

Indicators

 help.fractal.com/hc/en-us/articles/48644360448141-Indicators

In Fractal One, the availability, MTBF, and MTTR indicators allow you to measure the performance and reliability of your assets. From the **Business Intelligence** module, you calculate these indicators within a date range, save your analyses for reuse, and view the details of the formulas applied to each asset.

There are four fundamental types of indicators for any maintenance management:

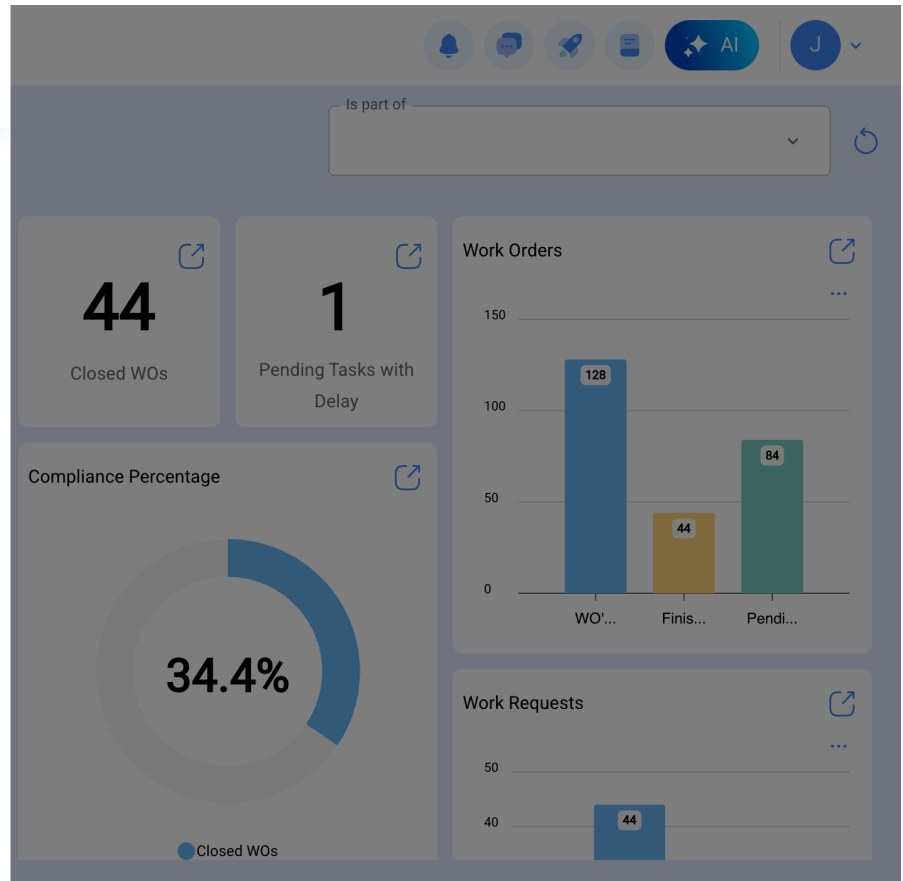
- **Maintenance availability:** This is the probability that a system, equipment, or component performs its intended function when required. It is expressed as a percentage and takes into account both the reliability and maintainability of the system.
- **Failure availability:** This is understood as the percentage of time during which equipment is fit for use and operational, but considering only the sum of time due to unexpected stops, **failures**, and incidents of equipment and physical assets.
- **Mean Time Between Failures MTBF (Mean Time Between Failures):** It is a measure of the average time between consecutive failures of a system or repairable component and, as its name suggests, it is calculated from when one failure occurs until the next one occurs, thus including both uptime and downtime periods.
- **Mean Time To Repair MTTR (Mean Time To Repair):** It indicates the average time required to repair a system after a failure. A low MTTR is desirable, as it implies quick recovery and less downtime.

Where to find them in Fractal One?

1. Go to the **Business Intelligence** module and select the **Indicators** section.

- Work Management
- Monitoring
- Dispatcher
- Business Intelligence**

- Economical Analysis
- Technical Analysis
- Work request Analysis
- Fracttal BI
- Indicators**
- Performance Analysis
- Dashboard



Here you will see the indicators interface:

Global Average Indicators per asset

Selected Kpi
Test Fabian+RT (Visual de ubicación)



2128

Number of assets



25

Failures Quantity



2026-01-01

Start Date



2026-07-01

End Date



2026-07-09

Calculation date

Total Hours

6 3 1 9 8 7 0 : 5 3

Hours

Minutes

Downtime hours by breakdowns

1 1 5 5 1 : 0 5

Hours

Minutes

Downtime hours for maintenance

1 8 3 5 : 4 7

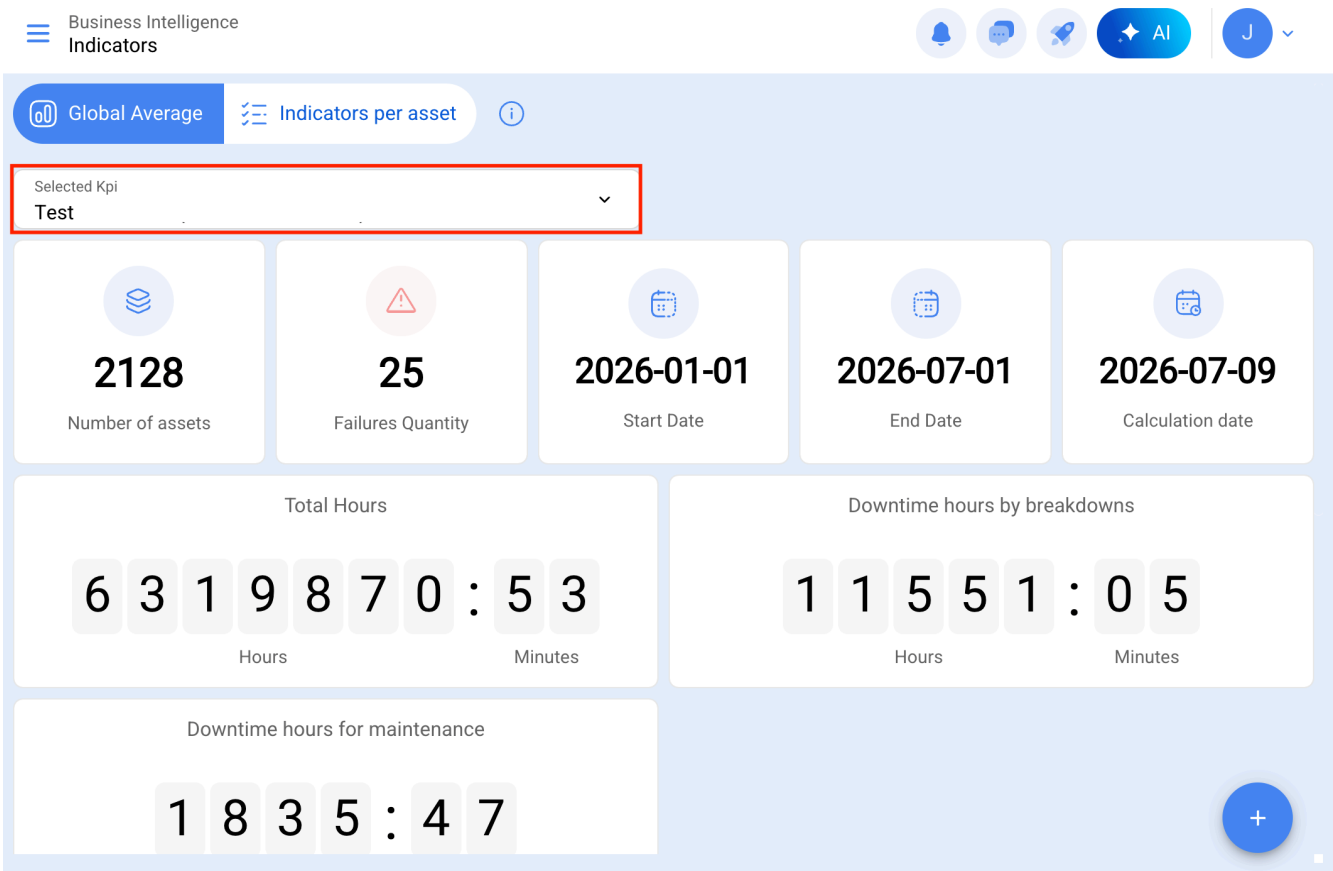
+

What can you do here?

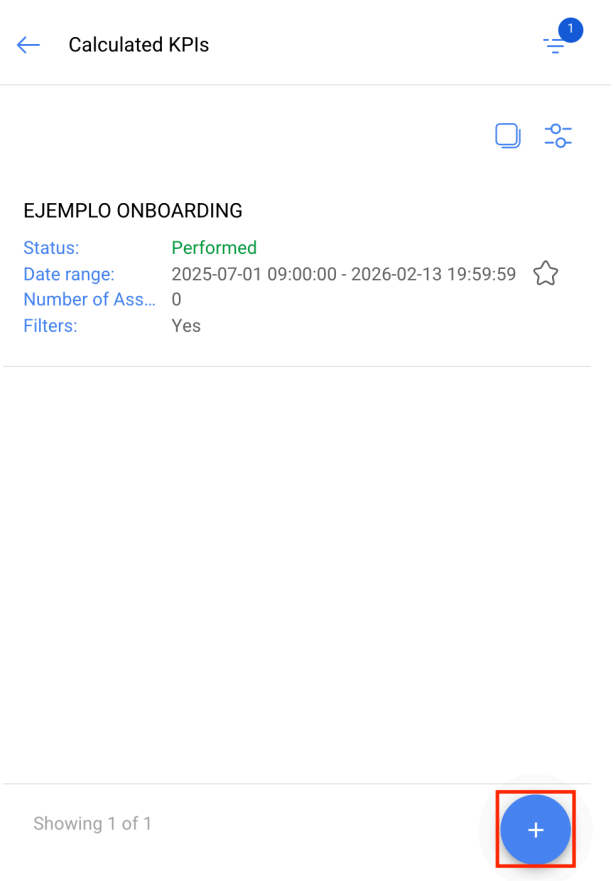
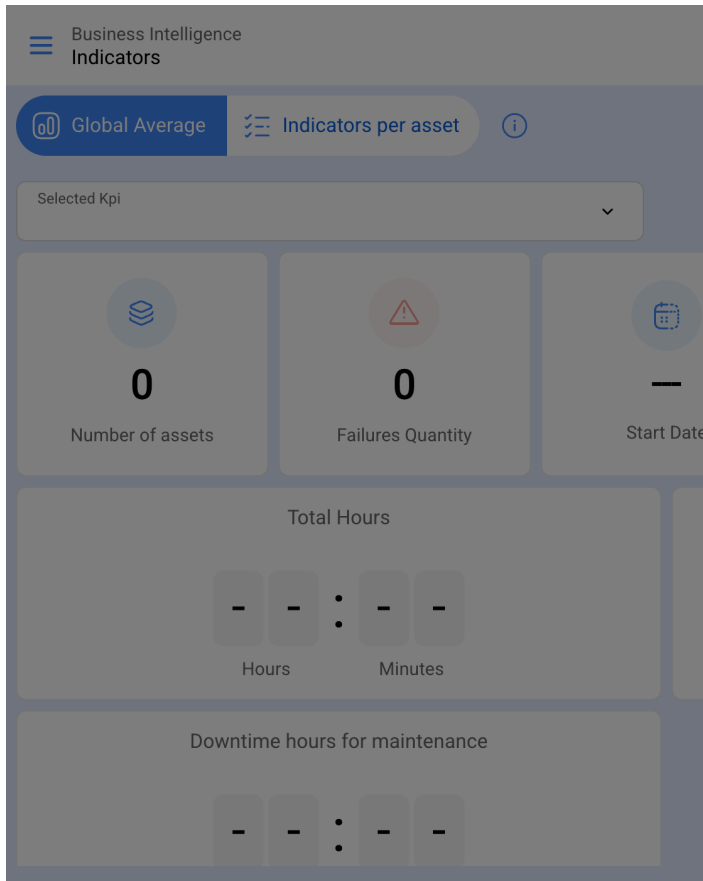
Calculated KPIs

In **Calculated KPIs** you can check the behavior of your indicators within a date range and save frequently used analyses to reuse them without reconfiguring.

1. Click on **Selected KPIs**.



2. Then, click the "+" button.



3. In **Description**, enter a name to identify the analysis. Then select the date range and complete the other fields to narrow the information you want to consult: **location, asset type, code, description, cost center, and forms**.

Business Intelligence Indicators

Global Average

Indicators per asset

Selected Kpi

0

Number of assets

0

Failures Quantity

—

Start Date

Total Hours

— : —

Hours Minutes

Downtime hours for maintenance

— : —

← Add KPI

Description

KPI Indicator

Start date

2024-11-04

End Date

2026-09-03

Location

📍

FRACTTAL BRASIL { FTTL.BR }

▼

×

Asset Type

Equipment

▼

Code

Description

Cancel

Calculate

4. Click **Calculate**.

Business Intelligence Indicators

Global Average

Indicators per asset

Selected Kpi

0

Number of assets

0

Failures Quantity

—

Start Date

Total Hours

— : —

Hours Minutes

Downtime hours for maintenance

— : —

← Add KPI

Description

KPI Indicator

Start date

2024-11-04

End Date

2026-09-03

Location

📍

FRACTTAL BRASIL { FTTL.BR }

▼

×

Asset Type

Equipment

▼

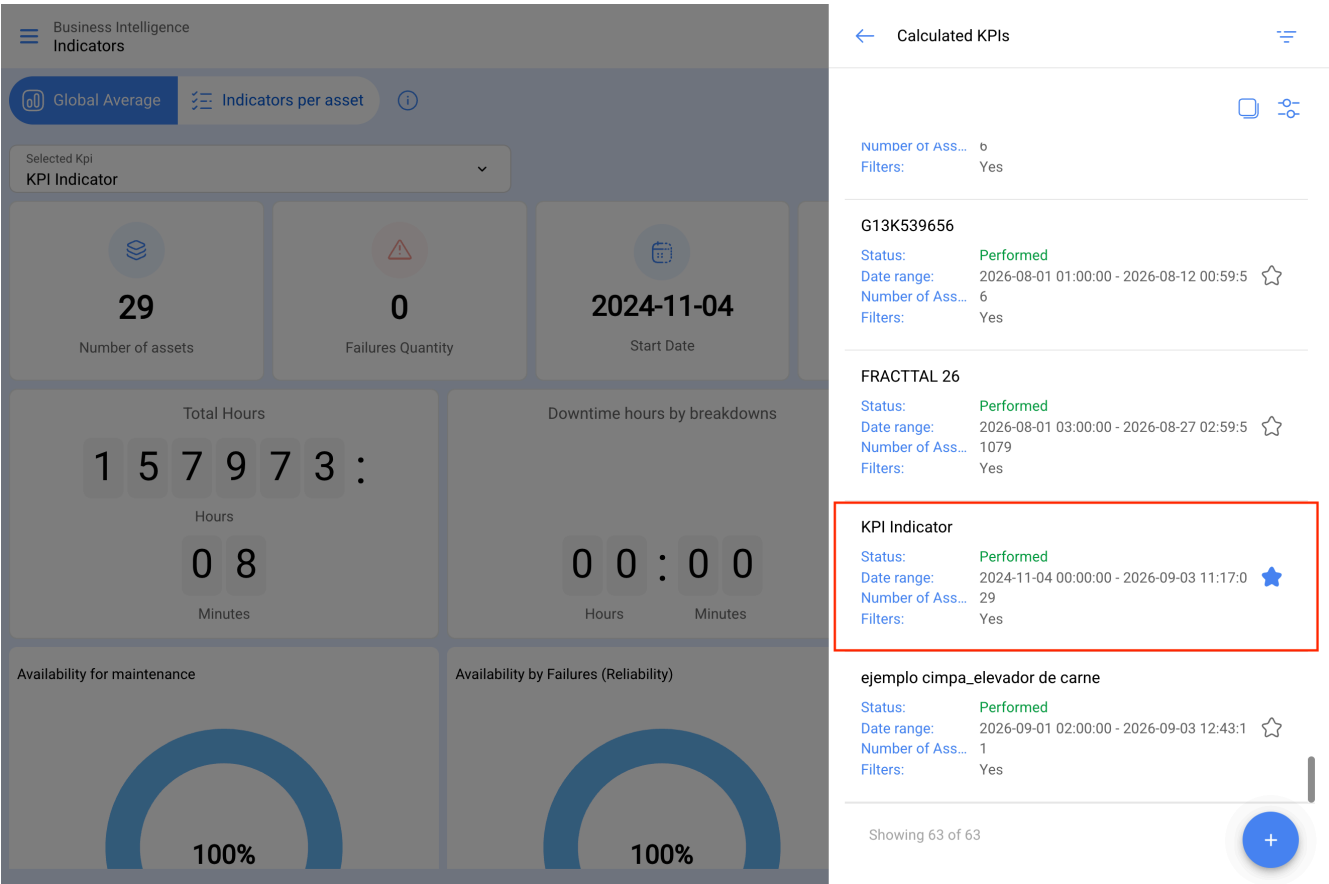
Code

Description

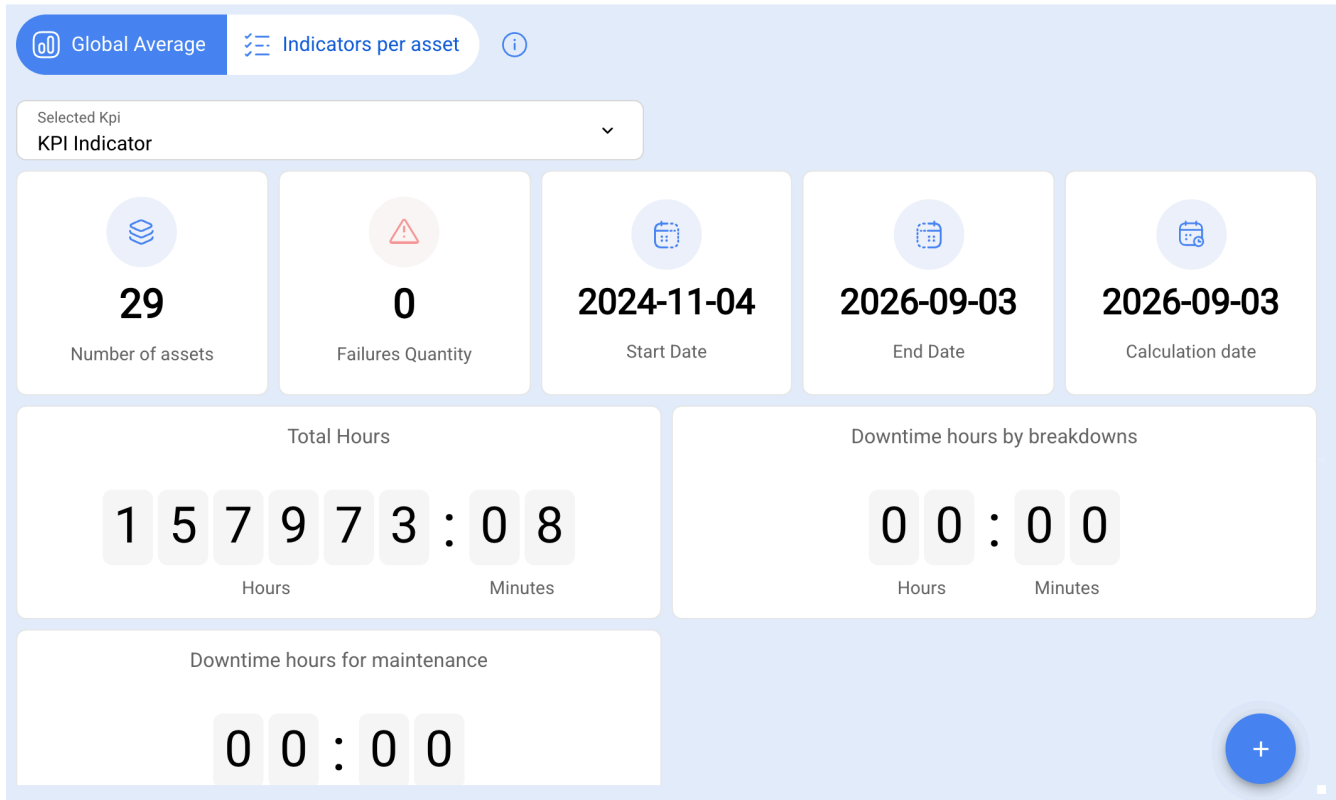
Cancel

Calculate

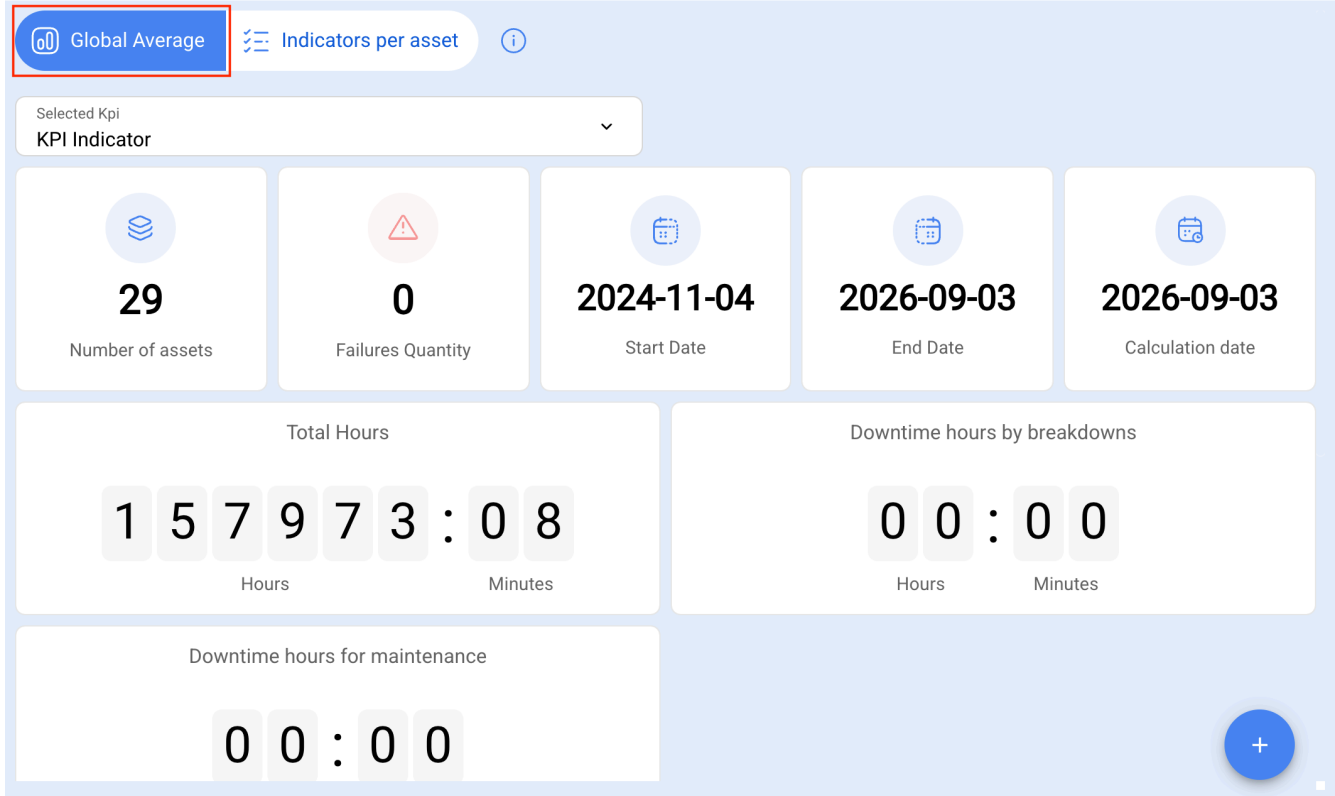
5. To keep the analysis selected with the assigned dates and data, click the **star** next to the name until it turns blue.



6. Once the information is loaded, you will see the behavior of the indicators within the specified date range.



Global average: This commonly refers to the average calculation made on the assets, considering that Fractal One takes an average of a certain number of assets to extract the available variables or data.



Indicators by asset: shows the detail of each asset separately, with the evaluation of the following aspects:

Global Average		Indicators per asset							
	Item	Availability for maint...	Availability by Failures (Reliability)	MTBF	MTTR	Failures Quantity	Total Hours		
☐	GRAND V...	100,000 %	100,000 %	---	---	0,00	280,4677		
☐	TORRE 1 ...	100,000 %	100,000 %	---	---	0,00	280,4677		
☐	PISO 1 { ...	100,000 %	100,000 %	---	---	0,00	280,4677		
☐	SUITE 10...	100,000 %	100,000 %	---	---	0,00	280,4677		
☐	SUITE 10...	100,000 %	100,000 %	---	---	0,00	280,4677		
☐	SUITE 10...	100,000 %	100,000 %	---	---	0,00	280,4677		
☐	SUITE 10...	100,000 %	100,000 %	---	---	0,00	280,4677		
☐	SUITE 10...	100,000 %	100,000 %	---	---	0,00	280,4677		

Showing 200 of 1256

- 1. Maintenance availability:** Maintenance availability refers to the time during which an asset is operational and available for use, excluding the time dedicated to planned maintenance activities. That is, it represents the fraction of time the asset is running and not scheduled for maintenance.
- 2. Failure availability (reliability):** Failure availability, also known as reliability, indicates an asset's ability to operate without interruptions due to failures. It represents the percentage of time the asset is operational without experiencing problems or breakdowns.
- 3. MTBF (Mean Time Between Failures):** MTBF stands for Mean Time Between Failures. It is a reliability measure representing the average time that passes between asset failures, indicating the expected reliability.
- 4. MTTR (Mean Time To Repair):** MTTR stands for Mean Time To Repair. It represents the average time needed to repair an asset after it has experienced a failure.
- 5. Number of failures:** Refers to the total number of failures causing downtime that an asset has experienced in a specific period.
- 6. Total hours:** This information serves as a basis to evaluate asset performance over a specific period.

7. **Total hours due to failures:** Indicates the total number of hours assets are out of service due to failures and corrective interventions.

8. **Hours stopped for maintenance:** Indicates the total number of hours assets are out of service due to planned maintenance activities.

Note: These indicators are evaluated according to the date range you choose when editing the KPIs.

By clicking on each asset, you access the specific formulas implemented to calculate the final results. Each formula is adjusted and customized according to the selected asset.

Business Intelligence
Indicators per asset

Global Average Indicators per asset

Item	Availability
☐  FREIDORA VULCAN #1	100,000 %
☐  FREIDORA VULCAN #2	100,000 %
☐  PLANCHA	100,000 %
☐  FOGON 2 QUEMADORES	100,000 %
☐  SARTEN ELECTRICO	100,000 %
☐  REBANADORA	100,000 %
☐  LICUADORA	100,000 %
☐  BAÑO MARIA	100,000 %

Showing 200 of 697

Formula

Availability for maintenance

$$Availability = \frac{THP - \sum SHM}{THP} \times 100$$

Abbreviations
THP: Total hours in period
ΣSHM: Summation Downtime hours for maintenance

Availability For Breakdowns

$$AvailabilitybyFailures(Reliability) = \frac{THP - \sum SHB}{THP} \times 100$$

Abbreviations
THP: Total hours in period
ΣSHB: Summation Downtime hours by breakdowns

Meantime Between Failure

$$MTBF = \frac{(THP - SHB)}{FP}$$

Abbreviations
THP: Total hours in period
SHB: Downtime hours by breakdowns
FP: N° Faults in the Period

An icon redirects you to the detailed information of each asset.

Global Average

Indicators per asset



☐	Item	Availability for maintenance	Availability by Failures (Reliability)	MTBF
☐	GRILL	100,000 %	100,000 %	---
☐	☒ FREIDORA	100,000 %	100,000 %	---
☐	☒ ESTUFON 2 QUEMADORES	100,000 %	100,000 %	---
☐	☒ SALAMANDRA	100,000 %	100,000 %	---
☐	☒ FOGON 1 QUEMADOR	100,000 %	100,000 %	---
☐	☒ ESTUFON 2 QUEMADORES PASTELERIA	100,000 %	100,000 %	---
☐	☒ BATIDORA HOBART PASTELERIA	100,000 %	100,000 %	---
☐	☒ HORNO VULCAN PASTELERIA	100,000 %	100,000 %	---
☐	☒ FOGON DE 2 QUEMADORES	100,000 %	100,000 %	---

Showing 200 of 697

You can filter by location, site, asset type, code, cost center, or custom form.

Business Intelligence

Indicators per asset

Global Average

Indicators per asset

☐	Item	Availability
☐	☒ SUITE 107 { P1-S107 }	100,000 \$
☐	☒ SUITE 108 { P1-S108 }	100,000 \$
☐	☒ SUITE 109 { P1-S109 }	100,000 \$
☐	☒ SUITE 110 { P1-S110 }	100,000 \$
☐	☒ SUITE 111 { P1-S111 }	100,000 \$
☐	☒ SUITE 112 { P1-S112 }	100,000 \$
☐	☒ SUITE 114 { P1-S114 }	100,000 \$
☐	☒ SUITE 115 { P1-S115 }	100,000 \$

Showing 200 of 1256

Filter

Asset

Asset Type

Equipment

Code

Description

Priority

Type

Group 1

Clear Filters

Apply Filters

General View Formulas Icon: shows a detailed explanation of the formulas used to obtain the final results in a general way.

Global Average

Indicators per asset



1

Item	Availability for maintenance	Availability by Failures (Reliability)	MTBF
SUITE 107 { P1-S107 }	100,000 %	100,000 %	---
SUITE 108 { P1-S108 }	100,000 %	100,000 %	---
SUITE 109 { P1-S109 }	100,000 %	100,000 %	---
SUITE 110 { P1-S110 }	100,000 %	100,000 %	---
SUITE 111 { P1-S111 }	100,000 %	100,000 %	---
SUITE 112 { P1-S112 }	100,000 %	100,000 %	---
SUITE 114 { P1-S114 }	100,000 %	100,000 %	---
SUITE 115 { P1-S115 }	100,000 %	100,000 %	---

Showing 200 of 1256

Global Average

Indicators per asset



Selected Kpi
KPI Indicator

29

Number of assets

0

Failures Quantity

2024-11-04

Start Date

Total Hours

1 5 7 9 7 3 :

Hours

0 8

Minutes

Downtime hours by breakdowns

0 0 : 0 0

Hours

Minutes

Availability for maintenance

100%

Availability by Failures (Reliability)

100%

Formula

Availability for maintenance

$$Availability = \frac{THP - \sum SHM}{THP} \times 100$$

Abbreviations

THP: Total hours in period

ΣSHM: Summation Downtime hours for maintenance

Availability For Breakdowns

$$AvailabilitybyFailures(Reliability) = \frac{THP - \sum SHB}{THP} \times 100$$

Abbreviations

THP: Total hours in period

ΣSHB: Summation Downtime hours by breakdowns

Meantime Between Failure

$$MTBF = \frac{(THP - SHB)}{FP}$$

Abbreviations

THP: Total hours in period

SHB: Downtime hours by breakdowns

FP: N° Faults in the Period

Meantime To Repair

$$MTTR = \frac{SHB}{FP}$$

Abbreviations

SHB: Downtime hours by breakdowns

FP: N° Faults in the Period

+

Let's understand the formulas specifically:

1. What are the total hours in the period (HTP):

It corresponds to the total hours evaluated in the time span (this data comes from the date range filter) in which the indicator is being evaluated (**Image A**) multiplied by the average daily usage hours of the evaluated assets (**Image B**).

Where do we find the above in Fracttal One?

Evaluated time span (**Image A**).

Average daily usage hours of the asset (**Image B**).

Assets
Equipment

🔔

🗨️

🚀

AI

J

← A3/SPEED 1000 SLIM I 1 { PTQ-UHT-A3SI }

Save



Out of Service: No
Enabled ☒

General

Custom Form

Health Status

Financial

Third Parties

Spare Parts and Supplies

Related Assets

History

Type
ENVASADORA

Group 1
250kVA

Group 2
unidad dental tipo 2

Supplier
AGICO CEMENT

Purchase date

Configure schedule

Configure the asset's usage hours or set the start and end of operation.

Hours of average daily use
24:00

Schedule Operating Hours

Start time
06:00

End time
16:00

☐ Visible to all

Planned Maintenance

Plan de mantenimiento de compresor

Public QR

It only allows to add the valid format of Qr Public (https://one.fracttal.com/qr/xxx)

Notes

Recommendations:

Important: The **Average daily usage hours** field must not be zero: it directly affects the calculation of **Total Hours in the Period (HTP)** and, consequently, the key performance indicators.

2. What is the sum of hours stopped for maintenance (HPM)?

It corresponds to the actual downtime of the asset recorded in the Planned Work Orders.

Where do we find the above in Fracttal One?

To find the information mentioned above in Fracttal One, first go to the main menu and select the "Tasks" module, then "Work Orders" as shown below:

Then, apply a filter by selecting the "Tasks" option and in the planning type box choose "Planned tasks," as shown in the following image:

The screenshot displays the Fracttal One Work Management interface. The main area shows a Kanban view with two columns: "Pending Tasks" (165 items) and "WOs in Process" (308 items). The "Pending Tasks" column contains three task cards. The first card is for "Asset: prueba { a12121221 }" with the task "INSPECCIÓN DEL ESTADO GENERAL DE LOS COMPONENTES", scheduled for 00:10 on 2026-12-02, with a recurrence of "EVERY 3 MONTHS". The second card is for "Asset: prueba { a12121221 }" with the task "INSPECCIÓN DE PERDIDAS DE FLUIDOS", scheduled for 00:10 on 2027-08-16, with a recurrence of "EVERY 1 YEAR(S)". The third card is for "Asset: BATERIA 5 { SIN-001-BAT5 }". The "WOs in Process" column contains three work order cards. The first card is for "OT-1619-FRT" created by Sebastian Osorio, with the task "Ejemplo correctivo que afecta la seguridad d...", scheduled for 00:10 on 2026-09-03, with a recurrence of "EVERY 3 MONTHS", and assigned to Alejandro Gonzalez. The second card is for "OT-1617-FRT" created by Jonas Campos, with the task "task review ggh", scheduled for 00:10 on 2026-09-03, with a recurrence of "EVERY 3 MONTHS", and assigned to Jonas Campos. The third card is for "OT-1616-FRT" created by Diego Perez, with the task "equipo 25 { 10009336-B2 }". To the right of the Kanban view is a "Filter" sidebar. It includes a "Description" search bar, a "Planned Tasks ?" filter with "ALL", "YES", and "NO" options, a "Task with out of service" filter with "ALL", "YES", and "NO" options, an "Equipment downtime?" filter with "ALL", "YES", and "NO" options, a "Compliance and security form" dropdown, a "Work Request Number" search bar, a "Task Status" dropdown, a "Resource Type" search bar, and a "Spare Parts" search bar. At the bottom of the filter sidebar are "Clear Filters" and "Apply Filters" buttons.

Each task you see after applying the filter will contain a specific field, as shown in the image:

The screenshot displays the 'Work Order' interface in Fractal One. The left sidebar shows the user 'EDWARD SOSSA' and the date '2026-06-16' with a timer at '01:30'. The main area is titled '{ CONV_B_1 } CONVEYOR BELT 1' and contains a 'Note' section and a 'Work Management' section. The 'Work Management' section lists the task 'Inspección general y lubricación del conveyor belt' with details: 'Advance measurem...', 'All subtasks', 'Priority: High', 'Task type: PREVENTIVO', 'Group 1:', 'Group 2:', 'Work Request Num...', 'Actual Schedule Dat... 2026-06-16', and 'Estimated Duration: 01:30:00'. The right sidebar shows the 'Task' details for the same task, including 'General' information (Task type: PREVENTIVO, Actual Schedule Date: 2026-06-16, Priority: High, Group 1: ---, Group 2: ---), 'Progress' (100%), and 'Time' information (Estimated Duration: 01:30:00, Start Date: 2026-06-16 18:01:31, End Date: 2026-06-16 18:01:59, Actual Duration: 00:00:28, Estimated asset downtime: 01:30:00). A red box highlights the 'Real Time of Asset Downtime' field, which shows '001:30'. A 'Log' button is visible at the bottom right.

This is the field where the downtime of the asset during each maintenance must be recorded. This responsibility lies directly with the technician executing the planned task and also with the planner or supervisor, who must ensure the information is properly recorded.

3. What is the sum of hours stopped due to failure?

It corresponds to the out-of-service time recorded in **unplanned tasks**.

Where do we find the above in Fractal One?

To find the information mentioned above in Fractal One, first go to the main menu and select the Tasks module, then Work Orders, as shown below:

Then apply a filter selecting the Tasks option and in the planning type box, choose **NO** for *Planned tasks*, and select **YES** for *Task with out of service*, as shown in the following image:

Work Management
View Kanban

Pending Tasks165

Asset: prueba { a12121221 }

Task: INSPECCIÓN DEL ESTADO GENERAL DE LOS COMPONENTES

00:102026-12-02

EVERY 3 MONTHS

Asset: prueba { a12121221 }

Task: INSPECCIÓN DE PERDIDAS DE FLUIDOS

00:102027-08-16

EVERY 1 YEAR(S)

Asset: BATERIA 5 { SIN-001-BAT5 }

WOs in Process308

OT-1619-FRT

Created by Sebastian Osorio

Asset: ELEVADOR DE CARNE { ELE_carne_sa }

Task: Ejemplo correctivo que afecta la seguridad d...

00:102026-09-030 %

Alejandro Gonzalez

OT-1617-FRT

Created by JonasCampos

Asset: Air compresor { AI0112 }

Task: task review ggh

00:102026-09-030 %

Jonas Campos

OT-1616-FRT

Created by Diego Perez

Asset: equipo 25 { 10009336-B2 }

Filter

Asset

Work Management

WOs

Description

Planned Tasks ?

ALLYESNO

Task with out of service

ALLYESNO

Equipment downtime?

ALLYESNO

Compliance and security form

Work Request Number

Task Status

Resource Type

Spare Parts

Clear Filters

Apply Filters

Each task identified after applying the filter will show specific fields, as shown in the image. It is essential to complete all these fields and, especially, check the box **Did the asset fail?**

← Work Order

Jonas Campos

2026-09-03 00:10

00:00

Note

Work Management

Air compresor { AI0112 }

//

task review ggh

Advance measurem...

All subtasks

Priority:

Very High

Task type:

TL

Group 1:

Group 2:

Work Request Num...

Actual Schedule Dat...

2026-09-03

Estimated Duration:

00:10:00

1

0

0

← Air compresor { AI0112 }

Task

Sub Tasks

Resources

Attachments

Has the asset failed?

Fault Type

Asset review

Failures Causes

Damage

Fault Detection Method

Analysis

Fault Severity

Undefined severity

Type of damage

None

It caused disruption of other assets?

00:00

Asset out of service

Since when

2026-09-03 11:47

Restart

Log

If the equipment is out of service, the **Asset Out of Service** box must be checked, and then the date and time when the equipment started being out of service must be recorded, as illustrated in the image.

Work Order

Jonas Campos

2026-09-03 00:10

00:00

Note

Work Management

Air compressor { AI0112 }

task review ggh

Advance measurement... All subtasks

Priority: Very High

Task type: TL

Group 1:

Group 2:

Work Request Num...

Actual Schedule Date: 2026-09-03

Estimated Duration: 00:10:00

1 0 0

Air compressor { AI0112 }

Task Sub Tasks Resources Attachments

Failures information

☒ Has the asset failed?

Fault Type: Asset review

Failures Causes: Damage

Fault Detection Method: Analysis

Fault Severity: Undefined severity

Type of damage: None

It caused disruption of other assets? 00:00

☒ Asset out of service

Since when: 2026-09-03 11:47

Restart Log

These fields must be completed in every corrective maintenance. This responsibility lies directly with the technician executing the corrective task and also with the planner or supervisor, who must ensure the information is properly recorded.

Additionally, you should check in the configuration module, under Modules, specifically in the Work Orders section, that the option indicating "**Set the out-of-service end date for assets with the task completion date**" is enabled and appears in green, as shown in the image.

General

User Accounts

Business Calendar

Modules

Financial

Auxiliary Catalogs

Document Management

Transactions Log

Security

API Connections

Guest Portal

Account

Work Order Prints

My Apps

Type

Work Orders

Options and permissions

Work order ID

Description



Allow adding attachments in finished WO's



Allow end / cancel WOs with pending material requisitions



Set the end date of out of service of the assets with the date of completion of the task (by default is the end date of the WO).



Allow assigned human resources to be responsible for the work order (Multi-responsible)



Allow editing of the real used qty with pending material requisitions



Allow to qualify the WO even though it is under review



Filter human resources according to the selected profile (Within a task)



Allow updating triggers with active WOs



Establish mandatory completion of the failure catalog



Allow automatic WO generation to be triggered by the scheduled date



Allow mandatory signature in Compliance and Security forms



Allow advanced cancellation options for work orders

Note: For the **MTBF** and **MTTR** indicators, only failures causing asset downtime are counted.