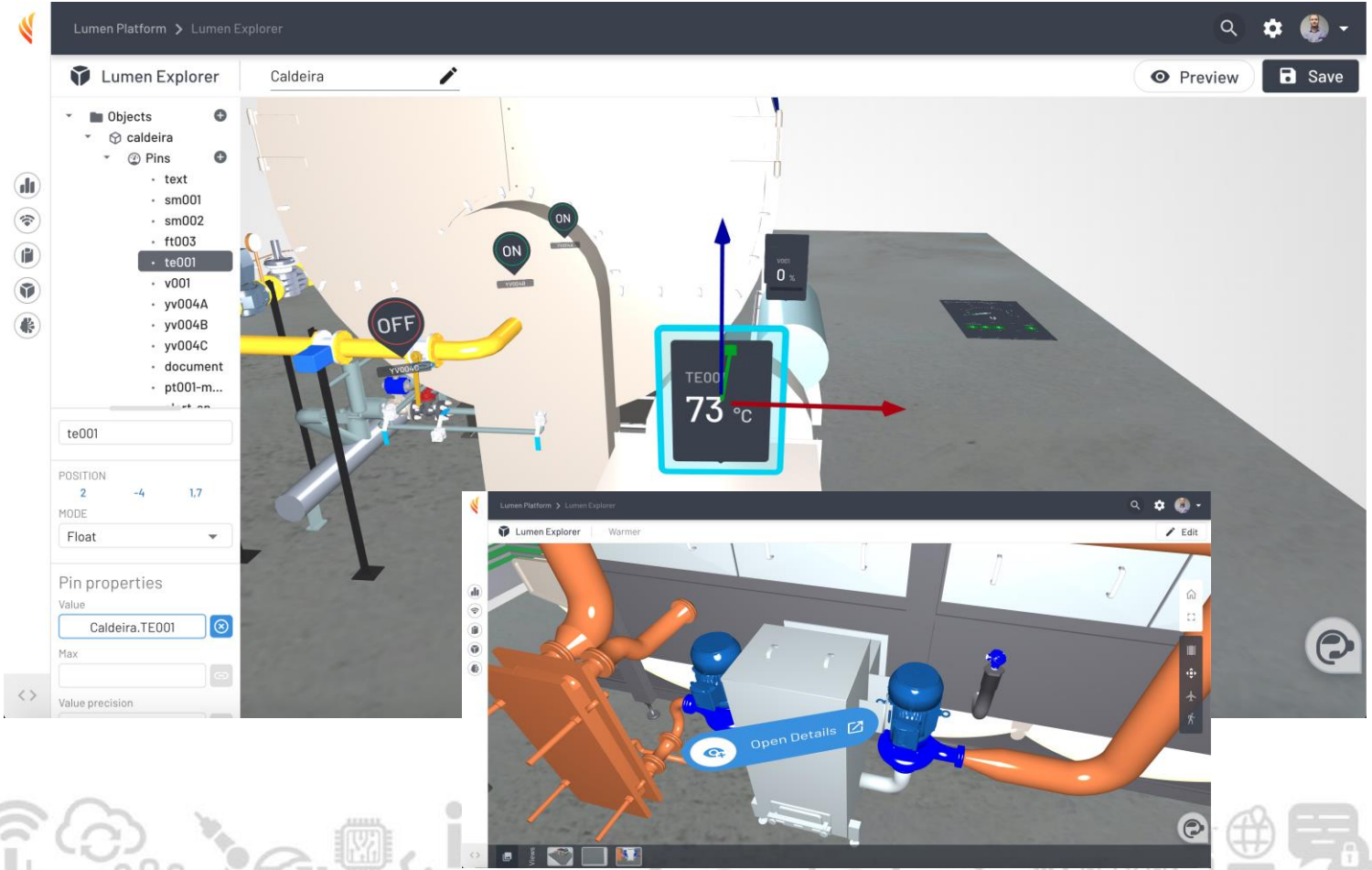
Create beautiful scenes, billboard, links to documents, explode objects and more.



IT, Depends

It's pretty complicated to make some things simple, and even more complicated to make other things possible. We embrace and value the knowledge required to do both.

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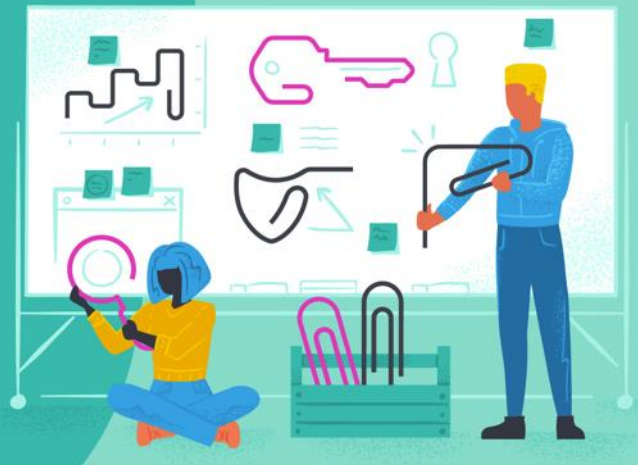

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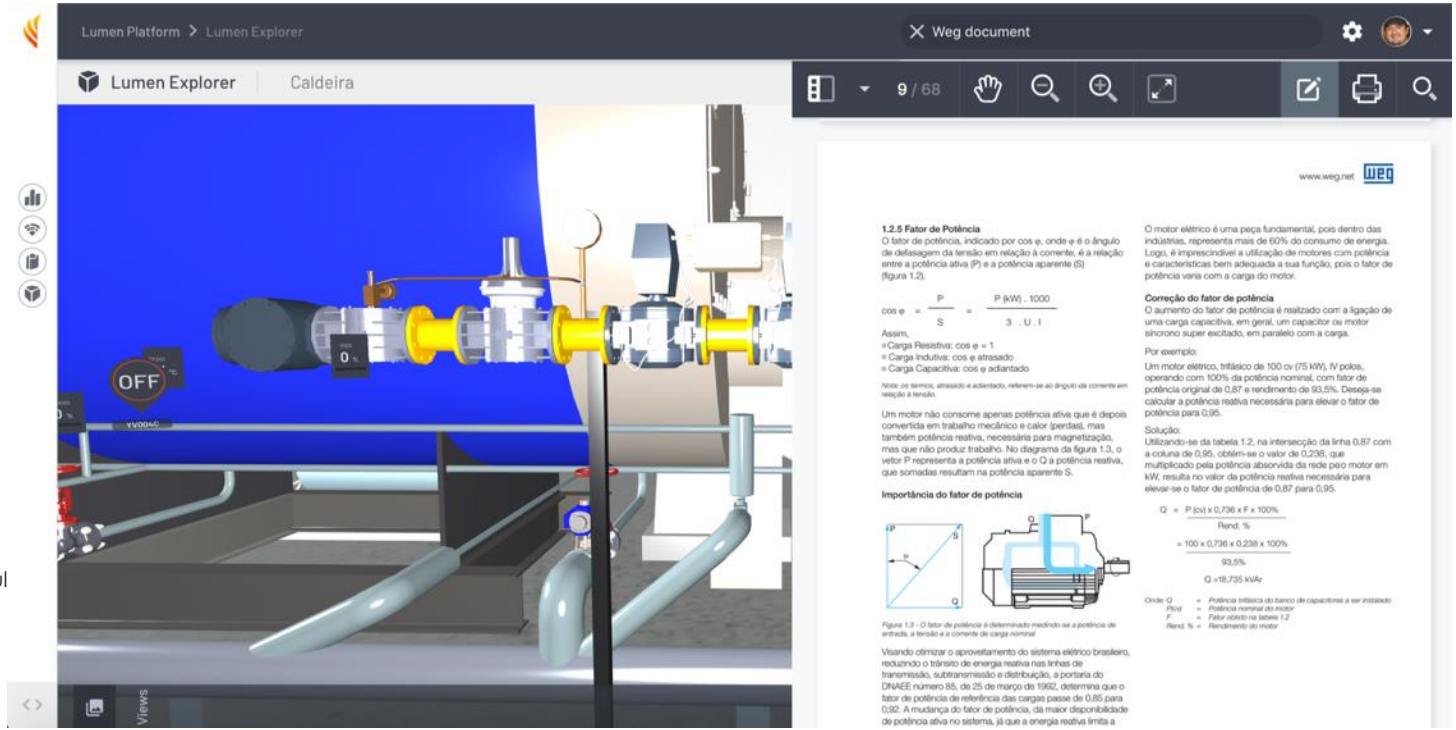

Lumen DOCS

App for knowledge management based on Data and Document Searching Engine

Search engine with automated tracking, OCR, tagging and instant ful text search, VIDEO.

Instant Search
Perform a Google-like search through your documents and images contents

Tagging
Tag your documents to easily find what you need

Formats
supports all popular document formats

OCR
Performs OCR on your images and PDFs

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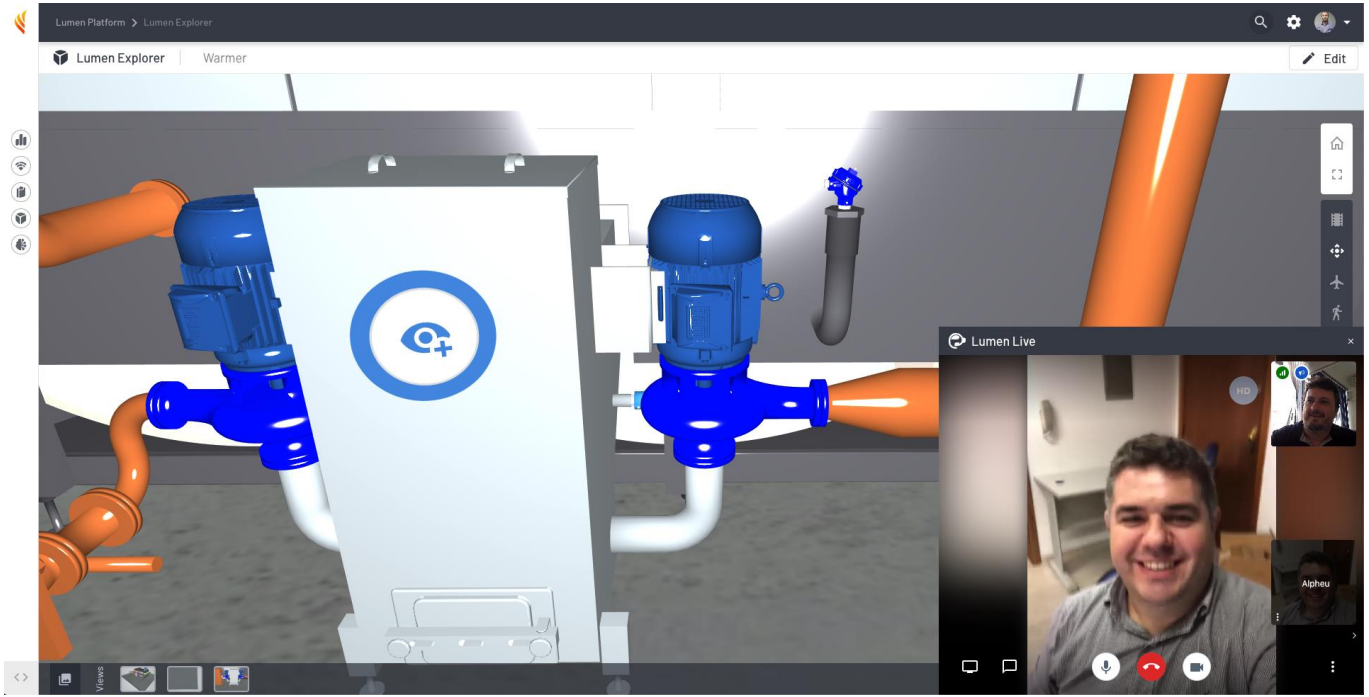
Lumen Live

Communicate and collaborate using team chat and switch to video or audio calls

At Lumen Live, we believe every video chat should look and sound amazing, between two people or 200. Whether you want to build your own massively multi-user video conference client.

- take pictures
- create videos
- real-time maintenance with helpdesk
- Share scenes in 3D
- Share documentation



Secure, Simple and Scalable Video Conferences

Multiuser video XMPP server component

Recording and live streaming

library for secure audio/video communication

Be intuitive, simple and for everyone

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