

**Oracle Utilities Analytics Dashboards for
Work & Asset Analytics**

Metric Reference Guide

Release 2.5.1

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Preface

This document describes the Work & Asset Analytics metrics (such as dashboards, analyses, and subject areas) available in Oracle Utilities Analytics Dashboards. These metrics are used in the prebuilt analyses, and/or available for customers to use via OBIEE Answers in building new analyses or extending existing analyses.

Audience

This guide is intended for all users of Oracle Utilities Analytics Dashboards for Oracle Utilities Work & Asset Management.

Related Documents

For more information, see the following documents:

- *Oracle Utilities Analytics Installation Guide*
- *Oracle Utilities Analytics Quick Install Guide*
- *Oracle Utilities Analytics Release Notes*
- *Oracle Utilities Analytics User's Guide*
- *Oracle Utilities Analytics Administration Guide*

See Also:

- Oracle Utilities Work and Asset Management Documentation Library

Notational Conventions

The following notational conventions are used in this document:

| Notation | Indicates |
|-----------------|--|
| boldface | Graphical user interface elements associated with an action, terms defined in text, or terms defines in the glossary |
| <i>italic</i> | Book titles, emphasis, or placeholder variables for which you supply particular values |
| monospace | Commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter |

Chapter 1

Dashboard Content Reference

Oracle Utilities Analytics Dashboards, Release 2.5.1, provides analysis of and data from Oracle Utilities Work and Asset Management using Oracle Business Intelligence Enterprise Edition built-in metrics. Non-spatial analytics, information that is not tied to geography, is represented in a series of dashboards showing tables, bar graphs, pie charts, and gauges. Spatial analytics, or information that is geographically related, use OBIEE integrated Map Viewer technology to represent events, weather data, map data, and other geographical information.

Work & Asset Analytics includes metrics that help customers to monitor and measure their asset and work order management.

This chapter describes the Work & Asset Analytics' content in the following dashboard pages:

- **Overview**
- **Inventory**
- **Storeroom Transactions**
- **Cost and Expenditure**
- **Maintenance**

To access these dashboard pages:

1. Go to the **Home** page.
2. Select > **Dashboards** > **Work & Asset Analytics** > **Work & Assets**.

By default, the data for current month and year is displayed. You can modify the criteria per requirement.

Overview

The Overview dashboard page provides a snapshot of work management process, focusing on the overall health of the organization.

Proactive Maintenance

| Property | Details |
|--------------------|---|
| Description | <p>Proactive maintenance of assets is less expensive and ensures assets are in good condition to prevent break downs. This analysis includes two views which show if the service organization is proactively maintaining their assets or is being reactive.</p> <p>For selected year: This view shows proactive maintenance of assets for the selected year.</p> <p>For selected month: This view shows proactive maintenance of assets for the selected month.</p> |
| Purpose | <p>Business users can analyze the targets for proactive maintenance. For example, a goal can be 80% of all maintenance should be proactive as opposed to reactive.</p> |
| Representation | <p>For selected year: The gauge shows the proactive percentage for the selected year, using different colors to denote how the business users perceive the calculated result.</p> <p>$\text{Proactive \%} = 100 * (\text{Proactive Maintenance Cost} / (\text{Proactive Maintenance Cost} + \text{Reactive Maintenance Cost}))$</p> <p>The needle movement in the gauge towards yellow or red indicates a need to pay more attention on the maintenance scenarios. Note: The ranges for green, yellow, and red can be customized.</p> <p>For selected month: The gauge shows the proactive percentage for the selected month, using different colors to denote how the business users perceive the calculated result. The needle movement in the gauge towards yellow or red indicates a need to pay more attention on the maintenance scenarios. Note: The ranges for green, yellow, and red can be customized.</p> |
| Drill Down | <p>The gauges drill down to the Maintenance dashboard page for specific maintenance details.</p> |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Proactive % |

Actual vs Estimated Total Cost

| Property | Details |
|--------------------|---|
| Description | This analysis shows a monthly comparison of the total estimated costs versus actual costs for the work orders. The cost information comes from the work order cost summaries. The data is displayed for the selected month and previous two months. |
| Purpose | Business users can analyze the effectiveness of their estimation techniques by showing the deviation between actual and estimated amounts. |
| Representation | The bar graph shows the estimated total amount and the actual total amount for previous three months. The X-axis represents the month. The Y-axis represents the amount. Hover over the bars for specific values. |
| Drill Down | The graph drills down to the Cost and Expenditure dashboard page for details about materials, labor, and other costs. |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Estimated Total Amount, Actual Total Amount |

Inventory

The Inventory dashboard page provides a snapshot of the inventory process. It shows the stock items in inventory and then plots a trend on the stock items over the year.

Inventory Summary

| Property | Details |
|--------------------|--|
| Description | <p>“Inventory” consists of spare assets which can replace the installed assets in case of defects in them.</p> <p>This analysis shows a summary of all the storerooms and items in each of these storerooms, along with the total value of the stock items. The data is displayed for the selected calendar month.</p> |
| Purpose | Business users can analyze the storeroom details, stock, and total value. They get a quick snapshot on the inventory status. |
| Representation | The table lists all the storerooms and number of items in each of these storerooms, in the selected month. It also shows the total value of the stock items. |
| Drill Down | No drill down |
| Source Object | Storeroom Inventory Snapshot Fact |
| OBIEE Subject Area | WAM - Storeroom Inventory Snapshot |
| Metrics | Stock Items, Total Value |

Stockout Trend

| Property | Details |
|--------------------|---|
| Description | <p>A “stockout” is defined as a material request that was not fulfilled because the materials were not available. In the Oracle Utilities Work and Asset Management system, stock outs are tracked in the Store-room Transaction Log.</p> <p>This analysis shows the trend of the number of stock outs per month, for the previous 15 months, initially sliced by commodity category.</p> |
| Purpose | Business users can analyze the trend in stockout. Further, they can look into the cause of stockout in the selected month. |
| Representation | <p>The View By drop down slices the data by commodity category, storeroom, or stock class.</p> <p>The line graph shows the monthly trend in stockout of an entity. The X-axis represents the calendar month. The Y-axis represents the stockout. The lines on the graph represent various items in the selected View By entity. Hover over the lines for specific values.</p> |
| Drill Down | No drill down |
| Source Object | Storeroom Transaction Fact |
| OBIEE Subject Area | WAM - Storeroom Transaction |
| Metrics | Number of Stockouts |

Top 10 Stockouts by Stock Code

| Property | Details |
|--------------------|---|
| Description | This analysis shows the top 10 stock codes that had the maximum number of stockouts in the selected month. |
| Purpose | If the same stock code is consistently out of stock, business users should investigate the reason and have the stock item available. |
| Representation | <p>The table shows the number of stockout events for each stock code. It also shows the storeroom and stock class details for each stock code.</p> <p>Rank = Rank (Stockout Events)</p> |
| Drill Down | No drill down |
| Source Object | Storeroom Transaction Fact |
| OBIEE Subject Area | WAM - Storeroom Transaction |
| Metrics | Stockout Events |

Top 10 Stock Codes by Value Over Max

| Property | Details |
|--------------------|--|
| Description | <p>Every stock item has a predefined maximum limit to be maintained at a store room. If the inventory quantity in the storerooms exceeds the maximum limit, the procurement should be adjusted to keep the items in the predefined limit.</p> <p>This analysis displays the top 10 stock items that exceeded the maximum limit in the selected month. The number of items over the maximum are valued and presented as a dollar value.</p> |
| Purpose | Business users can take necessary measures so that such stock codes are not produced. Thus, they can plan the usage of these items. |
| Representation | <p>The table shows the actual stock items on hand and the stock items that exceeded the maximum limit for each of the stock codes. It also displays the respective storeroom details.</p> <p>$Value\ Over\ Max = (Quantity\ Over\ Max / Value\ Over\ Max) * 100$</p> <p>$Rank = Rank\ (Value\ Over\ Max)$</p> |
| Drill Down | No drill down |
| Source Object | Storeroom Inventory Snapshot Fact |
| OBIEE Subject Area | WAM - Storeroom Inventory Snapshot |
| Metrics | Quantity On Hand, Quantity Over Max, Value Over Max |

Storeroom Transactions

The Storeroom Transactions dashboard page provides a snapshot of the transaction amount for the stock.

Transaction Amount Trend

| Property | Details |
|-------------|---|
| Description | This analysis summarizes the monthly trend in transaction amount of the storerooms. The data is displayed for the previous 15 months. |
| Purpose | Business analysts can identify the storerooms where maximum transactions happen and when. The analysis provides a high-level summary and helps in planning the resources accordingly. |

| Property | Details |
|--------------------|---|
| Representation | <p>The View By drop down slices the transaction amount by storeroom, stock class, commodity category, or commodity type attributes.</p> <p>Note: The selected attribute is broadcast to the Transaction Amount Distribution analysis on the same dashboard page</p> <p>The stacked bar graph compares the month-on-month transaction amount for the selected View By segment, and shows the trend for previous 15 months. The X-axis represents the calendar month. The Y-axis represents the transaction amount. Hover over the bars for specific values.</p> <p>The table shows the transaction amount and percentage of total for the attribute selected in the View By option. These details are displayed for each of the month for the previous 15 months.</p> |
| Drill Down | No drill down |
| Source Object | Storeroom Transaction Fact |
| OBIEE Subject Area | WAM - Storeroom Transaction |
| Metrics | Transaction Amount, % of Total |

Transaction Amount Distribution

| Property | Details |
|--------------------|---|
| Description | This analysis shows the distribution of transaction amount of the segment initially selected in the Transaction Amount Trend analysis on the same dashboard page. The data is displayed for the selected month. |
| Purpose | Business users can get an insight into how each storeroom contributes to the total transaction amount. It helps them in planning the resources accordingly. |
| Representation | <p>The View By drop down slices the transaction amount by storeroom, stock class, commodity category, or commodity type.</p> <p>Use the slider to view the transformation amount distribution for a particular month.</p> <p>The pie chart shows the distribution of transaction amount under each attribute for the selected month.</p> |
| Drill Down | No drill down |
| Source Object | Storeroom Transaction Fact |
| OBIEE Subject Area | WAM - Storeroom Transaction |
| Metrics | Transaction Amount, % of Total |

Cost and Expenditure

The Cost and Expenditure dashboard page provides a snapshot of the cost and expenditure incurred in planning the work.

Asset Failure Cost

| Property | Details |
|--------------------|--|
| Description | This analysis provides information about the asset failure cost for 15 months. |
| Purpose | This analysis gives an overall picture about failures reported by various factors. Business users can take necessary pro-active measures and improve the failure handling capability. |
| Representation | <p>The Criticality prompt filters the data by criticality. For ex: A failure might impact the production at area level, result in personal injury, or have no impact on production.</p> <p>The View By drop down slices the data by failure, root cause, repair description, or asset class.</p> <p>The stacked bar graph shows the asset failure cost for the selected segment for previous 15 months. The X-axis represents the calendar month. The Y-axis represents the failure cost. Hover over the bars for specific values.</p> <p>Note: Click the graph for respective granular details.</p> <p>Use the slider to view the failure cost distribution for a particular month.</p> <p>The pie chart shows the distribution of asset failure costs around a failure for the selected month.</p> <p>Note: Click the pie chart for respective granular details.</p> |
| Drill Down | No drill down |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Asset Failure Cost, % of Total |

Actual vs Estimated Total Cost

| Property | Details |
|-------------|---|
| Description | This analysis shows the monthly trend between the actual and estimated total costs involved in planning the work. The data is displayed for the previous 15 months. |
| Purpose | Business users can analyze the effectiveness of their estimation techniques by showing the deviation between actual and estimated amounts. |

| Property | Details |
|--------------------|--|
| Representation | <p>The bar graph shows the estimated and actual total amounts for each month, for the previous 15 months. The X-axis represents the calendar month. The Y-axis represents the total amount. Hover over the bars for specific values.</p> <p>The table displays the estimated cost, the actual cost incurred, and also the difference as a percentage, for the previous 15 months.</p> <p>$\% \text{ Difference in Cost} = (\text{Actual Total Amount} / \text{Estimated Total Amount}) * 100$</p> |
| Drill Down | No drill down |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Estimated Total Amount, Actual Total Amount, % Difference in Cost |

Actual vs Estimated Service Cost

| Property | Details |
|--------------------|---|
| Description | This analysis shows the monthly trend between the actual and estimated contract services costs involved in planning the work, for the previous 15 months. |
| Purpose | Business users can analyze the effectiveness of their estimation techniques by showing the deviation between actual and estimated service costs. |
| Representation | The bar graph shows the estimated and actual contract services cost for each month, for the previous 15 months. The X-axis represents the calendar month. The Y-axis represents the total services amount. Hover over the bars for specific values. |
| Drill Down | No drill down |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Actual Contract Services Amount, Estimated Contract Services Amount |

Actual vs Estimated Cost of Material

| Property | Details |
|-------------|---|
| Description | This analysis shows the monthly trend between the actual and estimated material costs involved in planning the work, per month, for the previous 15 months. |

| Property | Details |
|--------------------|---|
| Purpose | Business users can analyze the effectiveness of their estimation techniques by showing the deviation between actual and estimated costs of materials. |
| Representation | The bar graph shows the estimated and actual material costs for each month, for the previous 15 months. The X-axis represents the calendar month. The Y-axis represents the total material cost. Hover over the bars for specific values. |
| Drill Down | No drill down |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Actual Materials Amount, Estimated Materials Amount |

Actual vs Estimated Labor Cost

| Property | Details |
|--------------------|---|
| Description | This analysis shows the monthly trend between the actual and estimated labor costs involved in planning the work, per month, for the previous 15 months. |
| Purpose | Business users can analyze the effectiveness of their estimation techniques by showing the deviation between actual and estimated labor costs. |
| Representation | The bar graph shows the estimated and actual labor costs for each month, for the previous 15 months. The X-axis represents the calendar month. The Y-axis represents the total labor cost. Hover over the bars for specific values. |
| Drill Down | No drill down |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Actual Labor Amount, Estimated Labor Amount |

Actual vs Estimated Labor Hours

| Property | Details |
|-------------|--|
| Description | This analysis shows the trend between the actual and estimated labor hours involved in planning the work, per month, for the previous 15 months. |
| Purpose | Business users can analyze the effectiveness of their estimation techniques by showing the deviation between actual and estimated labor hours. |

| Property | Details |
|--------------------|--|
| Representation | The bar graph shows the estimated and actual labor hours for each month, for the previous 15 months. The X-axis represents the calendar month. The Y-axis represents the total labor hours. Hover over the bars for specific values. |
| Drill Down | No drill down |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Actual Labor Hours, Estimated Labor Hours |

Maintenance

The Maintenance dashboard page provides insight into the maintenance costs (such as expenditure, repair, etc) associated with assets.

Proactive Maintenance Trend

| Property | Details |
|--------------------|--|
| Description | This analysis presents the data from the work order showing the trend in proactive versus reactive maintenance work done over the previous 15 months. |
| Purpose | Business users can analyze the trend in proactive versus reactive maintenance work and make business decisions accordingly. |
| Representation | <p>The line graph shows the monthly trend in proactive maintenance for the previous 15 months. The X-axis represents the calendar month. The Y-axis represents the proactive maintenance percentage. Hover over the line for specific values.</p> <p>The table shows the proactive and reactive maintenance details, and also the proactive percentage for each month.</p> |
| Drill Down | No drill down |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Proactive Maintenance, Reactive Maintenance, Proactive % |

Maintenance Cost

| Property | Details |
|-------------|---|
| Description | This analysis presents the total amount spent on maintenance, every year. |

| Property | Details |
|--------------------|--|
| Purpose | Business users can analyze the total preventive maintenance costs summarized by year. They can focus on the reasons for any increase in cost in a specific year, and propose suggestions for controlling the costs. |
| Representation | The bar graph shows the total maintenance costs, for every year. The X-axis represents the calendar year. The Y-axis represents the maintenance cost. Hover over the bars for specific values. Click the graph to view quarter-wise details of the selected year. |
| Drill Down | No drill down |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Maintenance Cost |

Work Order Trend by Type

| Property | Details |
|--------------------|--|
| Description | This analysis shows the total number of work orders closed in a month, by the type of work order. The work order types include urgent, regular, preventive maintenance, emergency, etc. The data is presented for the previous 15 months. |
| Purpose | Business users can analyze the areas where most efforts are spent. They can come up with respective balancing techniques in all areas. |
| Representation | The stacked bar graph shows the total work orders per month against each work order type. The data is displayed for the previous 15 months. The X-axis represents the calendar month. The Y-axis represents the number of work orders. Hover over the bars for specific values. |
| Drill Down | No drill down |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Work Order Count |

Average Work Order Completion Time

| Property | Details |
|-------------|---|
| Description | This analysis presents the overall average time to complete the work orders on hand, per month. The data is shown for the previous 15 months. |

| Property | Details |
|--------------------|--|
| Purpose | Business users can analyze how effectively the work orders are being handled over a period of time. |
| Representation | The line graph shows the number of hours taken to complete the work orders on hand for a month. The X-axis represents the calendar month. The Y-axis represents the hours for completion. Hover over the line for specific values. |
| Drill Down | No drill down |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Average Time to Complete |

Work Order Labor Hours

| Property | Details |
|--------------------|--|
| Description | This analysis presents the total labor hours required to complete the work orders on hand. The data is shown for the previous 15 months. |
| Purpose | Business users can analyze the labor hours spent over a period and the average time taken to handle a task. This helps to identify the effectiveness in labor usage. |
| Representation | <p>The line-bar combo graph shows the merge view with total labor hours and average labor hours per task aggregated by month. The details are displayed for the previous 15 months.</p> <p>The X-axis represents the calendar month. The Y1-axis represents the total labor hours, while the Y2-axis represents the average labor hours per task. Hover over the bars or line for specific values.</p> |
| Drill Down | No drill down |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Total Labor Hours, Average Labor Hours |

Top 10 Assets With Longest Mean Time to Repair

| Property | Details |
|-------------|---|
| Description | <p>This analysis shows the top 10 assets with longest mean time to repair. The data is displayed for the selected month.</p> <p>The source for this information comes from the work order closeout information, where start and finish time details are captured.</p> |
| Purpose | Business users can identify the assets which take longer to repair. Necessary actions can be taken and planned accordingly. |

| Property | Details |
|--------------------|---|
| Representation | <p>The Criticality drop down filters data by the criticality of the asset repair. The Apply button applies the selection to the analysis.</p> <p>The table shows the mean time taken to repair each asset, ranked by order of mean time.</p> <p>Mean Time To Repair (hours) = Avg (Actual Labor Hours)</p> <p>Rank = TOPN (Mean Time To Repair (hours))</p> |
| Drill Down | No drill down |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Mean Time To Repair (Hours) |

Top 10 Assets with Highest Work Orders

| Property | Details |
|--------------------|---|
| Description | This analysis shows the top 10 assets with highest number of attached work order tasks in the selected month. |
| Purpose | Business users can identify the assets in demand, so that the supply can be planned accordingly. |
| Representation | <p>The Criticality drop down filters data by critical repair details. The Apply button applies the selection to the analysis.</p> <p>The Asset Class drop down filters data by the type of asset. The Apply button applies the selection to the analysis.</p> <p>The table shows the number of work order tasks in hand against each asset. It also shows the description and rank for each of the assets.</p> <p>Rank = Rank (Work Orders)</p> |
| Drill Down | No drill down |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Work Order Count |

Top 10 Assets with Highest Expenditure

| Property | Details |
|-------------|--|
| Description | This analysis shows the top 10 assets that need maximum maintenance in the selected month. Users tend to spend more on these assets. |

| Property | Details |
|--------------------|--|
| Purpose | Business users can identify the assets that incur highest expenditure. Service Organizations can plan for alternatives or take necessary actions to reduce the expenses. |
| Representation | <p>The Criticality drop down filters data by critical repair details. The Apply button applies the selection to the analysis.</p> <p>The Asset Class drop down filters data by the type of asset. The Apply button applies the selection to the analysis.</p> <p>The table shows the expenditure of each asset in the selected month. It also shows the asset description, location and department details, and rank for each of the assets.</p> <p>Rank = TopN (Transaction Amount)</p> |
| Drill Down | No drill down |
| Source Object | Work Order Task Fact |
| OBIEE Subject Area | WAM - Work Order Task |
| Metrics | Expenditure of the Asset |