## **Box plot - standardised chart for distribution of data**

* Standardised way of displaying distribution of data based on a five-number summary.
* Whisker - minimum, maximum, median, first quartile, third quartile
* Data distribution, variance, symmetry or skewness, outliers

## **Waterfall (bridge) chart - contribution and change**

* Explains the net change in value between two points, split over categories
* Typically starts at a baseline of zero; then, there are a series of bars that present category contribution to the total.
* Positive values can easily be distinguished from the negative ones by the use of a categorical or graded color palette
* Exposes the complexity hidden behind an aggregated number.
* Downside is that it works well with only a limited number of categories.

## **Heat map - density and matrix comparisons**

* Used for presenting density and comparisons, often in a matrix form, relying on the use of colors to communicate the values.
* Heat maps have various forms and types. The most frequently used are colored geo-maps, for example, to illustrate the density of the population, but they also are often used in web analytics to analyze where on the screen visitors click the most.
* Another use case is a matrix comparison
* Advantage of heat maps is that it gives almost an instant high-level picture through their use of easy-to-understand color gradations
* However, without appropriate labels, it might be challenging to interpret when a high level of detail is required

## **Scatter plot - relationship and correlation**

## Show the relationship between two numerical variables plotted simultaneously along both the X and Y axis.

## Often used in exploratory data analysis or when we need to plot the data on a quadrant

## Can be multidimensional, with the use of color, size, and shape, and easily store quite some data, with a high number of data marks

## Powerful to present a correlation between two measures

## However, in many cases, scatter plots can be tricky to communicate the data insights with, especially when data marks are plentiful and when there is no immediate correlation legible from the chart.

MARKS - Drag order for Treemaps