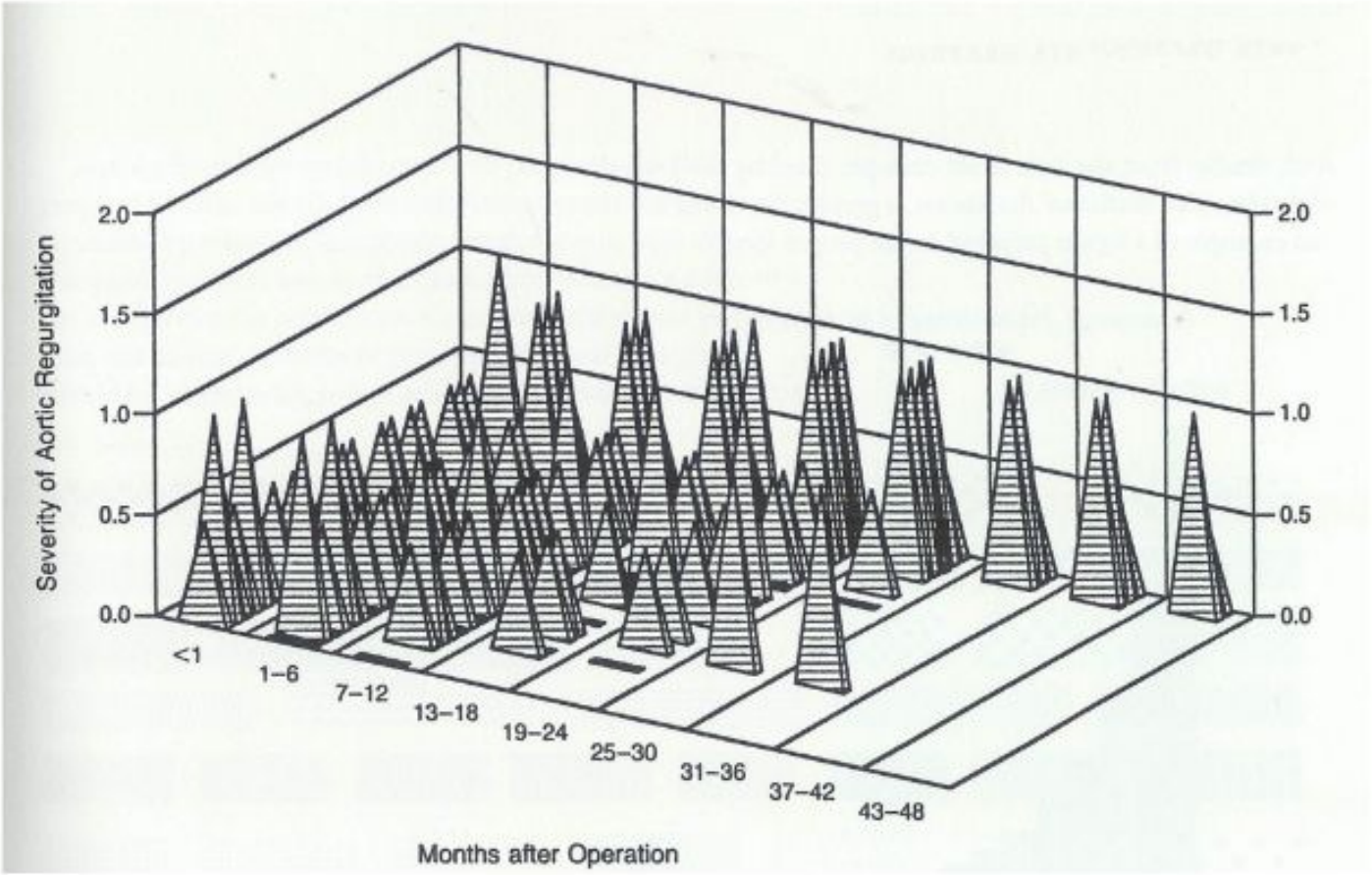
Clutter is your enemy.

Knaflic Chapter 3.



Nicholas T. Kouchoukos (1994)

Clutter
is defined as visual elements that take up space but don't increase understanding.

Gestalt principles of visual perception

The Gestalt School of Psychology set out in the early 1900 to understand the principles of visual perception still accepted today that define how **people interact with and create order out of visual stimuli.**

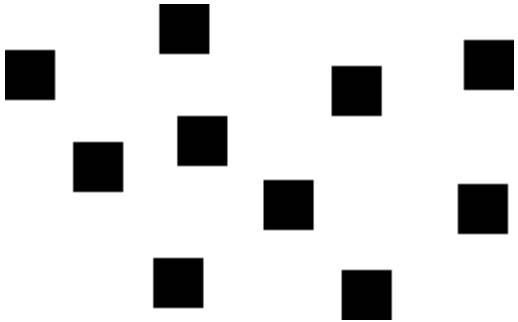
Principle I: Proximity

Objects or shapes that are **close to one another** appear to form groups.

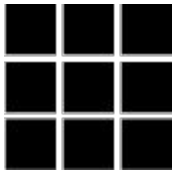
You naturally see the dots as three distinct groups.

Proximity cont.

Nine squares are placed **without proximity**.
Perception? **Separate shapes**.



These squares are given close proximity.
Perception? One group = unity.

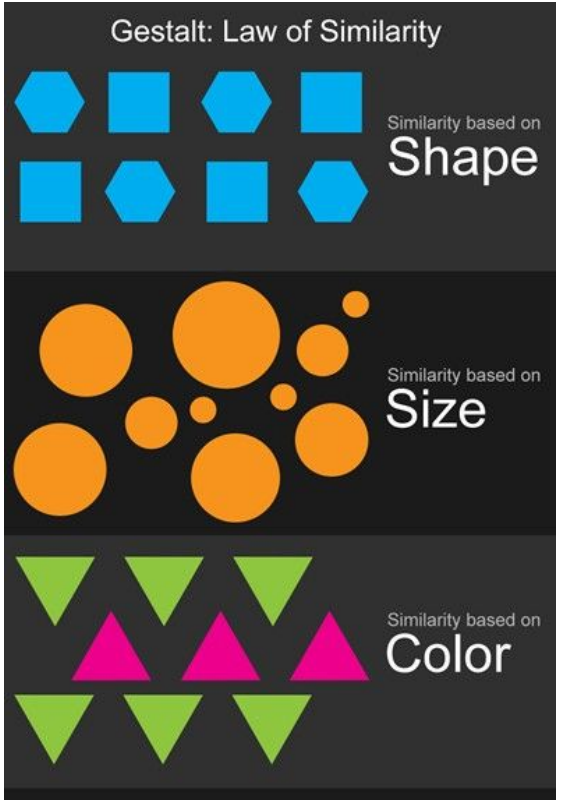


Proximity principle for table design

You see columns and rows due to dot spacing.

Principle II: Similarity

Objects that are of similar **shape, size, color or orientation** are perceived to be **grouped together**.



Similarity of color and shape.

Blue circles on the left and grey squares on the right are naturally associated.

Similarity of color and shape for table design.

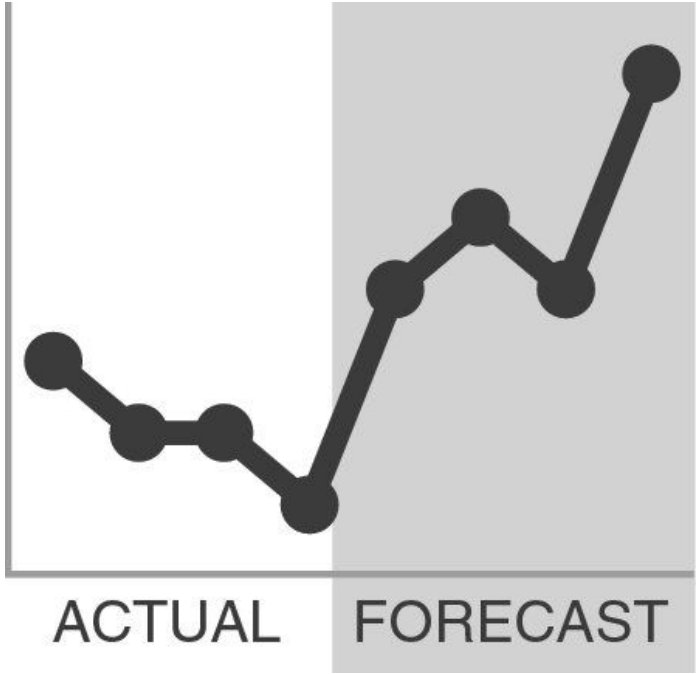
Helps us see across rows rather than columns. Also, eliminates the need for additional elements (such as borders).

Principal III: Enclosure

We think of objects that are physically enclosed together as belonging to part of a group.

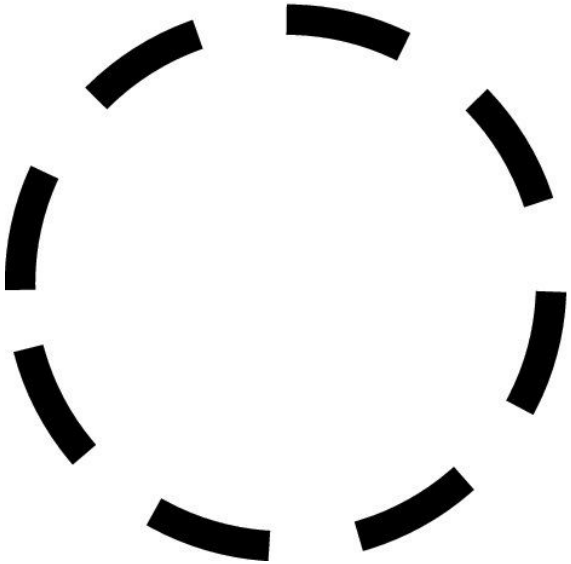
Enclosure principal example

The shaded area separates the forecast from actual data.



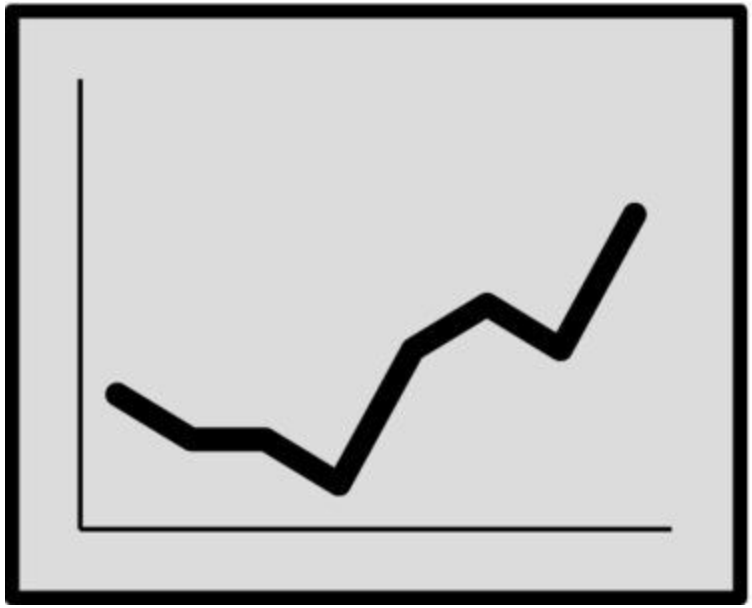
Principle IV: Closure

When parts of a whole are missing, our eyes fill in the gap. We tend to see complete figures even if a picture is incomplete.



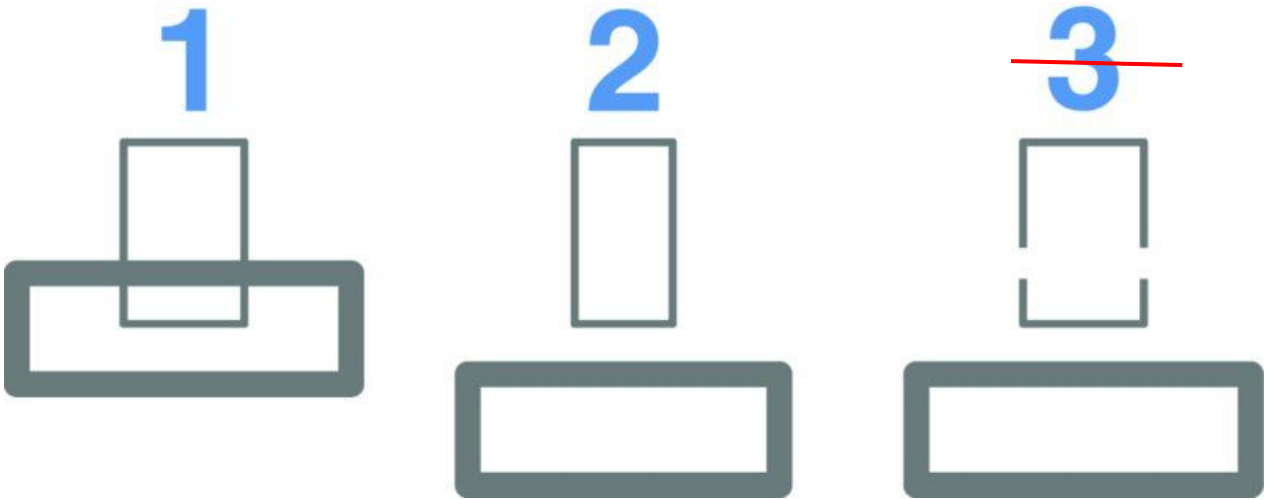
Closure principle in action.

Borders, background shading are unnecessary. Our graph still appears as cohesive entity without them. In fact, our data stands our more.



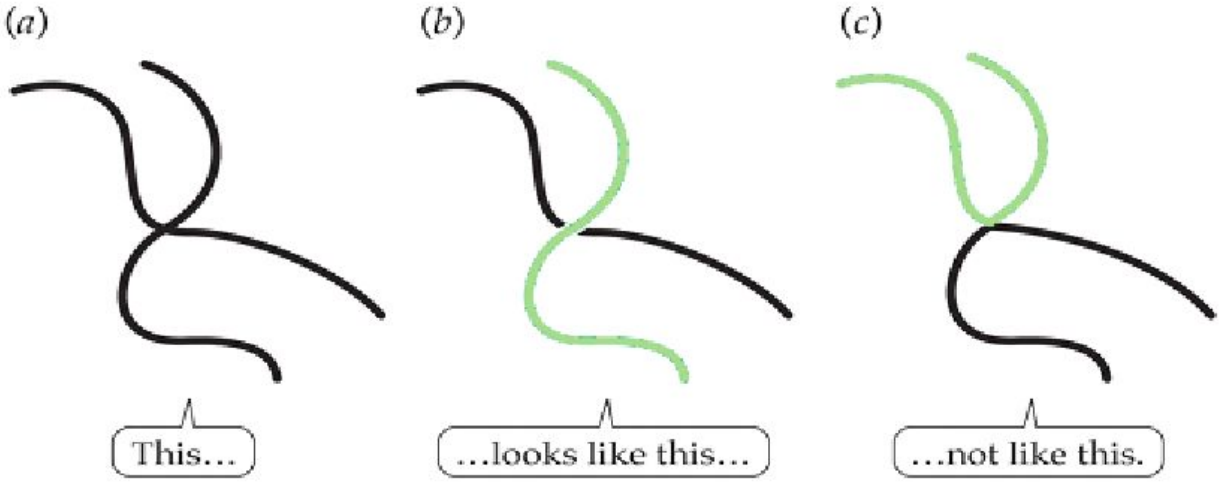
Principle V: Continuity (good continuation)

If we take objects **1** and pull them apart, most people will expect to see what is shown next - **2**, whereas it could as easily be what is shown in **3**.



Principle of continuity (good continuation)

When there is an intersection between two or more objects, people tend to perceive each object as a single uninterrupted object.



Continuity principle in action.

The vertical y-axis is removed from the graph. Our eyes still see the bars as lined up because of the consistent white space (the smoothest path) between the labels on the left and data on the right.

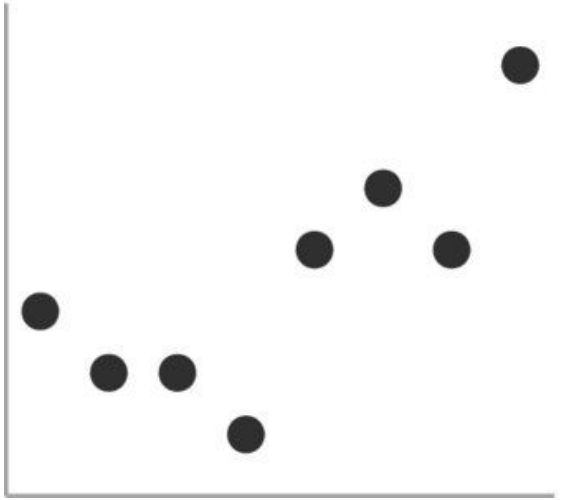
Principle VI: Connection.

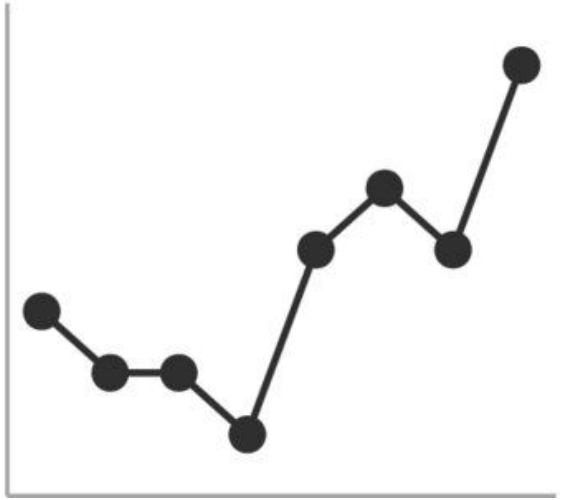
We tend to think of objects that are physically connected as part of a group.

Color, size or shape do not pair the shape as strong as the lines. Enclosure creates a stronger connectivity.

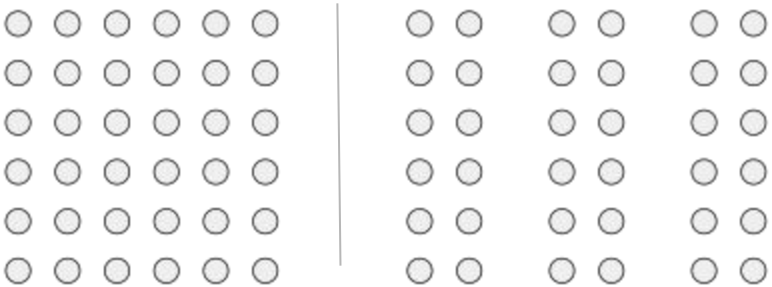
Connection principle in action.

Lines connect the dots to help our eyes see order.





Please name the principle:

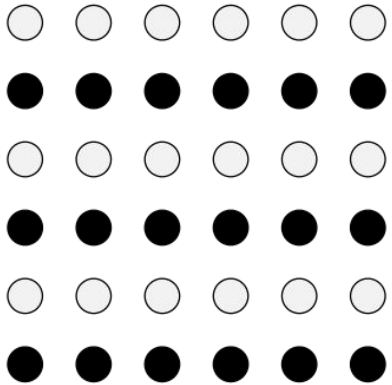


Proximity

Please name the principle:

Proximity

Please name the principle:

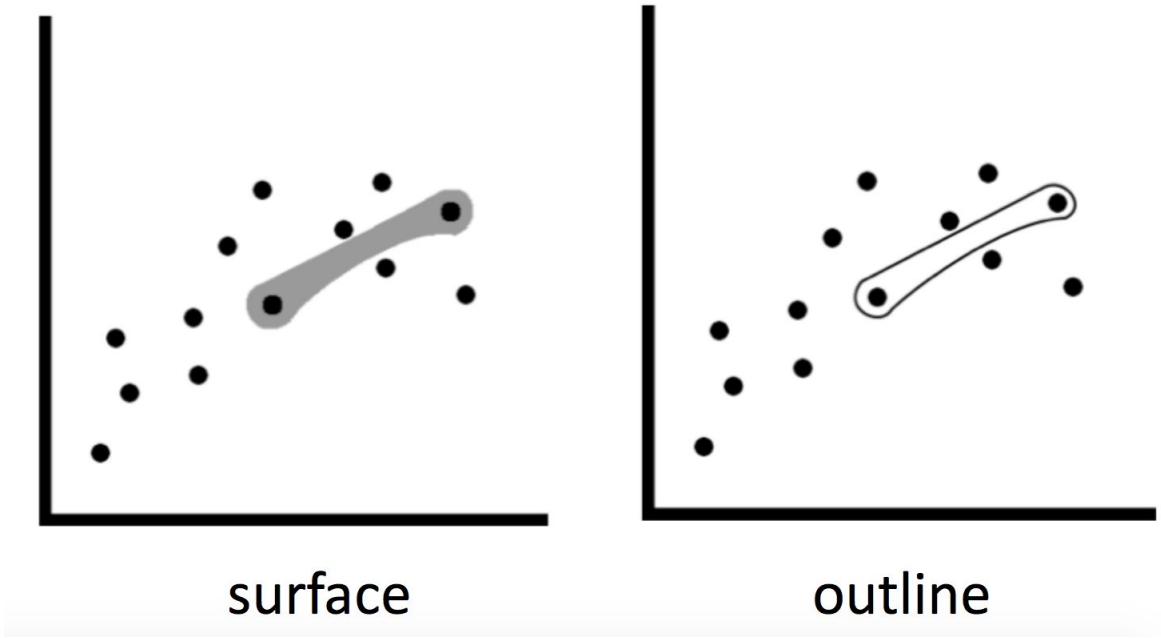


Similarity

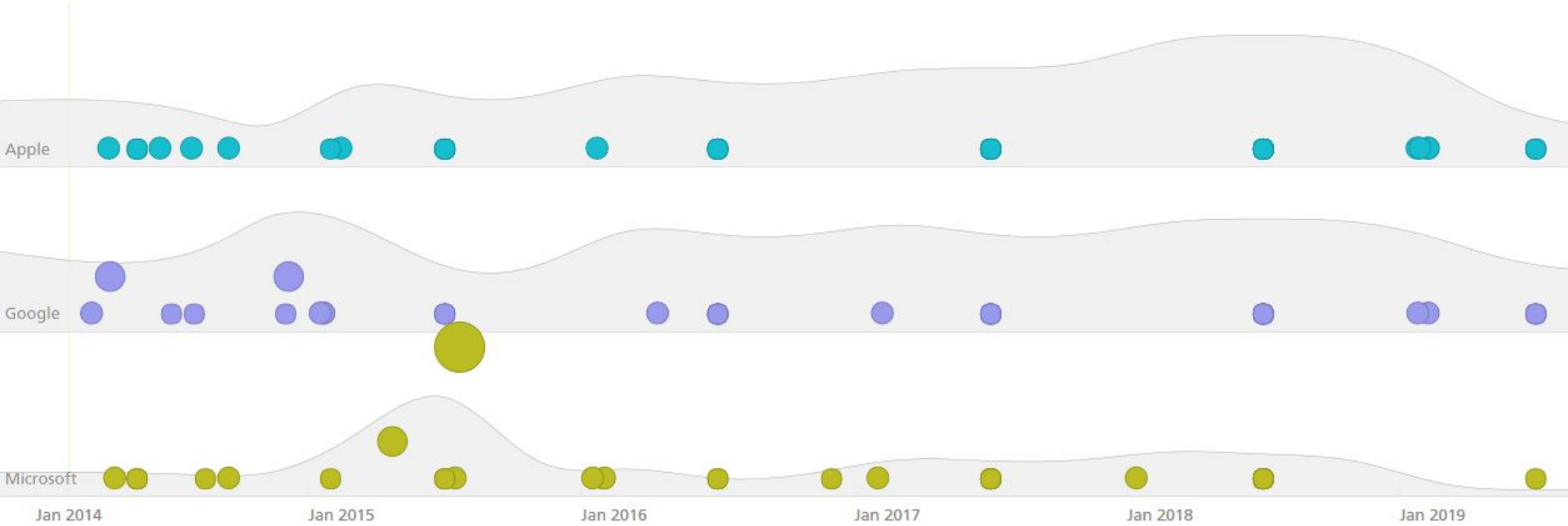
Please name the principle:

Similarity

Please name the principle:



Enclosure


Apple
Google
Microsoft
Jan 2014
Jan 2015
Jan 2016
Jan 2017
Jan 2018
Jan 2019

Enclosure

Please name the principle:

Closure (parts are missing)

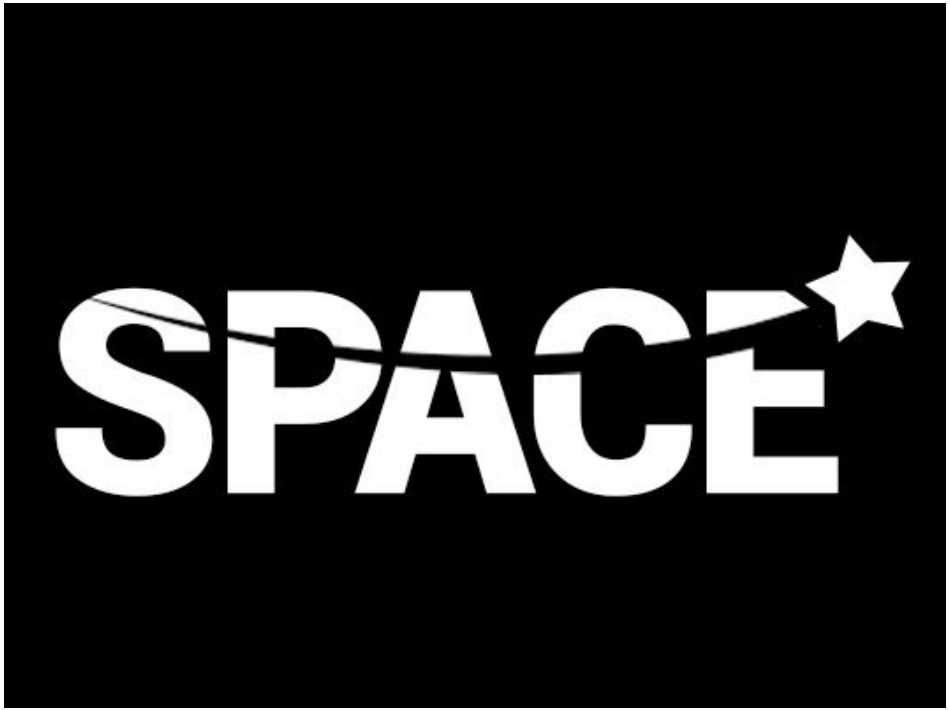
Please name the principle:

Closure

Please name the principle:

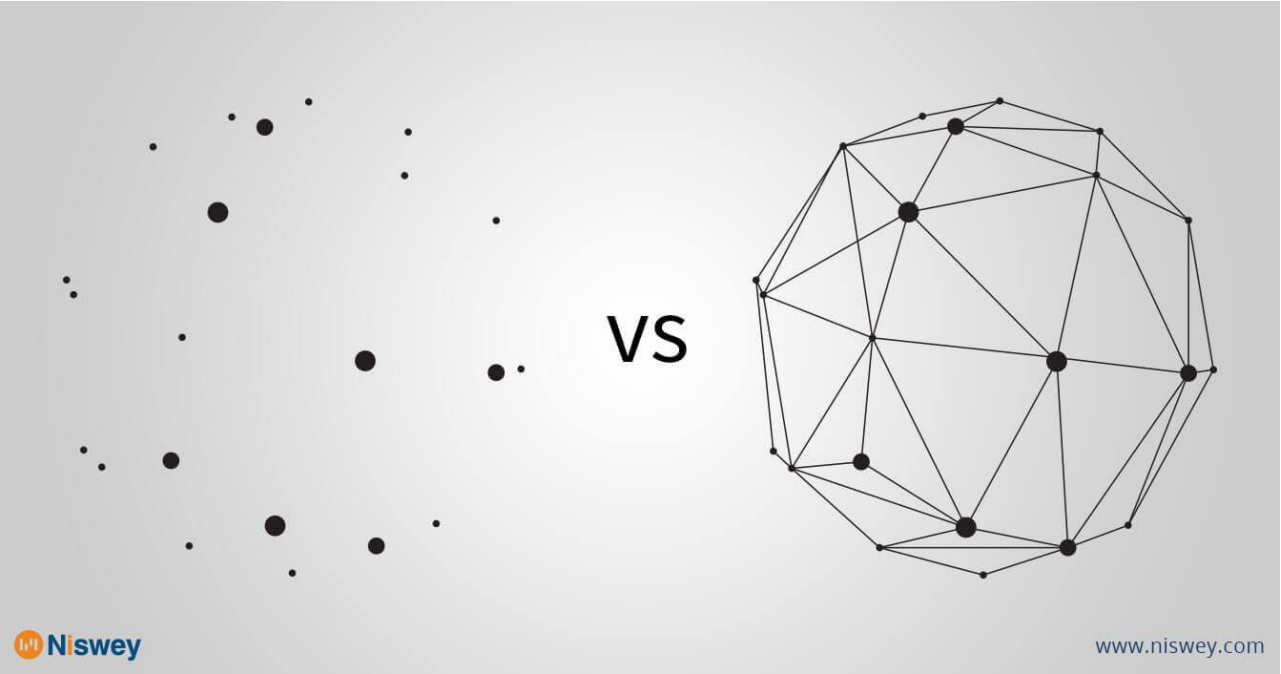
Continuity

Please name the principle:



Continuity

Please name the principle:



Connection

Perhaps one of the most famous examples..

The use of negative space in the FedEx logo:

https://www.cnn.com/style/article/hidden-designs-famous-logos/index.html

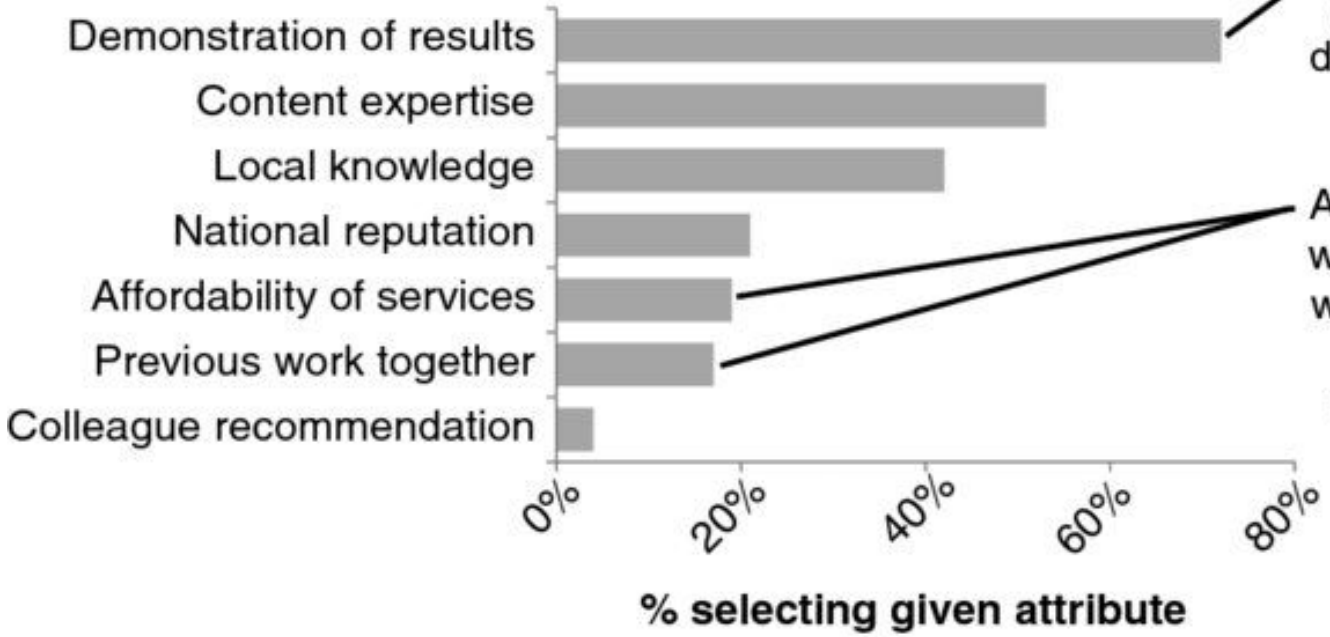
Example 1: Survey feedback

about factors considered by nonprofits

in **vendor selection**.

Demonstrating effectiveness is most important consideration when selecting a provider

In general, what attributes are the most important to you in selecting a service provider? *(Choose up to 3)*



Survey shows that demonstration of results is the single most important dimension when choosing a service provider.

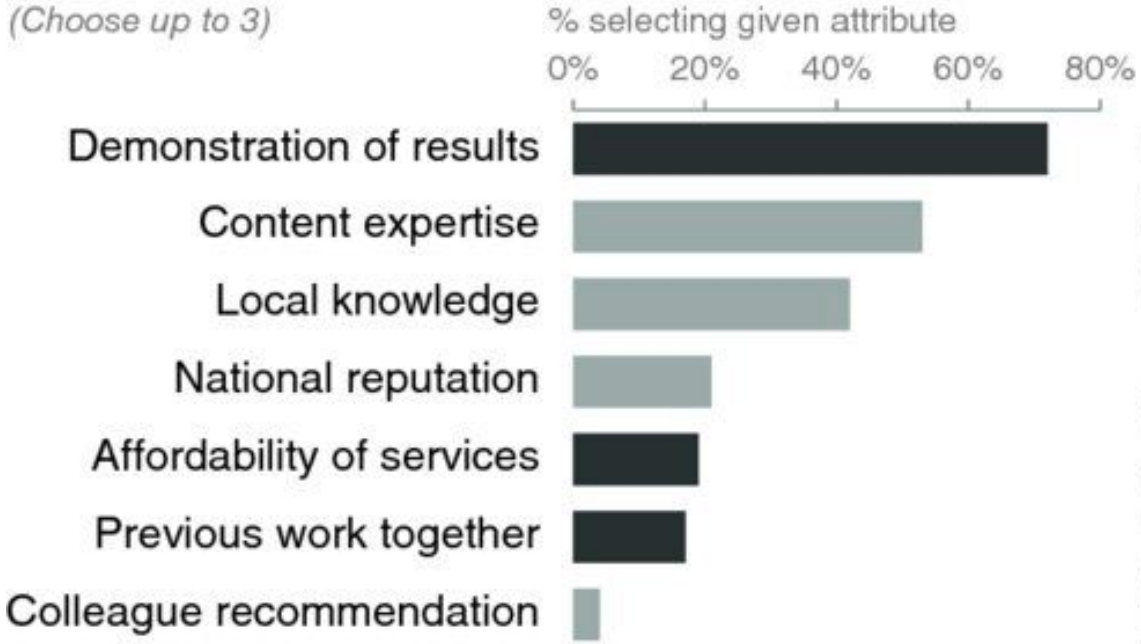
Affordability and experience working together previously, which were hypothesized to be very important in the decision making process, were both cited less frequently as important attributes.

Data source: xyz; includes N number of survey respondents. Note that respondents were able to choose up to 3 options.

Demonstrating effectiveness is most important consideration when selecting a provider

In general, **what attributes are the most important** to you in selecting a service provider?

(Choose up to 3)



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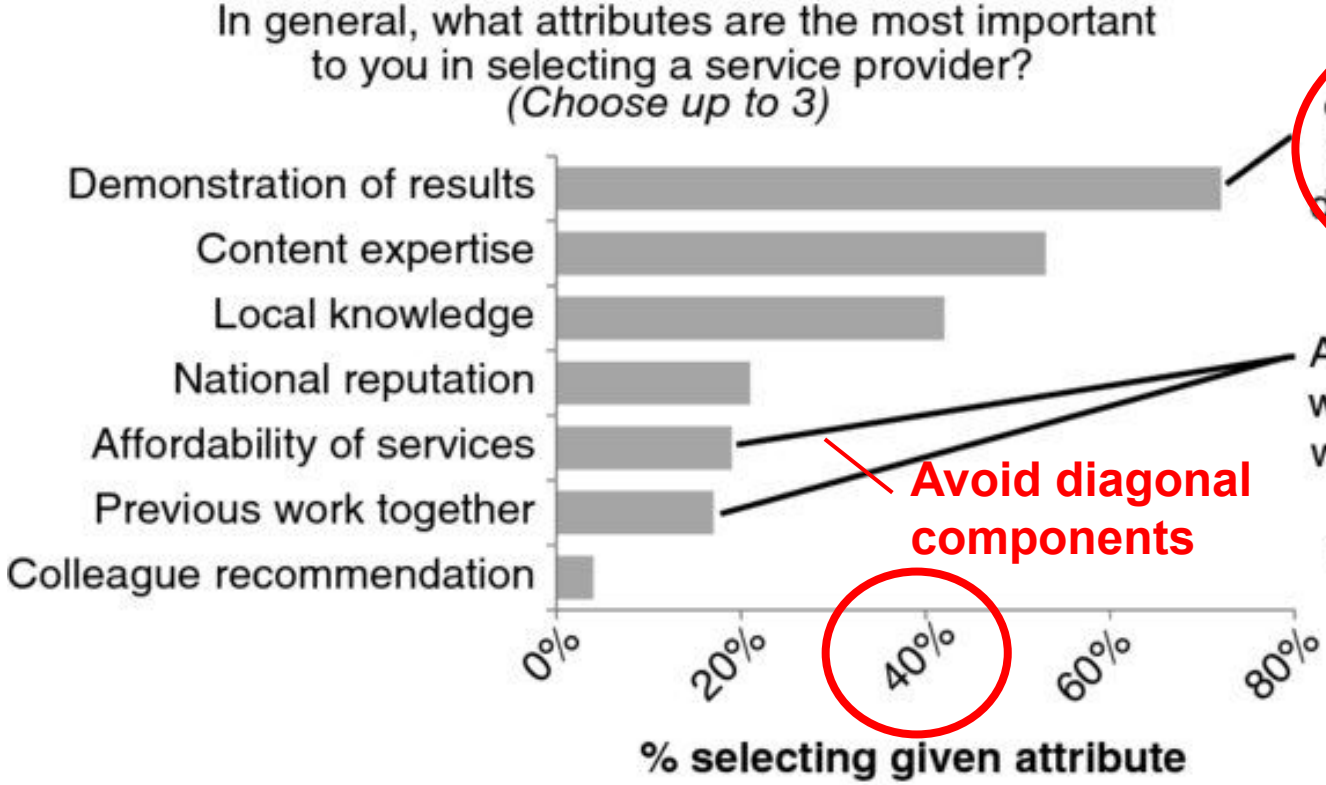
Note that respondents were able to choose up to 3 options.

Demonstrating effectiveness is most important consideration when selecting a provider

Avoid center alignment



Survey shows that demonstration of results is the single most important dimension when choosing a service provider.

Affordability and experience working together previously, which were hypothesized to be very important in the decision making process, were both cited less frequently as important attributes.

Avoid diagonal components

Data source: xyz; includes N number of survey respondents. Note that respondents were able to choose up to 3 options.

Demonstrating effectiveness is most important consideration when selecting a provider

In general, **what attributes are the most important** to you in selecting a service provider?

(Choose up to 3)

Data source: xyz; includes N number of survey respondents.
Note that respondents were able to choose up to 3 options.

white space - margins should remain free of text.

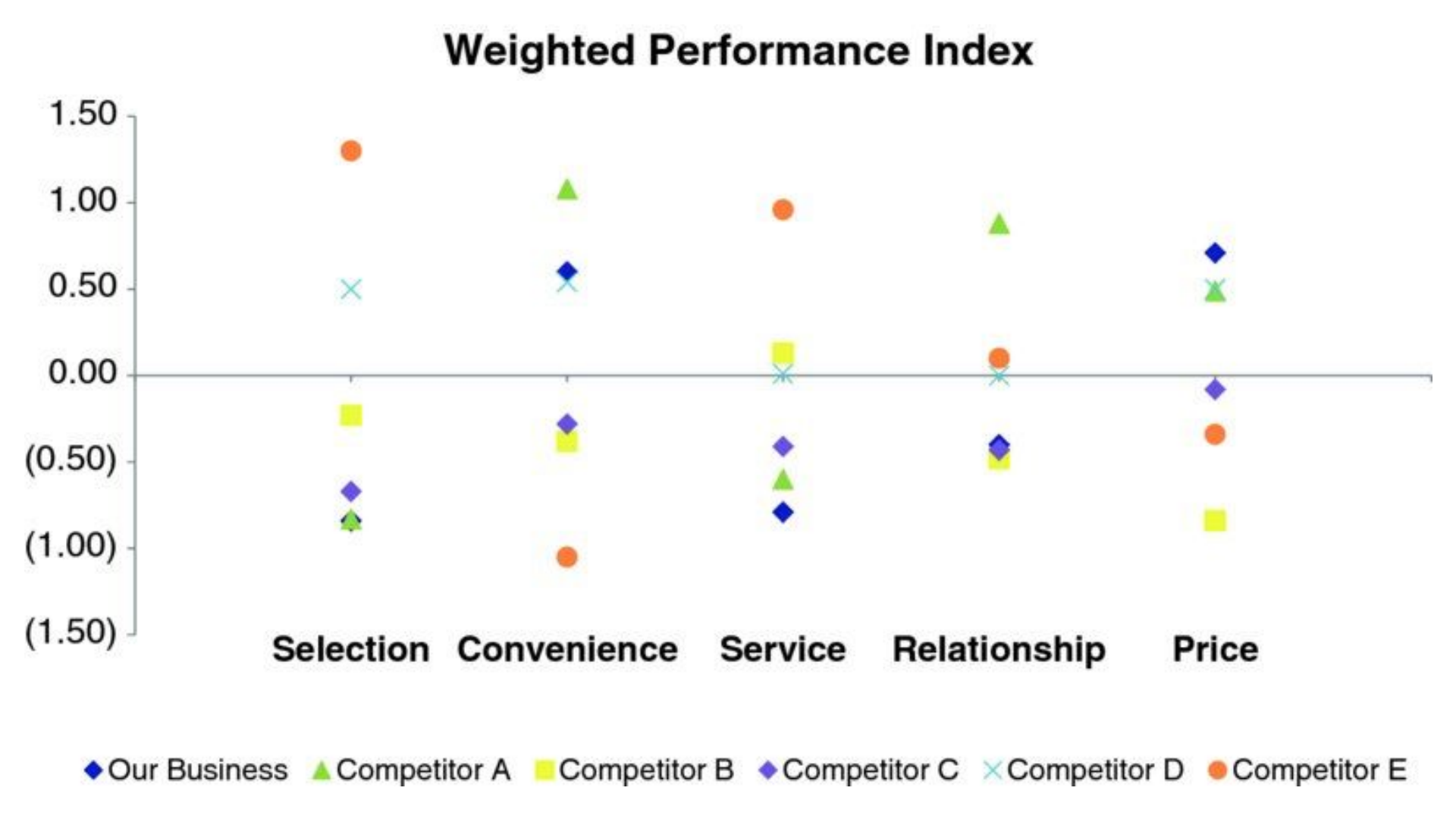
Survey shows that **demonstration of results** is the single most important dimension when choosing a service provider.

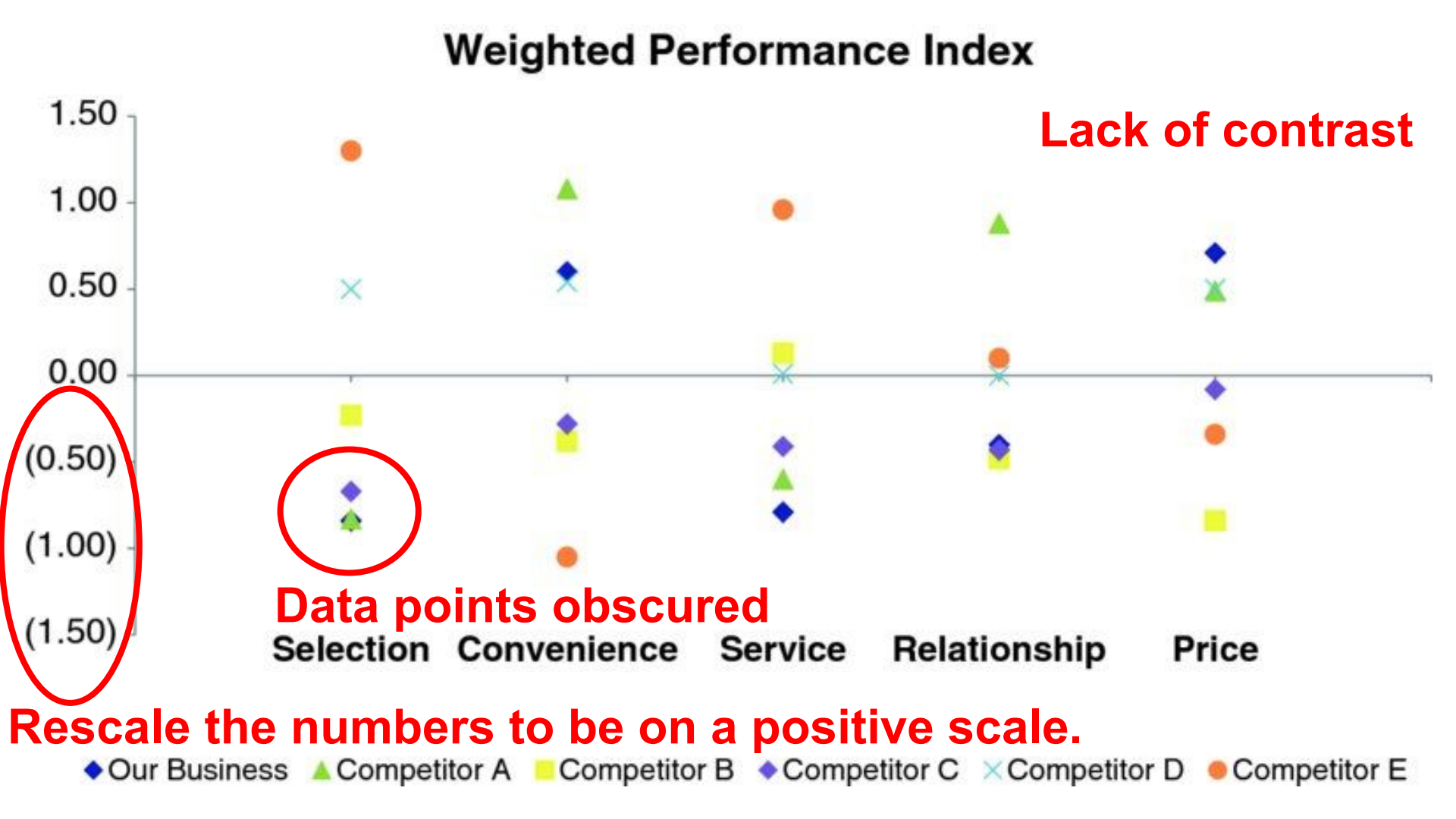
Affordability and **experience working together previously**, which were hypothesized to be very important in the decision making process, were both cited less frequently as important attributes.

white space

Example 2.
Non-strategic use of contrast.

Retail store **competitor analysis**: Weighted Performance Index.


Weighted Performance Index
1.50
1.00
0.50
0.00
(0.50)
(1.00)
(1.50)
Selection
Convenience
Service
Relationship
Price
Our Business
Competitor A
Competitor B
Competitor C
Competitor D
Competitor E

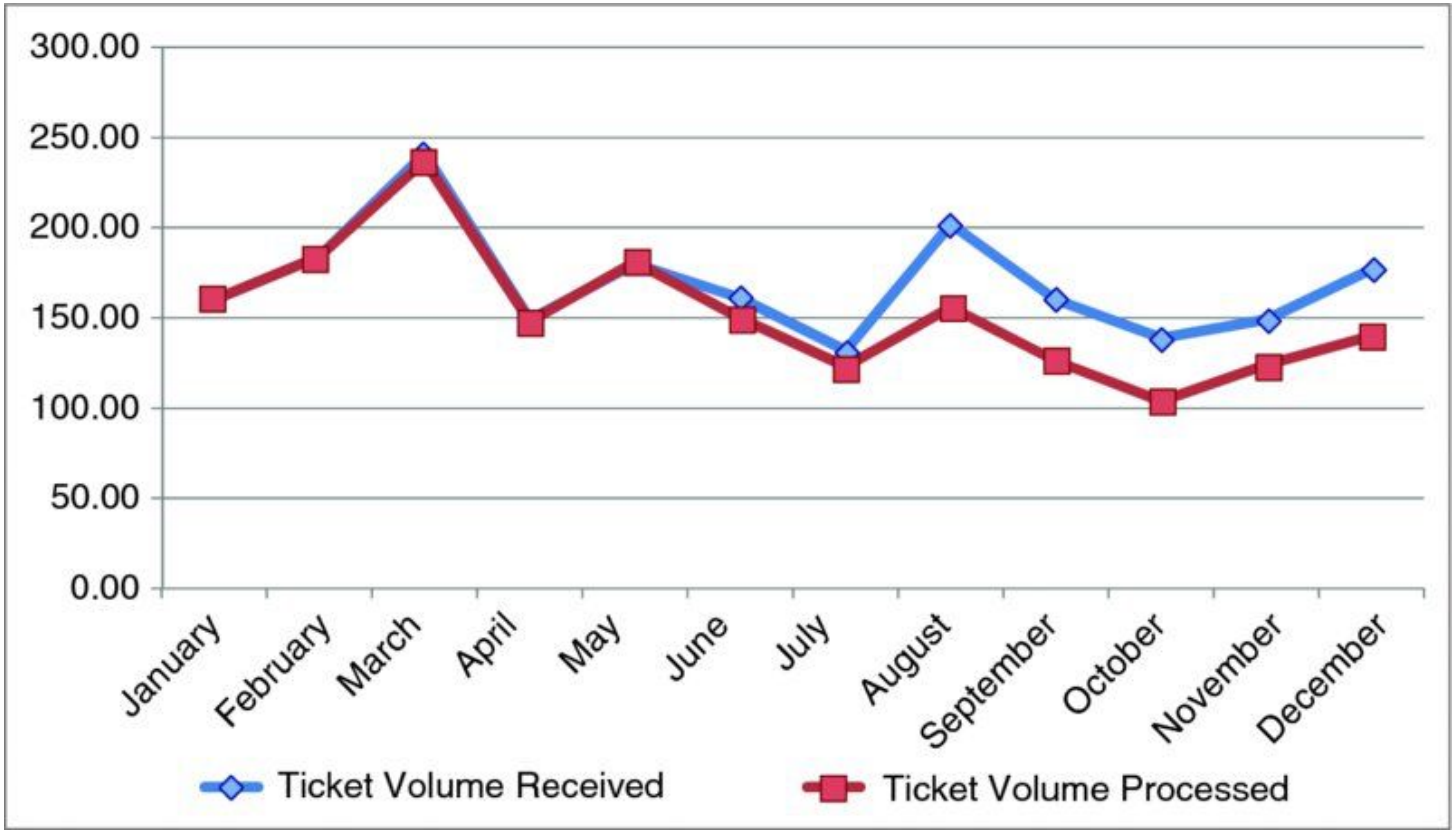

Weighted Performance Index
1.50
1.00
0.50
0.00
(0.50)
(1.00)
(1.50)
Lack of contrast
Data points obscured
Selection
Convenience
Service
Relationship
Price
Rescale the numbers to be on a positive scale.
Our Business
Competitor A
Competitor B
Competitor C
Competitor D
Competitor E

Performance overview

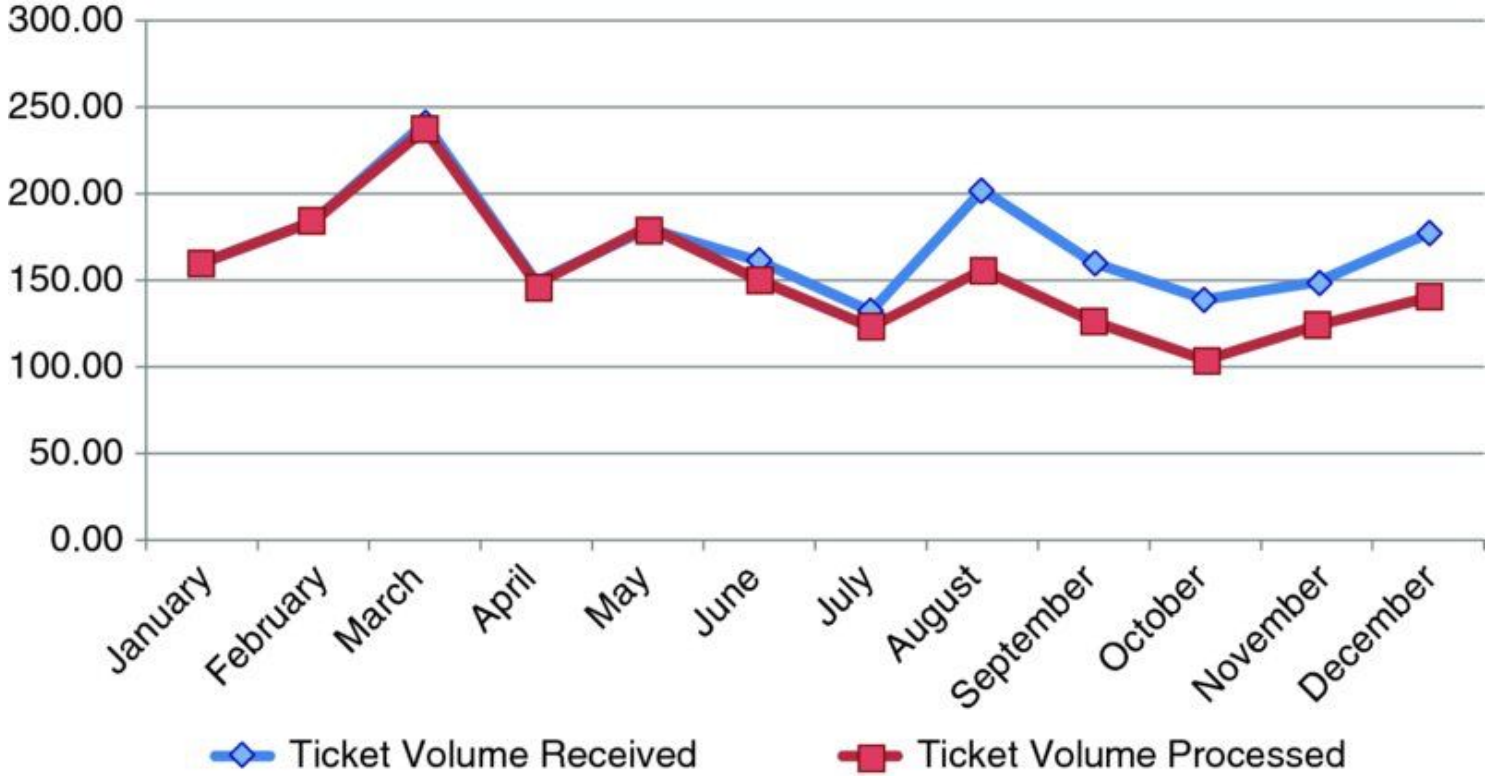
Example 3.

Decluttering: Step-By-Step.

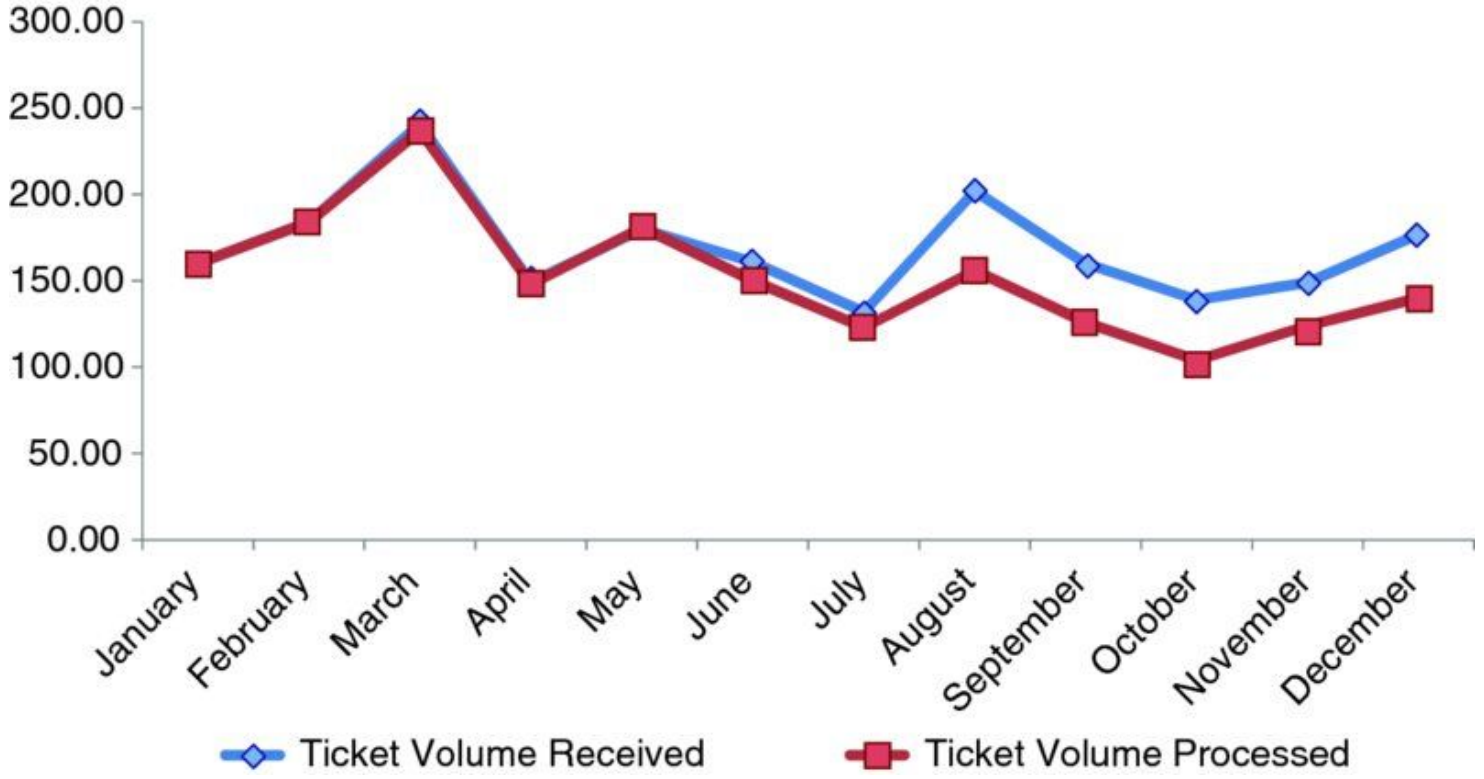
IT Tickets Received & Processed: Original Graph



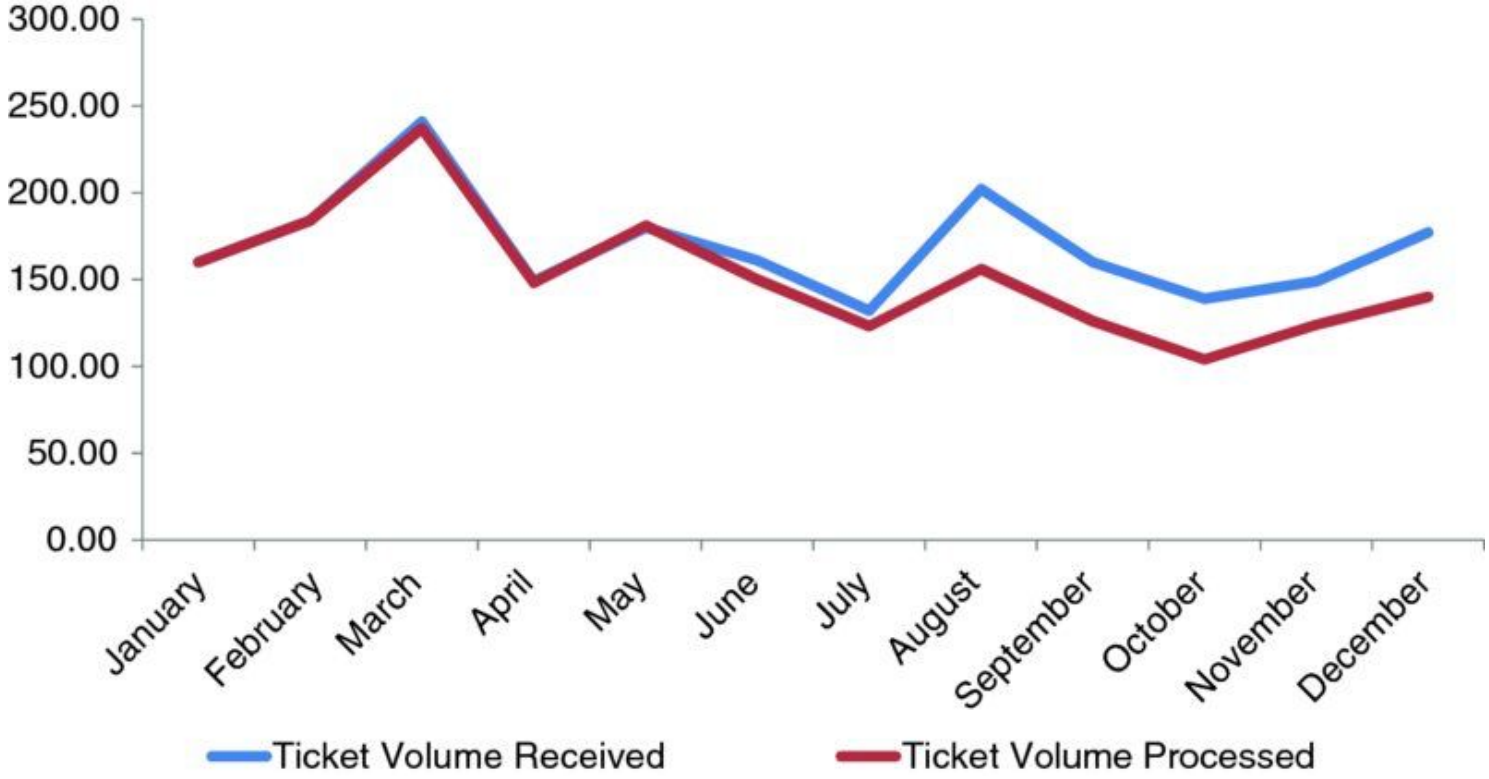
1. Remove chart border.



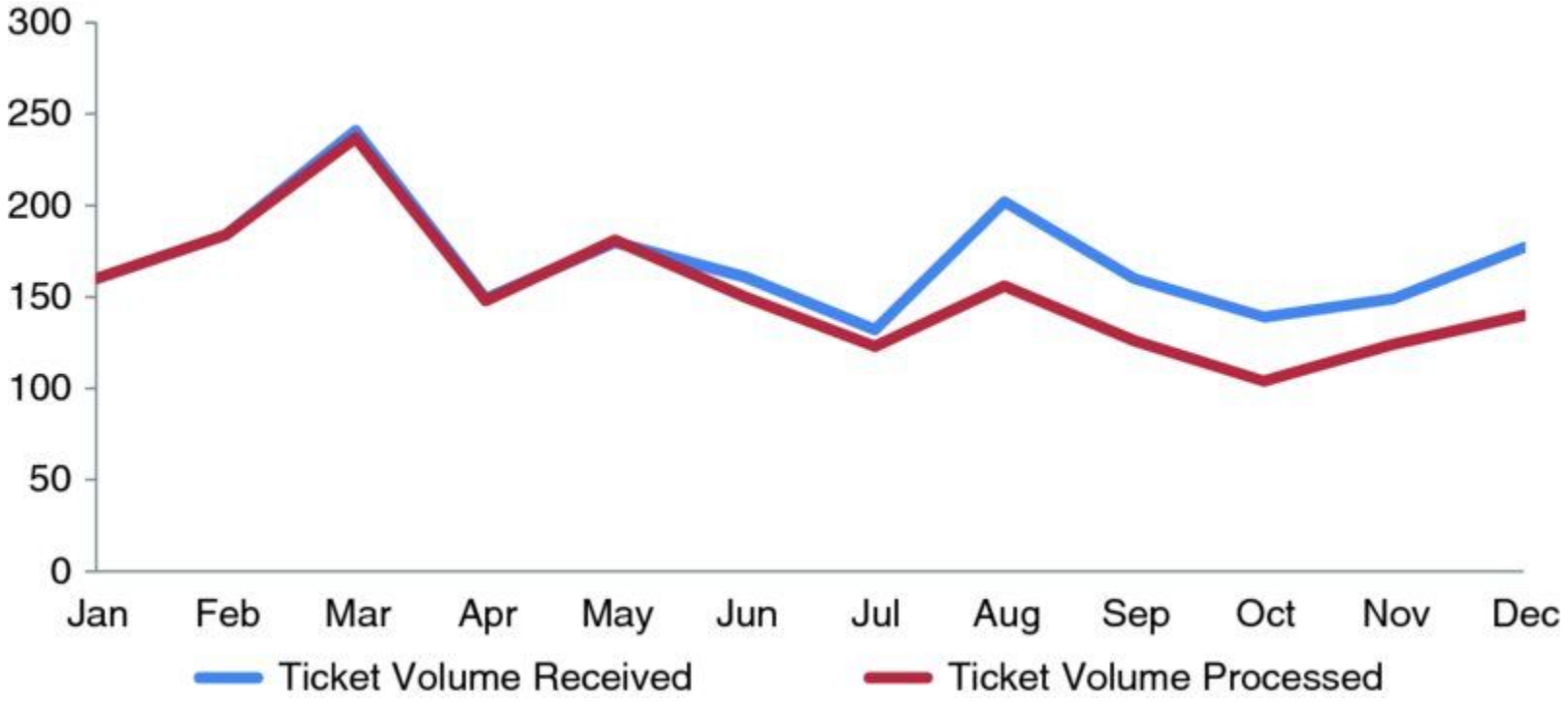
2. Remove gridlines



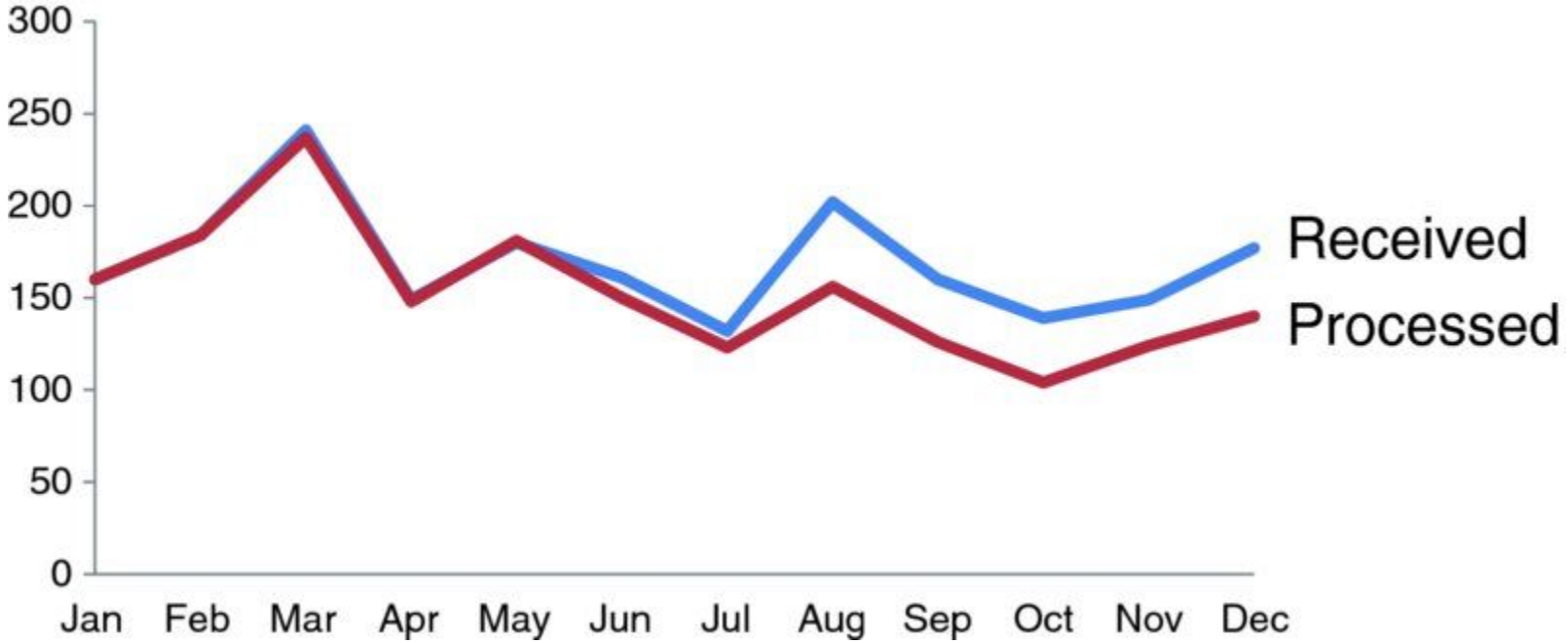
3. Remove data markers



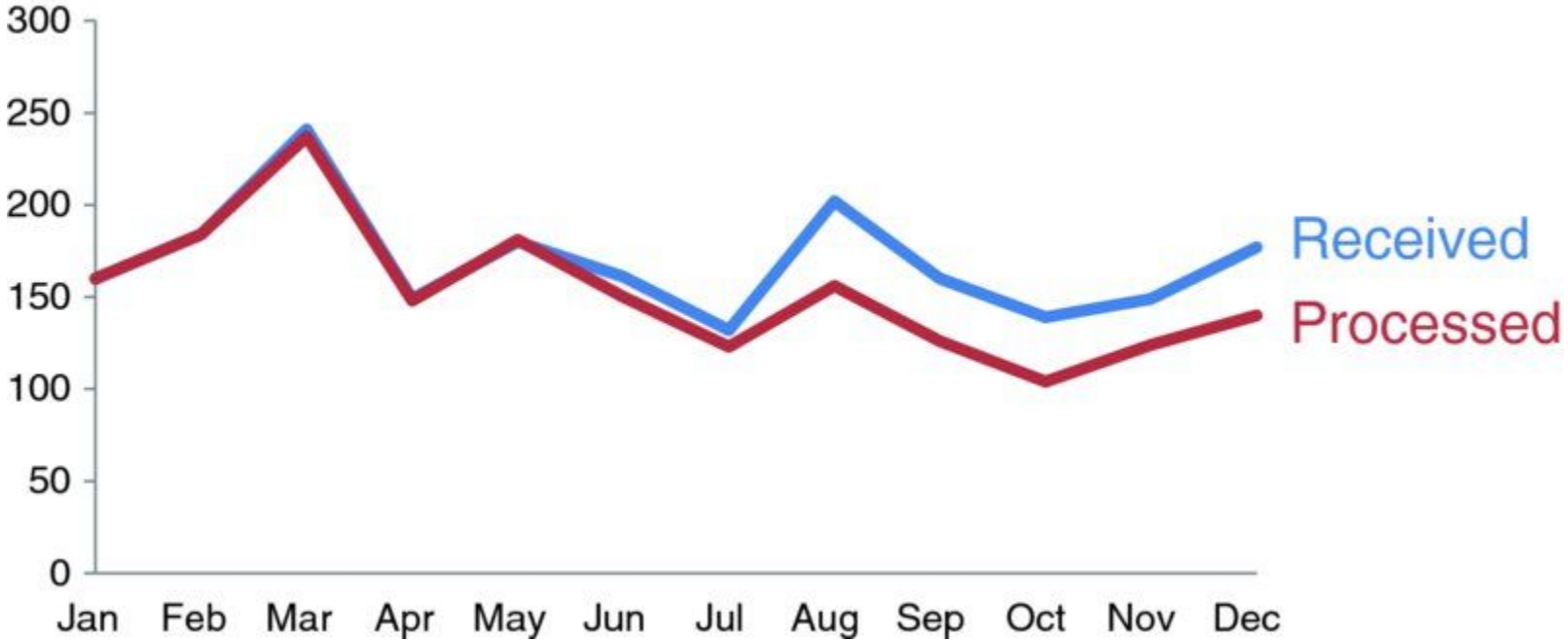
4. Clean up axis labels



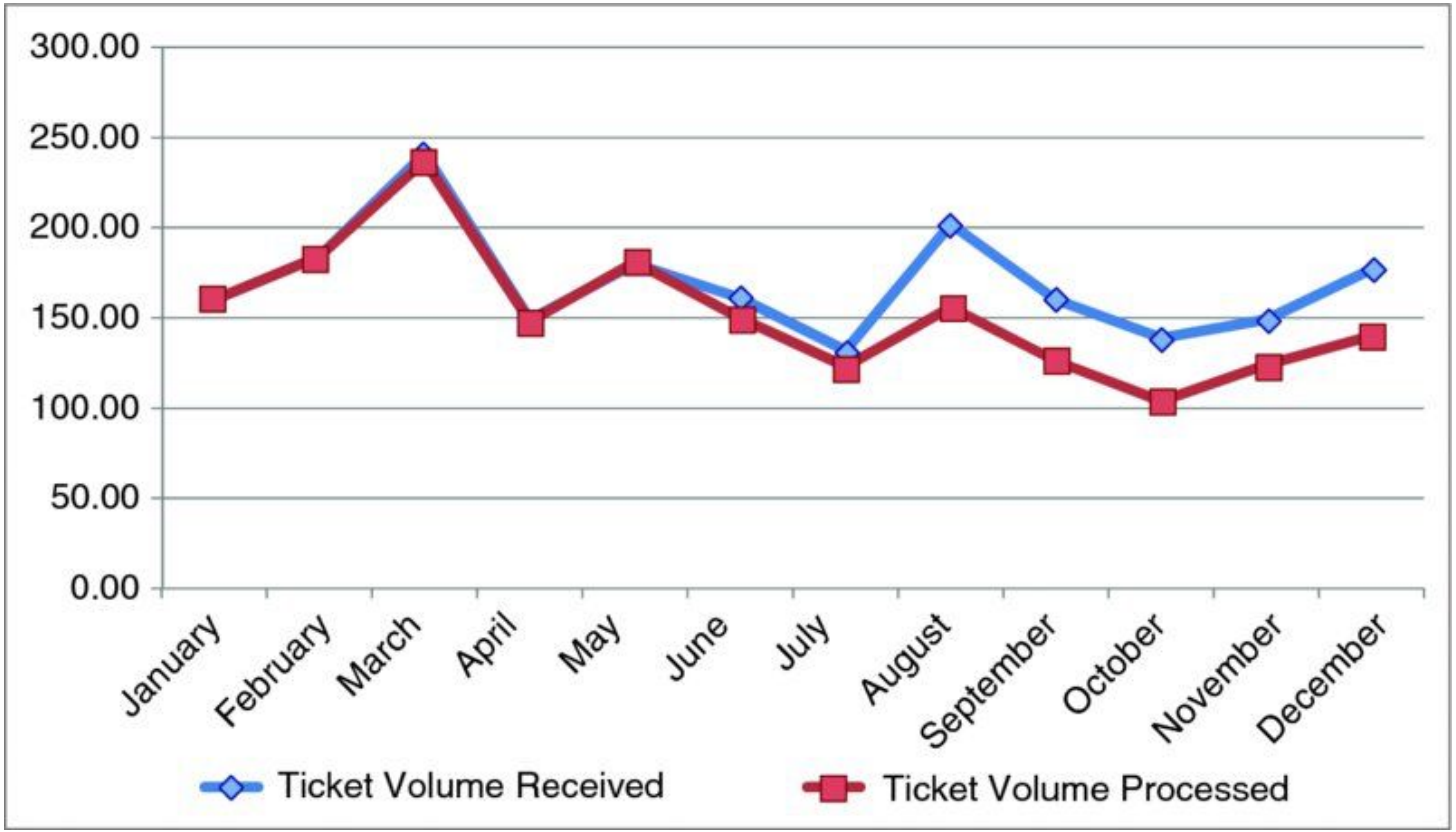
5. Label data directly



6. Leverage consistent color

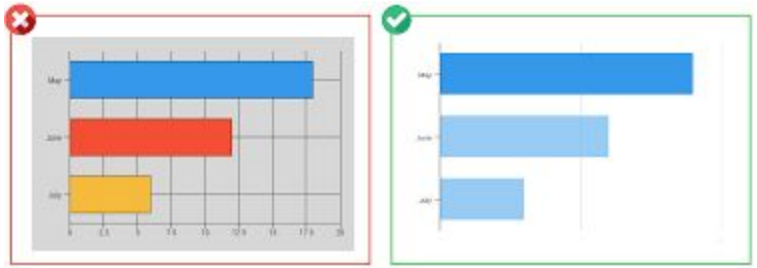


IT Tickets Received & Processed: Original Graph



Conclusion: clutter is your enemy!

Ban it from your visuals: identify and eliminate.



References

https://en.wikipedia.org/wiki/Principles_of_grouping

https://emeeks.github.io/gestaltdataviz/section1.html

How do you pronounce Gestault?

https://dictionary.cambridge.org/us/pronunciation/english/gestalt