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Clutter is your Enemy

Storytelling With Data

Advanced Data Analytics Training

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<https://intip.in/declutterpresent>

<https://intip.in/tableautraining/>



Outline

- **Identifying Clutter**
- **Gestalt Principles of Visual Perception**
- **Alignment, strategic use of white space, and contrast**
- **Decluttering step by step**

Quote

"Minimalism isn't about removing the things you love.

It's about removing the things that distract you from the things you love."

~ Joshua Becker

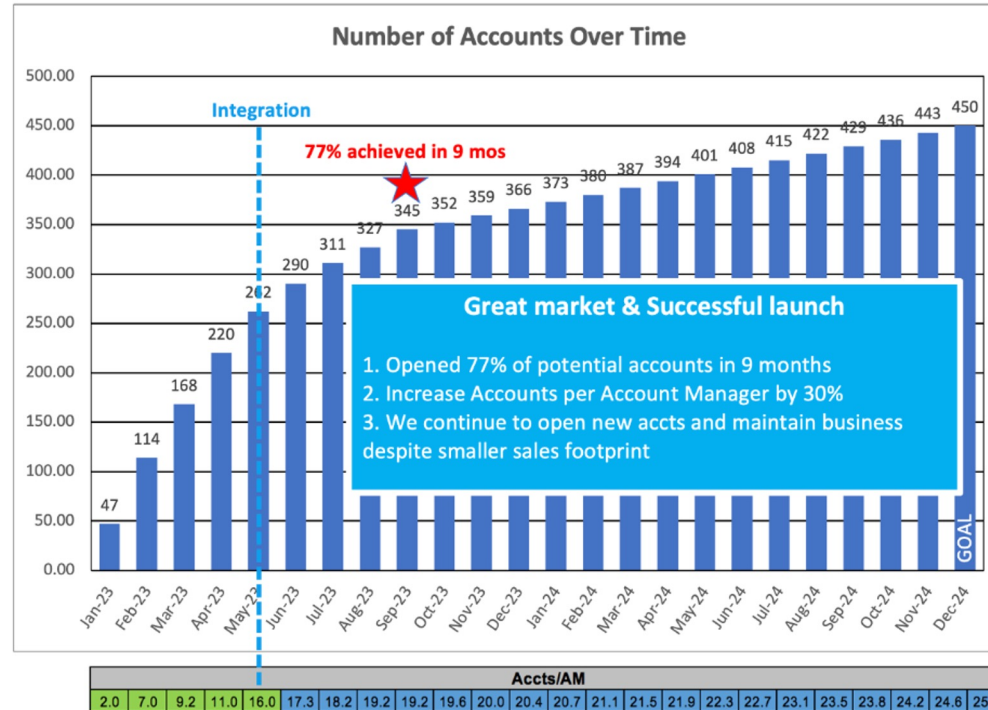


What is clutter?



Observe:
can we
make
better?

MARKET MODEL: ACCOUNTS AND FIELD COVERAGE



*AM = Account Manager.



Identifying and eliminating clutter

- Excessive or extraneous **cognitive load**
- Cognitive load can be thought of as the **mental effort that's required to learn new information.**
- **Humans' brains have a finite amount of this mental processing power.**
- **We should be smart about how we use our audience's brain power.**
- **In general, think about minimizing the perceived cognitive load.**



What is clutter?

- Visual elements that take up space but don't increase understanding
- It makes our visuals appear more complicated than necessary.



Gestalt Principles of Visual Perception

Which elements in our visuals are **signal** (the information we want to communicate) and which might be **noise** (clutter)

Principles:

1. Proximity
2. Similarity
3. Enclosure
4. Closure
5. Continuity
6. Connection



Gestalt Principles of Visual Perception

Gestalt principles help us understand **how people see**, which we can use to identify unnecessary elements and ease the processing of our visual communications.

Proximity

We tend to think of **objects that are physically close together as** belonging to part of a group



FIGURE 3.1 Gestalt principle of proximity



Proximity



FIGURE 3.2 You see columns and rows, simply due to dot spacing

Similarity

similar color, shape, size, or orientation are perceived as related or belonging to part of a group



FIGURE 3.3 Gestalt principle of similarity



Similarity

similar color, shape, size, or orientation are perceived as related or belonging to part of a group



FIGURE 3.4 You see rows due to similarity of color

Enclosure

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



FIGURE 3.5 Gestalt principle of enclosure

Enclosure

We think of **objects that are physically enclosed together** as belonging

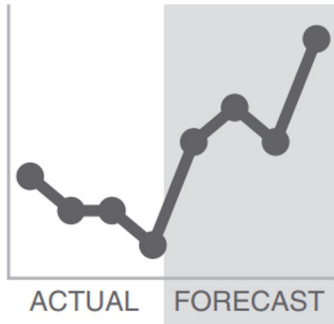


FIGURE 3.6 The shaded area separates the forecast from actual data



Closure

people like **things to be simple** and **to fit in the constructs** that are already in our heads



FIGURE 3.7 Gestalt principle of closure

Closure

people like **things to be simple** and **to fit in the constructs** that are already in our heads



FIGURE 3.8 The graph still appears complete without the border and background shading

Continuity

when looking at objects, our eyes seek the **smoothest path** and naturally create **continuity** in what we see even where it may not explicitly exist



FIGURE 3.9 Gestalt principle of continuity



Continuity

when looking at objects, our eyes seek the **smoothest path** and naturally create **continuity** in what we see even where it may not explicitly exist

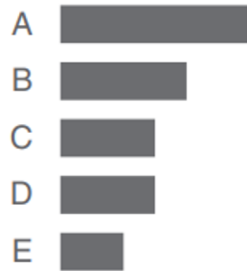


FIGURE 3.10 Graph with y-axis line removed

Connection

We tend to think of **objects that are physically connected** as part of a group. The connective property typically has a **stronger associative value** than similar **color, size, or shape**.



FIGURE 3.11 Gestalt principle of connection



Connection

We tend to think of **objects that are physically connected** as part of a group. The connective property typically has a **stronger associative value** than similar **color, size, or shape**.

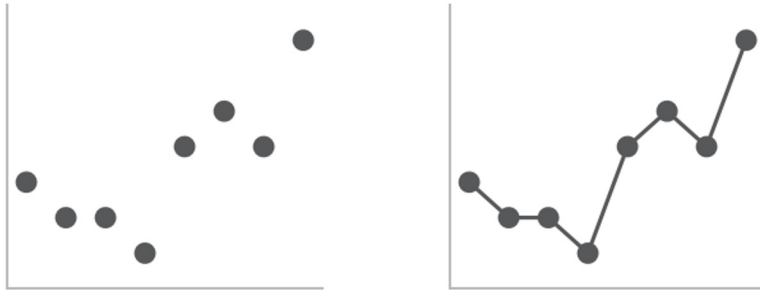
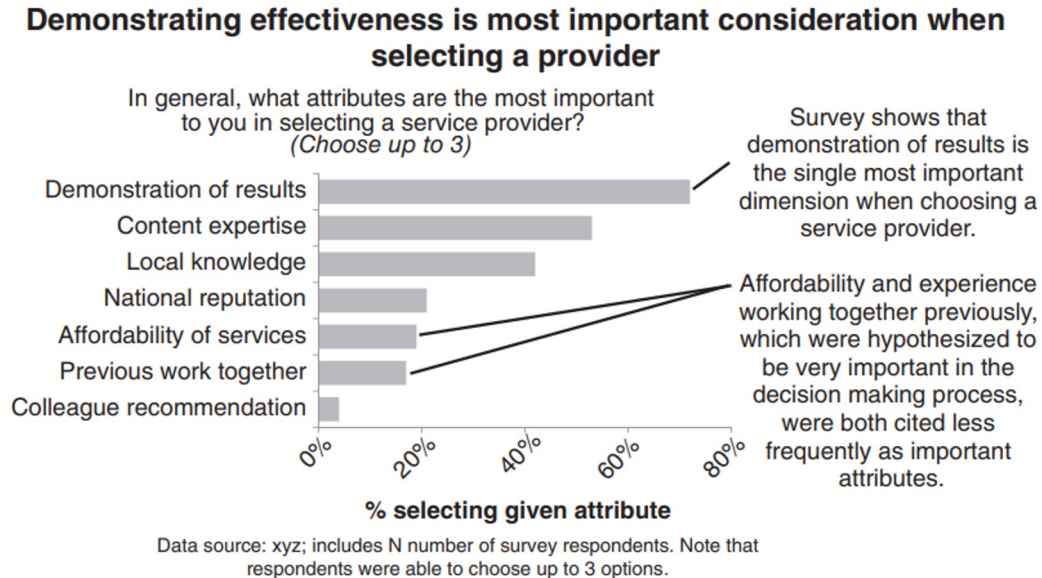


FIGURE 3.12 Lines connect the dots

Lack of Visual Order, Alignment



the graph is well ordered and labeled, and key observations are articulated and tied visually to where we're meant to look in the graph.

However, the aggregate visual feels disorganized and uncomfortable to look

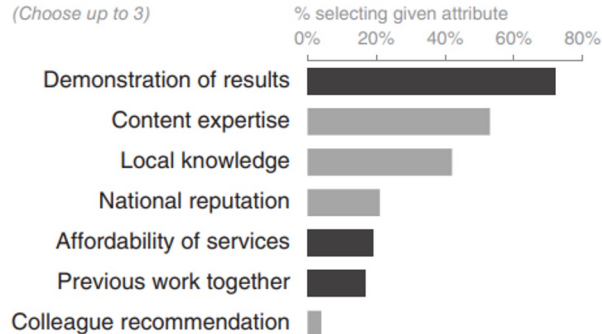
FIGURE 3.13 Summary of survey feedback

Lack of Visual Order, Alignment

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.

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.

FIGURE 3.14 Revamped summary of survey feedback

the **placement** and **formatting** of elements have been modified.

Create **clean lines** (both horizontally and vertically) of elements and white space.

Diagonal elements such as lines and text should be avoided



White space

White space in visual communication is as important as **pauses** in public speaking.

Space can be used strategically to **draw attention** to the parts of the page that are not white space.

Contrast

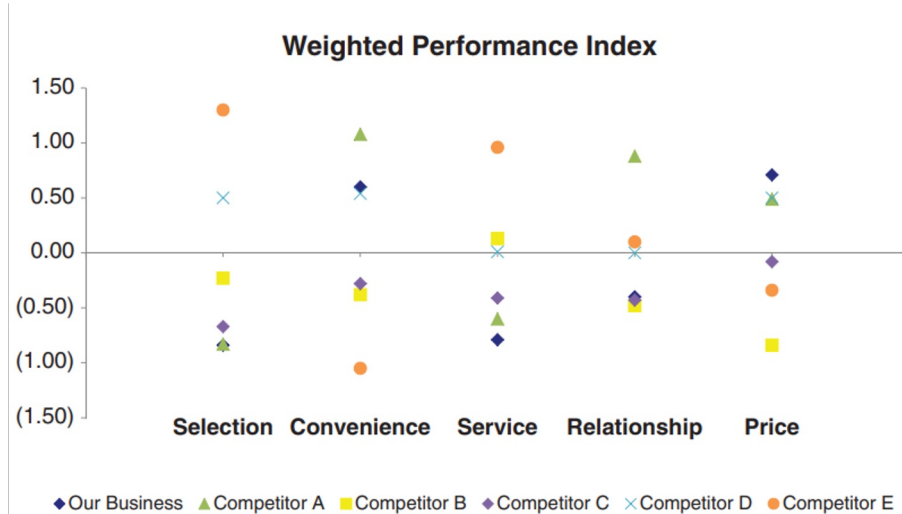


FIGURE 3.15 Original graph

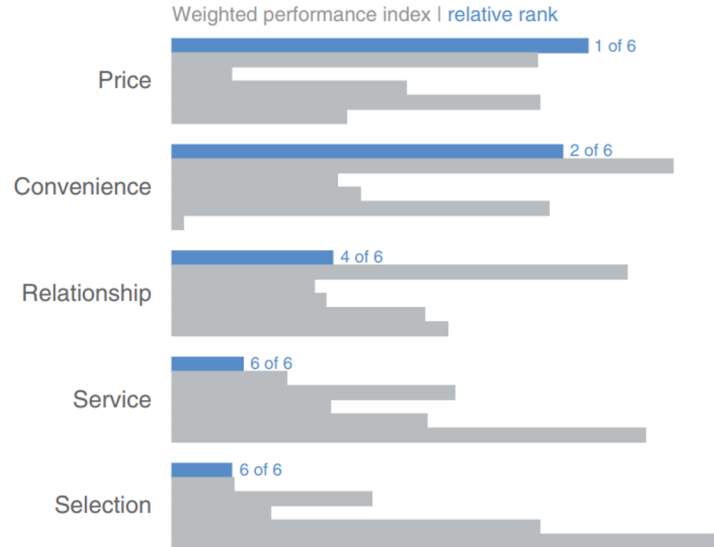
Clear contrast can be a signal to our audience, helping them understand **where to focus** their attention.

Contrast

Performance overview

■ Our business

- Competitor A
- Competitor B
- Competitor C
- Competitor D
- Competitor E



Clear contrast can be a signal to our audience, helping them understand **where to focus** their attention.

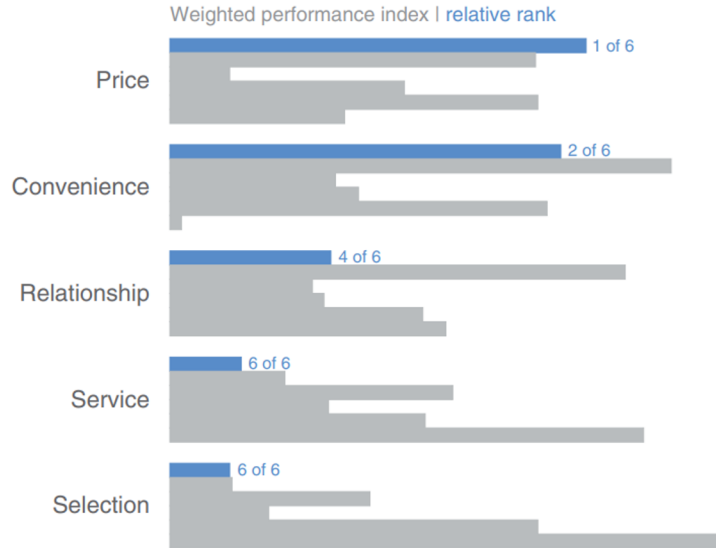
FIGURE 3.16 Revamped graph, using contrast strategically

Contrast

Performance overview

■ Our business

- Competitor A
- Competitor B
- Competitor C
- Competitor D
- Competitor E



Clear contrast can be a signal to our audience, helping them understand **where to focus** their attention.

FIGURE 3.16 Revamped graph, using contrast strategically

Decluttering: step-by-step

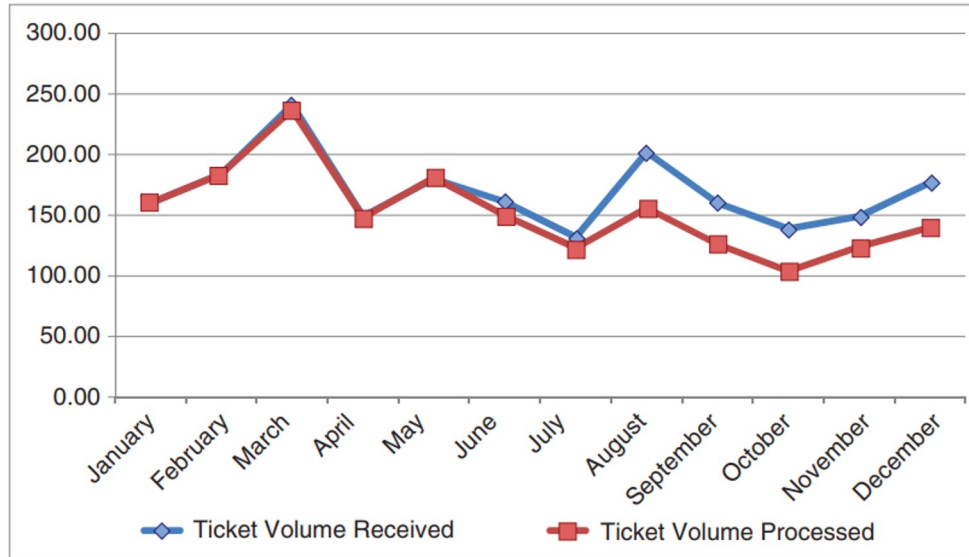


FIGURE 3.17 Original graph

First, you want to understand **what** impact the departure of individuals over the past year?

Step 1: Remove chart border

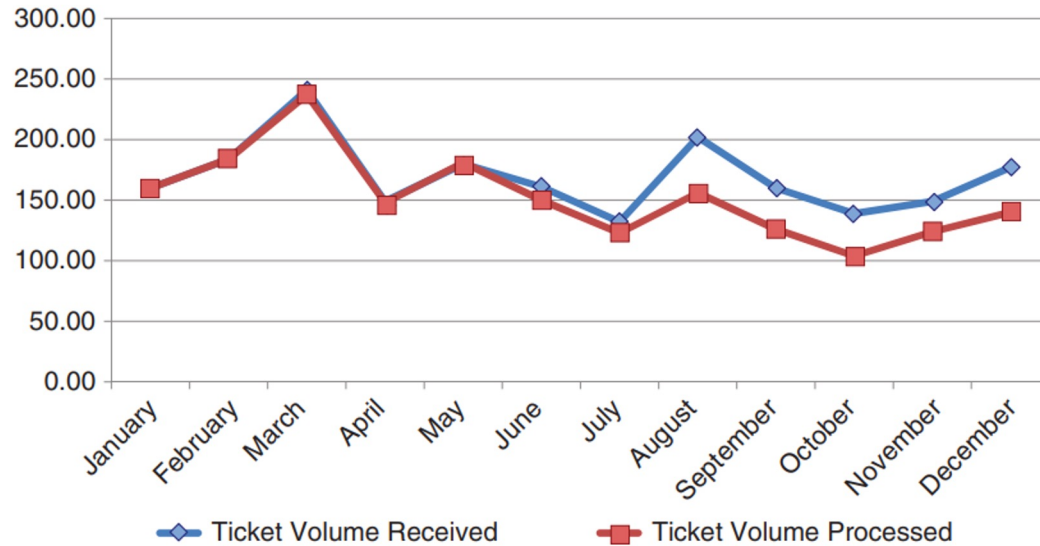


FIGURE 3.18 Remove chart border

Chart borders are usually unnecessary.

Use **white space** to differentiate the visual from other elements.

Step 2: Remove gridlines

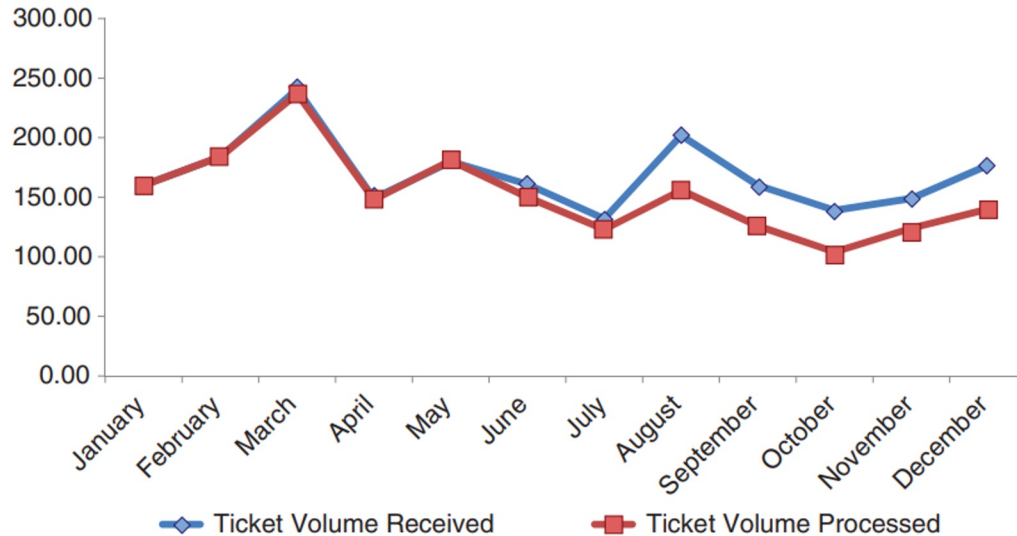


FIGURE 3.19 Remove gridlines

Do not let them compete visually with your data.

When you can, **get rid of them altogether**: this allows for greater contrast, and your data will stand out more

Step 3: Remove data markers

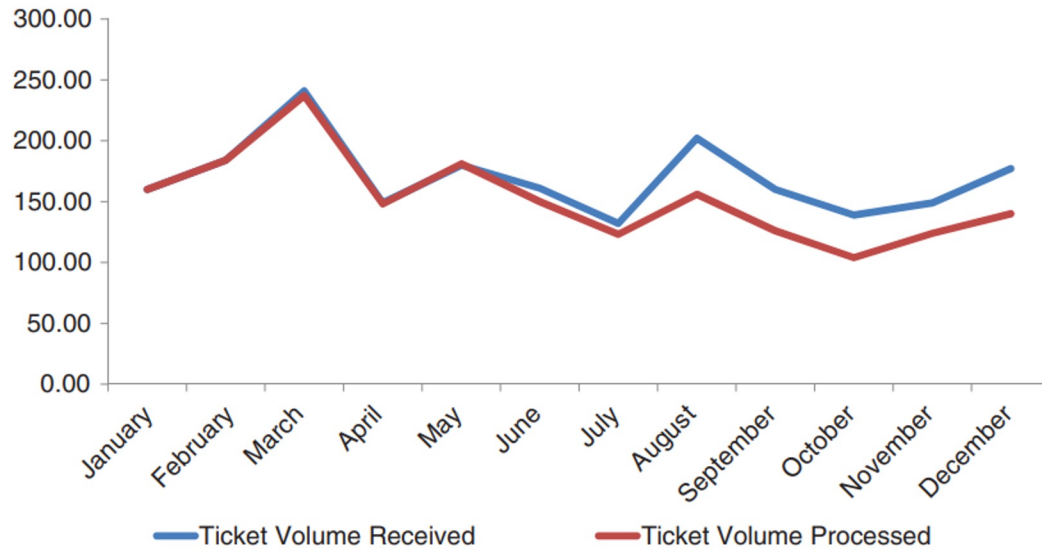
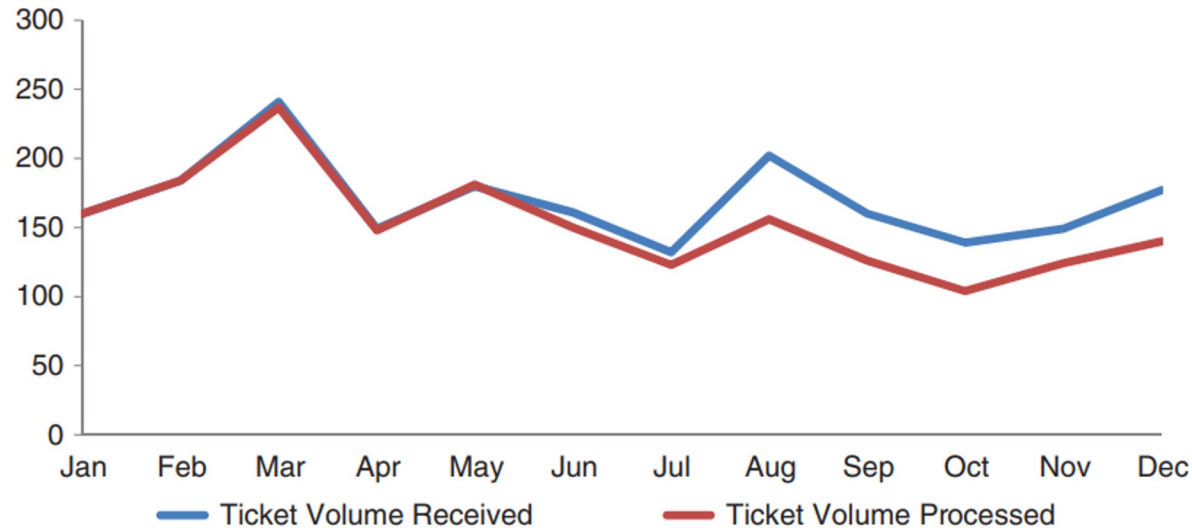


FIGURE 3.20 Remove data markers

every single element
adds **cognitive load**.

use **data markers** on
purpose and with a
purpose,

Step 4: Clean up axis labels



Get rid of them,
reducing their
unnecessary burden
on the audience's
cognitive load

Eliminating the
diagonal text.

FIGURE 3.21 Clean up axis labels

Step 5: Label data directly

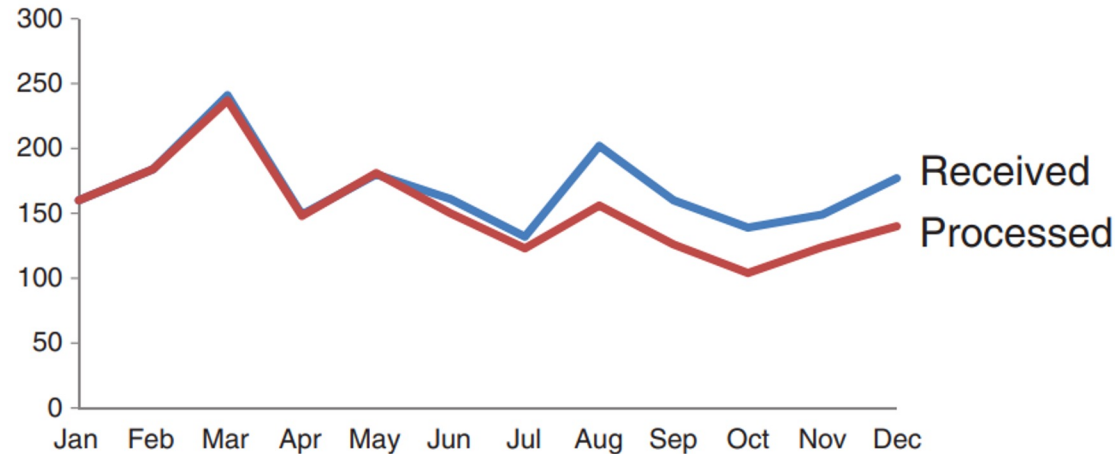


FIGURE 3.22 Label data directly

Gestalt principle of **proximity** and put the data labels right next to the data they describe.

Step 6: Leverage consistent color

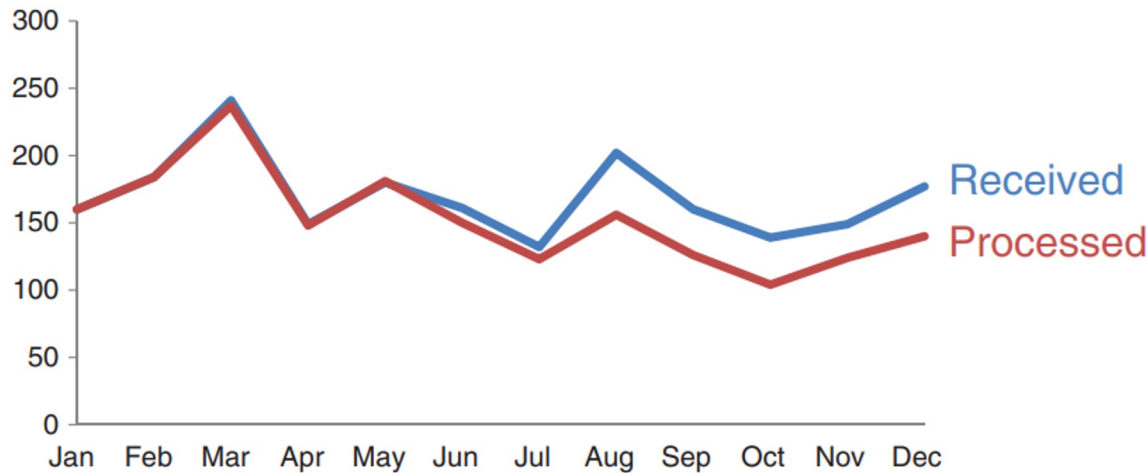


FIGURE 3.23 Leverage consistent color

Gestalt principle of **similarity** and make the data labels the same color as the data they describe.

Before and After

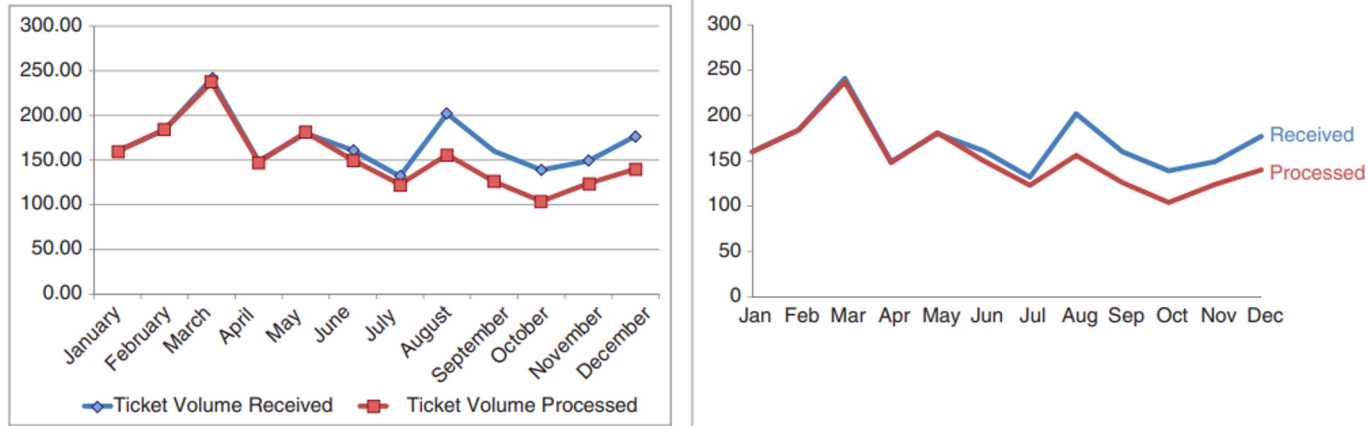


FIGURE 3.24 Before-and-after



Conclusion

Any time you put information in front of your audience, you are creating cognitive load and asking them to use their brain power to process that information.

Clutter is your enemy: ban it from your visuals!



Exercise

<https://intip.in/declutter>