Mastering your dashboards with impactful visualisations

How to choose the right visualisations to create effective dashboards that communicate your data story and aid quick decision making.

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The art and science of great dashboard design

Dashboards are critical in today's business environment. They collect and integrate marketing data from multiple sources and present a unified view of all the customer transactional and behavioural information flowing through a business. Dashboards help to generate a cohesive visual picture of this data, enabling understanding, and facilitating further exploration, and present a clear view of performance through real-time monitoring of key metrics and KPIs, effectively allowing for critical course correction and optimisation over time.

Dashboarding tools aim to be interactive and intuitive, consolidating data in a simple, visual, easy-to-understand way. However, data visualisation and great dashboard design may not be as easy to get right as they first appear.

So where do you start when you want to illustrate complex information without confusing your audience?

Choosing the right visualisations is key to presenting a clear and coherent story

There are many ways of representing and showing data to aid understanding in a dashboard. A well-designed dashboard allows the user to oversee a range of critical areas at one time by displaying trends, actionable insights, and real-time information in a digestible, visual format.

But how do you choose the right data visualisation to ensure that you communicate your message effectively?

"There is a magic in graphs. The profile of a curve reveals in a flash a whole situation. The curve informs the mind, awakens the imagination, convinces."

Henry D. Hubbard

3

Dashboards make it easy to visualise data by displaying metrics, graphs, maps, percentages, and comparisons of all the data that streams through a company, significantly shortening the time-to-insight so you can act on discoveries faster.

5x

Data analytics makes decision-making 5x faster for businesses

(Source: Better Buys)

90%

of information transmitted to the brain is visual, and visuals are processed 60,000X faster in the brain than text

(Source: 3M Corporation)

Visualisations are vital to communicate real-time, actionable insights.

When building a dashboard and creating visualisations, information should be communicated in the most concise and impactful way possible. It should also make use of the most appropriate visualisation/chart type to ensure that the message and insights you're trying to convey are not overlooked.

The visualisation you select might look fantastic, but you need to bear in mind whether the data can be easily understood and analysed in the way it has been presented. Carefully consider which chart types will be most effective for the data story you're trying to tell or the insights you want to present. Don't leave your audience baffled by a chart, deliberating what insights they should be seeing.
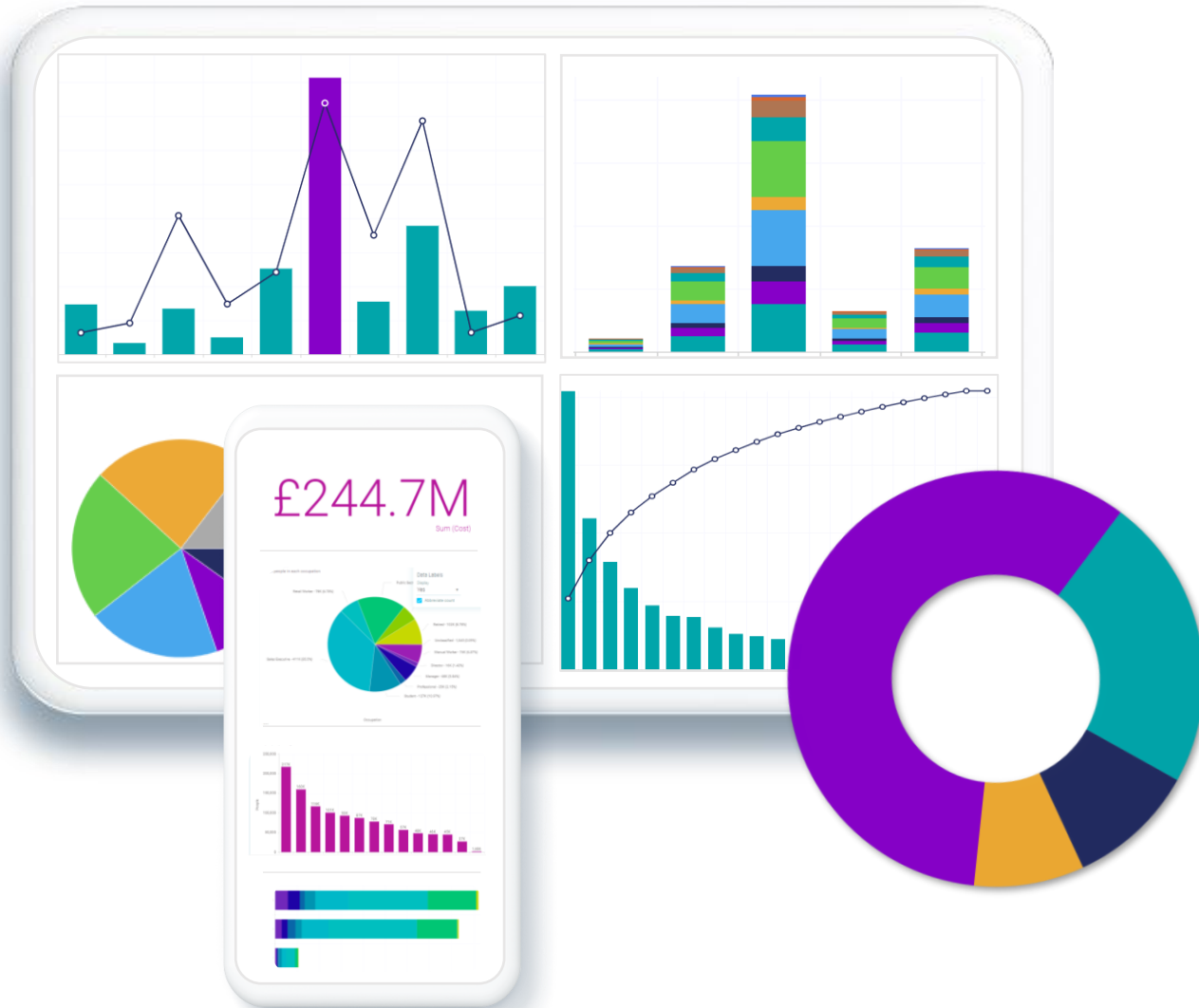
So how do you choose the right visualisations for your data - and your audience?

The wrong choice of visualisation can conceal the 'so what?' and could leave the viewer unsure of what the next action should be. The key message should be immediately apparent to add real business value.

Your dashboard and the visualisations you choose should consolidate, organise, and display data in an articulate way so the audience can digest it quickly and take the necessary action.

To make your visualisation decisions easier, we have provided insight into some of the most powerful and popular chart types, which are best suited to different types of data analysis.
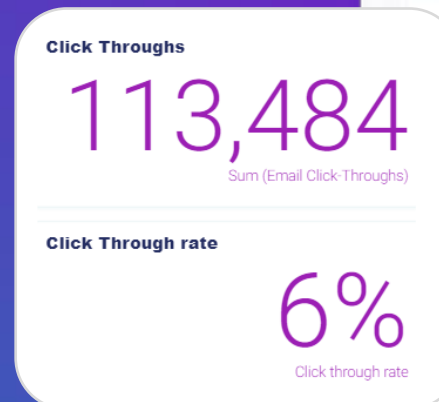
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Keep track of key stats to inform decision making

Number and text tiles

Single numbers are often the most important thing you want to track to inform whether you are meeting defined KPIs. Here you could use a number tile. Number tiles display single values either as a count – for example total sales, market share, new contacts, opportunities or leads – or as a calculated measure. A calculated measure enables you to simply add, subtract, multiply or divide data to present key marketing metrics, such as return on investment (ROI), profit and loss, and click-through/open rates.

Text tiles/visualisations allow you to add free text to your dashboard to provide context or important information to describe other tiles, further helping viewers understand the information presented.

Apteco Orbit number and text tiles allow you to add free text to provide information or context to the dashboard or display single values as a count or calculated measure.

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Apteco Orbit provides both column and bar charts with the ability to drill down into the bars for more detail or to filter your dashboard by any bar.

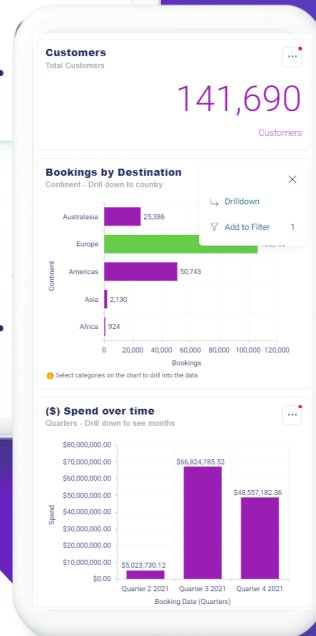# The most fundamental chart type

Column and bar charts

One of the most common data visualisations, bar/column charts are best used when showing comparisons between categories. You can use these charts to quickly compare data across categories, highlight differences, show trends and outliers, and reveal highs and lows at a glance.

Bar charts display categorical data vertically, and column charts display categorical data horizontally. Typically, the bars are proportional to the values they represent, and the viewer can compare the different bars or values instantly. Another benefit to using bar graphs is the ability to map changes over time, which helps in visualising trends.

Bar/column charts can be used in a multitude of real-life scenarios. For example, to display income or responses over time or how your customers' preferences or buying behaviour has changed over time, across regions, or by channel.

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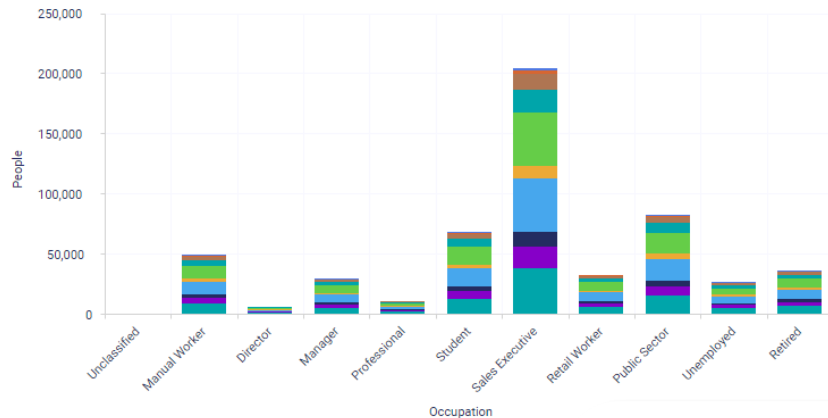# Compare totals and identify sharp changes simultaneously

Stacked charts

A stacked chart displays multiple data points on top of each other, so that you can see how categories of data compare to one another. Stacked charts come as either a simple stacked bar/column or as a 100% stacked bar/column. The one you choose depends on how you want to display your information.
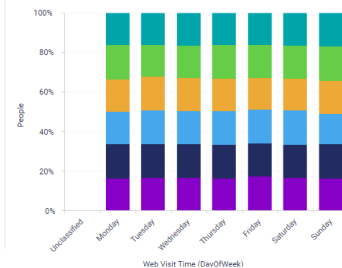
- A simple stacked chart displays the full value of the bar with the combined segment values. This type of chart may be useful when you want to compare the total amounts across every segmented bar or group. Multiple bars will often display in varying lengths.

- 100% stacked charts show the percentage of each group in relation to the whole amount. The differences between values tend to stand out more in this type of chart. Unlike a simple stacked chart, each bar will be the same length.

Use stacked charts to compare multiple data points more easily. For example, when you want to identify which product sold best over the last quarter, how many hours your followers spend on each of your social channels per day or which campaigns over the last quarter provided the most leads.

Apteco Orbit offers users both standard bar and column stacked charts and 100% stacked bar and column charts, which can be used to show multiple data points on one visualisation.

A simple, straightforward way to visualise trends

Line charts

Line charts are best used when trying to visualise continuous data over time and are ideal for displaying trends. A line graph is plotted using several points and is connected by straight lines, presenting them as one continuous evolution. Multiple lines can also be plotted in a single line chart to compare the trend between two categories of data. The result is a simple, straightforward way to visualise changes.

Because line graphs display trends so clearly, they can help to make predictions about the results of data not yet recorded. However, by plotting too many lines your visualisation could become tangled and unreadable, so try to limit yourself to a maximum of five, well-spaced lines.

Use line charts to present trends over time; for example, to show price fluctuations, revenue growth/decline or even website or social media visits over time.

New lead creation by month over 12 months YTD
Drilldown to view original source

You can select to use a simple single dimensional line chart or a multi-dimensional clustered line chart in Apteco Orbit dashboards to easily identify patterns in your data.
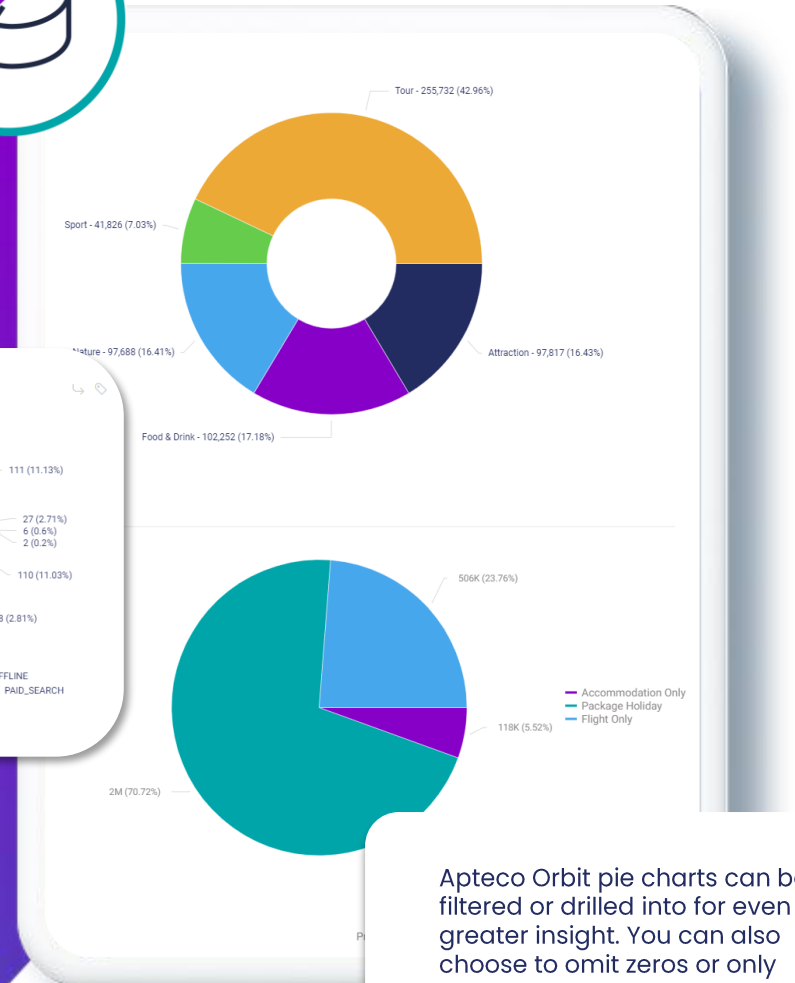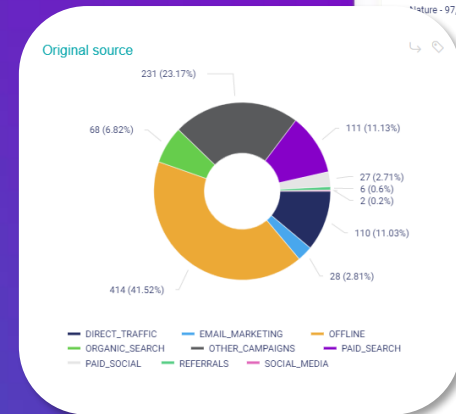
See data comparisons at a glance for instant analysis

Pie and donut charts

Pie charts and donut charts can give your dashboards a concise, neat, and clutter-free look, and are best used when comparing segments of a whole amount. These visualisations provide a strong and immediate sense of overall proportions and permit a quick visual check of the reasonableness or accuracy of calculations.

Pie charts make it easy for an audience to understand the relative importance of values, but when there are more than seven sections it can become difficult to see the smaller slices and thus difficult to compare the results. Try to include annotations (counts and/or percentages) to ensure that the exact proportions can be seen with ease or use drill-down functionality to provide more detail. Donut charts work best with 2-4 segments, so you may want to use a pie chart if you have more than that.

Utilise pie or donut charts to understand which of your channels is more effective – for example what proportion of your total responders engaged through social media, email, and direct mail – or to illustrate the engagement of your email campaign – how many delivered, clicked, opened, or bounced.

Tour - 255,732 (42.96%)

Sport - 41,826 (7.03%)

Attraction - 97,817 (16.43%)

Nature - 97,688 (16.41%)

Food & Drink - 102,252 (17.18%)

Original source

231 (23.17%)

68 (6.82%)

111 (11.13%)

27 (2.71%)
6 (0.6%)
2 (0.2%)

110 (11.03%)

414 (41.52%)

28 (2.81%)

DIRECT_TRAFFIC   EMAIL_MARKETING   OFFLINE
ORGANIC_SEARCH   OTHER_CAMPAIGNS   PAID_SEARCH
PAID_SOCIAL   REFERRALS   SOCIAL_MEDIA

506K (23.76%)

118K (5.52%)

2M (70.72%)

Accommodation Only
Package Holiday
Flight Only

Apteco Orbit pie charts can be filtered or drilled into for even greater insight. You can also choose to omit zeros or only show the 'top 5' segments to ensure the visualisation is communicating effectively.

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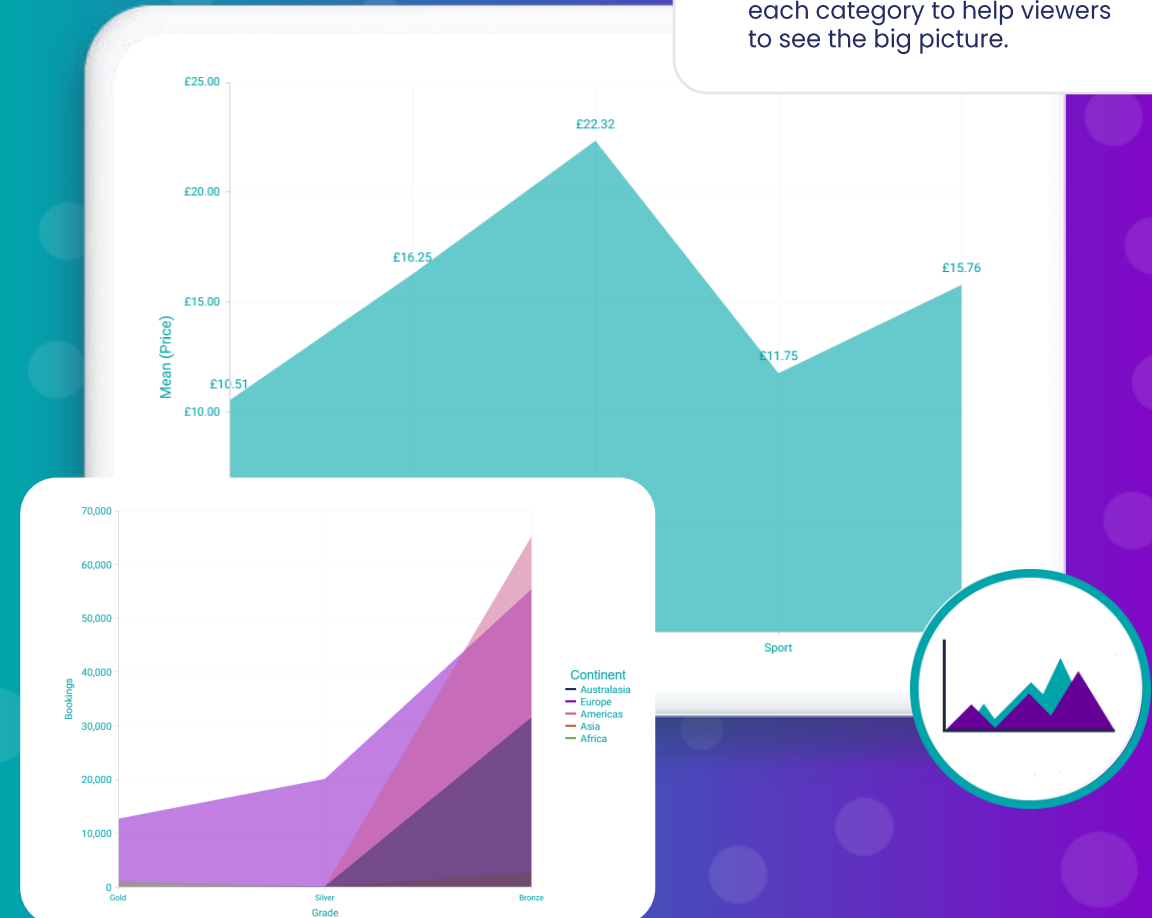# Quickly communicate changes in your data over time

Area charts

An area chart is often used to display several data sets that increase or decrease over time. It is similar to a line chart due to the use of straight or curved lines that connect data points, but what is unique to this chart is that colour fills the spaces between the line segments. This enables the viewer to quickly understand the data points in the chart without needing to interpret the numerical information, so it can be a highly effective tool for quickly communicating data to stakeholders.

Area charts are one of the best tools for showing trends. For example, you could use it to plot changes to sales over the course of the year, or to show comparisons between different groups of items, such as which channel has contributed the most leads over the course of a campaign period.

Area charts work best for considerably large differences between your values. If the differences between your values are very small, consider a line chart instead. Remember all the data values in an area chart are important, so use bold complementary colours to show your data points clearly.

Apteco Orbit offers users three types of area charts: Clustered, stacked, and 100% stacked area charts, and you can set contrasting colours for each category to help viewers to see the big picture.
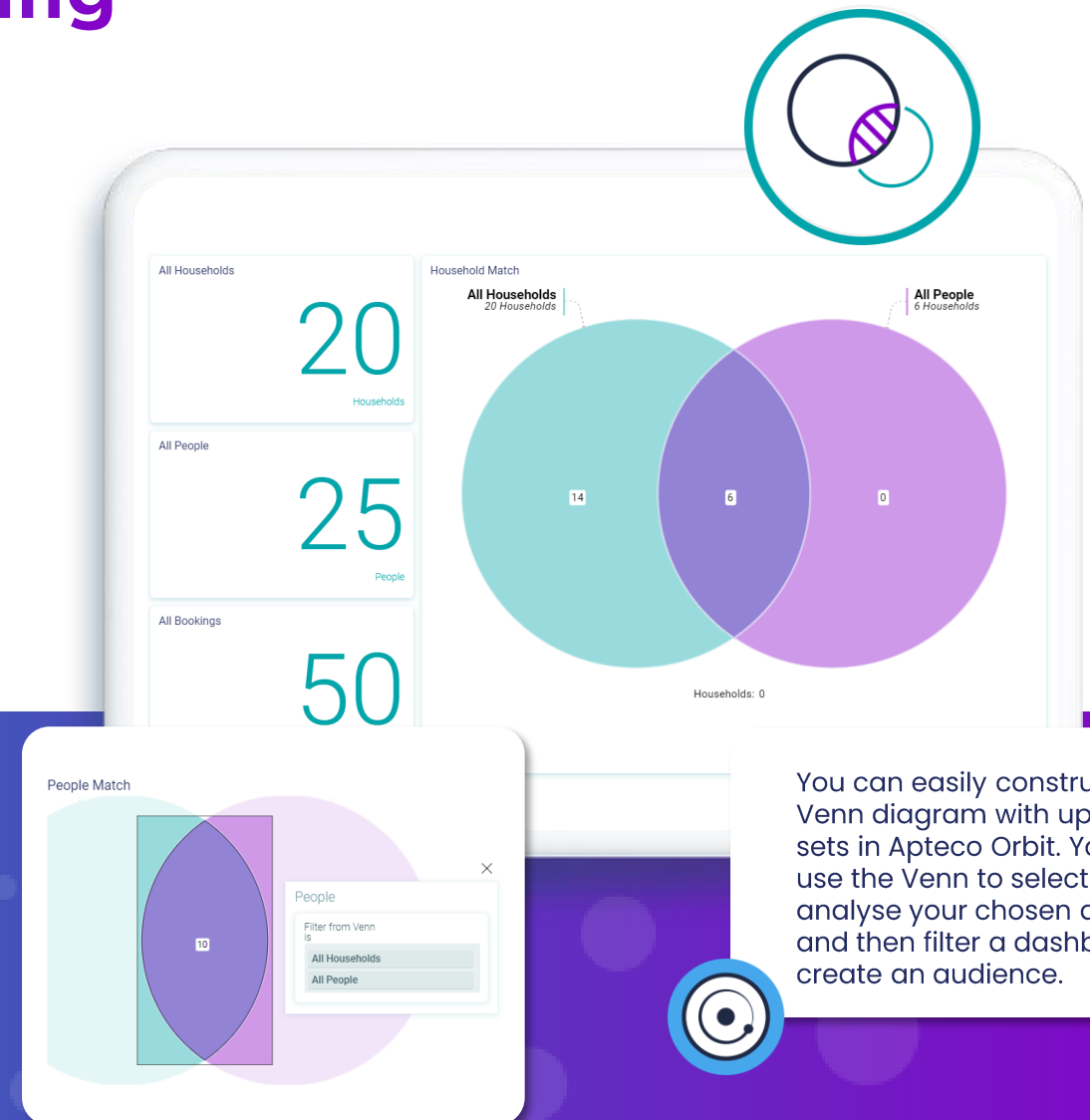
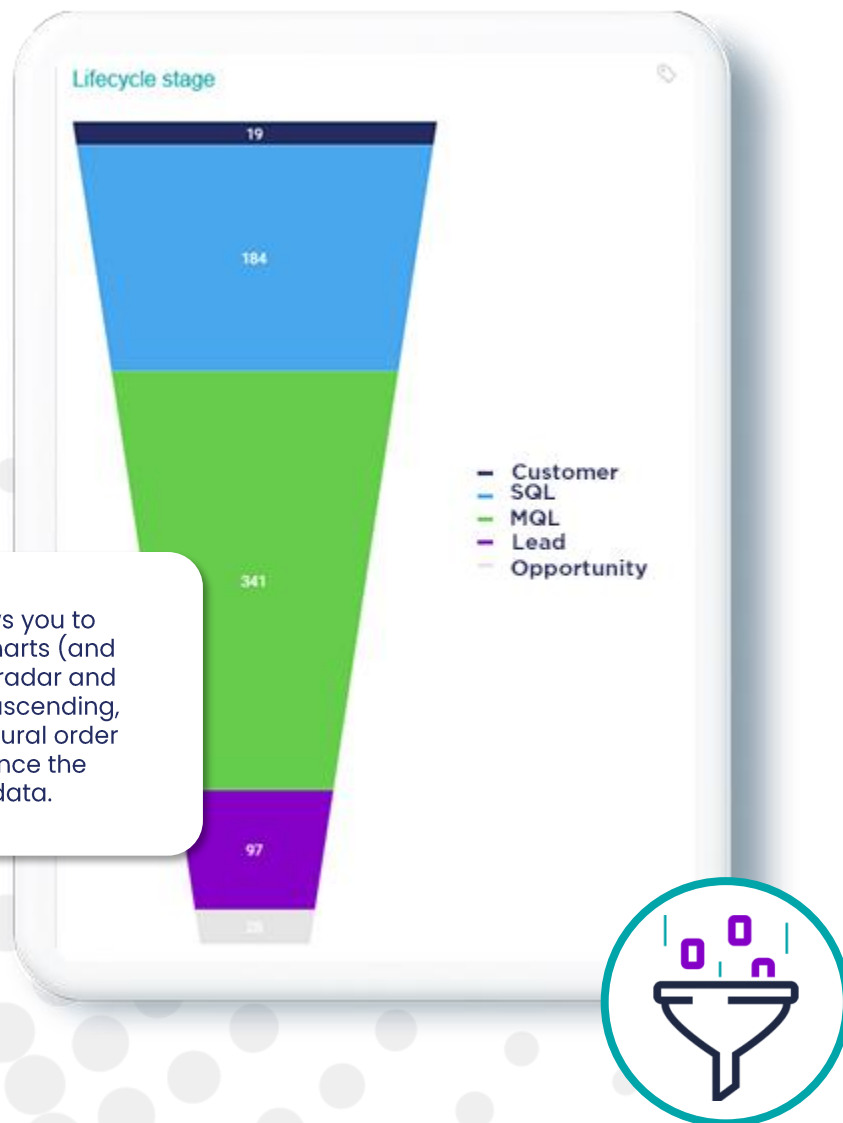apteco.com

Accelerate your understanding

Venn diagrams

Venn diagrams are used to compare and contrast groups of data depicted in sets, and they're a highly effective communication tool to illustrate that comparison. They help to graphically organise items in your data, by highlighting how the items are alike or different.

Venn diagrams can be simple – involving just two sets – or more complex, displaying four or five sets of data. The overlapping circles illuminate the relationships between the sets of items and are a critical tool in your analytics arsenal, providing a colourful, graphical representation of how data interrelates. They are also great for segmenting data – for example, when creating target audiences for campaigns.

Venn diagrams allow users to visualise data in a clear, powerful way, and so are often used in presentations and reports. You could use this visualisation to analyse which of your target audience attended certain events – you could then select the overlapping areas if you had a similar event you wanted to promote.

You can easily construct a Venn diagram with up to five sets in Apteco Orbit. You can use the Venn to select and analyse your chosen dataset, and then filter a dashboard or create an audience.

Lifecycle stage

19
184
341
97

- Customer
- SQL
- MQL
- Lead
- Opportunity

Apteco Orbit allows you to sort your funnel charts (and your bar, column, radar and Pareto charts) in ascending, descending or natural order to give your audience the best view of your data.

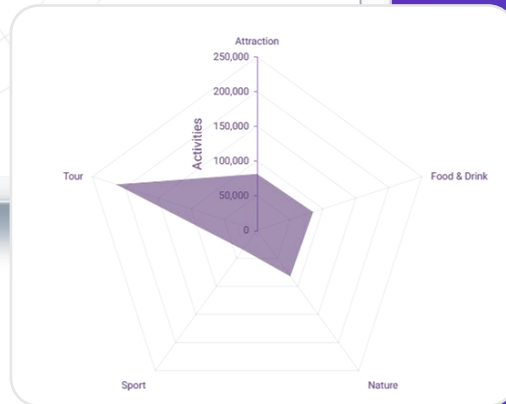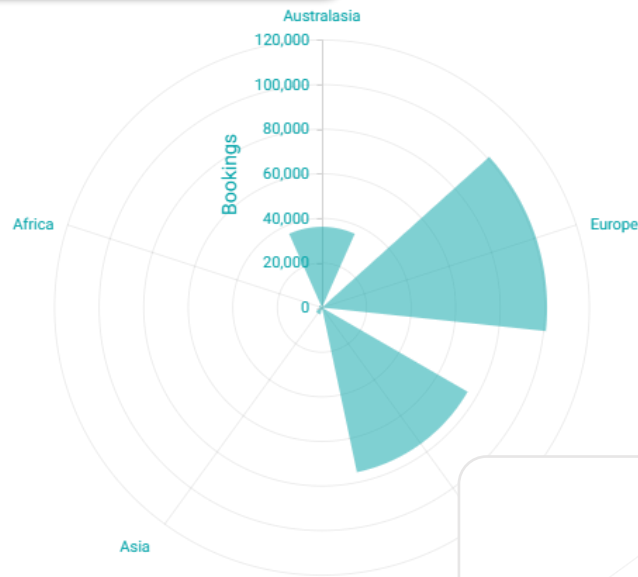# Highlight potential problem areas to remove bottlenecks

Funnel charts

Funnel charts display segments of your data in progressively decreasing or increasing proportions. They are ideal for showing stages in a process that are linear, connected, and sequential – such as the marketing or sales process – and can help to identify potential hurdles within the process. As your prospects move through the process, some drop-off from each stage and this drop off is reflected in the size of that segment.

A funnel chart could also be used to monitor the success of a campaign and easily identify stumbling blocks. For example, you could show how many emails were sent, how many people opened the emails, how many clicks you received, and eventually how many purchases were made as a result.

This would clearly reveal the bottlenecks for moving potential customers along the pipeline and help you to improve your emails, checkout, or other processes to boost sales.

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Compare items over a range of features and specifications

Radar charts

The radar chart – also known as web chart, spider chart, spider graph, spider web chart, star chart, star plot, cobweb chart, irregular polygon, or polar chart – has axis that are arranged radially and a sequence of angular spokes growing from its core, with each spoke representing one of your data variables. The length of each axis is proportional to the data they represent. A line is traced along this figure to create a shape that represents the unique combination of metrics that the chart represents.

This is a powerful graphic to display the relationships between different metrics and helps to answer questions such as 'How is this product/campaign performing against others?', ' What product features does my audience find most useful?', and 'Which channels in my campaigns have been most effective for lead generation?'
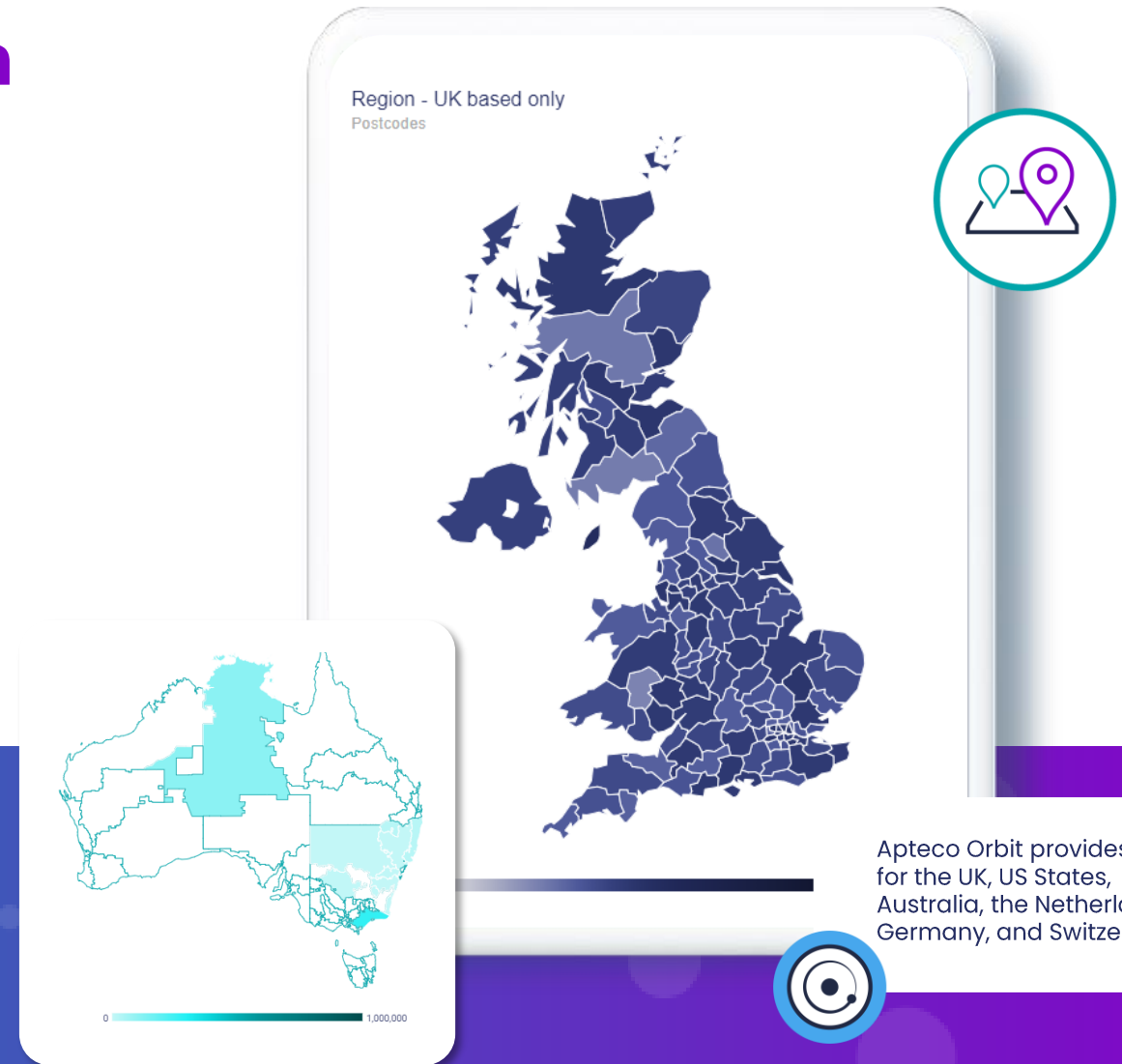
Radar charts are best used where a decision needs to be made by comparing two or more objects/groups on various features. For example, when comparing the satisfaction scores for two or more products, a radar chart could be used to plot how each product scores against the other. You could then identify the product's strengths and weaknesses compared to the average. Or, if you wanted to track spending, a radar chart could help to identify variances between budget and spending on different line items.

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Understand how your data breaks down regionally

Maps

Maps are best for showing a geographical representation of data and are an obvious choice for visualising location-specific questions or aiding geographical exploration. Viewers can clearly see the distribution or proportion of data in each region, as individual category values are displayed as varying colours/shades. Whether it's postal codes, states, or countries, if you have geographic information associated with your data, maps are a simple and compelling way to show how location correlates with trends in your data.

Use map visualisations to display sales or income by region, or when creating an audience to invite to a regional event. Select the appropriate regions and add them to your filter or create a new audience to export and use in your campaign. Drill-down functionality is a great tool to use in your maps and allows for deeper exploration.

Region - UK based only
Postcodes

Apteco Orbit provides maps for the UK, US States, Australia, the Netherlands, Germany, and Switzerland.

Apteco Orbit allows you to combine tables and charts on your dashboards, allowing the viewer to look into the detail behind the visualisations when needed.

Add tables and cubes to give you the full picture

Tables and cubes

Tables and cubes will not help to identify trends and compare sets of data but are best used when the exact quantities or detail behind the numbers needs to be shown.

Tables provide a list view of the data showing multiple values presented in rows and columns and allow you to deep dive precisely into the details and examine the exact numbers behind the visualisations.

A cube is a set of data organised by dimensions and measures to combine different groups of data within a larger set. Cubes are used when you want to analyse a subset of the database in greater depth. When used as a dashboard visualisation, cubes can help you to quickly choose categories that filter data to show the results that meet your selection. For example, a cube of sales data might provide combinations of the same data by product, time, or region.
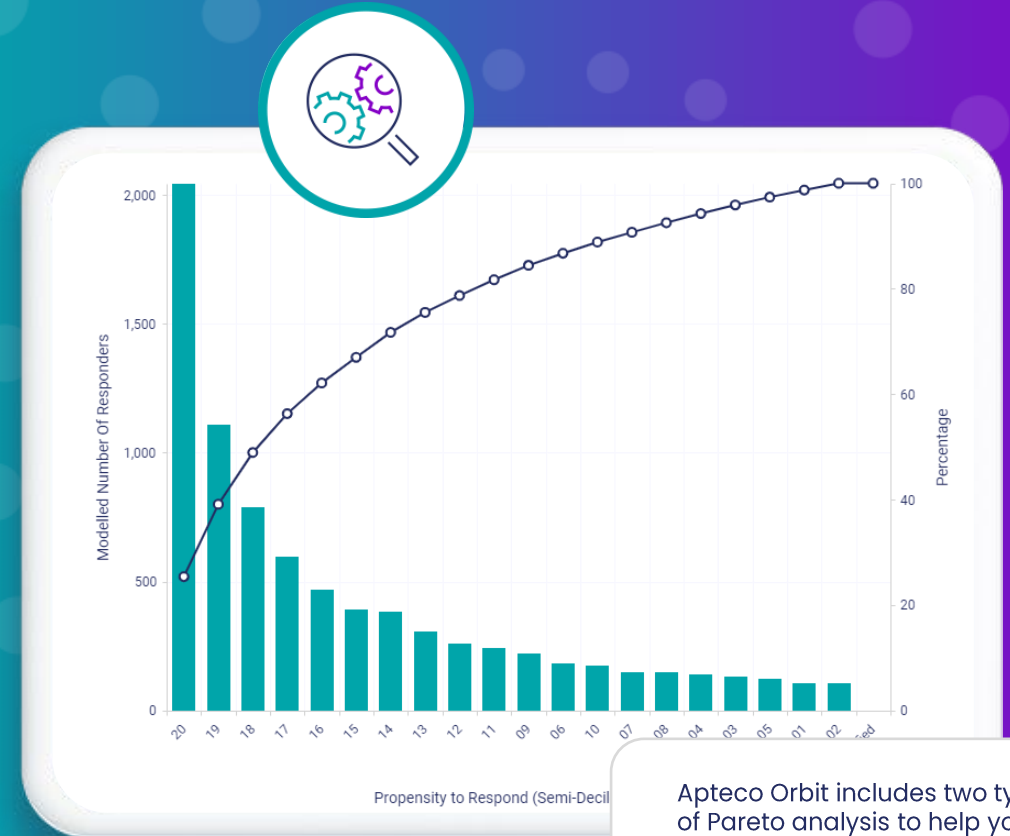
Focus your attention where you can get the most significant improvement

Pareto charts

It can be challenging to understand critical contributors and difficulties, and their causes. Often time is wasted on trying to solve problems that don't have much impact on the bottom line. Pareto is an analytical decision-making technique based on the 80/20 rule, that can help you identify those problems and contributing factors with the biggest influence.

Pareto is an excellent visual communication tool and provides you with a clear picture of the top and bottom contributors to your overall success, helping you allocate resources optimally for maximum return on investment.

Use a Pareto chart to identify differentiating high-level strategic priorities, especially those related to critical success factors, to prioritise resources or funding for projects, or to determine who your best-performing customers might be.

Apteco Orbit includes two types of Pareto analysis to help you to answer questions such as: which are the top product categories that equate to 80% of my sales, or who are the top 20% of my spenders?

Apteco Orbit includes clustered combo, stacked combo, 100% stacked combo charts so that you can understand data at a glance.

Display multiple measures with different scales
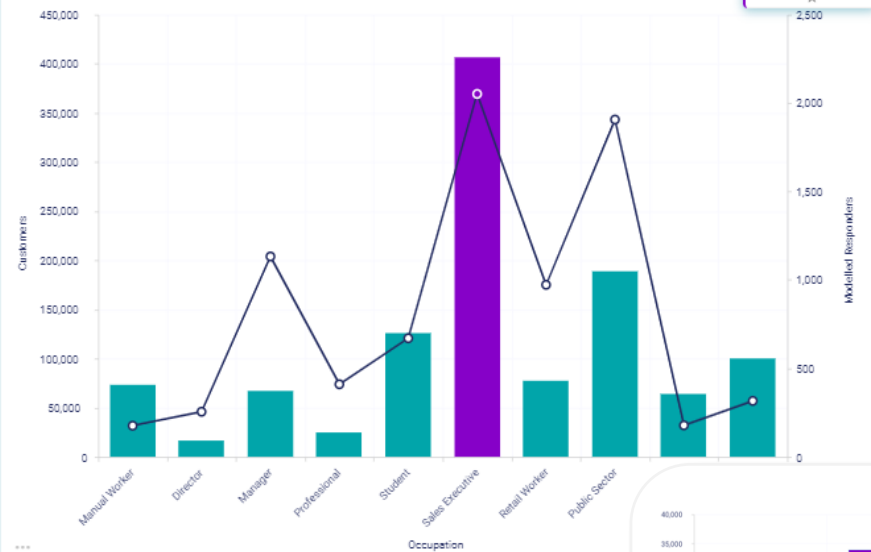
Combo charts

A Combo chart is a combination of two or more chart types, such as a column and a line chart. This simple visualisation allows the viewer to interpret the data story quickly and is helpful to identify outliers, or to prove or disprove a trend.

Combo charts let you display different types of data, showing the values of one category as a line and another category as a bar, on the same chart. This visual combination of two chart types is incredibly effective to highlight the differences in your data.
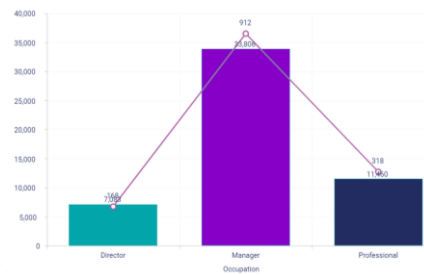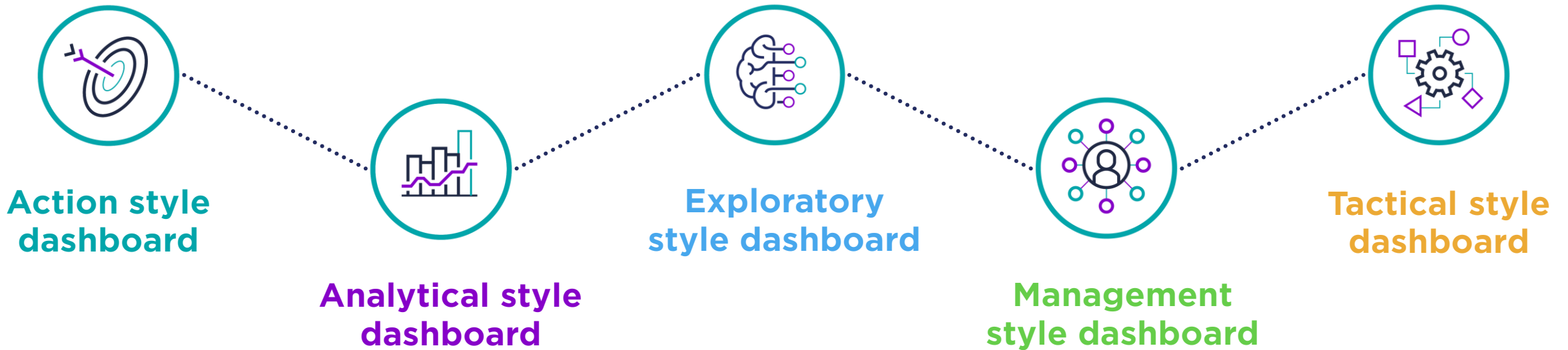
You can use a Combo chart to plot multiple data sets on one graph – but beware as these charts can become quickly overcomplicated.

Use a combo chart to easily compare projected vs. actual. For example, revenue projections vs. actual sales, or estimated leads vs. leads generated. Combo charts could also be used to measure the number of social media posts vs. the number of subscribers over the year, or to compare the average duration on the website of new users vs. users.

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How to use your chosen visualisations in real-life business scenarios

Apteco dashboards can easily be designed and customised for all your marketing, analytics, and reporting business scenarios. We have designed five different dashboard styles to give you a head start.

Action style dashboard

Analytical style dashboard

Exploratory style dashboard

Management style dashboard

Tactical style dashboard

The action style dashboard

Who uses it?
Marketers, analysts, and operational executives who wish to easily assess a situation, identify an opportunity, and instigate a specific course of action.
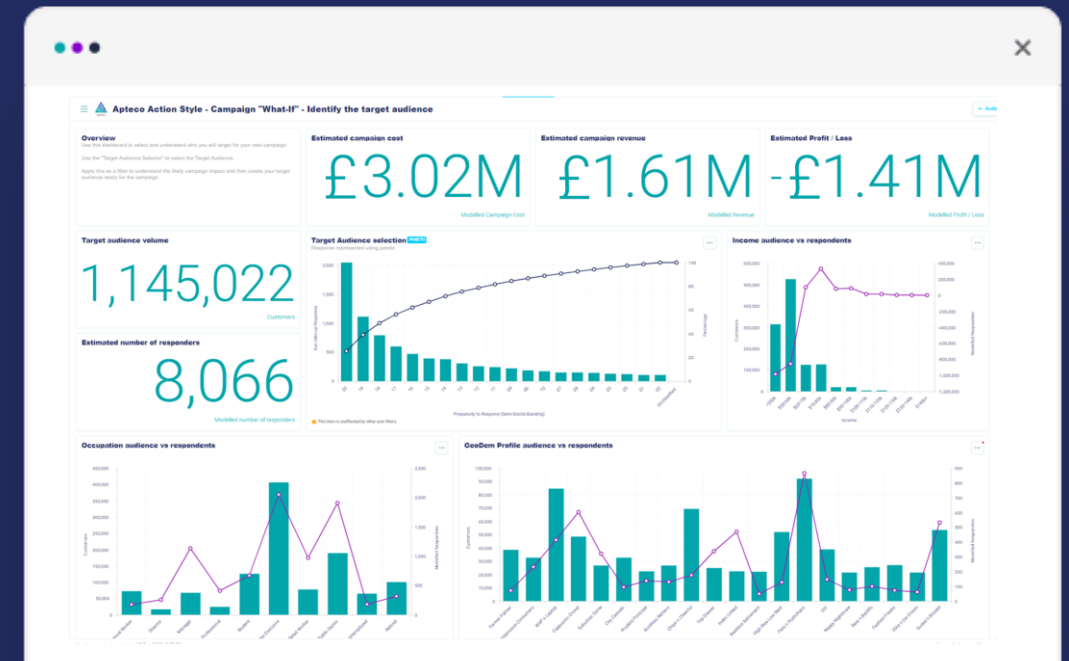
Aim
The action dashboard enables analysis to be run and a mitigating strategy to be launched from the dashboard. The user can test hypotheses to optimise an outcome and use this dashboard to select and understand who to target for their next campaign.

Benefits
- Save time and effort by reducing bottlenecks and the need to rely on staff with specialist skills
- Democratisation of data
- Artificial intelligence simplifies the application of complex data analysis principles, whilst ensuring accuracy and consistency

Types of visualisations used in this dashboard style
- Number and text tiles with calculated measures – campaign cost, revenue, profit, and loss
- Pareto charts – top customers
- Combo charts – audience vs responders (occupation, income, geodemographics)

21

The analytical style dashboard

Who uses it?

Analysts, marketers, executives, and operational specialists who need to identify the cause of an issue or conversely identify opportunities.
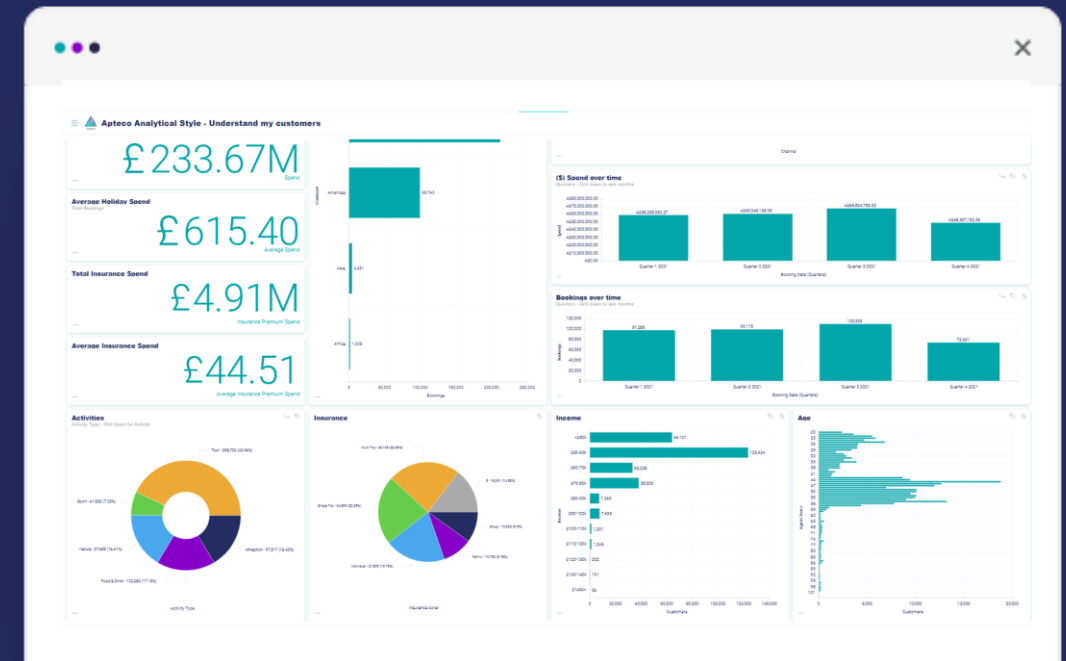
Aim

These dashboards provide in-depth reporting, focusing on a specific business function or topic with drill-down functionality to reflect different levels of granularity, allowing users to explore areas of interest. The analytical dashboard is frequently used to evaluate a situation and provide results of findings so the next course of action can be determined.

Benefits

- Easily evaluate a situation
- Quickly determine the next course of action
- Better understand your customers

Types of visualisations used in this dashboard style

- Number tiles and calculated measures – volume of customers, total bookings/spend
- Pie charts and donuts – activities, onboarding channel
- Bar and column charts – bookings by destination, spend over time, age, income

The exploratory style dashboard

Who uses it?
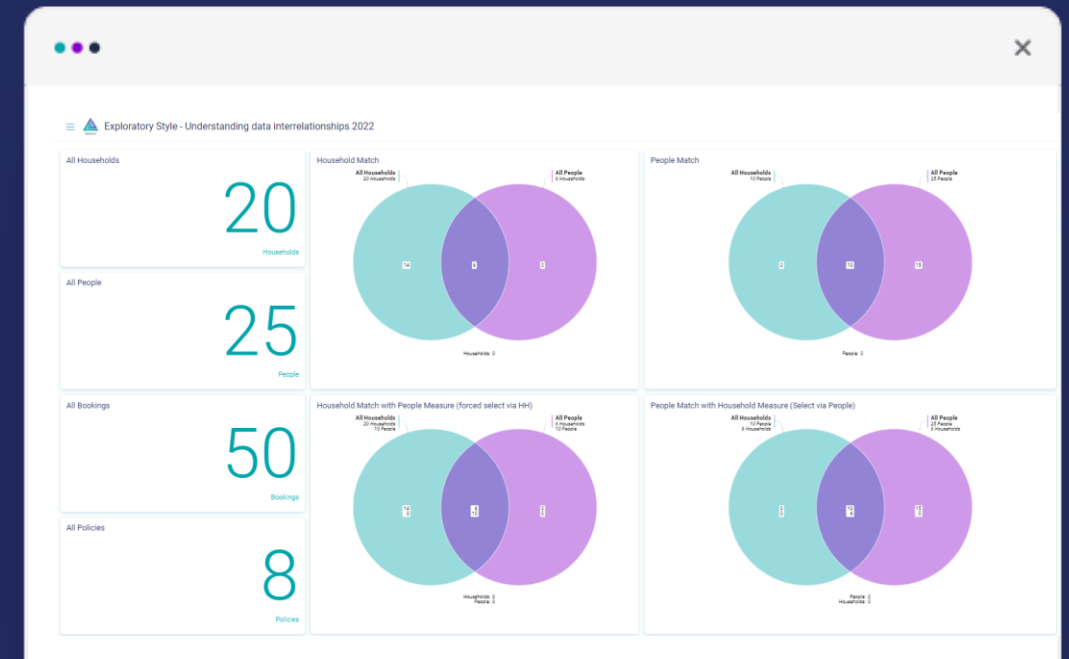Perfect for analysts, and data specialists.

Aim
These dashboards are used to understand how different sets of information interrelate and allow a skilled data analyst to quickly evaluate large volumes of data without the need to write a script. These dashboards are generally created by more advanced users to help them understand complex information. This exploration process will allow an advanced user to determine the best means of visualising the data so that it can be clearly portrayed to other users through one of the other dashboard styles.

Benefits
- Exploratory – understanding interrelationships in data
- To aid the design of dashboards so complex information can be clearly portrayed

Types of visualisations used in this dashboard style
- Number cards – volumes of households, people, bookings, policies
- Venn diagrams – to show relationships crossover

23

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The management style dashboard

Who uses it?
Marketers, investors, managers, and senior executives who have a need to see regular reports to get a bird's-eye perspective on performance.

Aim
This is high-level reporting, designed to inform at a glance. The management style dashboard typically reflects a situational status frequently using benchmarks to draw comparisons and is used on a regular basis to provide clarity and transparency to a broader audience. This dashboard depicts an underlying dataset focusing on, for example, a particular product line, store, or time-period, or in a customer segmentation comparison.

Benefits
• Compare various customer segments on one dashboard for a clear picture
• Reveal progressive changes and demonstrate the status quo
• Assess performance and provide clarity and transparency

Types of visualisations used in this dashboard style
• Number and text tiles – total customers and revenue, average purchase value
• Bar charts – top 10 destinations/products
• Tables – sales distribution by region
• Pie charts – average spend by activity

The tactical style dashboard

Who uses it?
Operational executives, and marketers tasked with monitoring and fine-tuning campaigns.
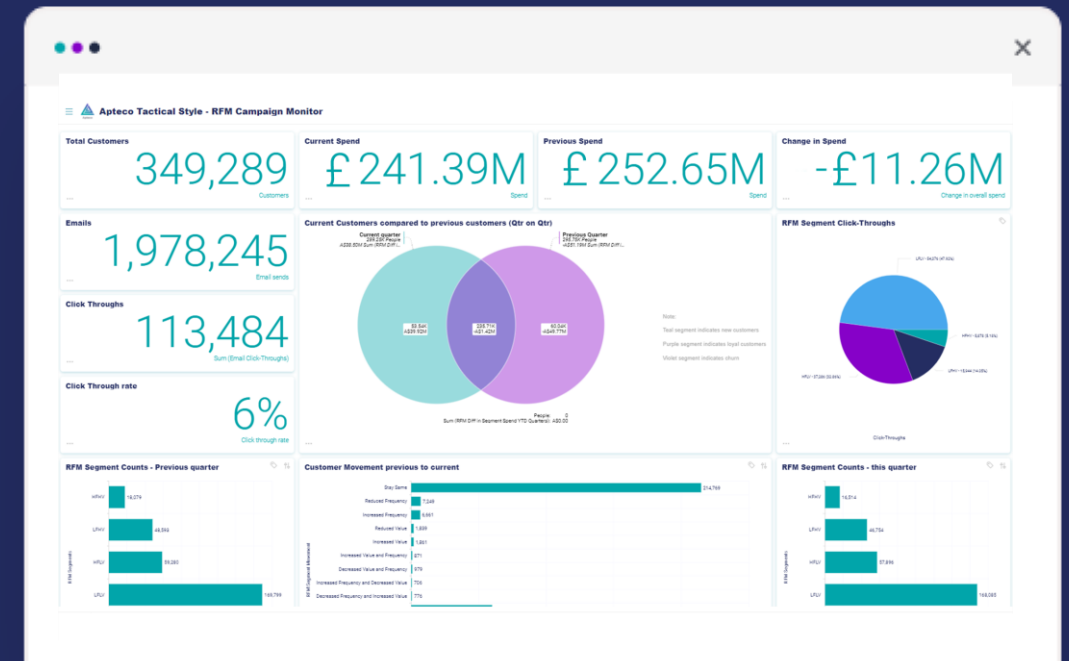
Aim
To ensure the business retains its competitive edge, through tactical vigilance of ongoing operations. The tactical dashboard allows you to evaluate and react to results by focusing on a specific business scenario and reacting to observations, particularly those that are unexpected. This dashboard design permits analysis and the implementation of a mitigating strategy from the dashboard to influence performance.

Benefits
- Easily evaluate live or active business functions
- React at speed to influencing forces
- Identify the best customers and perform targeted marketing campaigns
- Rank and group customers based on the recency, frequency, and monetary total of their recent transactions

Types of visualisations used in this dashboard style
- Simple number tiles – volumes of customers, total spend
- Number tiles with calculated measures – open rates, click-through-rate (CTR), change in spend this year vs. previous year
- Venn diagrams – compare new customers vs. loyal customers to see churn
- Pie charts – click throughs, opens
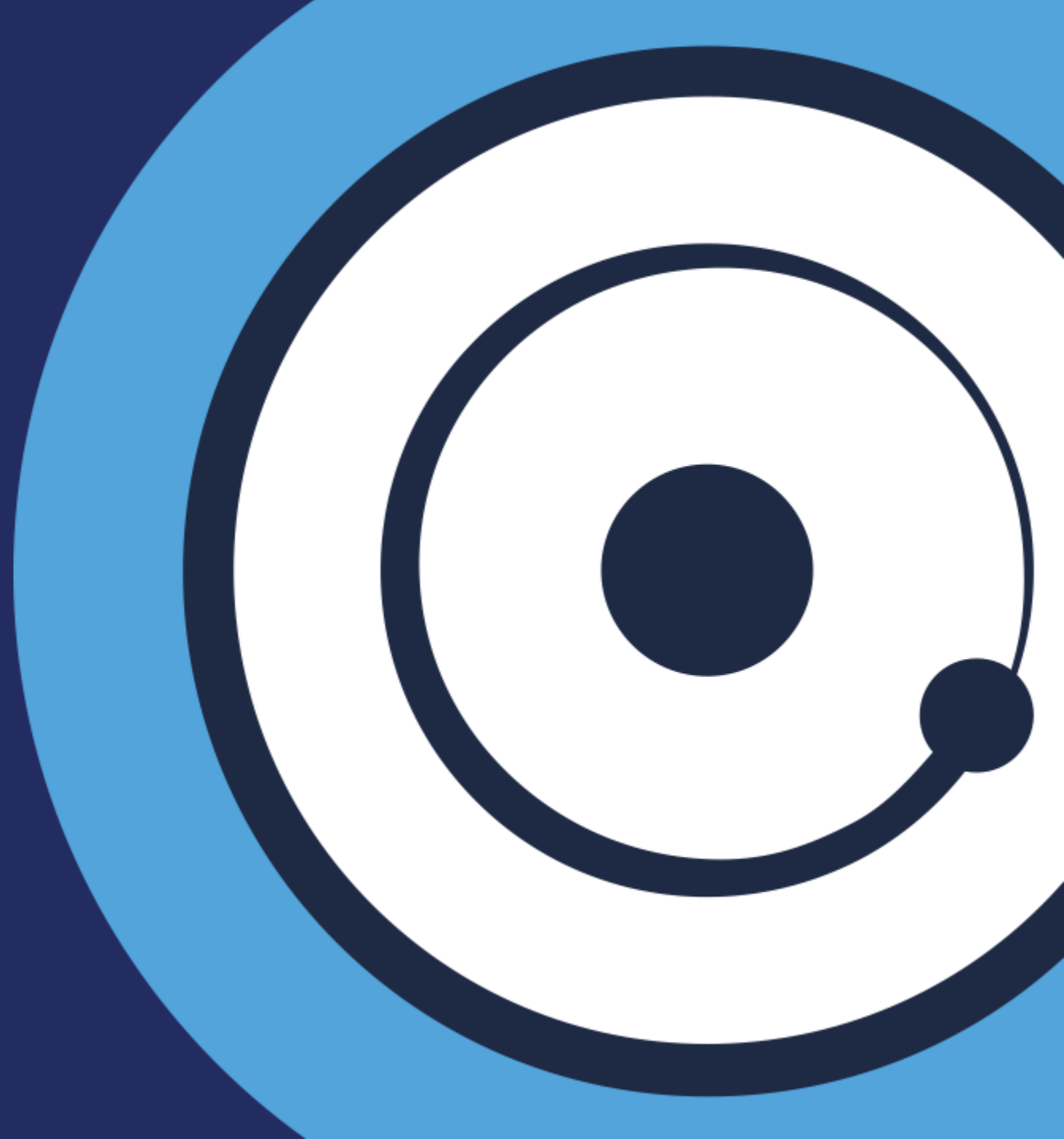- Bar charts – customer segment migration, RFM counts

25

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Apteco Orbit

Interactive marketing dashboards

Explore your customer data to gain insight and build audiences for targeting. Create targeted data segments directly from visualisations to transform your dashboarding insights into campaign actions.

Apteco Orbit offers more than 30 interactive and customisable visualisations, including basic text and number cards, column, bar, pie, donut, line, area, radar, funnel, clustered and combo charts, Venns, tables and cubes plus a range of maps and Pareto charts to help you to make your data easily digestible. Generate a cohesive visual picture, enabling understanding and facilitating further exploration.

Style your dashboards to match your company brand and add logos. The beautiful visualisations on offer make your data easily digestible, helping you to uncover actionable insights.

"Data visualisation is the language of decision making. Good charts effectively convey information. Great charts enable, inform and improve decision making."

Dante Vitagliano
Founder, Trailmapper

Great dashboards amplify understanding so that you can act immediately

Dashboards help to generate a cohesive visual picture, enabling understanding, and facilitating further exploration

Dashboards present a clear view of performance through real-time monitoring of key metrics and KPIs allowing for course correction and optimisation over time

A great dashboard can significantly reduce time-to-insight so you can act on discoveries faster!

Data visualisations are used to organize and present data in a coherent manner so the audience can make sense of what's going on and take action

For visualisations to have real business value, data must be represented graphically so the "so what?" is immediately apparent to the audience

Choosing the right visualisations, is key to presenting a clear and coherent story

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Sign up to a free trial

Try Apteco Orbit

Experience the power of Apteco's end-to-end actionable data insights online platform. Connect people and channels, analyse data, target your audience, and manage campaigns – all on one intuitive platform.

Try now!

Learn more about Apteco

Interactive marketing dashboards

Transform your dashboarding insights into campaign actions with Apteco Orbit. Apteco's interactive marketing dashboards combine high performance and ease of use to deliver an intuitive, practical user experience.

Learn more

Storytelling in full colour

Why are the colours you choose in your data visualisations so important? Discover in this blog why colour selection is not merely an aesthetic choice but a crucial tool to convey information in your data visualisations.

Read more

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INSIGHT INTO ACTION

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