

NIOTANTEK Platform instruction manual

INDEX

Content

1- How to Register with NIOTANTEK?	2
2- Inside the Demo Platform:	2
2.1-Dashboard	2
2.2-Accounts.....	3
2.3-Billing.....	4
2.4-Support	5
2.5-Production.....	5
2.5.1-Maps	6
2.5.1.1-2D map.....	6
2.5.1.1.1-Layer Manager	10
2.5.1.2-3D map.....	17
2.5.2-Planning operations	17
2.5.3-Inventory	18
2.5.4-Resources	18
2.5.5-IoT	19
In the IoT tab we have access to the list of sensors that are installed on the machines. ...	19
2.5.6-Reports.....	19
2.5.6.1-Exploration	19
2.5.6.2-Environment.....	19
2.5.7-Communications	19
2.5.8-Data storage	22
3- I liked the demo, how can I buy the PRO version?.....	22
4- What other services does NIOTANTEK offer?	22

1- How to Register with NIOTANTEK?

After exploring the content of the NIOTANTEK website, you thought it might be the ideal platform for your business. Since you want to start using the platform, first of all you need to register by clicking on one of the "Start Now" buttons, which will take you to the login/registration page. Click on "Register Now!" and fill in the form.

Once you've registered, you can log in and you'll have access to a demo model of the platform.

2- Inside the Demo Platform:

On the platform you can see the functionalities and assess whether it fits your business.

2.1-Dashboard

In the Dashboard tab, you have access to information such as Temperature, Humidity, Wind Direction, Wind Speed. And a graph to monitor your quarries.



Figure 1- Environment Graph Values

Both the first and second graphs can be changed to Pressure and Visibility respectively.



Figure 2- Graph values for Environment 2

In Quarry Monitoring you can change the graph depending on the information you need to visualise. You'll need to filter by the "Quarry" you want to visualise, the "Process" (Slag heap, All, Extraction data), the "Parameter" (Volume, Weight, Cost, Area), the "Mode" (Cumulative, Relative), the "Option" (Total, Levels) and the "From" and "To" which will be the date of the

filtered values for the selected quarry.

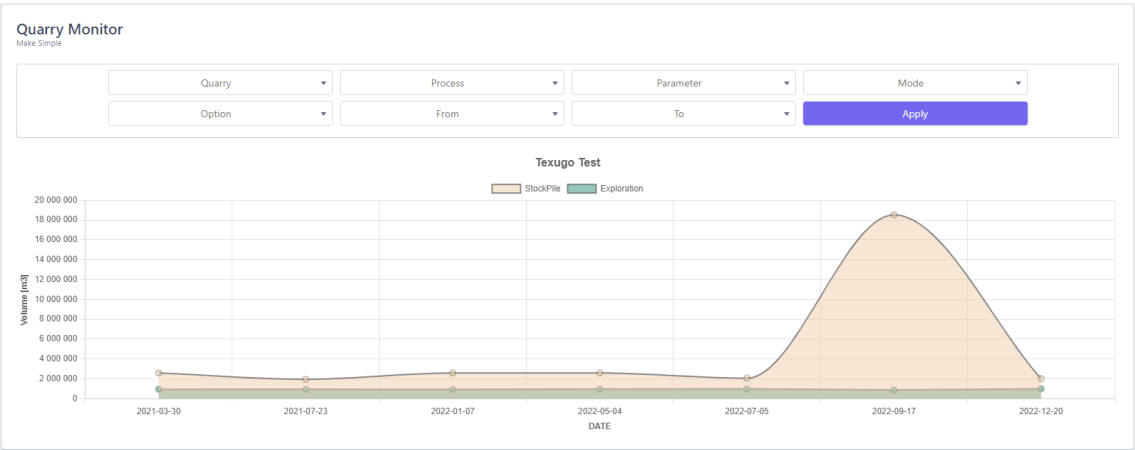


Figure 3- Quarry Monitoring Chart

2.2-Accounts

In the Accounts tab you can see which companies and quarries are associated with your account, and you can also change any information that is incorrect.

Niotantek - Enter a new stone universe.

Copy Excel PDF Print

Company	VAT	Address	Country	Start subscription	End subscription	Package	Payment	Account type
Exemplo de Empresa	123456789	Vila	Portugal	2022-02-01	2023-02-01	A1	Bank transfer	Pro

Showing 1 to 1 of 1 entries

First Previous 1 Next Last

Figure 4- Company information table

Niotantek - Manage your quarries without effort.

Copy Excel PDF Print

Quarry name	Country	County	Address	License	Administration	Class	Situation	Mineral	Geology	Boundaries
Texugo Test	Portugal	Vila Viçosa	Bencatel	10012	Licensed	Class 2	Active	Marble	36D	457

Showing 1 to 1 of 1 entries

First Previous 1 Next Last

Figure 5- Quarry information table

You can also add and manage your users/collaborators. You can search for a specific user by filtering by quarry.

General

Manage your team without effort

See beyond

+ Add New User

Select

Name

Apply

Copy

Excel

PDF

Print

Name	Phone	Email	Status	Job title	Language	Quarry	Actions
Rafael	(000) 000-000-000		On	Admin	English	Texugo Test	

Showing 1 to 1 of 1 entries

First

Previous

1

Next

Last

Figure 6- User information table

2.3-Billing

In the Invoicing tab you will see a record of all payments made and yet to be made, including downloadable supporting documents.

Niotantek - Full time management

Copy

Excel

PDF

Print

Company	Invoice	Proforma	Emission Date	Expiration Date	Amount	Status
Exemplo de Empresa			2023-03-13	2023-07-13	€1234.00	On
Exemplo de Empresa			2023-10-19	2023-10-19	€200.00	On

Showing 1 to 2 of 2 entries

First

Previous

1

Next

Last

Figure 7- Payment registration table

2.4-Support

In the Assistance tab you can send any feedback you think is necessary, questions, improvements, requirements, etc...

Niotantek - A click away

Subject:

Reason:

Select

Message:

Send

Figure 8- Contact form

2.5-Production

Following the Production tab opens up a whole new set of functionalities:

2.5.1-Maps

2.5.1.1-2D map

You have access to a 2D map of your quarries, here you can make all the markings you need for your work.

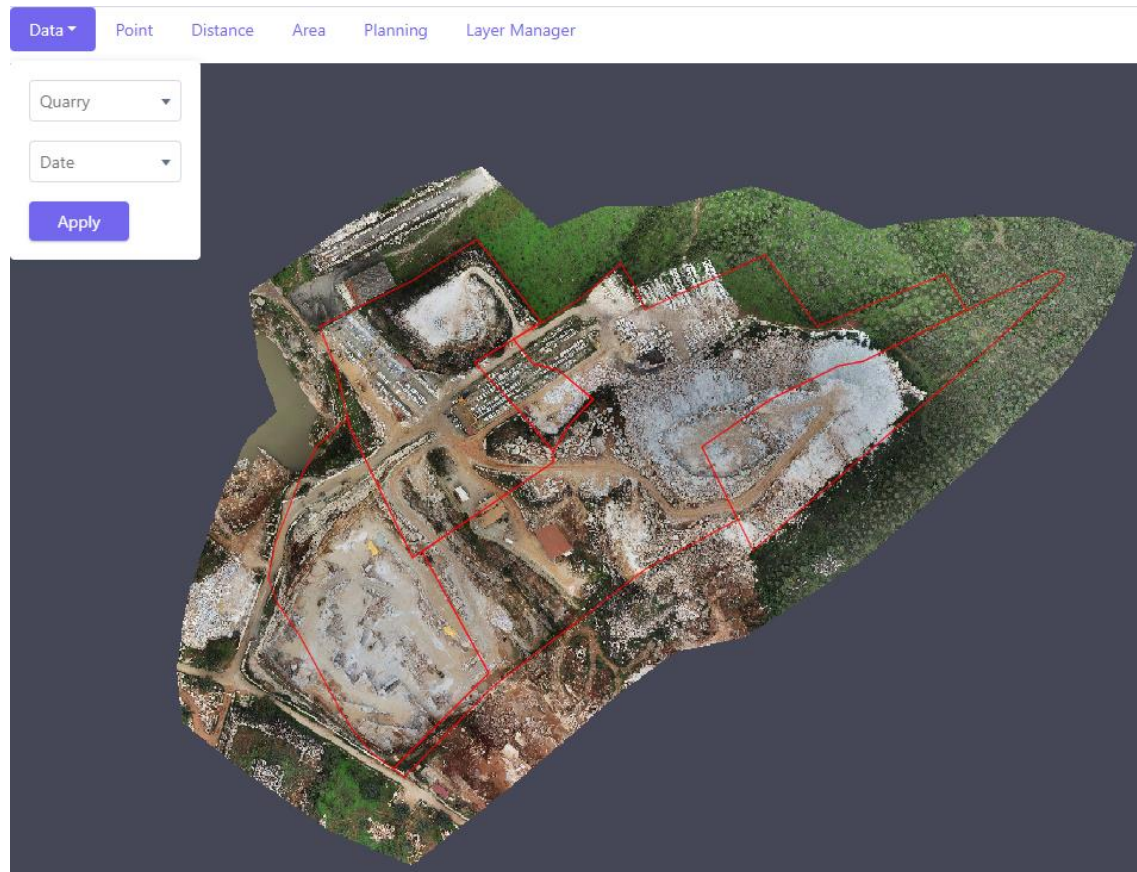


Figure 9- 2D map of the selected quarry

You have access to data from different quarries and dates when the images were taken to make the map.

You can mark points that give you the latitude, longitude and elevation of each point. You can also import or export this information if you need to. As well as points, you can also draw lines, areas and planes to better orientate your 2D maps.

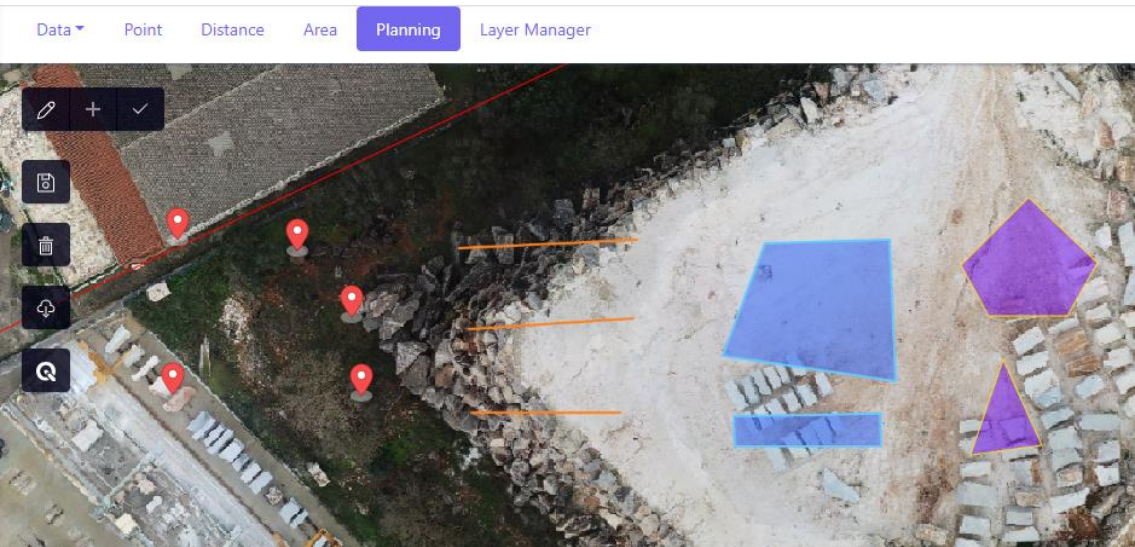


Figure 10- Different types of signage on the 2D map

When you click on the point you have placed, a pop-up will appear with some information such as: the point number, the latitude, longitude and elevation of that point, notes if you need to identify more detailed information and finally the date on which the map in question was surveyed.

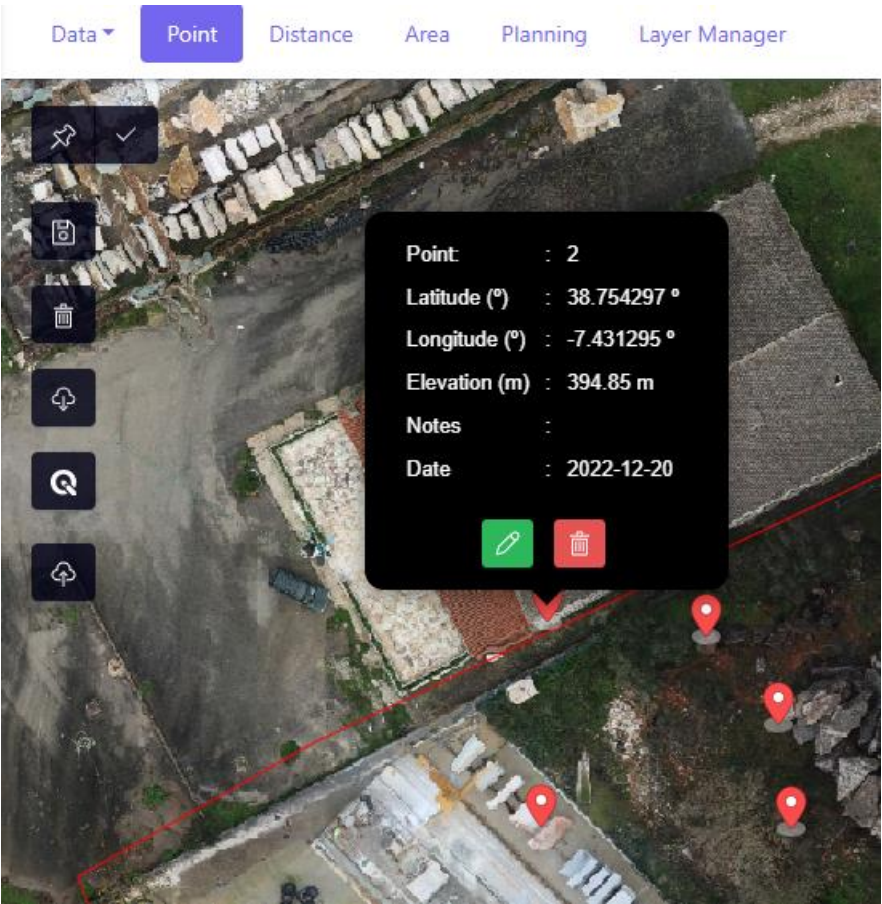


Figure 11- Signposting by dots on the 2D map

When you click on the line you have placed, a pop-up will appear with some information such as: the ID of that line, the distance which is the sum of the length of all the points, notes if you need to identify more detailed information and the date the map in question was surveyed.

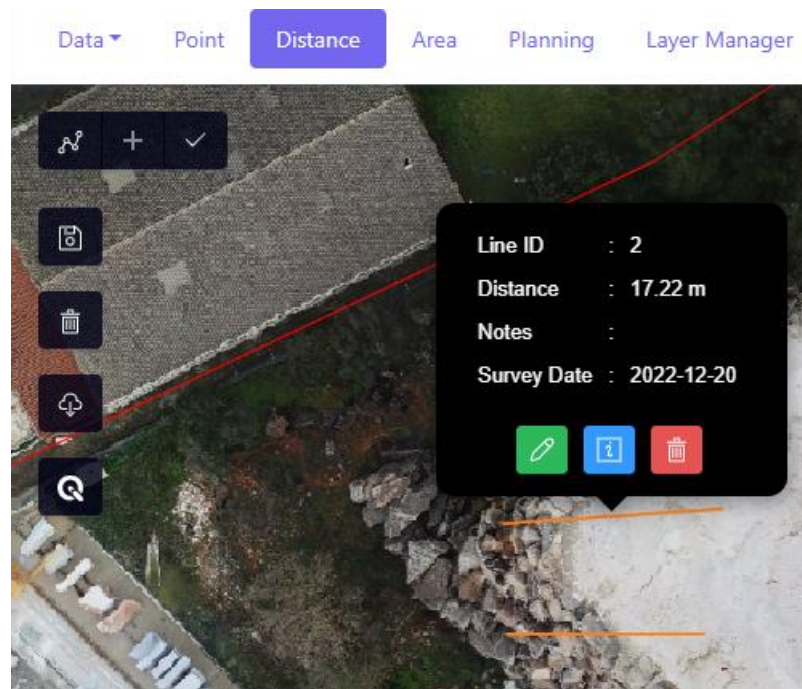


Figure 12- Distance signalling on 2D map

When you click on the area you have placed, a pop-up will appear with some information such as: the ID of that area, the selected area, notes if you need to identify more detailed information and the date the map in question was surveyed.

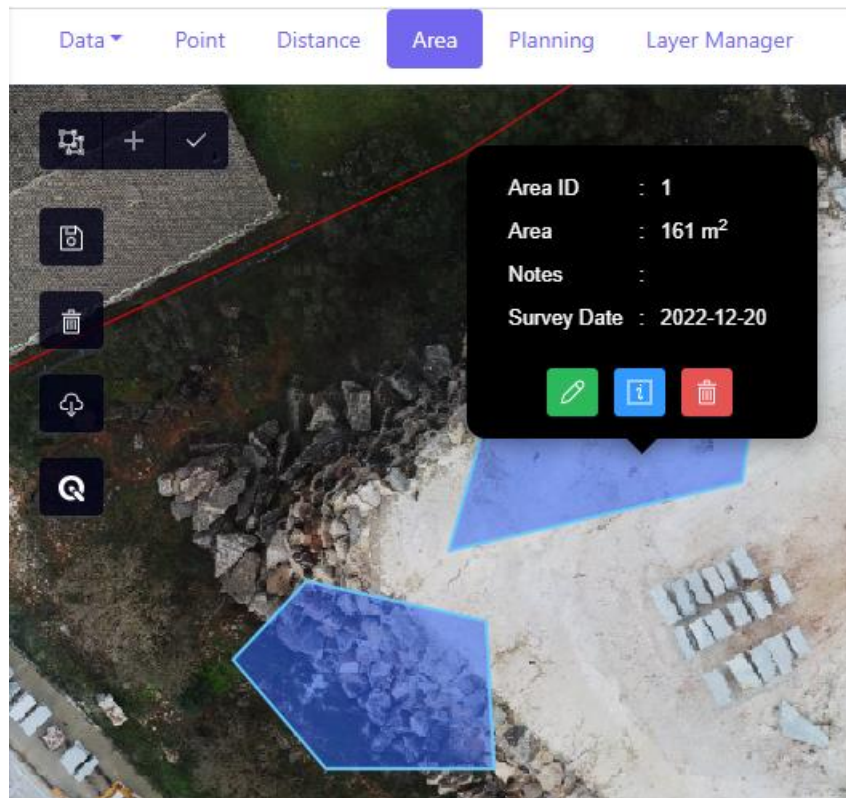


Figure 13- Signposting by area on the 2D map

When you click on the planning you have placed, a pop-up will appear with some information such as: the ID of that planning, the area of the zone that has the planning defined, the volume, notes if you need to identify information in more detail, the date the map in question was surveyed and whether it has been dismantled or not.

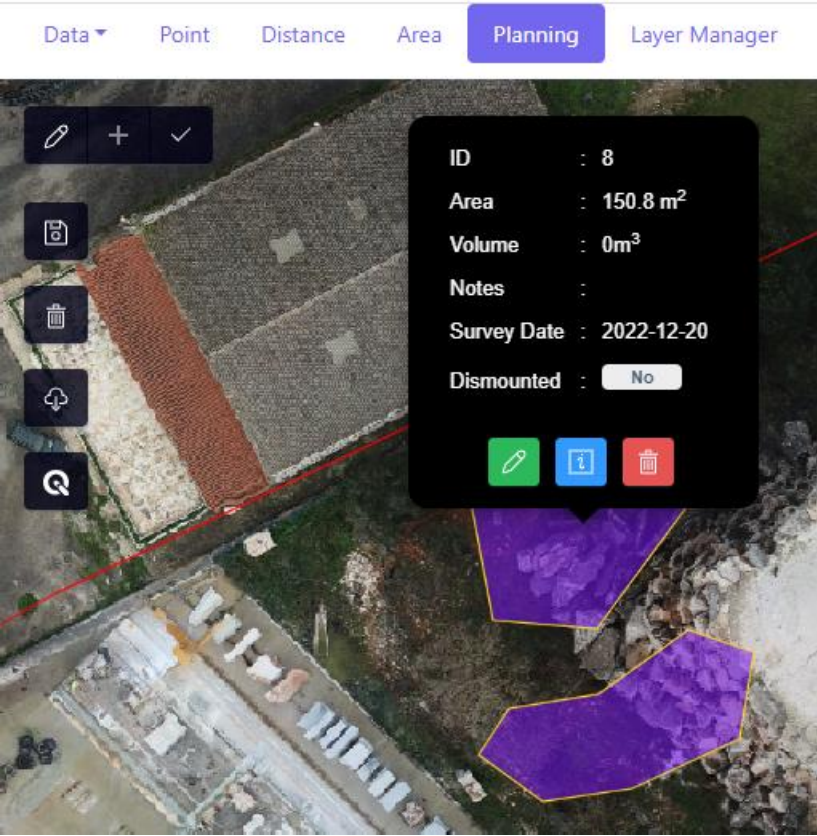


Figure 14- Planning signposts on the 2D map

2.5.1.1.1-Layer Manager

In the level manager you can customise your drawings (points, lines, areas, plans with different colours and styles, choose what you want to be visible on your map according to your needs.

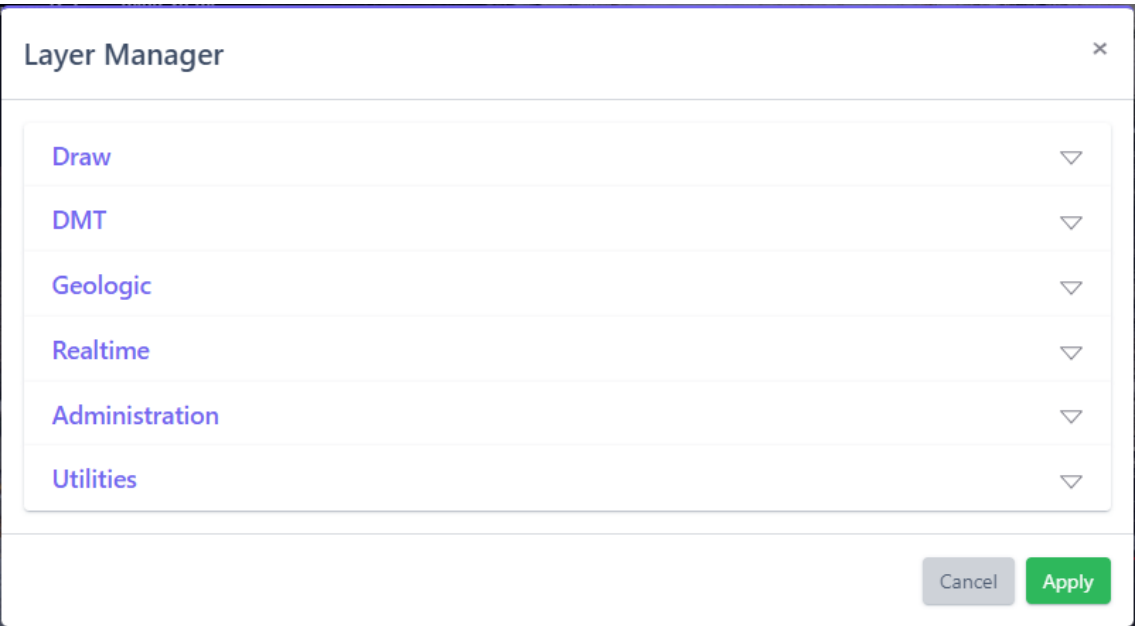


Figure 15- Level Manager topics

In "Draw" you can activate or deactivate the visualisation and/or interaction of points, lines, areas and plans. You can also change the colours, line thickness and style to personalise it to your liking.

Layer Manager

Draw

Layer name	ON	Interaction	Color	Lineweight	Style
Point					
Line			Line	1	
Area			Filled Border line	1	
Planning			Dismounted Mounted Border line	0.5	
DMT					
Geologic					
Realtime					
Administration					
Utilities					

Cancel

Apply

Figure 16- Level Manager: Draw

In "DMT" you can activate and deactivate Aerial images which is the map, HD cavity images which is the map of the cavity (if there is no file you can't activate the cavity) and Contours which outlines the entire 2D map with the altitude of each of the lines.

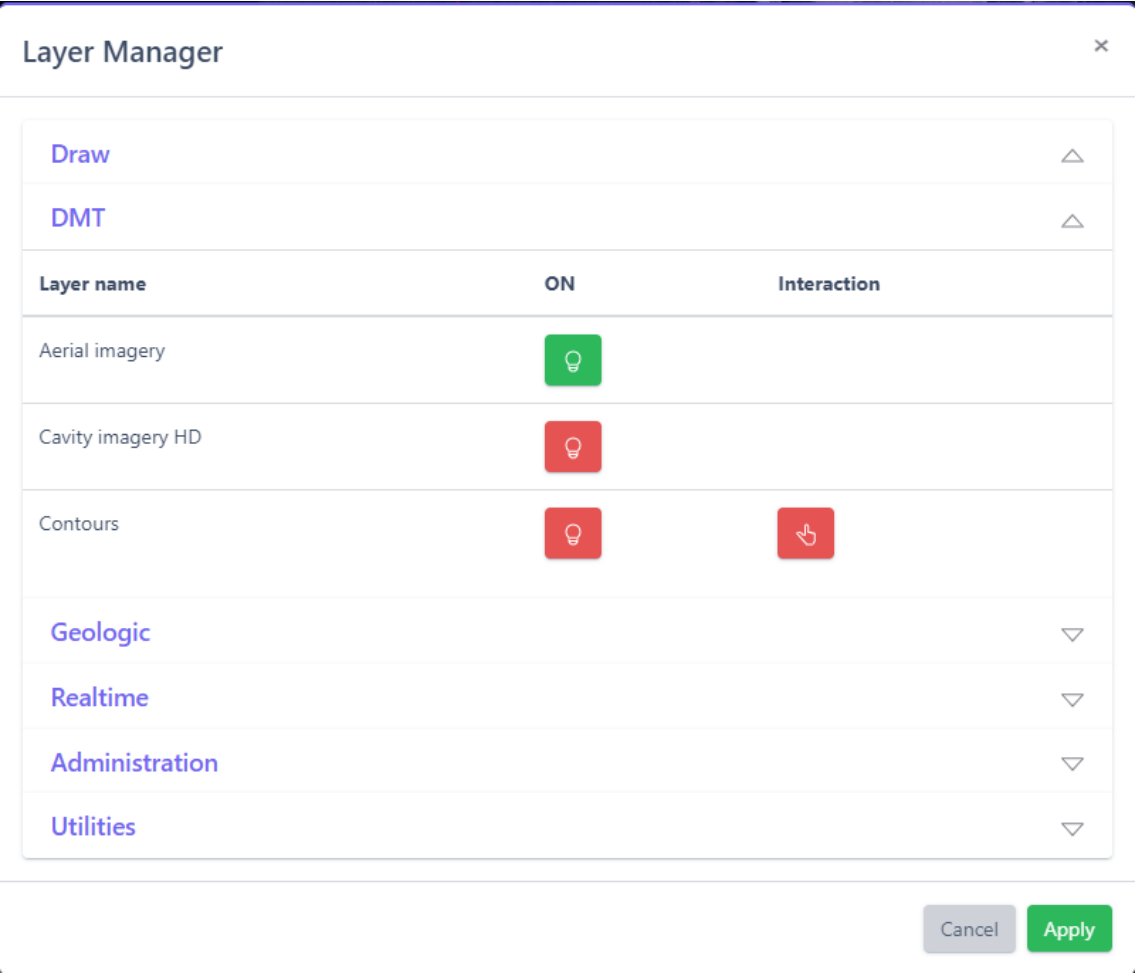


Figure 17- Level Manager: DMT

In "Geological" you can activate and deactivate Geological, which is a geological map, and Fracture, which indicates where there are fractures on the map.

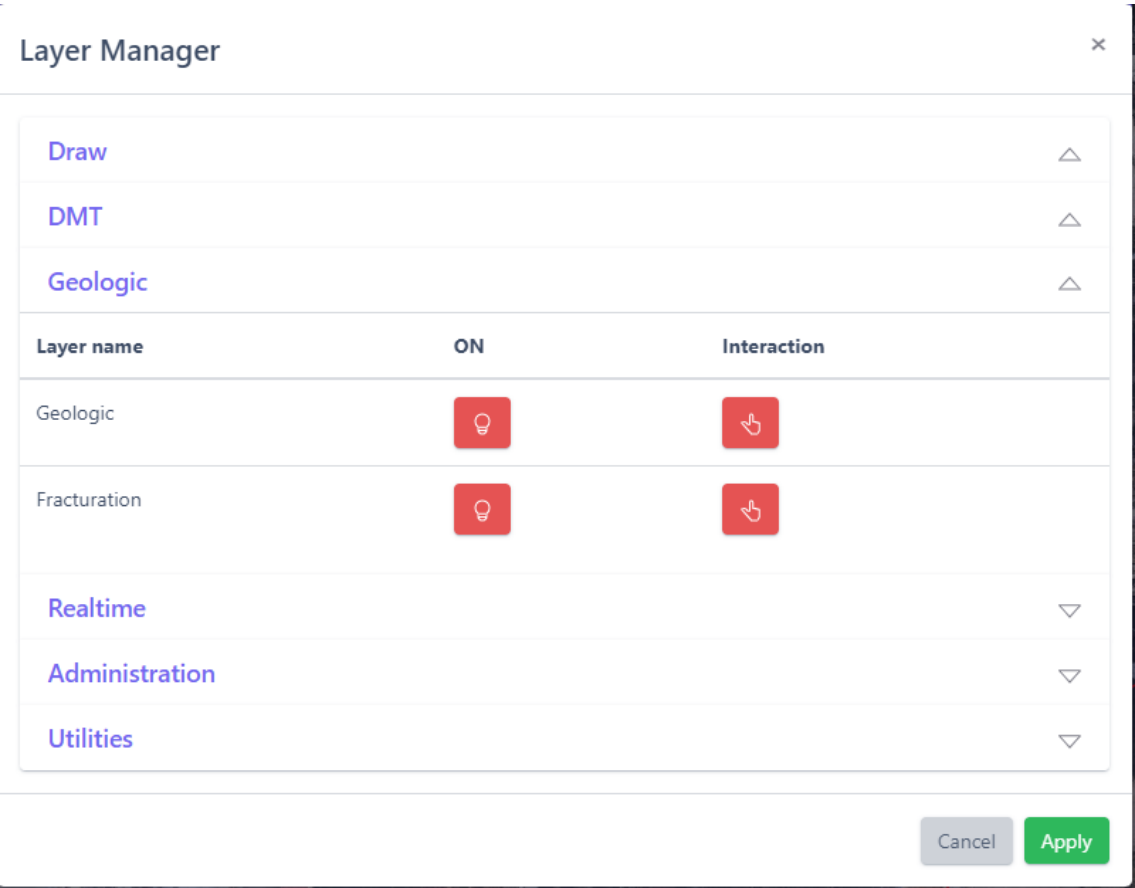


Figure 18- Level Manager: Geologic

In "Real time" you can activate or deactivate the location of both workers and machines working in the quarry.

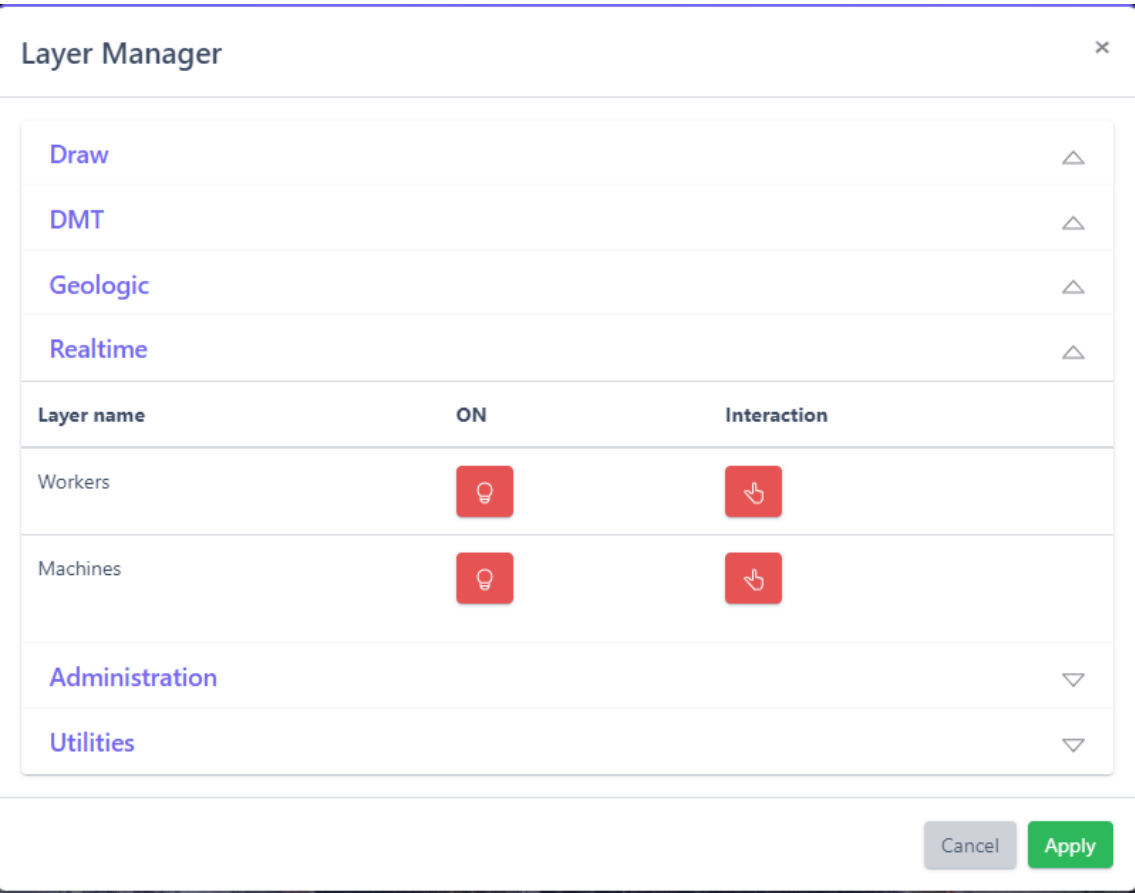


Figure 19- Level Manager: Real Time

In "Administration" you can activate and deactivate the Register and Licensed Exploration, where the perimeter is visible on the map.

Layer Manager

Draw

DMT

Geologic

Realtime

Administration

Layer name	ON	Interaction
Boundaries		
Exploration licensed		
Utilities		

Cancel

Apply

Figure 20- Level Manager: Administration

In "Public utilities" you can activate and deactivate the marking on the map of Electricity, Water lines, Networks, Ponds, Access, Buildings and Roads.

Layer Manager

×

Draw

△

DMT

△

Geologic

△

Realtime

△

Administration

△

Utilities

△

Layer name	ON	Interaction
Electricity		
Water lines		
Networks		
Ponds		
Tracks		
Buildings		
Roads		

Cancel

Apply

Figure 21- Level Manager: Utilities

2.5.1.2-3D map

You have access to a 3D map to better immerse yourself in the state of your quarry, being able to see the changes from different surveys carried out on your quarries.

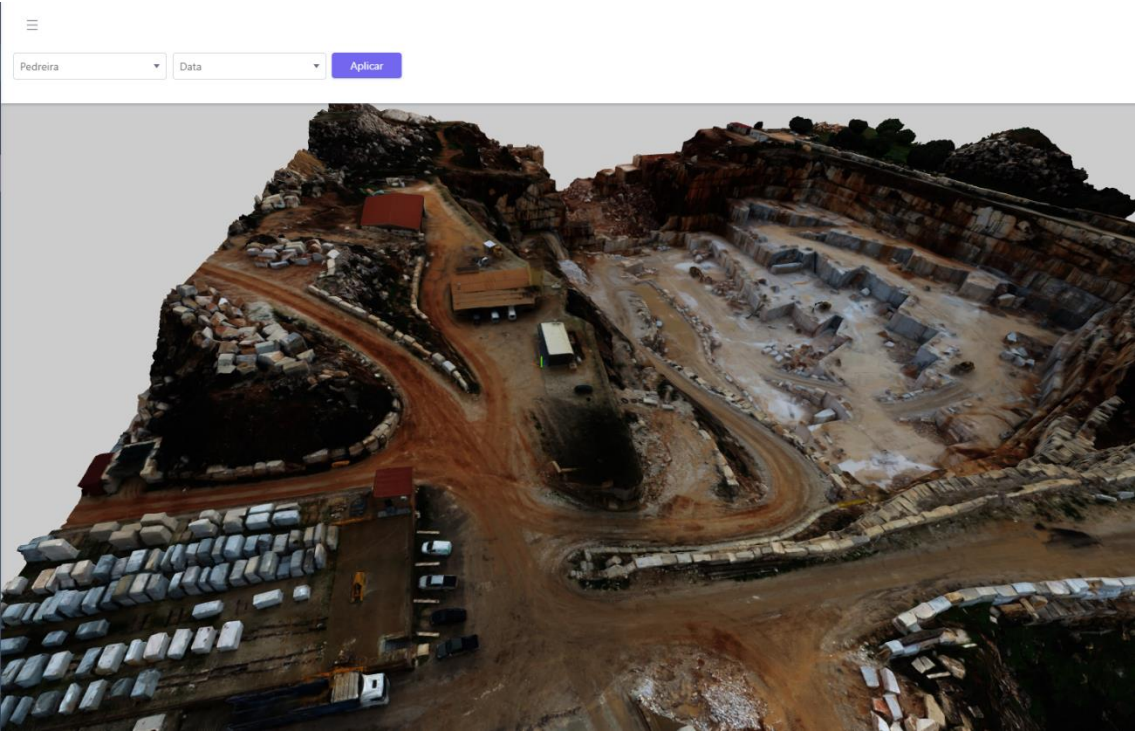


Figure 22- 3D map of the selected quarry

2.5.2-Planning operations

In Operations Planning you have recorded all the planning for the selected areas on the 2D map.

Niotantek - Full time management

Copy Excel PDF Print

Quarry	Level	Notes	Elevation (m)	Height (m)	Area (m²)	Volume (m³)	Dismounted	Surveydate	Info
Texugo Test	1	a1	347.22	8.00	91.70	733.60	No	2021-07-23	
Texugo Test	1		398.50	0.00	523.40	0.00	No	2022-07-05	
Texugo Test	7	area1	350.39	6.00	23.60	141.60	Yes	2022-12-20	
Texugo Test	2	Pa	346.97	0.00	25.10	0.00	Yes	2022-12-20	
Texugo Test	2	e	399.90	0.00	497.10	0.00	Yes	2023-07-31	
Texugo Test	4		-32767.00	0.00	6862.60	0.00	No	2023-07-31	
Texugo Test	3		-32767.00	0.00	18688.10	0.00	No	2023-07-31	
Texugo Test	1		406.15	0.00	684.90	0.00	No	2023-07-31	

Showing 1 to 8 of 8 entries

First Previous 1 Next Last

Figure 23- Planning table drawn on the 2D map

2.5.3-Inventory

You also have access to an inventory tab where you can visualise all the stones inserted in the platform, filtering them by characteristics and their respective categories.

Niotantek - Monitor and manage your products.

+ Add

Main filter

Apply

CopyExcelPDFPrint

Product	Notes	Width (m)	Length (m)	Height (m)	Volume (m³)	Weight (ton)	Color	Fracture	Class	Status	Coordinates	Images	Actions
No data available in table													

Showing 0 to 0 of 0 entries

First

Previous

Next

Last

Figure 24- Table of stones added to the inventory

To add the stones to the platform's inventory, simply click on "Add" and fill in the form.

←

Product Id

Notes

Width (m)

Length (m)

Height (m)

Weight (ton)

Color

Longitude (°)

Latitude (°)

Fracture

Class

Status

Assigned Quarry

Images (max 5)

Escolher Ficheiros

Nenhum ficheiro selecionado

Register Product

Figure 25- Form for adding extracted stones

2.5.4-Resources

It is possible to integrate APIs for monitoring machines and people. These APIs are not included in the purchase of the platform, you will need to contact Niotantek for the API integration service.

2.5.5-IoT

In the IoT tab we have access to the list of sensors that are installed on the machines.

2.5.6-Reports

In the Reports tab you have access to two functions: Exploration to compare quarry extraction data and Environment, which gives you information on the weather.

2.5.6.1-Exploration

In the Exploration tab you can compare extraction data from your quarries by analysing graphs or tables. You can select which quarry you want to view, the process (Slag heap, Extraction Data or All), the comparison parameter (Volume, Weight, Cost or Area), the way you want to view the graph (cumulative or relative), the option (Total or by levels) and the respective comparison dates.

2.5.6.2-Environment

In the Environment tab, you have access to information such as Temperature, Humidity, Wind Direction, Wind Speed. And a graph to monitor your quarries.



Figure 26- Environment Graph Values

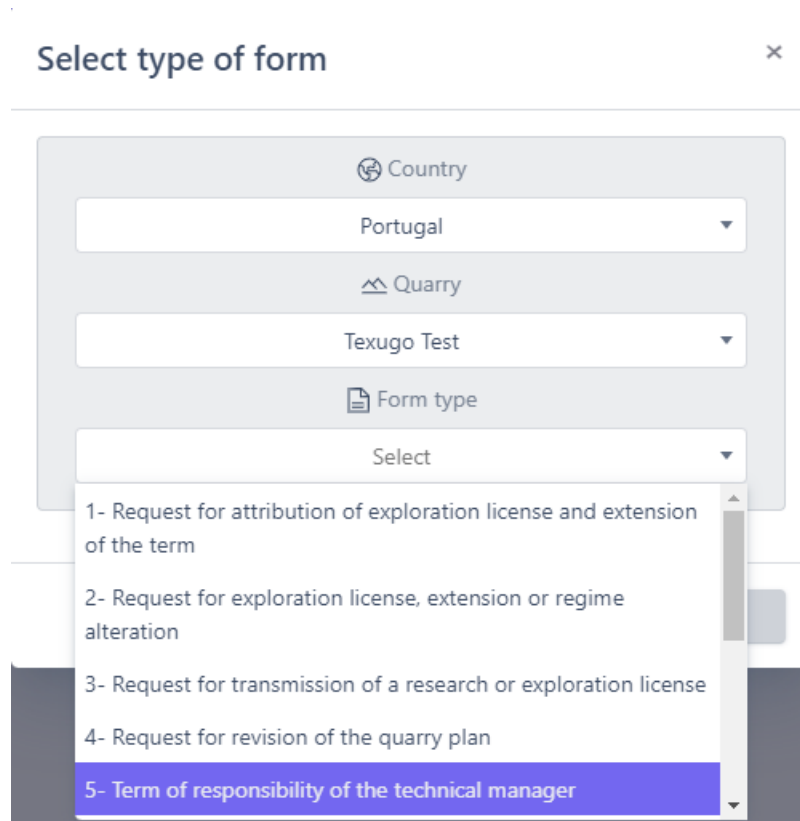
Both the first and second graphs can be changed to Pressure and Visibility respectively.



Figure 26- Environment Graph Values 2

2.5.7-Communications

In Communications you can fill in different forms by choosing the country, the related quarry and the type of form.



The screenshot shows a web application window titled "Select type of form". Inside, there are three stacked dropdown menus. The first is labeled "Country" and has "Portugal" selected. The second is labeled "Quarry" and has "Texugo Test" selected. The third is labeled "Form type" and has "Select" selected. The "Form type" dropdown is open, displaying a list of 12 options. The 5th option, "5- Term of responsibility of the technical manager", is highlighted in blue. The other options are: "1- Request for attribution of exploration license and extension of the term", "2- Request for exploration license, extension or regime alteration", "3- Request for transmission of a research or exploration license", "4- Request for revision of the quarry plan", "6- Request for change of technical manager", "7- Request for suspension of quarry operation", "8- Request for an opinion on the use of gunpowder and explosives in quarrying", "9- Request for merger of quarries", "10- Declaration of quarry abandonment", "11- Request for inspection", and "12- Triennial quarry program".

Figure 28- Form selection form

1-Application for an exploration license and extension of the deadline

2-Application for an exploration license, extension or change of regime

3-Request for transfer of exploration and exploitation license

4-Request for revision of the quarry plan

5-Termination of responsibility of technical manager

6-Request for change of technical manager

7-Request for suspension of quarry operation

8-Request for an opinion on the use of gunpowder and explosives in quarrying

9-Request for merger of quarries

10-Declaration of quarry abandonment

11-Request for inspection

12-Triennial quarry program

These forms are recorded in a table and can be revised, edited, and sent at any time...

Niotantek - Improve your communications

+ New form

Copy Excel PDF Print

Quarry	Date	Form type	Status	PDF	Edit	Delete
Texugo Test	2023-11-14	5- Term of responsibility of the technical manager	Sent			
Texugo Test	2023-11-20	5- Term of responsibility of the technical manager	Not Sent			

Showing 1 to 2 of 2 entries

First Previous 1 Next Last

Figure 29- Table of forms created

To send forms that have already been filled in, you just need to click on the "Not Sent" status and fill in another submission form.

Send signed files to DGE×

Name:

Rafael

From:

rafael-duarte@live.com

To:

e-mail

Subject:

Message:

Signed PDF

Escolher ficheiro

Nenhum ficheiro selecionado

Cancel

Send

Figure 30- Form submission form

2.5.8-Data storage

In Data Storage you can request all the files you need from NIOTANTEK. Once permission has been granted, you can download your files.

Niotantek - Beyond your imagination.

Quarry

From

To

Apply

Copy Excel PDF Print

Quarry	Point cloud	3D Models	Orthophoto	DEM	Contour	PDF	CAD	Utilities	Date
Texugo Test	Request	  	Active	Active	Active	Request	Request	▶	2022-12-20
Texugo Test	Request	  	Active	Active	Active	Request	Request	▶	2022-09-17
Texugo Test	Request	  	Active	Active	Active		Request	▶	2022-07-05
Texugo Test	Request	  	Active	Active	Active		Request	▶	2022-05-04
Texugo Test	Request	  	Active	Active	Active		Request	▶	2022-01-07
Texugo Test	Request	  	Active	Active	Active	Request	Request	▶	2021-07-23
Texugo Test	Request	  	Active	Active	Active	Request	Request	▶	2021-03-30

Showing 1 to 7 of 7 entries

First Previous 1 Next Last

Figure 31- Table of files relating to quarries

3- I liked the demo, how can I buy the PRO version?

To ask NIOTANTEK for an upgrade to the PRO version, you need to contact us via mobile phone (+351 966 167 709) or email (geral@arrow4d.pt).

The NIOTANTEK platform is purchased for a monthly fee, which can vary depending on the customization and additional services you require.

4- What other services does NIOTANTEK offer?

NIOTANTEK offers Geology services: Aerial Photogrammetry, Precision Measurements, Cavity Detection and Fracture Detection. It also offers IT consultancy services: Software Integration, Customized Solutions, Networks, Cybersecurity and Industrial Automation 4.0.

NIOTANTEK products, both Cloud and Server, can be complemented with our NIOTANTEK Sensing.

Todas as informações sobre os serviços e produtos estão nas respectivas páginas do site da NIOTANTEK.