

PowerBI and Thrio

Advanced Analytics & Reporting

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Thrio's Power BI

What is Power BI?

BI (Business intelligence) is one of the fastest growing and most important sectors of modern business. With the collection and analysis of data being one of the main driving forces for improvement, Power BI looks to provide a platform where businesses can run reports and create visuals to help inform on the performance of their company.

Who can use Power BI?

Thrio has implemented a series of Contact Center related reports in Power BI that aid our customers with extracting the most value out of their data. With a focus on the performance of campaigns over time and the analysis of agents and queues, it is possible to extract visual information determining the progress of a company using Thrio as their contact center platform.

Any business using Thrio will have access to our basic reports mentioned above as part of their security group inside Thrio's Power BI space. To access these, it is necessary to have users that are set up as administrators or supervisors who must be monitoring the queues, campaigns and agents of the application under their respective umbrellas.

Using a username and password login to Microsoft, these users will be able to access the Power BI app and see the data related to the campaigns and agents that they monitor. It is necessary to have a Microsoft account to access Power BI and it must use the same username (email address) as they use to log in Thrio. This is because Thrio will be extracting the supervisory information from their user and be filtering the data in Power BI to show only data related to the items in Thrio that they monitor, and as such save on loading time.

How does Power BI work?

Upon logging in to the app, a Supervisor will see the report graphics displaying information only for the agents, campaigns and queues that they monitor in Thrio. These reports will have filters as well so that a user may display different data and even create bookmarks of chart views that they would be using particularly often.

Additionally, a panel will be available to those supervisors that have access to multiple reports, and Thrio will be happy to help integrate specific Power BI reports that a business may want or need and is not included in the generic ones. Thus, Thrio hands over control to your supervisors on visualisation of your data.

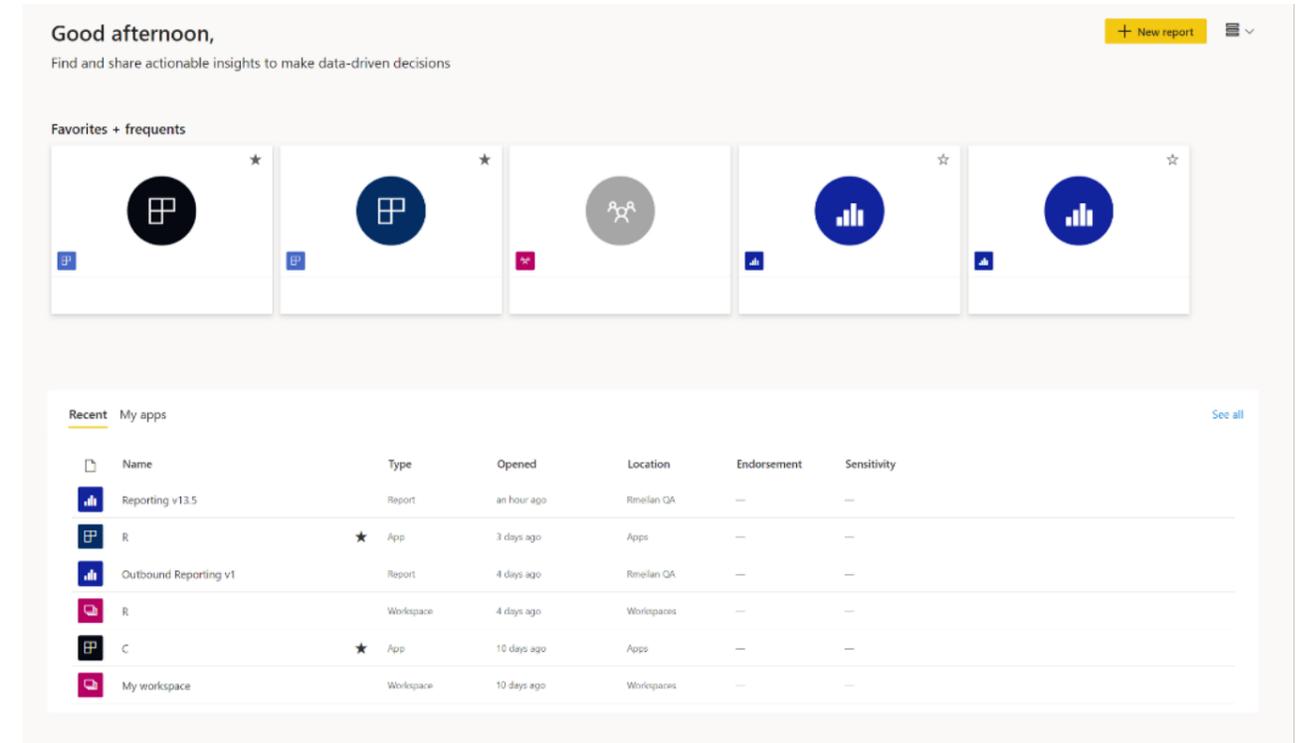


Figure 1: The Power BI dashboard. This is the view for the supervisors and administrators with access to multiple reports. If you only have access to one report then that one will open up.

Logging in steps:

1. Set up a Free Microsoft account using the same email address that is linked to your User in Thrio. You will be prompted to create a new secure password.
2. Second, have the Thrio Power BI System Administrator add that User to your Security Group to link your Microsoft User to the Agents and Campaigns that you supervise.
3. Navigate to <https://app.powerbi.com/> and enter your email and password for the newly created account. This will navigate you to your Power BI dashboard where you will see the apps (reports) and also be able to add new ones via a search option.
4. Once inside, select the report that you wish to open and click on it. This will take you to the Campaign Analysis report. From there you can navigate using the inside buttons.

The Reports

The three base reports that will be available to all of Thrio’s customers will be showing the data from their campaigns, agents and queues in visually appealing and simple to use visualisations. The objective of this is to help a supervisor to navigate quickly through the historic data of the tenant and thereby evaluate the progression of agents and their queues and show how a campaign’s contacts have improved or changed in that time-frame.

With a view to providing more insight into the data that Thrio collects, Power BI has brought a new way of monitoring the application over time, allowing supervisors and administrators to make data-driven decisions.

There are 3 base reports included: Agent Analysis, Campaign Analysis and Queue Analysis. They each have a series of filters which you can use to narrow down or expand the graphics and drill down on the data and be able to extract valuable, actionable insights.



Figure 2: The main page when you log in will be the Campaign Analysis dashboard. This will show graphics for the data of the campaigns that you monitor.

Report Basics

Each tab in a report contains a series of basic tools that can be used to create different visualisations of the items that a supervisor monitors

1. The Tools panel

Located just below the top-bar of the Power BI application. The Tools panel provides several buttons used in the creation of files, exporting of the visuals and creation of bookmarks.



- The File button is used to create an exported file of the current tab on Power BI that is being viewed. You can save a copy, download the Power BI file, manage permission and print the page. It is even possible to create a QR code of the current tab visuals.
- The Export button will give you an option to export the underlying data in an Excel file, PowerPoint or PDF.
- The Share button will allow you to send this current tab view via URL with people who have access to the report.
- Chat in Teams allows you to create a chat in the workspace that you share with your teammates, only teammates with access to PowerBI will be able to see the visuals.
- Get insights, see related content, open lineage view, open usage metrics and pin to a dashboard are all additional features available for Pro Licenses (can be acquired individually, not through Thrio).
- The Reset to default button is used to remove all filters and highlights that have been applied to the chart. This is the way to return to the default view of a Supervisor’s monitored items.
- The Bookmarks button is used to create a bookmark. These are additional buttons saved under this drop-down menu that will take you to a saved view of the application. For example if you choose to apply a set of filters and then create a highlight on a particular chart, you may then save that as a bookmark to be able to quickly return to it at a later date.
- The View button will allow you to expand the size of the charts to full page and handle their zooming in and colour correction features.
- The last 3 buttons allow you to refresh the data (from the backend), leave a comment or save the report in your Power BI app Favourites.

2. The Tab panel

The Tab panel shows navigation buttons to each of the 3 reports: Campaign, Agent, Queue. Clicking on these will take you to the corresponding view.



3. The Date Filter

Found at the top left corner of the reports, the date range filter is used to select the date range for data to be displayed on the charts.



4. The Tab's Chart filters

The chart filters available for a particular tab are located to the right of the date range filter. These will allow you to select individual items to filter your visuals out. This is particularly useful if you want to show data only for a particular campaign or a particular set of media types. You will notice how the charts change dynamically as you assign more filters.

As an example: you could select one campaign and a series of media types to show only inbound and outbound calls for a particular campaign. The eraser button may then be used to clear all items in a particular filter. You may also use the reset button on the Tools panel to reset all for the entire report.

Note: To select multiple items from a filter, it is important to hold down the Ctrl button as you select them.



5. The Highlight Functionality

It is often desirable to highlight a particular item from within a visual to draw special attention to it. To do this, simply click on the item in question, you will immediately see that the other charts in the tab will dynamically update, showing the information relative to only that item. To stop the highlight, re-select it in the original chart. You can also change to a different highlight by choosing a different item.

Below is a highlighted chart, notice how one is brighter and the others dimmer. See Figure 3 for a comparison view when using a highlight.

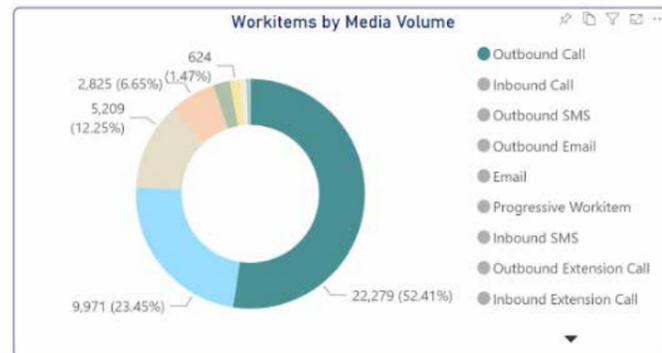


Figure 3: Above shows the Campaign Analysis tab before Outbound Call was selected to highlight set items. Below is the same tab after the highlight, notice how the other visuals have changed dynamically to display only Outbound Call items.

6. Right-click Drop-down and Hover Options

Every chart has the option of right-clicking on it, displaying a drop-down with additional actions to carry out on the chart. Here you can include and exclude particular data points from the chart, creating additional filters in a similar way to the tab filters. It is also possible to show the data as a table, which allows a supervisor to see the row-wise elements of the chart under the particular filtering conditions that they are at. It is important to note that this will open the chart in a new view, called a focus view, which you can escape from using the back button on the top-left.

There are also other additional features that appear when you hover over a chart, displaying options to copy the data, pin the visual, add comments or export the data. Exporting the data will allow you to export an Excel spreadsheet of the underlying data in a particular visual, giving a supervisor the possibility to then carry out a deeper analysis of the data outside of Power BI's dynamic graphs. The data that is exported here is the same as the data that is seen when selecting the show as table option.

Additionally there are options to sort the axes of the visual if it is desirable to change the order of it. Some visuals also include a retractable bar on the axes to be able to zoom in and out of a particular dataset easily.

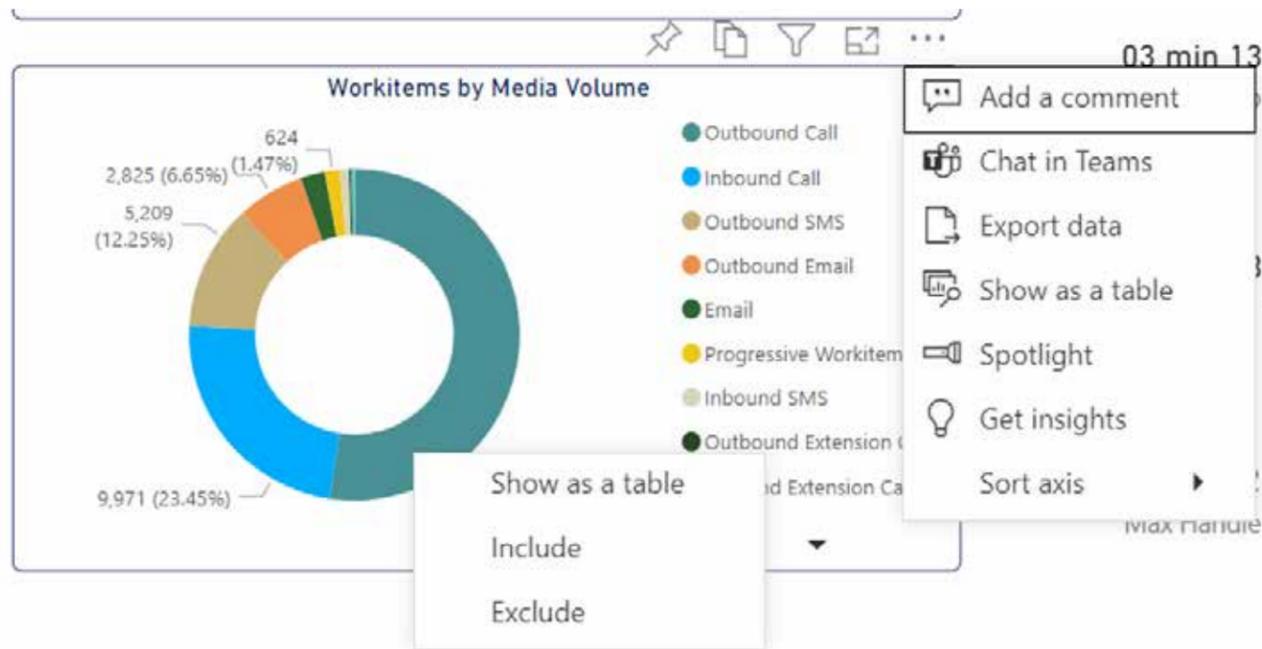


Figure 4: Showing a chart's hover options (top-right of the visual) and its right-click drop-down. You can include or exclude certain data points to change the visuals around and create new filters.

The Campaign Analysis Tab

On this tab a supervisor can see data related to the campaigns that they monitor and find visuals that describe how the campaigns have performed over time. It shows totals for different kinds of media types and the dispositions on the Workitems handled by those campaigns. This tab gives a more global view of the company's progress and has a broader view of total interactions with customers. There are 5 main charts here.

1. The Workitems evolution chart

Shows how many workitems have been handled by the selected campaigns over time. It also shows the average talk time and the average handle time of them. Hovering over a particular data point will show the metrics for that day.



Figure 5: Showing the Workitems evolution chart with the metrics seen on the hover KPI box. There are 2 black bars on the axes allowing for the restriction of days (on the x-axis) and minutes of talk and handle time (on the y-axis).

2. Workitems by Disposition

Shows the number of workitems handled by the campaigns that resulted in each disposition. This will be out of the total number of workitems that were dispositioned in the campaign.

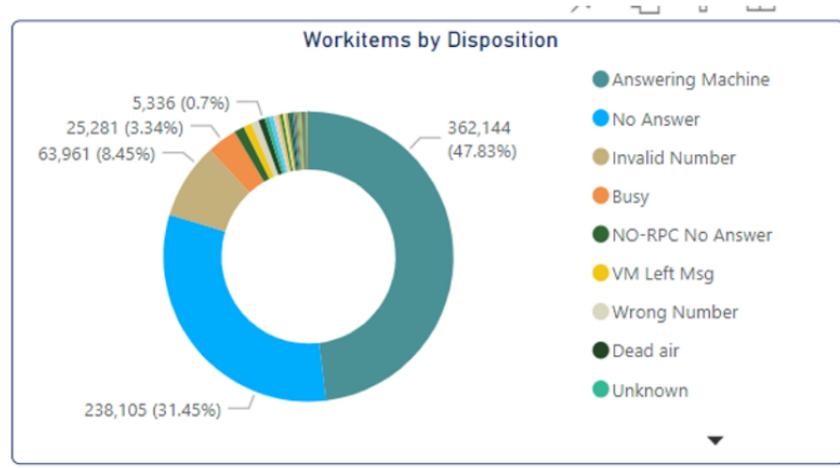
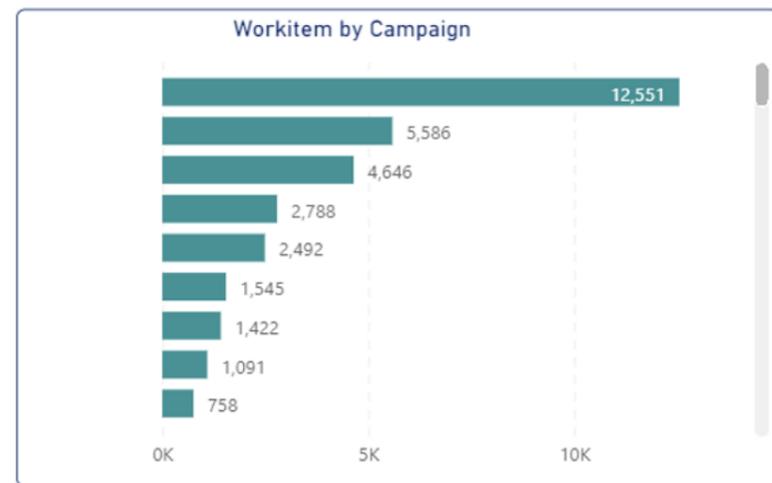


Figure 6; Showing the pie chart of dispositions in the selected campaigns (all monitored campaigns by default). It is quickly visible which dispositions are most used, by using a media type filter, a supervisor will see the most used dispositions for that type.

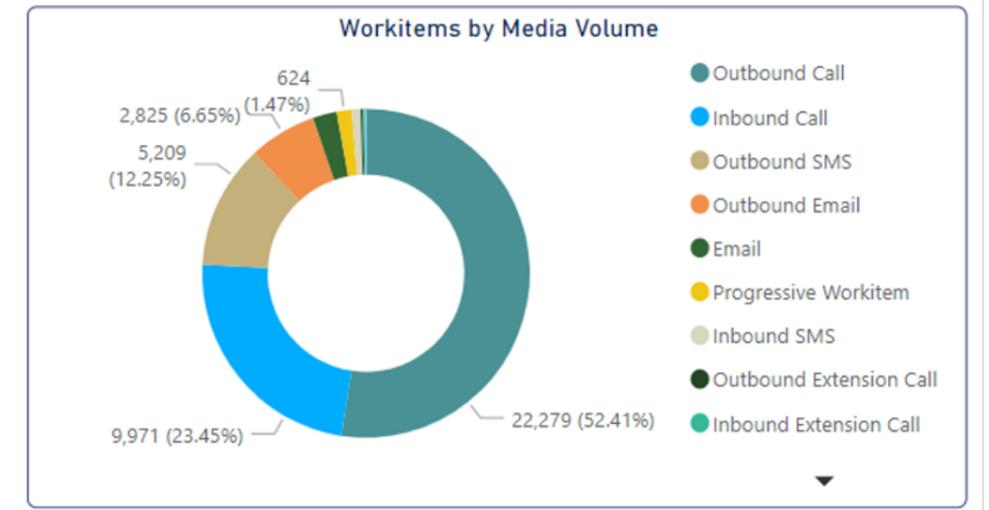
3. Workitem by Campaign

The number of workitems handled by each campaign in descending order, allowing a supervisor to see what campaigns are handling the most items, thereby providing valuable information as to where more agents should be allocated.



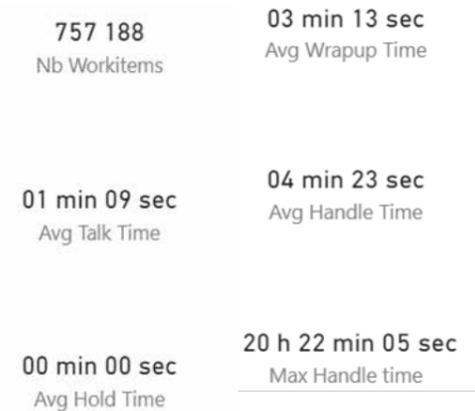
4. Workitems by Media Type

Showing the total number of workitems handled for each media type in the selected campaigns. This is a very useful chart for highlighting as it provides a clear interpretation of how these workitems are handled across the campaigns.



5. Total and average KPIs

The right-hand sidebar shows the KPIs for a few different workitem metrics on the selected campaigns. Filter and highlights will also dynamically change these details, quickly making the totals analyzeable across those slices of data. (Graphic divided in 2 here)

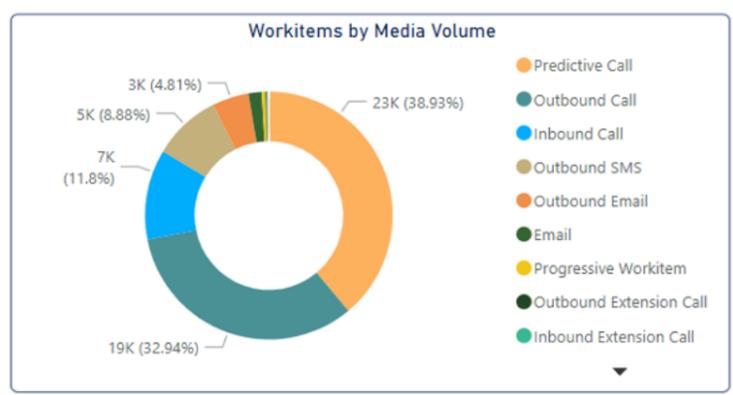


The Agent Analysis Tab

On this tab a supervisor can see data related to the agents that they monitor and find visuals that describe how they have performed in a similar fashion to the campaign tab. There are 5 main charts here and a detail view button which takes the user to a separate page to evaluate the handle time of their agents.

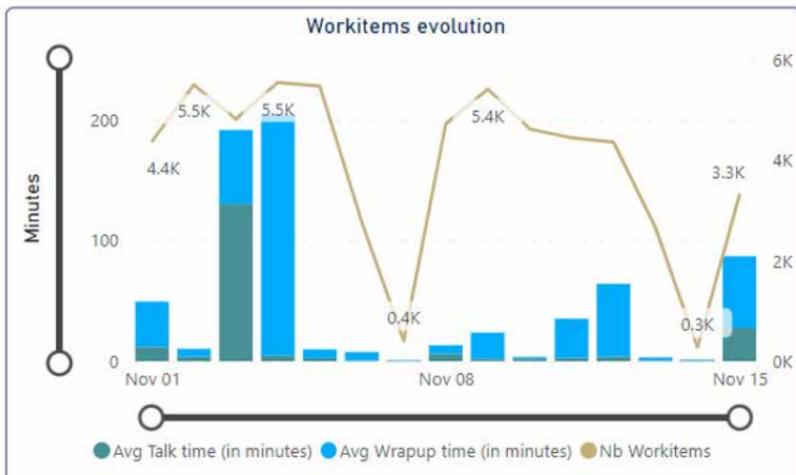
1. Workitems by Media Volume

Similar to the campaign media volume, this chart can now be filtered by agent and will show their statistics on the workitems that they have handled.



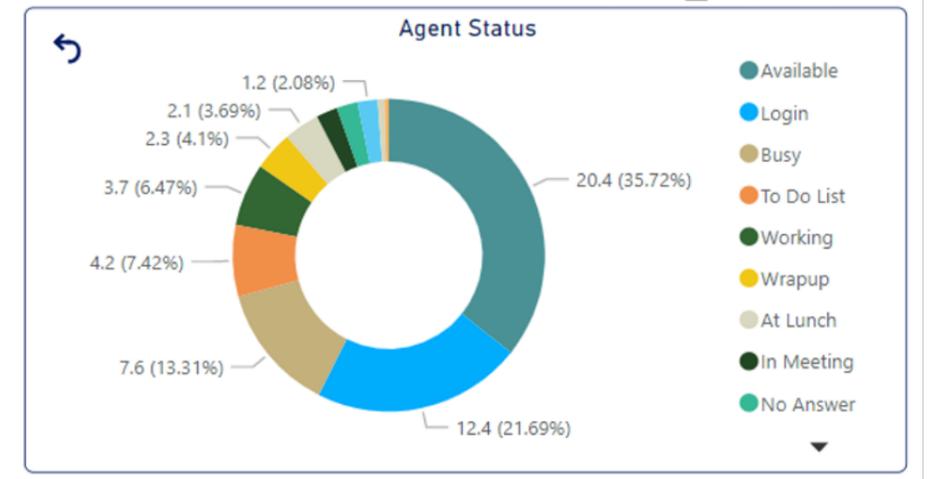
2. Workitem evolution

Similar to the evolution in Campaign Analysis, this chart allows a supervisor to see how the agents have done over the time frame selected. It is possible to filter out and see specific agents who may form part of a specific team or view them individually.



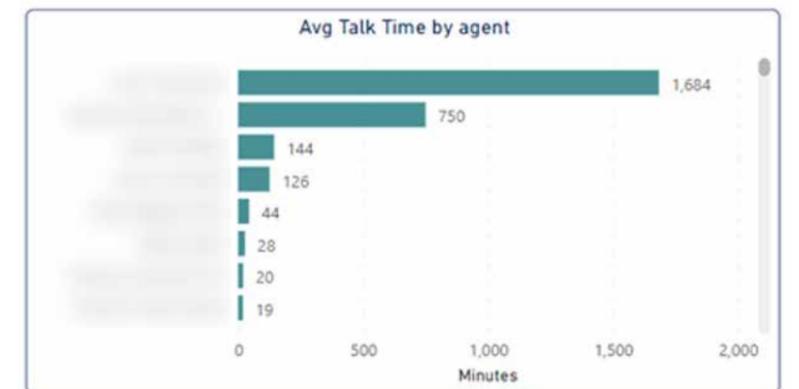
3. Agent Status

The Agent Status chart shows the occupancy of the agents under supervision. Here the most value can be extracted by excluding the logout status. This is because an agent will spend most of a 24hr period with the application closed. However by filtering other statuses a supervisor can also see what percentage of time that a user has spent logged in, available to take calls, working or on busy statuses.



4. Average Talk Time by agent

This chart shows the top agents ordered by average talk time on their workitems, giving valuable insight to the way agents handle their calls and thereby be able to make data-conscious decisions.



5. Total and Average KPIs

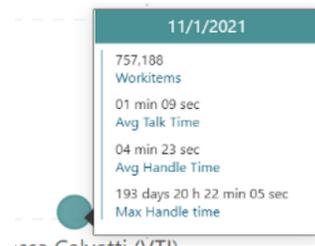
Similar to the campaign one, there are global KPIs that show the performance of agents. If one in particular is needed to focus on, then it is possible to select them in the filter and see only their data (similarly for groups).

6. Agent performance detail view

The agent performance detail view button takes a supervisor to another page where they are able to see more detailed information on the handle time, talk time and overall performance of the agents that they monitor. This orange button is used as a link to a separate chart seen below. It is important to note here that the filters applied outside of this detail view will not carry over and a supervisor will need to reselect them.



Figure 6: The Agent Performance detail view includes a bubble chart that shows the number of workitems handled by agents alongside the number of minutes of handle time that they have. The size of the bubble shows the average talk time or wrap-up time (based on the toggle above the graph) for each agent. A larger bubble means longer average talk time on the workitems. If a supervisor hovers over one of the bubbles they will see agent specific details as below.

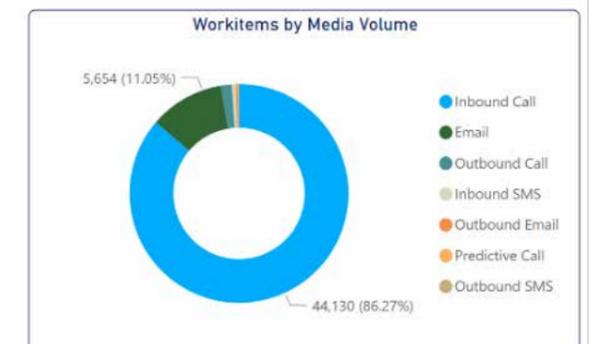


The Queue Analysis Tab

On the Queue Analysis tab a supervisor can see data related to the queues that they monitor and find visuals that describe how queues are performing towards their SLAs and across media types. There are 5 main charts here and two detail view buttons as for the agent analysis tab.

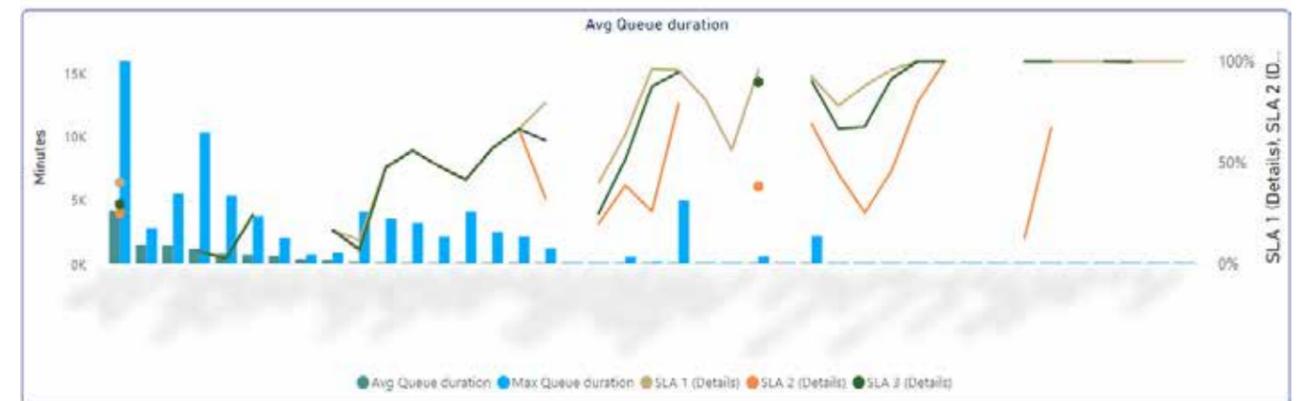
1. Workitems by Media Volume

The Media Volume chart in Queue Analysis shows totals of the channel types that are handled by each queue, these vary from the other two and have a much larger focus on Inbound items than Outbound, though it is still possible to have some.



2. Average Queue duration

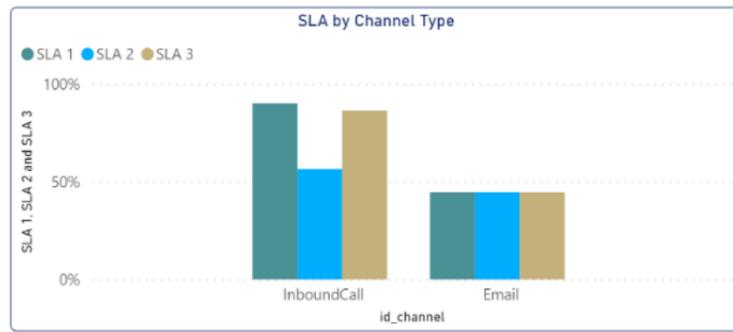
The Average Queue duration looks to show all of the queues organised from largest number of workitems handled to smallest. It shows several KPIs on the same chart for ease of comparison between them all. It shows bars for Average Queue duration and Max Queue duration per queue and on top of the bars, shows points of a line graph for the SLAs that are set.



There are 3 kinds of SLAs in Thrio and these are averaged across the different media types on this chart. It is possible to filter these out to display single types using the several different filtering options (media filter, highlighting etc) with a view to best extract the information needed to verify that the targets are being met and to help make informed decisions on changing these threshold values for each queue.

3. SLA by Channel Type

The SLA by Channel Type is best used in conjunction with the Average Queue duration graph. Together they can be used to truly evaluate whether the service level agreements are being met, to then be able to modify the thresholds for each media type in a way that will benefit each queue individually. This chart will give the initial overview of what media types are not meeting their SLAs.



4. Threshold detailed analysis

The Threshold Detailed Analysis will take the above two charts to another level of depth, providing clear charts of what thresholds are inside and outside of the reasonable SLA limits.



The charts inside of the Threshold detailed Analysis allow the supervisor to see the totals of items that were answered inside and outside of the thresholds divided into those that were abandoned and those that were answered, thereby truly seeing how many of the calls were lost that could have been answered. There is also an important chart on

transferred calls that are being lost, providing additional value on the SLAs.

5. Queue interval Detailed analysis

In the Queue interval Detailed section a supervisor can find the workitems of the entire time range divided into 15, 30 and 60 min intervals. This is particularly useful to be able to see at what times of day calls are being answered the most, as well as determining when the larger call flow traffic is occurring. Using this information a company can greatly improve the time that they have agents working and available for inbound to better their SLAs, and thus achieve better overall customer satisfaction levels. This chart has a few controls at the top which allow the supervisor to zoom in to the lower time intervals and also to toggle back and forth between total numbers and percentages.

15 minutes intervals 30 minutes intervals 60 minutes intervals %

Time Interval	Queue	Day	Nb Answered within threshold	Nb Answered after threshold	Nb Answered	Nb Abandoned within threshold	Nb Abandoned after threshold	Nb Abandoned	Nb Workitems	Total Queue Time
14:00-15:00		Tuesday, June 01, 2021			1				1	60.94
14:00-15:00		Tuesday, June 01, 2021		1					1	2,045.76
13:00-14:00		Tuesday, June 01, 2021	2		3		1	1	4	8.27
14:00-15:00		Tuesday, June 01, 2021	2		2				2	0.10
15:00-16:00		Tuesday, June 01, 2021	1		1				1	0.01
16:00-17:00		Tuesday, June 01, 2021	4		4				4	0.14
17:00-18:00		Tuesday, June 01, 2021	1		1				1	0.02
18:00-19:00		Tuesday, June 01, 2021	2		2				2	0.03
19:00-20:00		Tuesday, June 01, 2021	1		1				1	0.09
20:00-21:00		Tuesday, June 01, 2021	12		12	1		1	13	0.59
21:00-22:00		Tuesday, June 01, 2021	2		2				2	0.05
22:00-23:00		Tuesday, June 01, 2021	4		4				4	0.18
00:00-01:00		Tuesday, June 01, 2021				2		2	2	0.16
01:00-02:00		Tuesday, June 01, 2021				1	1	2	2	43.04
02:00-03:00		Tuesday, June 01, 2021				2		2	2	0.18
03:00-04:00		Tuesday, June 01, 2021				2	1	3	3	1.19
04:00-05:00		Tuesday, June 01, 2021				3		3	3	0.10
Total			8,269	1,255	9,525	1,927	708	2,650	76,098	590,196.6

In conclusion, these reports will help supervisors to improve the extraction of valuable data from the items that they monitor in such a way that helps them to make data-informed decisions on a day to day basis. Most importantly it gives them this ability without the need to schedule or run additional reports and have to handle multiple spreadsheets at a time; all the data is contained inside a user-friendly interface.

Test Cases

This is a short list of test cases that could be run to get a feel of the application and run a few reports of your own.

1. Creating Highlights

- a. Pick a few campaigns in the Campaign tab and select them in the filter by holding down the Ctrl key (Cmd in iOS). This will filter the charts for these specific campaigns.
- b. Click on a specific media type on the media chart and see how the campaigns

have handled workitems of this type. Do this by taking note of how the charts around the media chart change.

- c. Change the media type and watch what happens.

2. Exporting a Queue Interval report

- a. Open the Queue Analysis tab and find the Queue Interval Detailed Analysis button. Click on this to open up the Queue Interval report.
- b. On the report change from number to percentages and scroll down the chart to verify that the queues that you want are there. If not, make sure the filter has them selected.
- c. Right-click on the visual (table in this case) and choose the show as table option.
- d. See that a larger table opens up beneath it with the same values. Check this
- e. Click on the Back to report button.
- f. Hover over the chart again and this time click on the 3 dots menu that appears on the top right hand corner of the table.
- g. Select the option to export the data. A dialog window should open up prompting you to select the formatting that you want for the data.
- h. Select the Excel spreadsheet option and download it. Open it up

3. Bookmark a report view for future use

- a. Navigate to the Agents tab and find the Agent Status pie chart.
- b. On the pie chart, right-click on the logout status and select the Exclude option
- c. See that the chart changes and now shows percentages without the logout status
- d. Find the date range filter on the top left of the agent analysis tab and select a single day range eg Nov 16 to 17 Nov 17.
- e. Find the agent filter at the top and select a group of agents by holding down the Ctrl button.
- f. At the very top right of the Tools panel, select the Bookmark drop-down and choose the Add Personal Bookmark option. This will save your bookmarked view.
- g. Reset the filters by selecting the yellow button next to the bookmarks button.
- h. Open up the Bookmarks and choose your newly created bookmark. This should re-filter the agent tab.