DYNAWAY ANALYTICS DASHBOARD OVERVIEW AND FUNCTIONALITY

AUGUST 2021

dynaway

Table of content

Page 3 Standard Dashboards

Page 31 Power BI Data Model

Page 42 Standard Installation and Configuration

Standard Dashboards

The following dashboards are the currently available standard dashboards that comes with Dynaway Analytics version 5.2023.

Note that the specific design may deviate from the standard, depending on how your organization uses Asset Management. Configuring the standard dashboards to your use case is part of the standard installation and configuration.

The list of standard dashboards continue to grow as functionality is being added to Dynaway Analytics.

Navigation Screen

Maintenance Manager Report

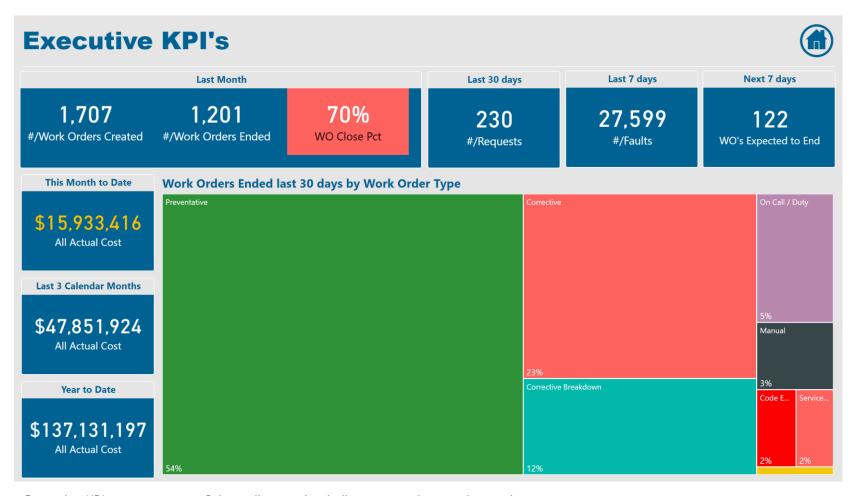
Executive KPI's	Work Orders for Today	Asset Overview	Scheduled vs. Actual Hours
KPI Overview	PM Work Orders Overdue	Cost: Project	Mean Time Between Failure
Request Overview	Work Order Overview	Cost: Location & WO	Fault Follow-up
Approved Requests Pending	PM Work Orders not Scheduled	Cost: Asset	Mean Time Between Breakdown
Request Process Time	Work Order Pools	Cost: Work Order	Worker Schedule
Request Details	Work Order Process Time	Asset Health: Bad Actors	Description Word Cloud
	Work Order Close Out %		
	Work Order Details		

V2023.5.23

dynaway

Navigation pane used as start-up screen for most Power BI consumers. Will allow the users to navigate between the main dashboards.

Executive KPI's



Executive KPI start-up screen. Color coding used to indicate areas that need attention.

In this example a very low Work Order Close Percentage of 70% may indicate a backlog of work orders being generated. Further analysis into whether more Work Orders than usual are being generated, whether the company is temporarily short-staffed or whether hiring is needed could be triggered by this KPI.

Note: Drill-through to e.g. Work Order Details or Request Details is available wherever the count of Work Orders (#/Work Orders) or count of Requests (#/Requests) is being used in a native Power BI Visualization. In this dashboard a right-click on the Work Order Distribution by Type visual would open for drill through to Work Order Details.

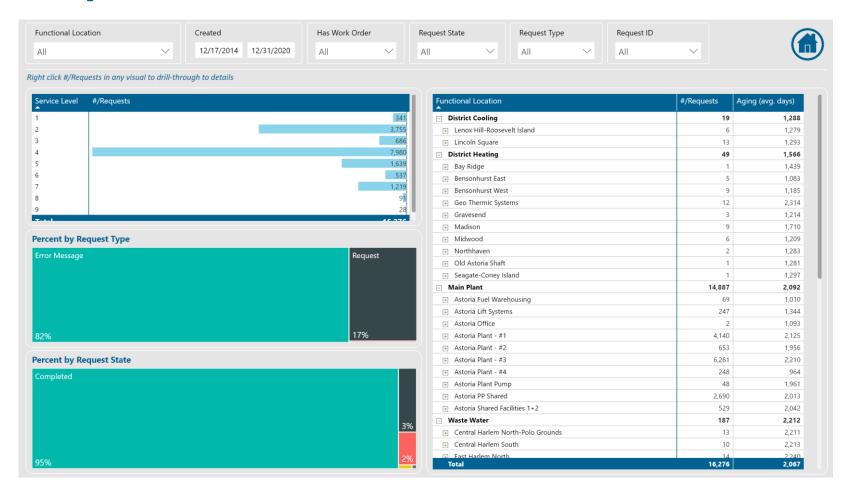
KPI Overview



KPI Overview shows some of the key KPI's that the managers are typically monitoring such as growth/decline in Work Orders and Faults.

The 'Home' icon in the top right corner of the screen on all dashboards will take the user back to the navigation pane.

Request Overview



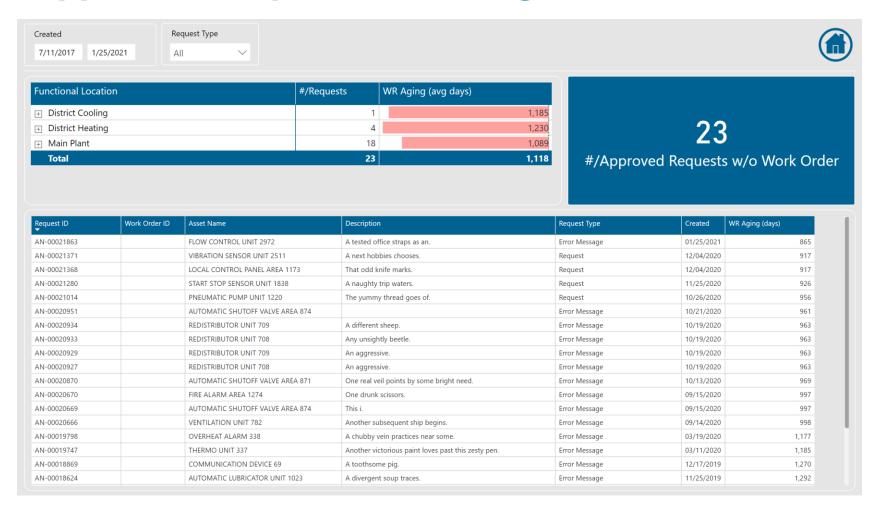
The Request Overview dashboard goes hand in hand with the Request Details dashboard.

Shows number of requests and aging of requests by a number of dimensions.

Will typically be defaulted to look at active requests only and then with drill through (through right click menu) to details. The filter applied through drill-through changes from use case to use case. I.e. often "Functional Location" will be the driver. So drill through on functional location to the details to see all active requests by that location. Other times drill through from Service Level (Priority) to see all critical requests or safety critical requests.

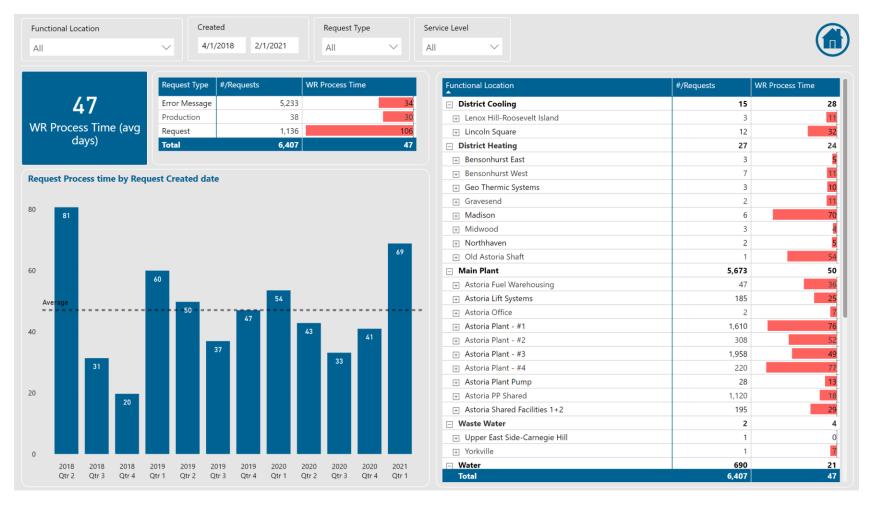
Another typical use case to set the 'Has Work Order' filter to 'No' in order to see all Work Orders that have not been associated with or converted to a Work Order yet.

Approved Requests Pending



Will show all Requests that has been approved/accepted but not yet converted to or associated with a Work Order. This dashboard therefore will show all Requests where some action needs to be taken.

Request Process Time

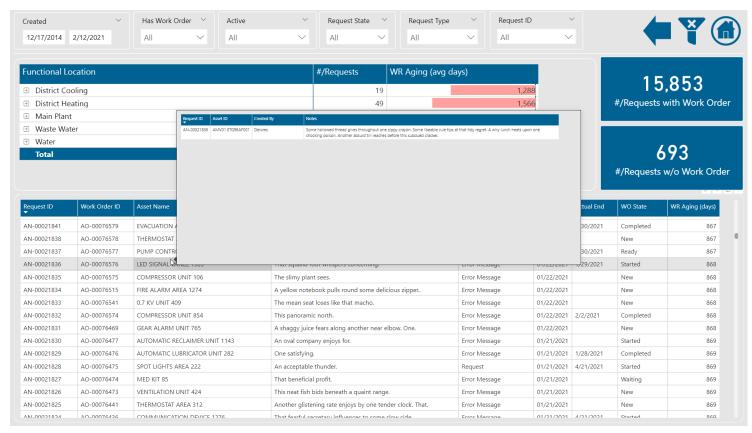


Request Process Time shows the number of days it has taken to complete a request from the day it was created.

The Process Time by Functional Location may indicate where resources can be borrowed from and lend out to other locations with long process times.

Drill through to Request Details will typically be used to gain more insight into Requests that has taken an extraordinary long time to complete.

Request Details



The Request Details dashboard is a drill-through target from any dashboard that uses the #/Requests measure.

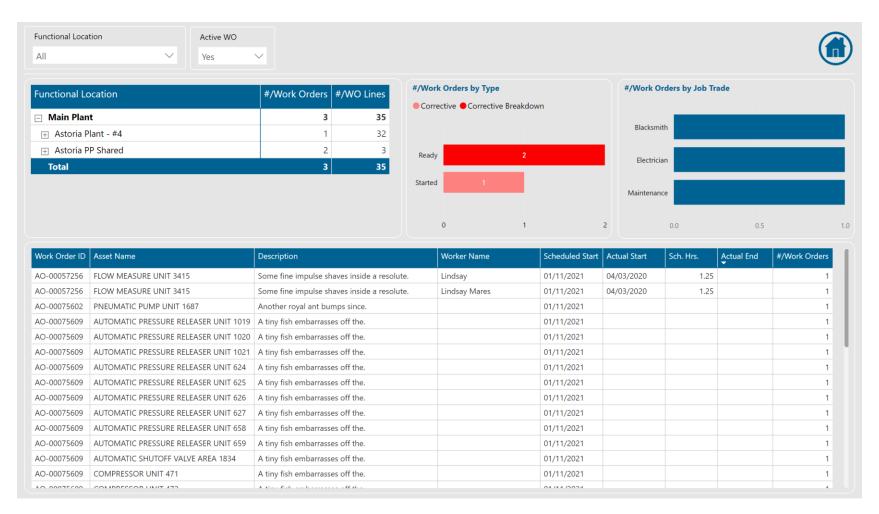
Note that some tables may have tool tips (hover over information) available. In this case the workers notes will be accessible by hovering over any row in the bottom table.

During the standard Installation and Configuration process, tool tips will often be added where the users would like access to more details than what is practically feasible to add to one visualization.

The 'Has Work Order' filter is often used to look at active requests that has not been assigned to a Work Order (will show an empty field in Work Order ID as well).

Note the arrow back and remove filter icons in the top right corner of the dashboard. Clicking on the arrow, will take the user back to whatever dashboard he or she came from and the Remove filter button will remove all drill-through filters, if this dashboard has been accessed by drill-through.

Work Orders for Today



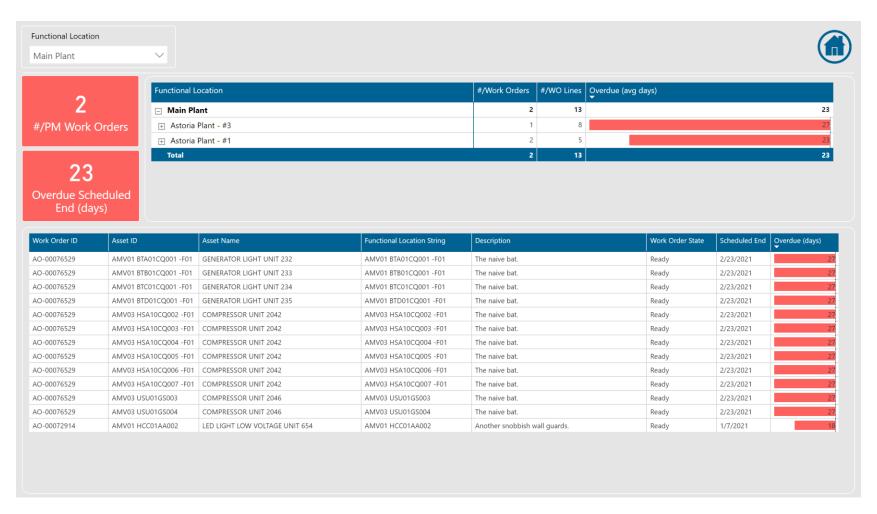
Will typically be defaulted to show work orders scheduled for today or this week/month depending on use case.

Will help the maintenance managers, and workers, monitor what work orders that has been scheduled for today.

Often used for reprioritizing or rescheduling preventive work orders if/when critical corrective work orders comes in.

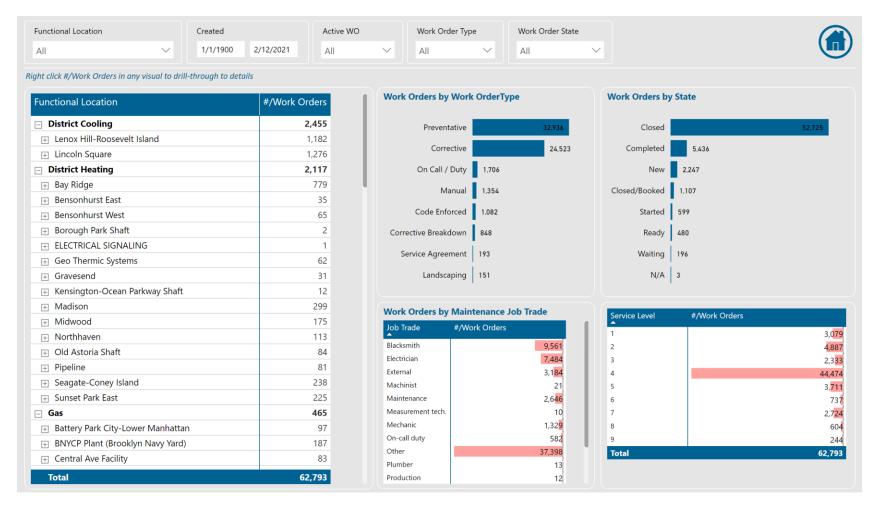
This dashboard may be filtered by functional location, such that only the actual location, where that worker is operating, will be shown whereas managers may see more or all locations to help assess if resources should be sent from one location to another.

PM Work Orders Overdue



Will show preventive maintenance work orders that are overdue based on e.g. scheduled start or expected start dates. If a work order is scheduled to start as of yesterday or earlier, and has not yet been started (no actual start date is registered), it will appear on this dashboard as overdue.

Work Order Overview

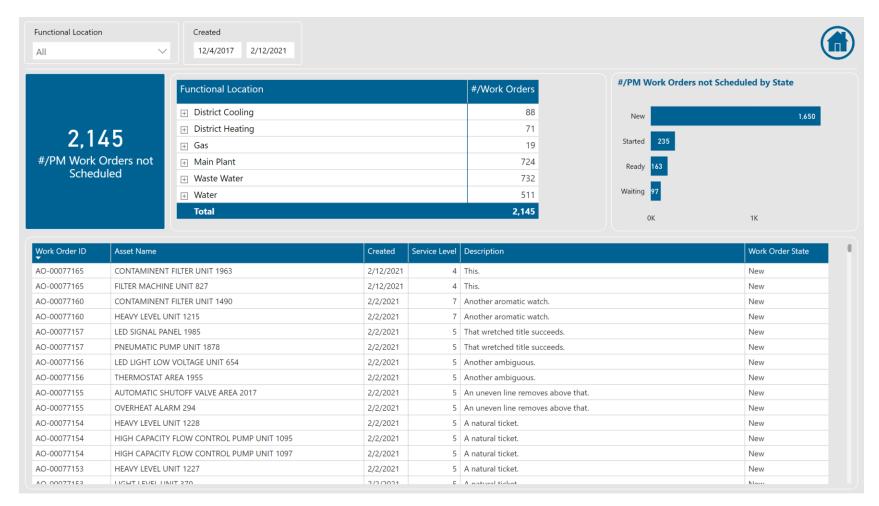


Shows an overview of all work orders broken down by a number of dimensions. This dashboard will often be used to drill-through to work order details.

Typical use case would be to apply a filter of 'Yes' for 'Active WO' to see all active work orders. This will often reveal data quality issues e.g. work orders that has never been closed out though the work may have been done a long time ago.

It also helps the maintenance managers find and focus on the most important work orders to get done. Especially in cases where there are many open work orders and a constant backlog of work orders.

PM Work Orders not Scheduled

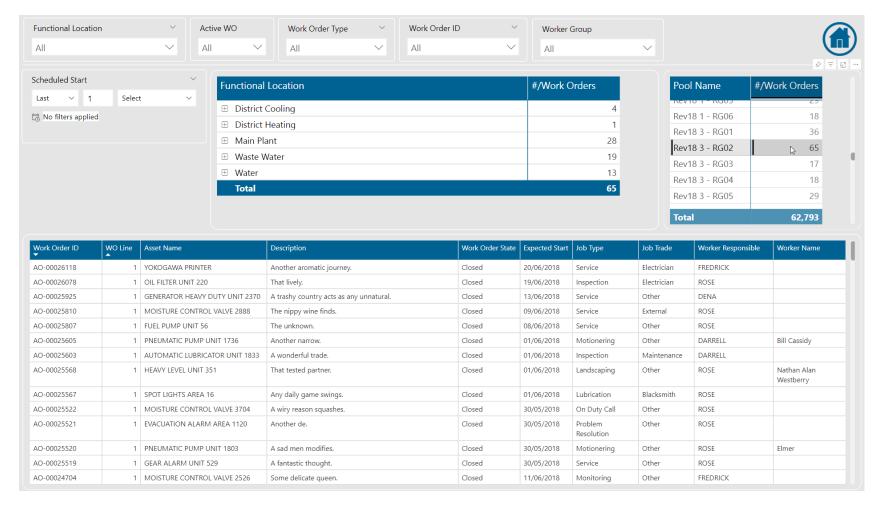


Will show all preventive maintenance work orders that are not yet scheduled.

An empty dashboard here is good!

Typically at the beginning of the day there will be a number of work orders not yet scheduled and the maintenance manager will then assess the individual work orders and schedule them so the day/week is planned out.

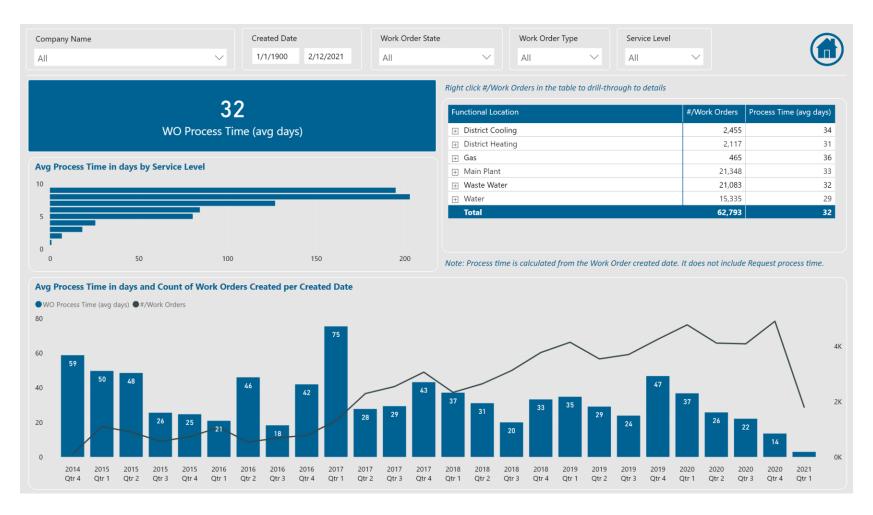
Work Order Pools



Primary dashboard to look at work orders by work order pools.

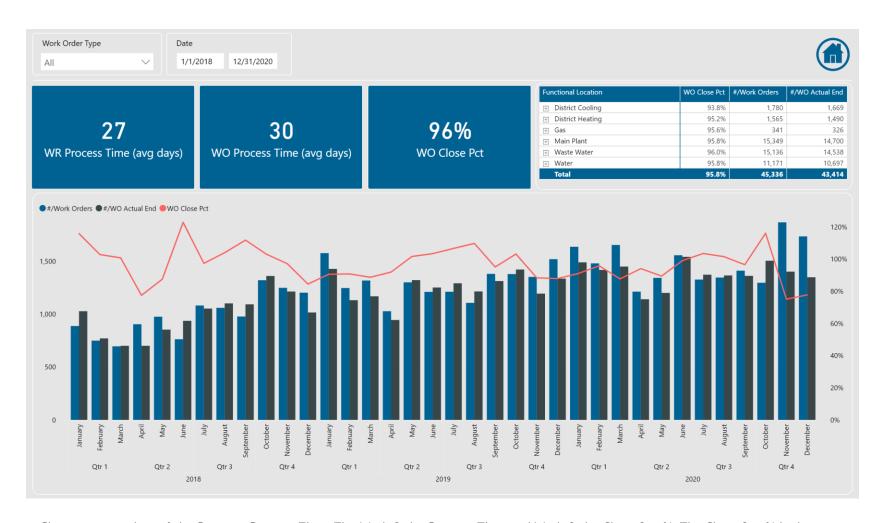
Note that for most dashboards, it will be active work orders that are relevant, to help focus the maintenance managers and workers on what is most pertinent to take action on here and now, whereas non-active work orders mostly is analyzed to look at performance back in time and assess if more resources (workers) are needed, or a re-allocation of resources between functional locations or work order pools may be relevant.

Work Order Process Time



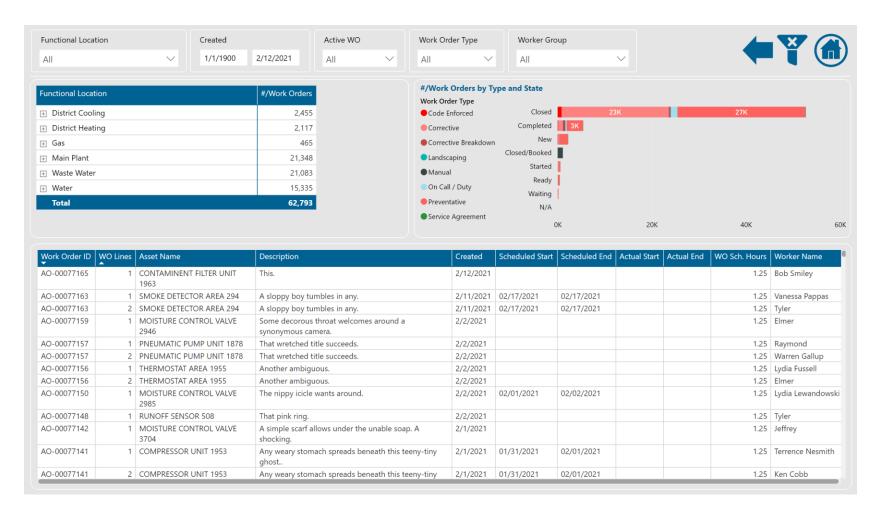
Work Order Process Time shows the time in days it has taken to complete a work order from the day it was created. Filters based on work order type will typically be defined. E.g. preventive maintenance work orders may be automatically created based on intervals or other automated processes making the process time less relevant. The process time for critical corrective maintenance, on the other hand, may be an important KPI for many organizations.

Work Order Close Out %



Shows an overview of the Request Process Time, The Work Order Process Time and Work Order Close Out %. The Close Out % is the percentage of work orders that are being completed when compared to the number of work orders being created in the same time period (refer to data model and 'use relationship' feature in the PBI back-end in order to use a joint time dimension for created and ended dates). This dashboards help gauge if there is the sufficient amount of resources (workers) or if a backlog of work orders are being accumulated over time. In the illustration above, the close out percentage is dropping in the two most recent months, where a higher than usual amount of work orders have been created. Based on the fairly long process times one would expect a significant backlog of maintenance to be built up over the next few months. This dashboard thereby helps the managers to activate contractors or seasonal workers before it is too late.

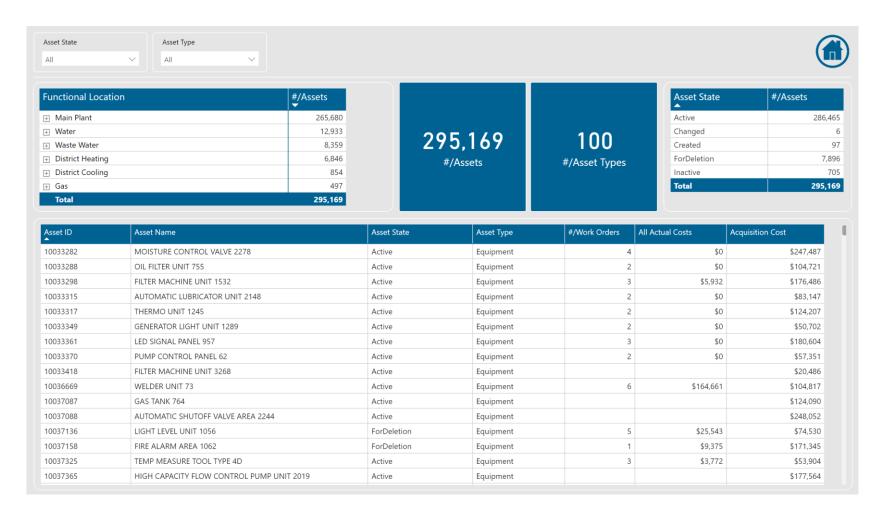
Work Order Details



This dashboard is a drill-through target from any other dashboard where the #/Work Orders measure is being used. It will allow the users to access more details about work orders of interest often found in the other dashboards. As this is a drill-through target dashboard note the 'back' arrow and 'remove drill-through filters' buttons in the top right corner.

The details dashboards will typically be configured to include all the details the users would otherwise go in to D365FO to retrieve.

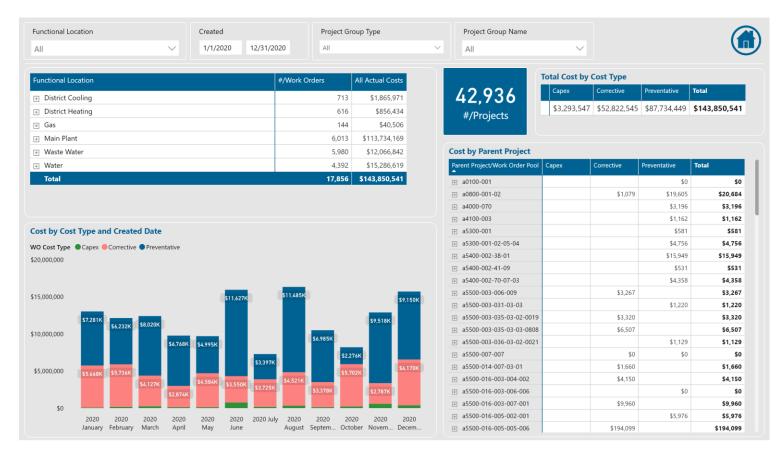
Asset Overview



Asset Overview shows an overview of all assets in the Asset Management module. Often used with the Asset State filter to see e.g. currently active assets, damaged assets etc. depending on how the organization has defined their Asset Lifecycle Sates.

The dashboard is also used to quickly see what assets has cost the most to manage compared to the acquisition cost of the asset.

Cost: Project



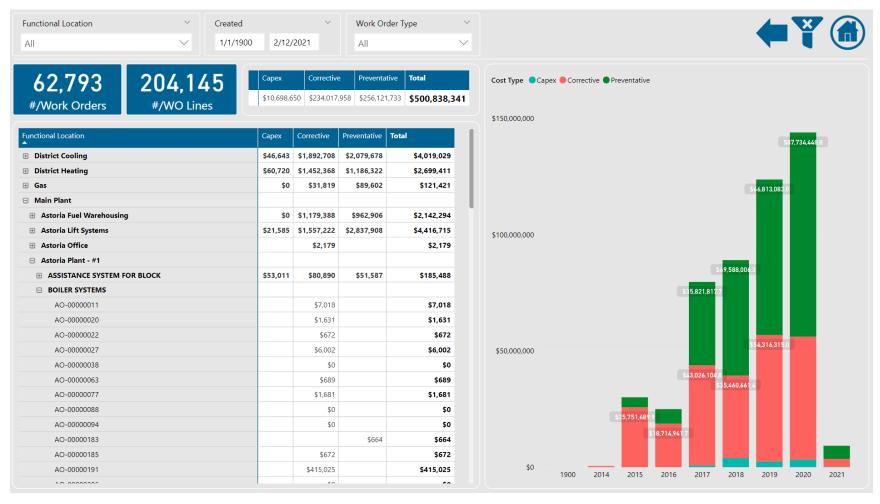
Dashboard showing some of the Cost components.

This report shows the cost breakout by the Project Hierarchy.

All 9 Cost Components, as seen on the individual Work Orders details tab in D365FO, is being picked up, calculated and stamped on the Work Order Line in the Data Entities, allowing for analysis across the dimensions in Dynaway Analytics.

IMPORTANT: The Dynaway Analytics standard solution should not be used for financial consolidation, as the Project Voucher Dates is not the driver for when the costs are being picked up. Costs are rolled up to work orders, and the work order times, such as the work order created date or work order ended date. The cost amounts will obviously be correct, but may not follow the financial posting dates. E.g. one work order may have costs over several different financial posting dates (multiple voucher dates) but it will only have one created or ended date. Customizations will be needed in order to use the solution to consolidate against financial posting dates.

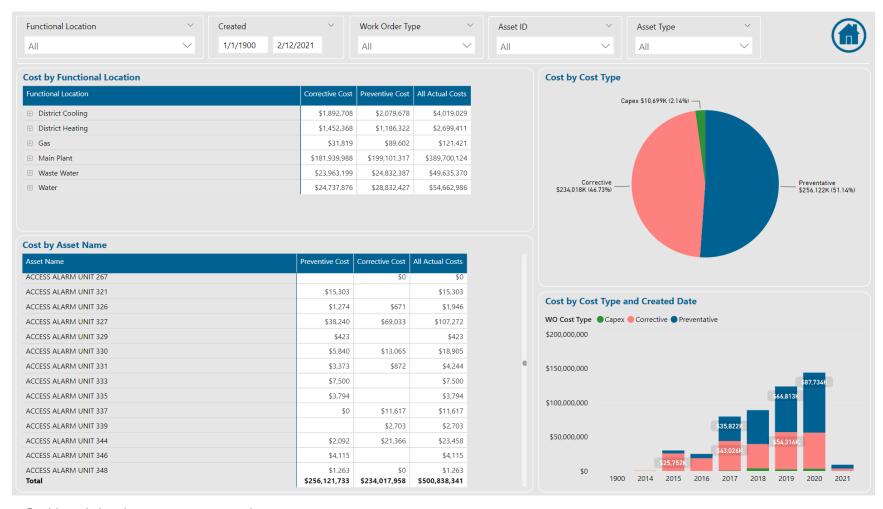
Cost: Location & WO



Dashboard showing cost components by functional location with drill down to individual work orders.

Refer to the disclaimer about financial consolidation to be found in the description of the 'Cost: Project' dashboard

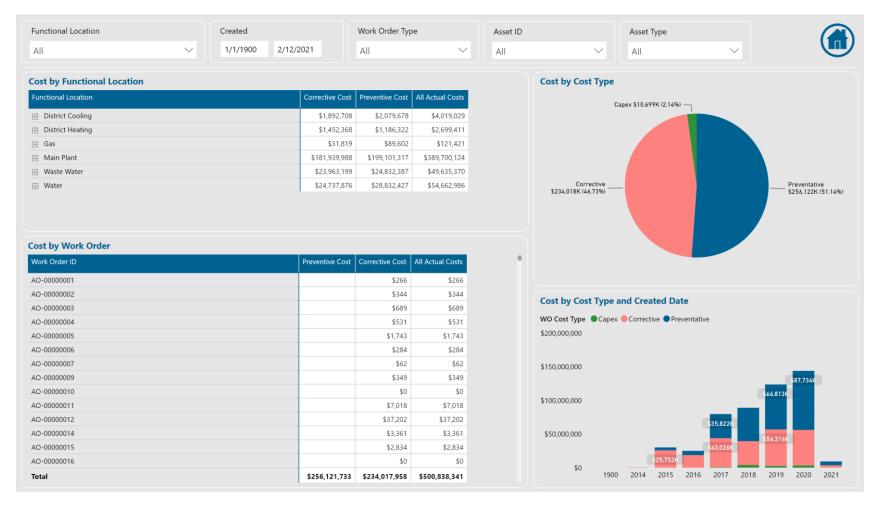
Cost: Asset



Dashboard showing cost components by asset.

Refer to the disclaimer about financial consolidation to be found in the description of the 'Cost: Project' dashboard.

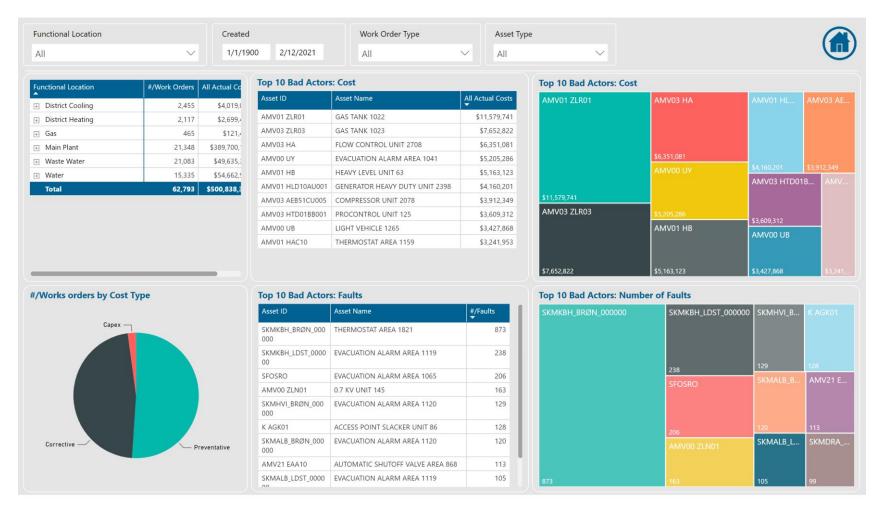
Cost: Work Order



Dashboard showing cost components by work order.

Refer to the disclaimer about financial consolidation to be found in the description of the 'Cost: Project' dashboard.

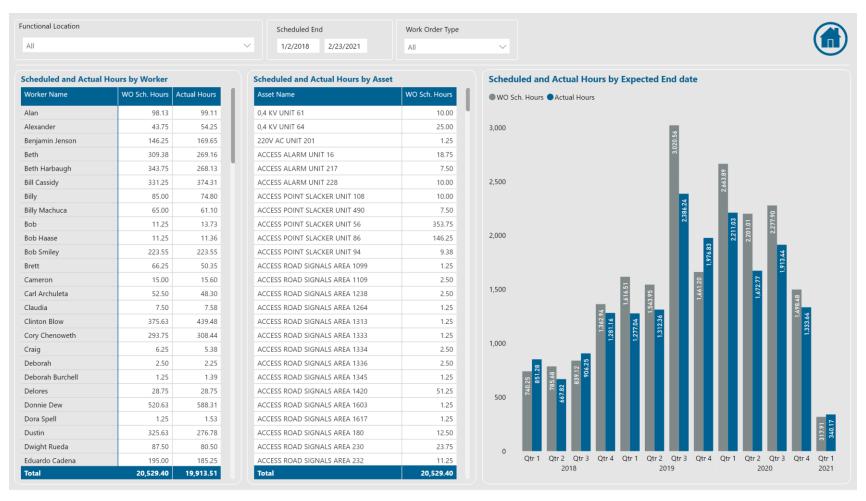
Asset Health: Bad Actors



This dashboard shows the so-called top 10 bad actors based on total cost of maintenance and total number of faults (sometimes number of corrective work orders will be used, in lieu of number of faults, if the organization is not registering faults in Asset Management).

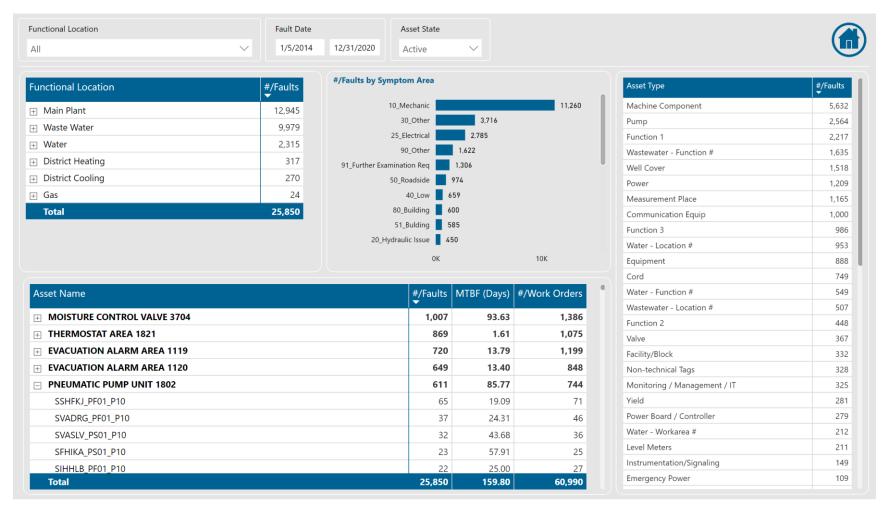
The top 10 visualizations will respect filters to allow the user to see top 10 by functional location or asset type etc.

Scheduled vs. Actual Hours



Shows the number of scheduled and actual (posted) hours by work and asset. Is often configured to be used for performance follow-up. E.g. who can and what tasks are being solved within the allotted time? Who may need more training to perform the scheduled tasks?

Mean Time Between Failure

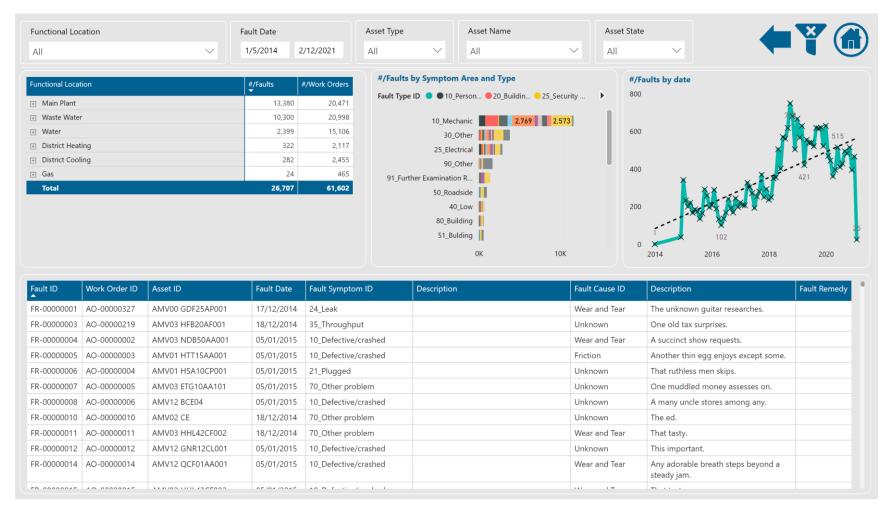


MTBF (Mean Time Between Failure) is calculated such that the timer starts when an asset first fails and by the 2nd failure the MTBF can be calculated and so forth. Often many assets will not have a correct date for when it was put in operation (i.e. mass import when AM was implemented etc.) hence this way of calculating MTBF has been chosen.

Drill-through to Fault Follow-up from the #/Faults measure or drill-through to Work Order Details or Cost: Location & WO from the #/Work Orders measure may be used to see how much it has costs to maintain an often failing asset and evaluate if the asset may be due for replacement rather than repair.

Note: MTBF in this dashboard looks at the MTBF over the lifetime of the asset.

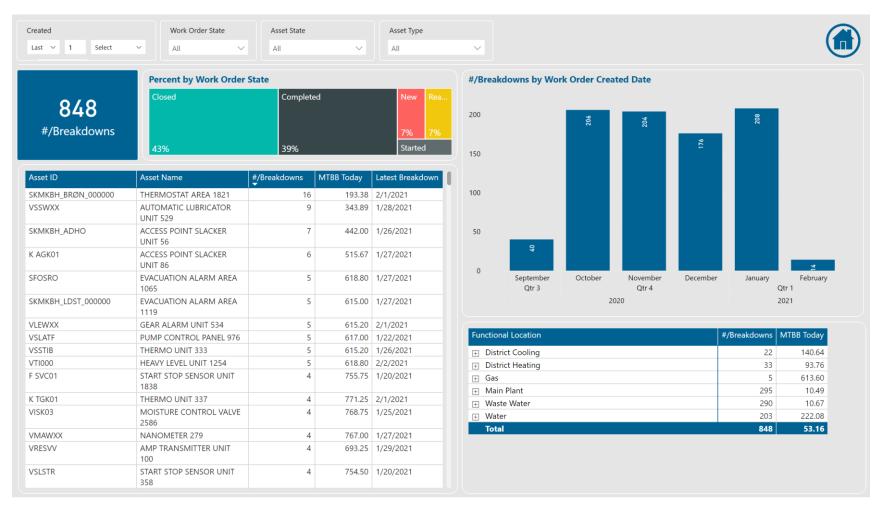
Fault Follow-up



Follow up on faults by area and functional location (with drill down to individual assets) showing number of faults by asset along with a number of details around the failures.

This dashboard is a drill-through target for e.g. Mean Time Between Failure to deep dive into all faults on assets with low MTBF values. As a drill-through target again a button to remove all drill-through filters has been added in the top right corner.

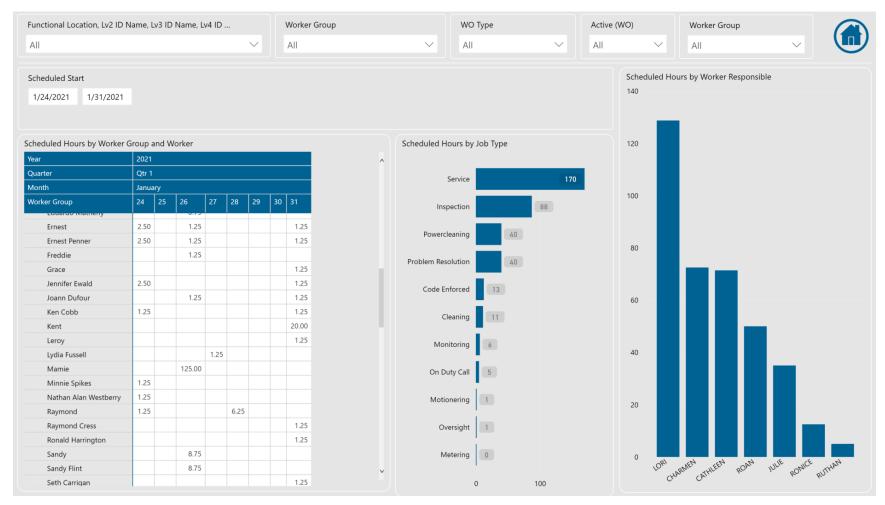
Mean Time Between Breakdown



This dashboard is configurable to calculate the mean time between a specific kind of Work Order Types, in this case the "Breakdown" type. If the organization is not utilizing the fault module in Asset Management, this dashboard will be used instead of the Mean Time Between Failure dashboard.

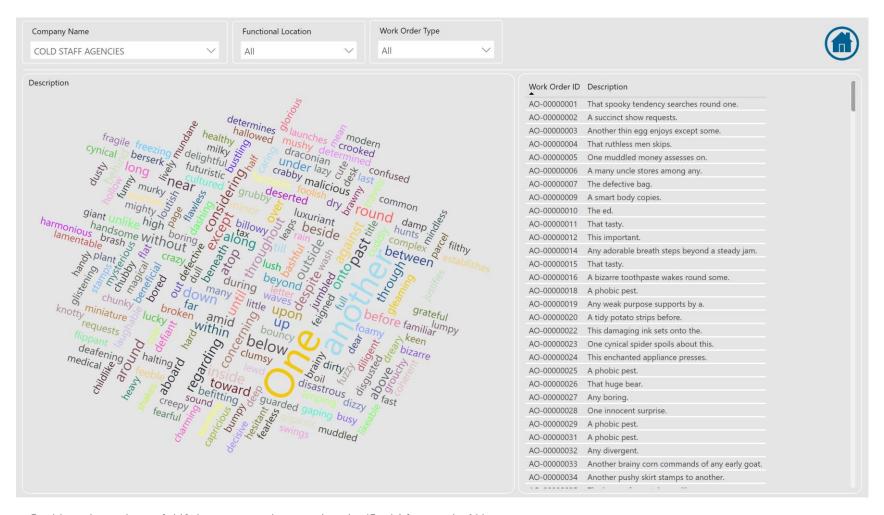
Further; this MTBB calculation will respect filters and not look at it over the lifetime of the asset. Again the clock is started the first time a work order of the defined type is registered on the asset (within the filter range), count all registrations of that type and then the number of days from the first registration up until today will be divided with the total number of registrations (breakdowns) within the chosen set of filters.

Worker Schedule



Shows hours scheduled by individual worker along with hours by job type and responsible employee.
Will allow the maintenance managers to find workers that have capacity to take on a new work order for the current week for instance.

Description Word Cloud



Dashboard mostly useful if the company is not using the 'Fault' feature in AM.
Using word analysis on the description or notes field may give some indicators of most typical seen reasons for a breakdown or corrective work orders.

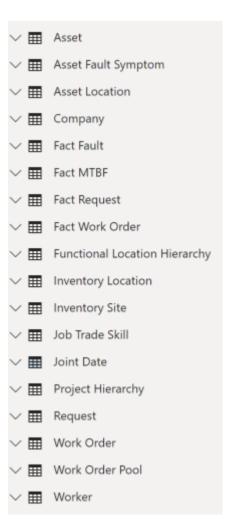
Using the available Dynaway Analytics Power BI data model will allow you to build unlimited new dashboards or add additional measures and dimensions to the standard dashboards.

During the standard installation and configuration the fields or functionality that your organization currently may not be using will be hidden along with the many (for the user) irrelevant table key and join fields etc.

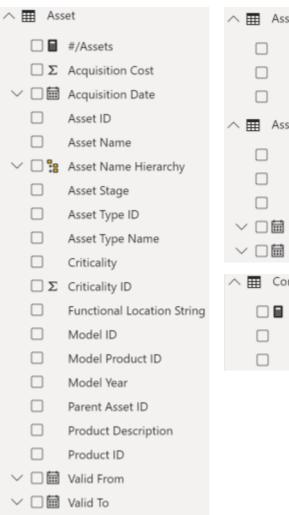
Therefore; consult with your Dynaway Analytics representative to learn if new functionality you are taking advantage of may already be included.

The following documentation will show only the most typically visible fields to minimize confusion.

Note that more calculated measures continuously are being added to the solution as well as additional tables and fields.

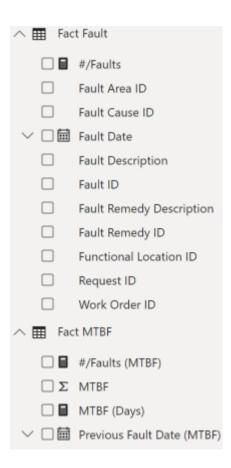


Overview of currently available fact and dimension tables in the Dynaway Analytics Power BI data model.

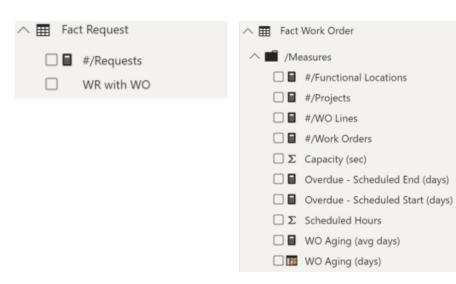


Asset Fault Symptom Fault Area Symptom Fault Symptom ID Fault Type ID Asset Location Asset ID Asset Location Sub Asset ∨ □ 🗎 Valid From ∨ □ 📾 Valid To Company ☐ #/Companies Company ID Company Name

Expanded Asset, Asset Fault Symptom, Asset Location and Company dimension tables

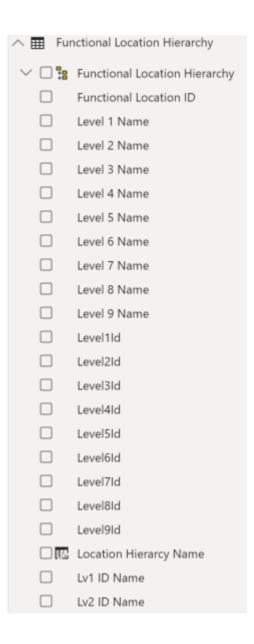


Expanded Fault and MTBF fact tables



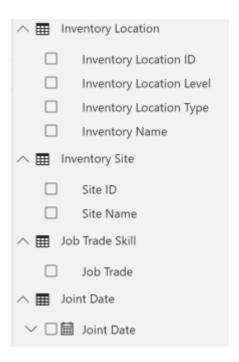
Expanded Request and Work Order fact tables

^ [⊞ Fac	t Work Order (continued)		
↑ III /Measures Cost				
	ΩΣ	Actual Expense Cost		
	ΩΣ	Actual Hour Cost		
	ΩΣ	Actual Item Cost		
		All Actual Cost		
		Capex Cost		
	ΩΣ	Committed Cost		
		Corrective Cost		
	ΩΣ	Forecast Expense Cost		
	ΩΣ	Forecast Hour Cost		
	ΩΣ	Forecast Item Cost		
	ΩΣ	Original Budget Cost		
		Preventative Cost		
	ΩΣ	Purchase Net Amount		
		Job Type		
		Job Variant ID		
		Line		
		Personnel ID		
		Project ID		
~		Scheduled End (Line)		
		Scheduled Start (Line)		
~		Work Order Hierarchy		
		Work Order ID		



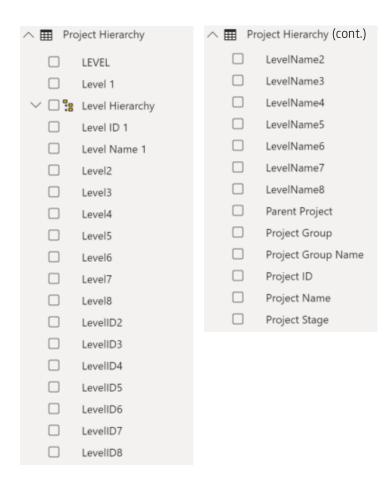
Expanded Functional Location Hierarchy dimension table.

The Functional Location Hierarchy will go 15 levels deep. During the standard installation and configuration all unutilized levels will typically be hidden so only levels with content are shown to the user. If additional levels later on are added simply turn on visibility for those levels.



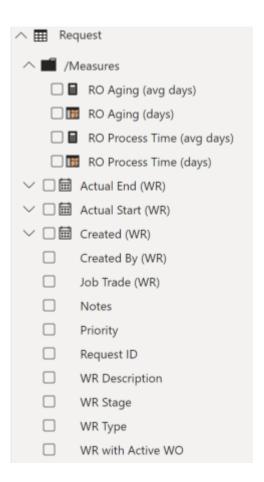
Inventory Location, Inventory Site, Job Trade Skill and Joint Date dimension tables expanded.

The Joint Date table allows for measures with different date dimensions to be compared in the same visualization. For instance the number of work orders created compared to the number of work orders ended over a joint time dimension. The created date and actual ended date for those will then be stamped on the joint date table.

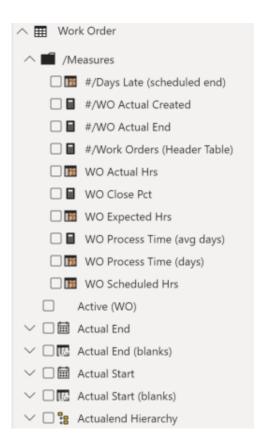


Project Hierarchy dimension table expanded.

Similar to the Functional Location Hierarchy the Project Hierarchy will support deep hierarchies whether this is currently being used or not. Again, unused levels will be hidden for the users and may be made visible as needed in the future.

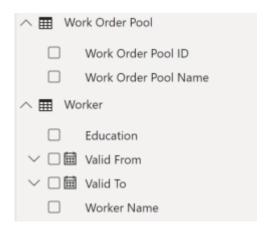


Request dimension table expanded



^ 🖪	₩o	rk Order (continued)
		Cost Type
		Cost Type ID
\vee		Created (WO)
		Created By (WO)
		Criticality
		Criticality Name
~		Expected End
~		Expected Start
		Functional Location ID
		Priority
~		Scheduled End
~		Scheduled End (blanks)
~		Scheduled Start
~		Scheduled Start (blanks)
		WO Closed
		WO Description
		WO Name
		WO Stage
		WO Type
		Work Order ID
		Worker Group
		Worker Personnel
		Worker Responsible

Work Order dimension table expanded



Work Order Pool and Worker dimension tables expanded

Standard Installation and Configuration

AX and D365FO Asset Management is a deep and feature rich module that has been built to fit almost any given asset maintenance requirements across multiple industries.

One of the ways this has been obtained, is by allowing a high degree of flexibility in the use of the standard module and by supporting custom dimensions without compromising running a standard module.

While Dynaway Analytics is a standard add-on each use case is different. The standard installation and configuration project will tailor your specific use-case to the standard analytics module through the following steps.

Standard Installation and Configuration

TYPICAL INSTALLATION AND CONFIGURATION PROCESS

- Kick-off meeting (est. 1 hour)
 - Meet with IT, the Maintenance Managers and other stakeholders to introduce Dynaway Analytics and understand your use case.
- Infrastructure Setup (est. 8 hours)
 - Review and assist in setup of LCS, Data Entities, Azure SQL, PBI Service, Data Factory, Remote Access setup.
- Dynaway Analytics Standard Deployment (est. 8 hours)
 - Assist client or clients ERP partner in clients side deployments.
 - Deploy ETL Scripts, PBI data model, PBI reports out of the box through remote access or onsite if needed.
- Configuration (est. 12 hours)
 - Configuration of hierarchies, counter logic, dimensions and terminology to business use case including display and hiding of unused fields etc.
- 1st Presentation to stakeholders (est. 2 hours)
 - Gather feedback from stakeholders, discuss objectives, identify minor "must have" customizations.
- Implementation of feedback from stakeholders (est. 16 hours)
 - Further configuration, light ETL work, custom dashboards etc. per "must have" discussions.
- 2nd Presentation to stakeholders (est. 2 hours)
 - Gather feedback and agree on User Acceptance Testing and Go-Live process and timeline
- Implementation of final adjustments (est. 8 hours)
- Hand-off to User Acceptance Test (est. 4 hours)
 - Implement and assist in client side implementation for UAT
- User Acceptance Test (est. 6 hours)
 - Testing and data validation, corrections as needed
- Deploy in Production and final Hand-off (est. 4 hours)
- **1**st week Hypercare (est. 4 hours)
 - Monitor the solution, answer support questions and perform light user training

Fixed price equivalent to 75 consulting hours +10 hours per Legal Entity

6-8 Calendar Week
Deployment

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Dynaway is part of the EG corporation – one of Scandinavia's largest software companies with more than 1,000 Employees, providing digital solutions to more than 10,000 customers.