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Grafana Tutorial

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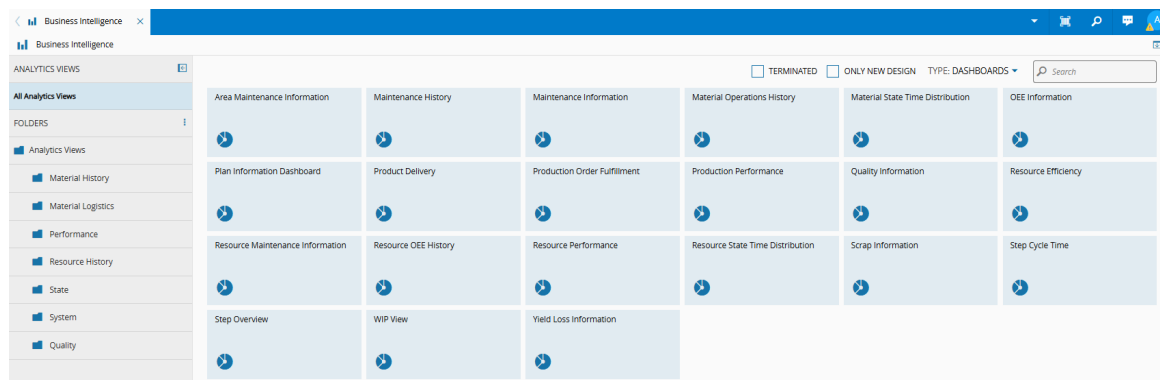
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Grafana Tutorial

This tutorial provides an overview of using Grafana dashboards, including how to navigate and modify their properties. If you require more advanced configurations, see [Grafana Dashboards \(Developer Portal\)](#).

The Grafana dashboards are available under the **Business Intelligence** menu and to access them, you can filter by Type **Dashboards**, as shown below.



Use Case

In this tutorial, the **Yield Loss Information** dashboard is used as an example. This dashboard is designed to support production and analysis of **Material** Efficiency.

With this dashboard, you can:

- **Monitor key performance indicators (KPIs)** - Track critical metrics to quickly assess overall production performance.
- **Analyze Material Yield Losses** - Identify trends and patterns in **Material** efficiency, helping to pinpoint areas for process improvement.
- **Visualize trends over time** - Use historical data to understand fluctuations in yield and anticipate potential issues.

This use case is ideal for production supervisors, process engineers, and manufacturing analysts who need actionable insights to optimize processes, reduce waste, and make data-driven decisions in real time.

Data source

This dashboard retrieves its information from the Data Warehouse (DWH). Specifically, it uses the [Material Loss Bonus](#) Data Set and the [Material Movement](#) cube, which provide insights into material flows, production output, and yield losses.

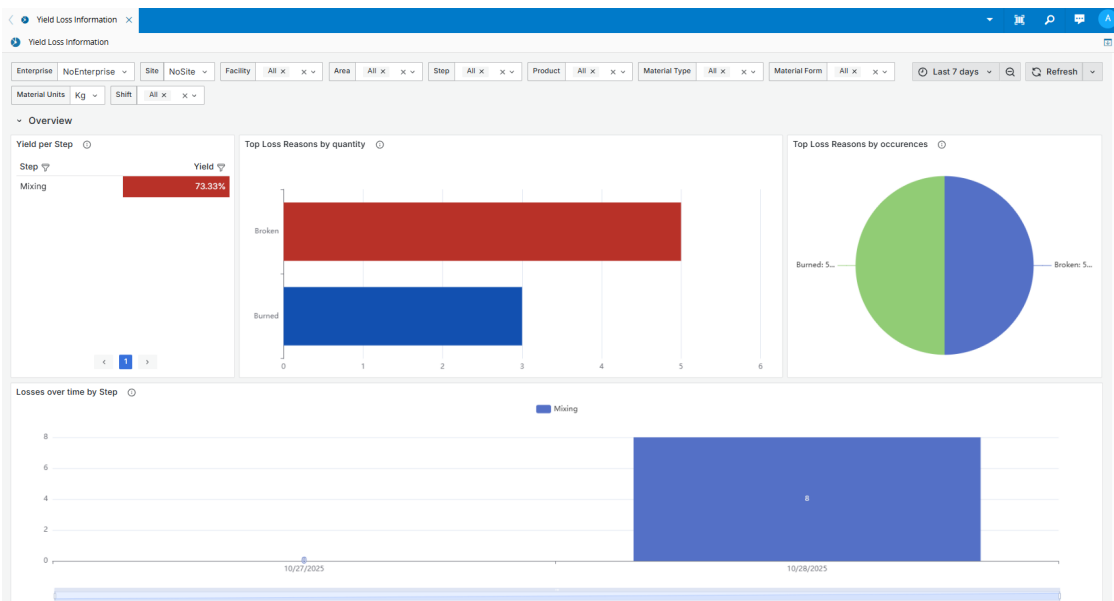
For your own dashboard, you can access these data sources in the **Data Platform** menu. To explore all available options, see [Supported Data Sources](#).

Dashboard Layout

This dashboard is structured around 3 visualization panels, each designed to provide key insights and a clear overview of your data. The layout ensures that essential information is easily accessible, promoting efficient monitoring and analysis.

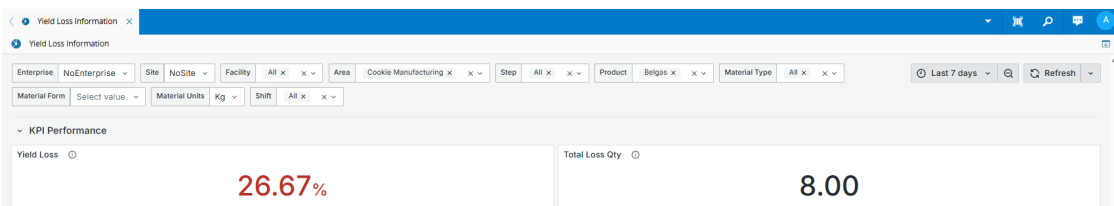
Panel 1: Overview

- **Yield per Step** - Displays the yield for each step.
- **The Top Loss Reasons by Quantity** - Highlights the top loss reasons by quantity.
- **The Top Loss Reasons by Occurrences** - Measures the percentage of occurrences for each loss reason.
- **Losses Over Time by Step** - Shows daily loss quantities.



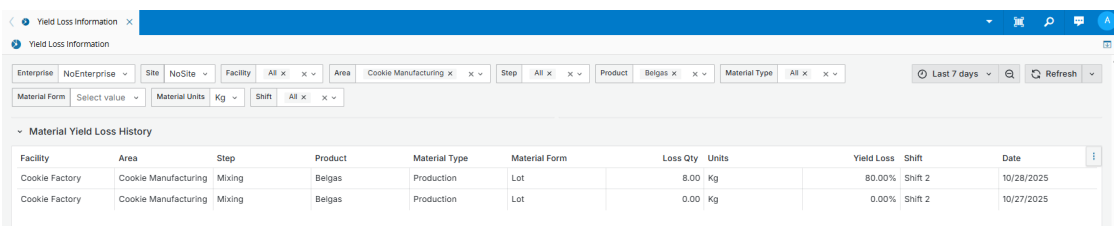
Panel 2: KPI Performance

- **Yield Loss** - Monitors Material inefficiency during production.
- **Total Loss Quantity** - Measures the amount of Material lost during production.



Panel 3: Material Yield Loss History


- **Material Yield Loss History** - Presents the historical record of daily Material Loss transactions.

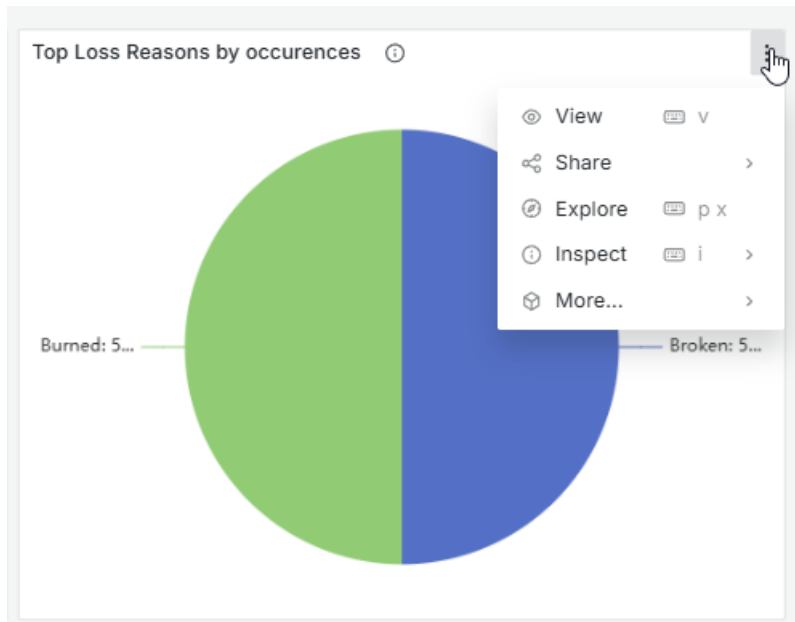


The screenshot shows the 'Material Yield Loss History' table with the following data:

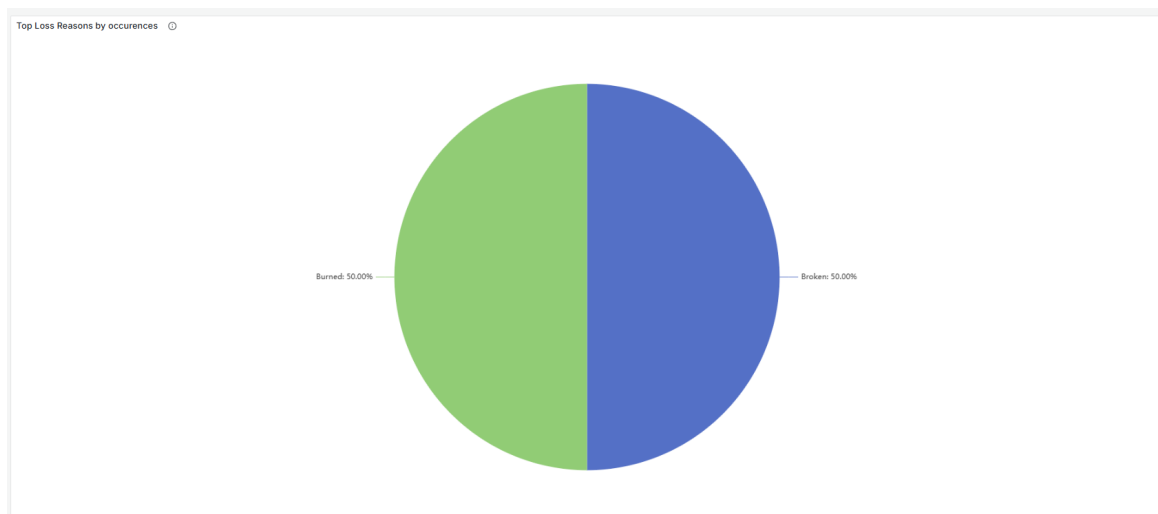
Facility	Area	Step	Product	Material Type	Material Form	Loss Qty	Units	Yield Loss	Shift	Date
Cookie Factory	Cookie Manufacturing	Mixing	Belgas	Production	Lot	8.00	Kg	80.00%	Shift 2	10/28/2025
Cookie Factory	Cookie Manufacturing	Mixing	Belgas	Production	Lot	0.00	Kg	0.00%	Shift 2	10/27/2025

Page Properties

Each panel in the dashboard includes a set of options that allow you to view, share, and analyze the data behind it. To access these options, select the  button in the top-right corner. This opens a menu with several useful actions for exploring and managing your dashboard.



Opens the panel in a zoomed-in view for easier interaction.



Share

Opens the sharing options, you can choose to **Share Link**, **Share Embed**, or **Share Snapshot**. According to your choice, a corresponding window will appear:

Link settings



Create a personalized, direct link to share your panel within your organization, with the following customization settings:


Lock time range
Change the current relative time range to an absolute time range

Shorten link

Theme

Current Dark Light


[Copy link](#)


 **Image renderer plugin not installed**
To render a panel image, you must install the [Grafana image renderer plugin](#). Please contact your Grafana administrator to install the plugin.

Panel preview

Image settings ⓘ

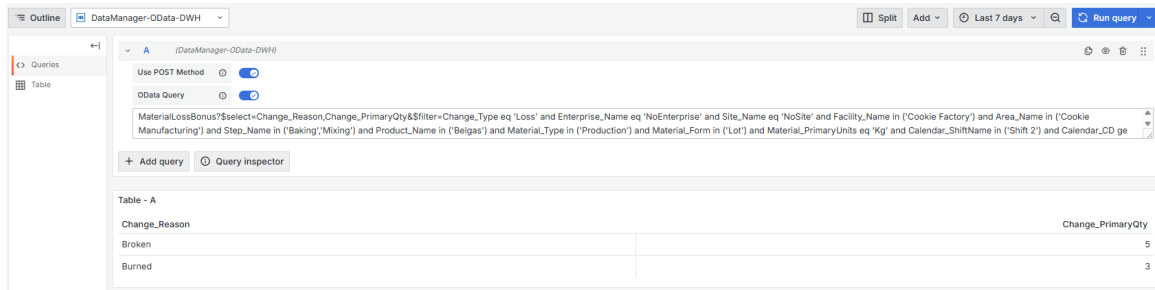
Width *	Height *	Scale factor *
1000 px	500 px	1

 Generate image

 Download image

Explore

Opens an interactive view showing the selected **Data source** and the **Query** used in the panel. You can modify and run the query, view results in real time, and use the **Query Inspector** to examine request and response details.



Inspect

Opens a view where you can choose to **Inspect Data** — to view the raw data returned by the query and check if it contains results — or **Panel JSON**, which shows the JSON definition of the panel, useful for debugging or exporting configurations.

Inspect: Top Loss Reasons by occurrences

Data Stats Query JSON

Select source

Panel JSON

```

1  {
2    "id": 31,
3    "type": "volkovlabs-echarts-panel",
4    "title": "Top Loss Reasons by occurrences",
5    "description": "The top loss reasons ranked by their total number of occurrences, cons:
6    "gridPos": {
7      "x": 17,
8      "y": 1,
9      "h": 11,
10     "w": 7
11   },
12   "fieldConfig": {
13     "defaults": {},
14     "overrides": []
15   },
16   "transformations": [
17     {
18       "id": "organize",
19       "options": {
20         "excludeByName": {},
21         "includeByName": {},
22         "indexByName": {},
23         "renameByName": {
24           "Change_PrimaryQty": "Quantity",
25           "Change_PrimaryQty (count)": "Count",
26           "Change_Reason": "Reason"
27         }
28       }
29     },
30     {
31       "id": "groupBy",
32       "options": {
33         "fields": {
34           "Quantity": {
35             "aggregations": [
36               "count"
37             ],
38             "operation": "aggregate"
39           }
40         }

```

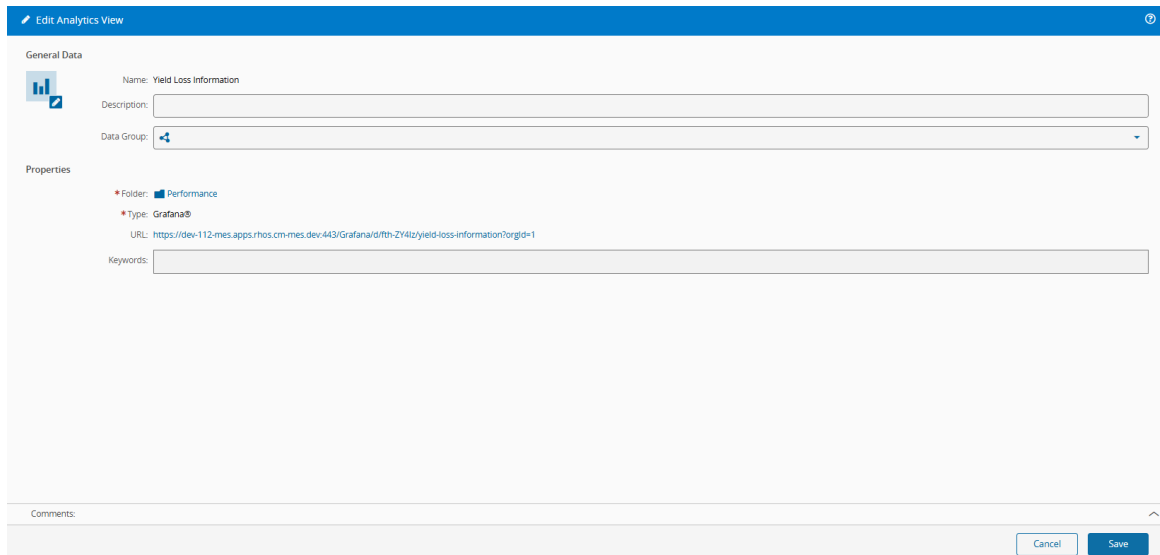
More

Opens a menu where you can perform additional actions on the panel, such as **Copy**, **Create a New Alert Rule**, or **Get Help**.

Editing the Dashboard

The **Edit Analytics View** wizard can be accessed from the Dashboard page within **Business Intelligence**.

1. In this wizard, you can modify all non-system properties, including Description, Data Group, and Keywords. The Name of the dashboard cannot be changed.
2. Select **Save** to apply your changes.



The screenshot shows the 'Edit Analytics View' interface for 'Yield Loss Information'. The interface is divided into several sections:

- General Data:** Includes fields for Name (Yield Loss Information), Description, and Data Group.
- Properties:** Includes fields for Folder (Performance), Type (Grafana), URL (https://dev-112-mes.apps.rhos.cm-mes.dev.443/Grafana/d/fth-2Y4lp/yield-loss-information?org=d-1), and Keywords.
- Comments:** A section at the bottom for adding comments.

At the bottom right, there are 'Cancel' and 'Save' buttons.

Demonstration: From Production to Dashboard

This section illustrates how data updates in real time during production. Consider the example of a **Material** moving through the production process — first being tracked in, then tracked out, with a **Loss Reason** recorded.

After these operations, the dashboard automatically updates to reflect the changes, and you can see how the new data appears instantly.

This example highlights how real production data feeds the dashboard, allowing you to monitor performance, identify issues, and make informed decisions to optimize the production process.

Expected Outcome

With this dashboard, you can now monitor **Material** efficiency in real time and track Yield Loss patterns throughout the production process. It also allows you to identify the main causes of losses, analyze performance deviations, and take data-driven actions to improve overall **Material** Yield.

This example illustrates a sample use case, and serves as a starting point for your own dashboards, customized to your specific data and business needs.



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