

# THE ART OF CHARTS



## Choosing the Right Visualization To Tell Your Story

**YOUR**  
**PART-TIME**  
**CONTROLLER®**

The **NONPROFIT** accounting specialists™

November 30, 2023 | 2023 GWSCPA Nonprofit Symposium



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**Director of Data Visualization**

Your Part-Time Controller, LLC



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**Data Visualization Manager**

Your Part-Time Controller, LLC



Professional services firm specializing in nonprofit financial management



Nationwide: 9 regional offices (and counting!)



Services include accounting, reporting, data visualization, and best practices



YPTC Anywhere®: Working remotely and from client offices nationwide



1,700+ clients and 650+ staff



3 decades of nonprofit expertise

# AGENDA



The **NONPROFIT** accounting specialists™

01

Core Concepts and  
Essential Elements

02

Types of Charts

03

Case Studies



Recognize **core concepts** and **essential elements** that contribute to effective data visualization and storytelling graphics.



Distinguish between different types of **commonly used charts**.



Recognize which **chart types to select** based on the data and the story that needs to be told.



Illustrate data visualization storytelling through **case study examples**.

# 1

## CORE CONCEPTS & ESSENTIAL ELEMENTS

that contribute to effective data visualization  
and storytelling graphics



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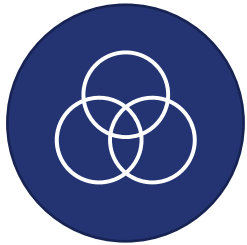


**You Deliver Great Information.**



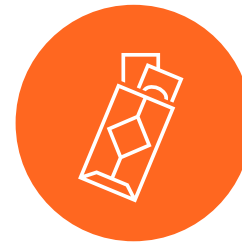
**Your Audience Needs Help Receiving It.**

## Organizations ask for graphics all the time!



### The CFO

“I really need the **E.D.** to understand the variance and address it.”



### The Executive Director

“This growth since last year—we need to emphasize this to the **Board.**”



### A Board Member

“I see we have about **\$1M in cash.** Is that enough, or too much?”



### A Development Director

“We need to trumpet these stats to our funders.”

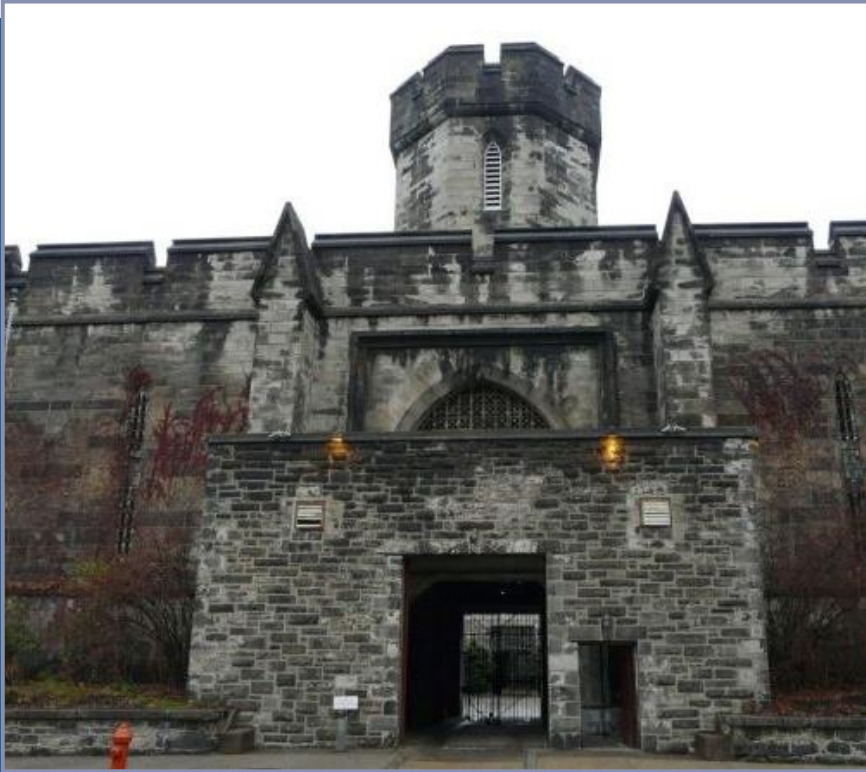


# CONSIDER A DATA VIZ WHEN A QUANTIFIABLE COMPARISON SUPPORTS

-  Raising an alarm
-  Trumpeting a success
-  Recommending an action



## Foreboding



## Inviting



# TUNE OUT THE NOISE, TURN UP THE STORY

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# TUNE OUT THE NOISE, TURN UP THE STORY

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# TYPES OF GRAPHICS: STATIC VS. DYNAMIC

## STATIC

### Total Revenue is Trending Up...

The success of our programs has been rewarded with increasing support from funders. As shown below, our total annual revenue has increased from \$1.5M in 2017 to nearly \$2M in 2022. We are currently projected to earn \$2.11M in 2023!

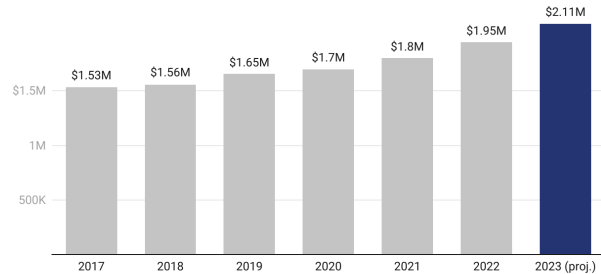
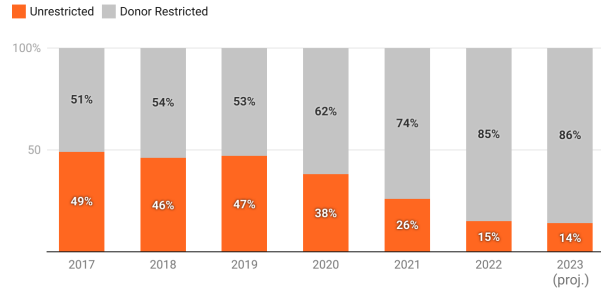


Chart: Staff Artist / YPTC - Source: QuickBooks Online

### ...But Unrestricted Revenue Isn't Keeping Pace

As expected, our overhead costs are increasing in step with our program growth. Yet our revenue is increasingly restricted only to programs. In 2017, 49% of our revenue was unrestricted; by 2022, that number had fallen to 15%. We are projected to be even lower in 2023. In order to continue covering the essential overhead functions that enable our programs, we must raise more unrestricted funds.



Accounting is also collaborating with program directors to optimize our allocation of overhead costs to programs.  
Chart: Staff Artist / YPTC - Source: QuickBooks Online

## DYNAMIC

**XYZ Nonprofit Disability Incidence by State**

Metric: # with Disability, % with Disability  
Sex: Male, Female  
Age: Under 5, 5-17 years, 18-34 years, 35-64 years, 65-74 years, 75 and over  
Disability: Ambulatory, Cognitive, Hearing, Independent Living, Self Care, Vision

**% with Disability by State**

| State   | # with Disability | Population | % Disability |
|---------|-------------------|------------|--------------|
| CA      | 1,141,934         | 38,487,143 | 3.0%         |
| TX      | 898,427           | 26,942,797 | 3.3%         |
| FL      | 760,931           | 19,966,535 | 3.8%         |
| NY      | 553,646           | 19,556,000 | 2.8%         |
| IL      | 374,980           | 12,670,000 | 2.9%         |
| Chicago | 57,967            | 2,670,000  | 2.1%         |

**Lowest % with Disability**  
District of Columbia: 14,083 # with Disability, 2.1% % with Disability

**Highest % with Disability**  
West Virginia: 113,496 # with Disability, 6.3% % with Disability

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**EAST END DISTRICT LEVERAGE REPORT**

District Staff: Leverage Report  
Key Performance Indicators: Board of Directors, Partners

**\$934K in East End District Funds Leveraged to \$42.2M in Total Community Investment Since Fall 2018**



The East End District (EED) spearheads community improvement projects that combine local assessment funds with public grants and private partnerships. Since Fall 2018, 80% of the cost of EED's projects have been covered by those public-private partnerships, with EED contributing the remainder. For every \$1 of locally collected assessment funds spent by EED, it has raised and invested \$44 from public-private partnerships.

Total Investment: **\$780K**

- Partners/Public Grants: \$37K (4.8%)
- Private Partners: \$24K (3.1%)
- East End District Funds: \$161K (21%)

Other investments include: East End Improvement Corporation (\$40,838), Explorade Express (Phase 1) (\$17,413), Farmers Market (\$117,489), and Harborside Tunnel Mural (\$40,000).

# TYPES OF GRAPHICS: STATIC VS. DYNAMIC

| STATIC  | DYNAMIC  |
|--|---|
| Tells a more specific story  | More open to interpretation   |
| Minimizes reader effort  | Rewards interactivity   |
| What you see is what you get   | Drill-downs, filters, links   |
| Sized for delivery   | Built to adapt  |



## LINKS TO DYNAMIC DASHBOARD EXAMPLES:

[www.yptc.com/data-visualization](http://www.yptc.com/data-visualization)

[www.eastenddistrict.com/about/leverage-report/](http://www.eastenddistrict.com/about/leverage-report/)

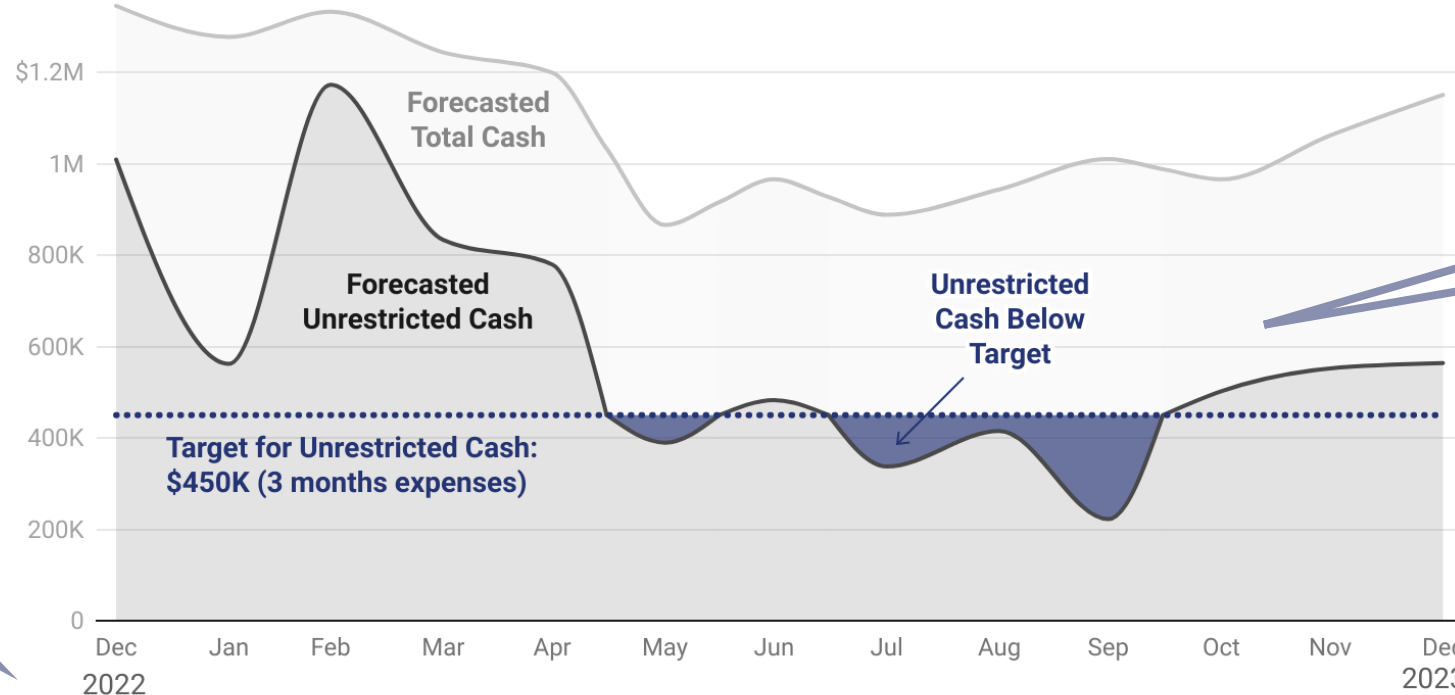
# STATIC GRAPHICS: FIVE ESSENTIAL ELEMENTS

## 1. HEADLINE

### New Revenue Required to Prevent Dip into Donor-Restricted Funds

Our FY2023 cash forecast revealed that new revenues are needed to remain above our target minimum amount of \$450K in unrestricted cash. Total cash is forecasted to remain above \$800K throughout FY2023, and unrestricted cash is projected to recover to nearly \$600K by year-end. However, **we are currently forecasted to be "under water" from May to October**, during which time we may be unable cover the cost of operations in the event of unexpected expenses or reduced revenues.

## 2. INTERPRETATION



## 3. GRAPH

## 4. CREDIT

Chart: Staff Artist / YPTC • Source: Actual month-end balances from Sage to March 31st; Forecast month-ends balances from YPTC

## 5. SOURCE

# STATIC GRAPHICS: TWO OPTIONAL ELEMENTS

## Service Fees Averaging Over \$50K Per Month, Consistently Supplementing Contributions

Our income from service fees has been increasing since 2020 and now provides a reliable supplement to our income from contributions. We have earned as much as \$71K in service fees in a single month, and **our monthly average for the last twelve months is \$52K**. Our goal for this "12-month rolling average" is \$60K by the end of 2023.

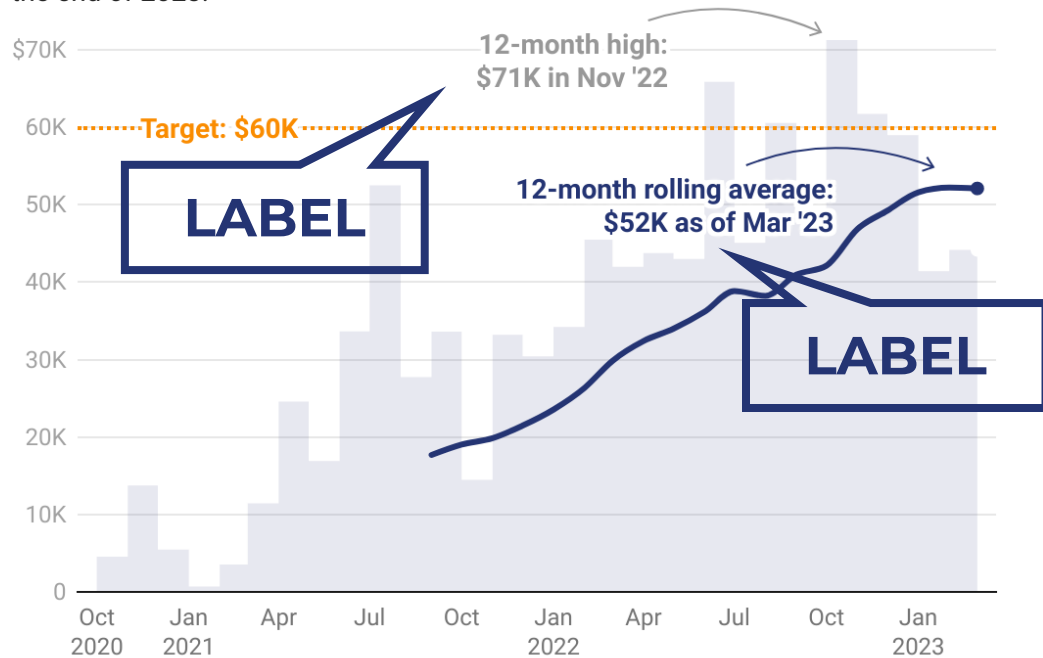
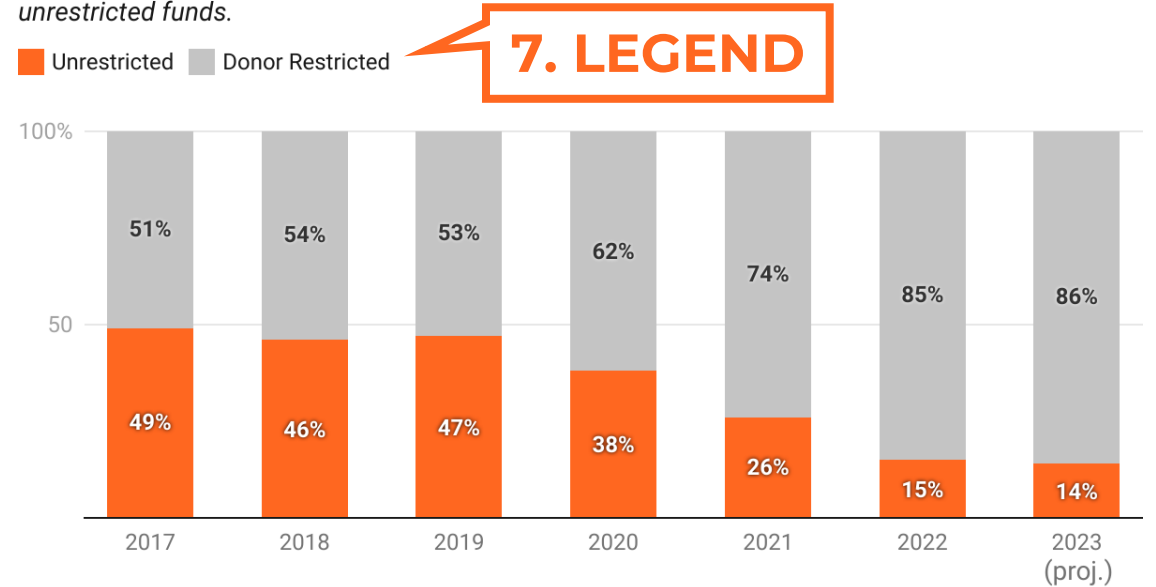


Chart: Staff Artist / YPTC • Source: Financial Edge

## ...But Unrestricted Revenue Isn't Keeping Pace

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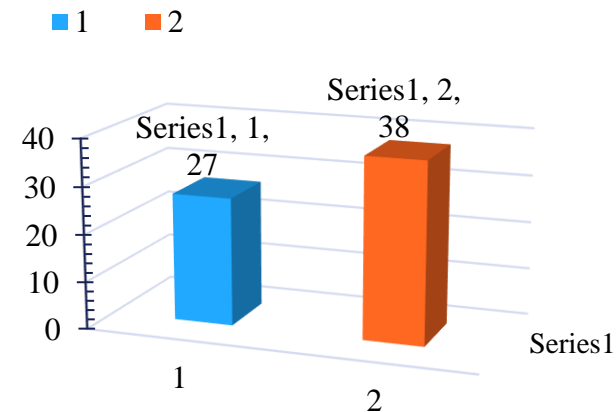
Accounting is also collaborating with program directors to optimize our allocation of overhead costs to programs.

Chart: Staff Artist / YPTC • Source: QuickBooks Online



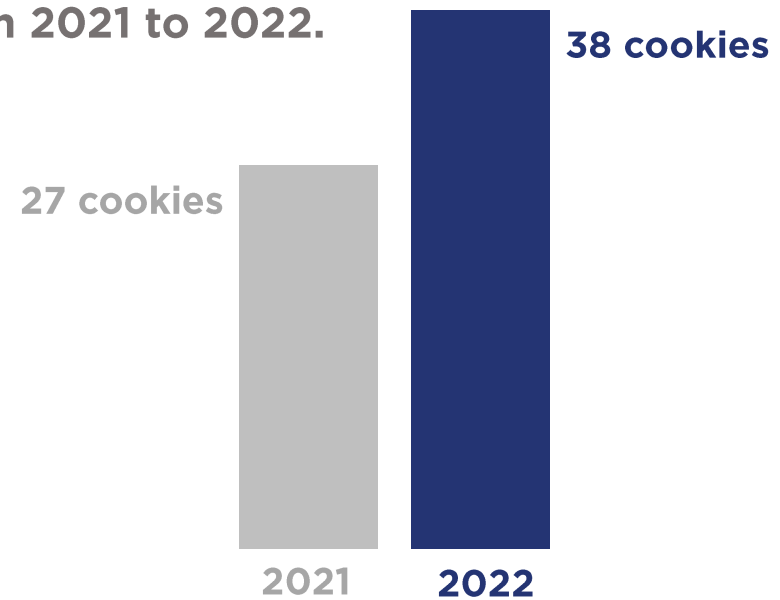
## Dramatic Increase in Cookie Consumption

The count of cookies eaten increased dramatically from 2021 to 2022.



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The count of cookies eaten increased dramatically from 2021 to 2022.



# EVERY MARK HELPS OR HURTS

**DRAW MORE  
ATTENTION**  
(should be **MORE** important)

**DRAW LESS  
ATTENTION**  
(should be less important)

**Colorful**

**Grayscale**

**Bigger**

Smaller

**More saturated**

**Less saturated**

**bold *italicized***

**standard**

**ALL CAPS**

**lower case**

# 2

## TYPES OF CHARTS

and when to use each

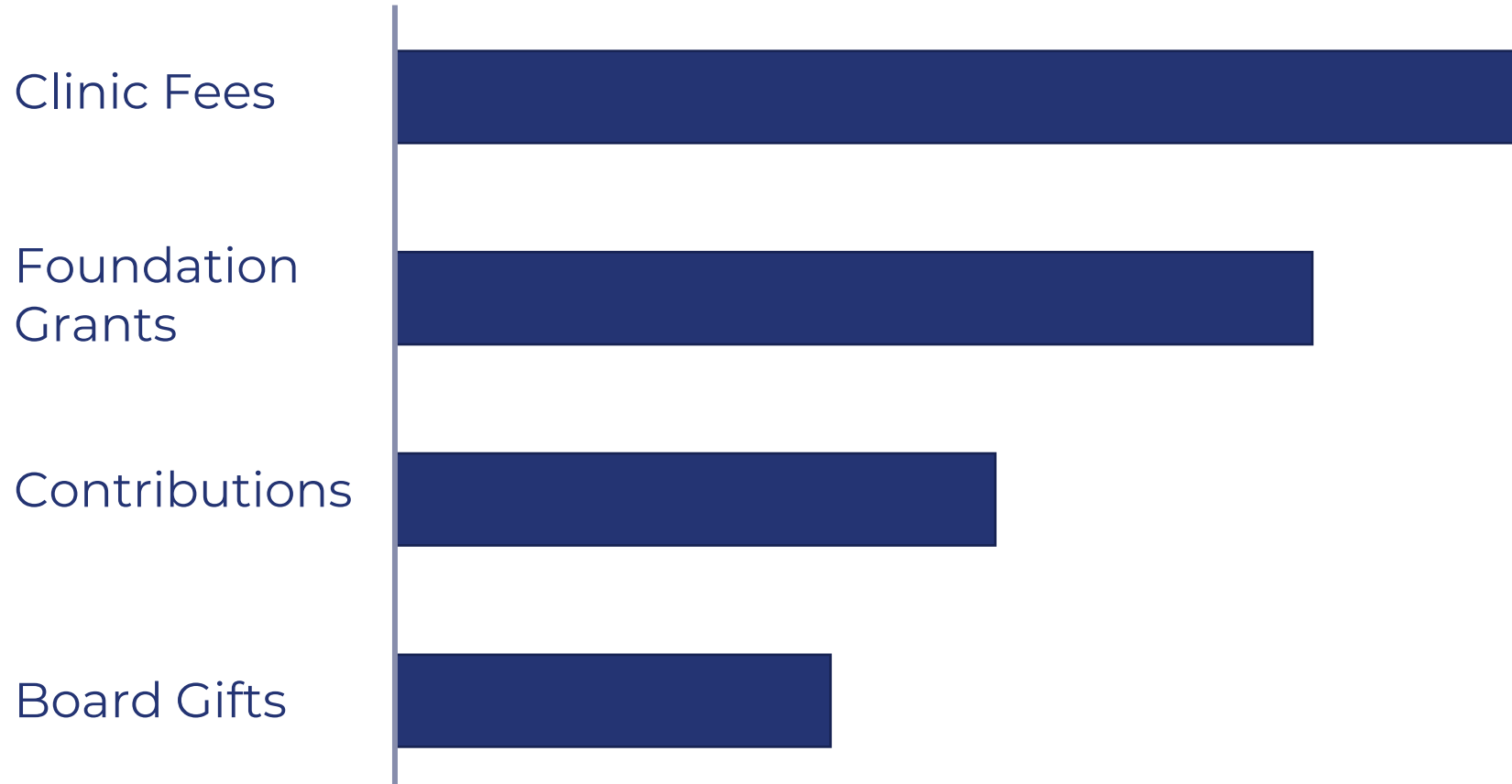


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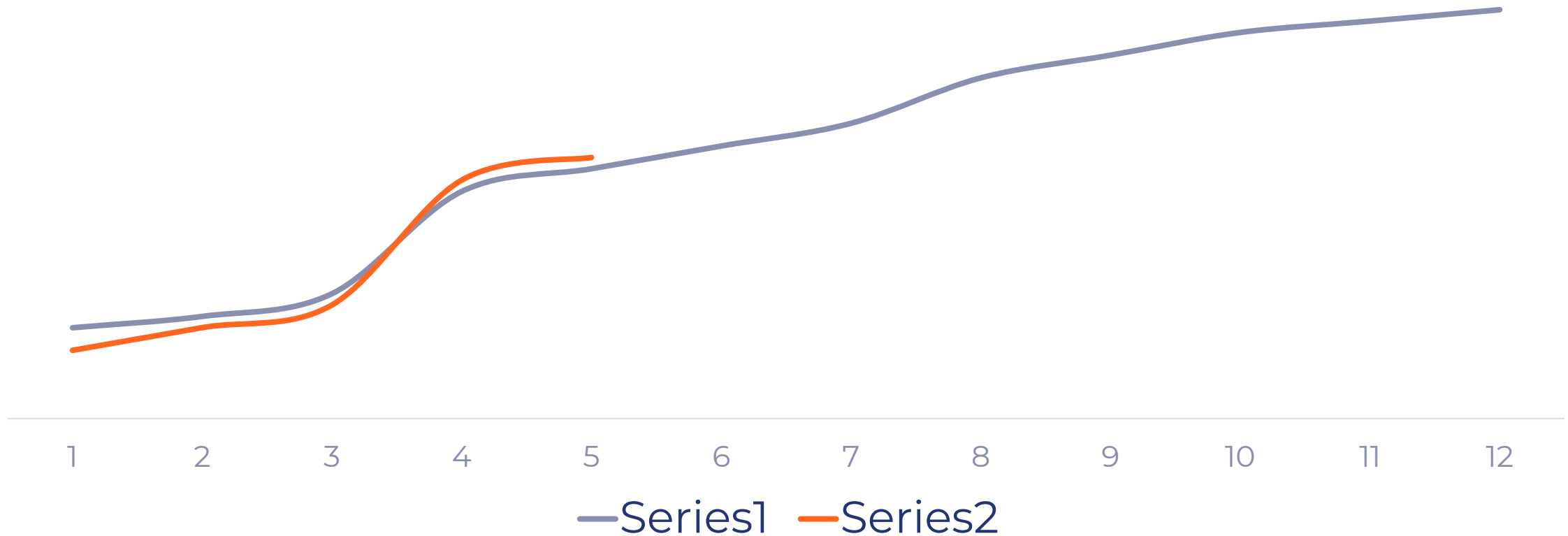
# QUANTIFIABLE COMPARISON



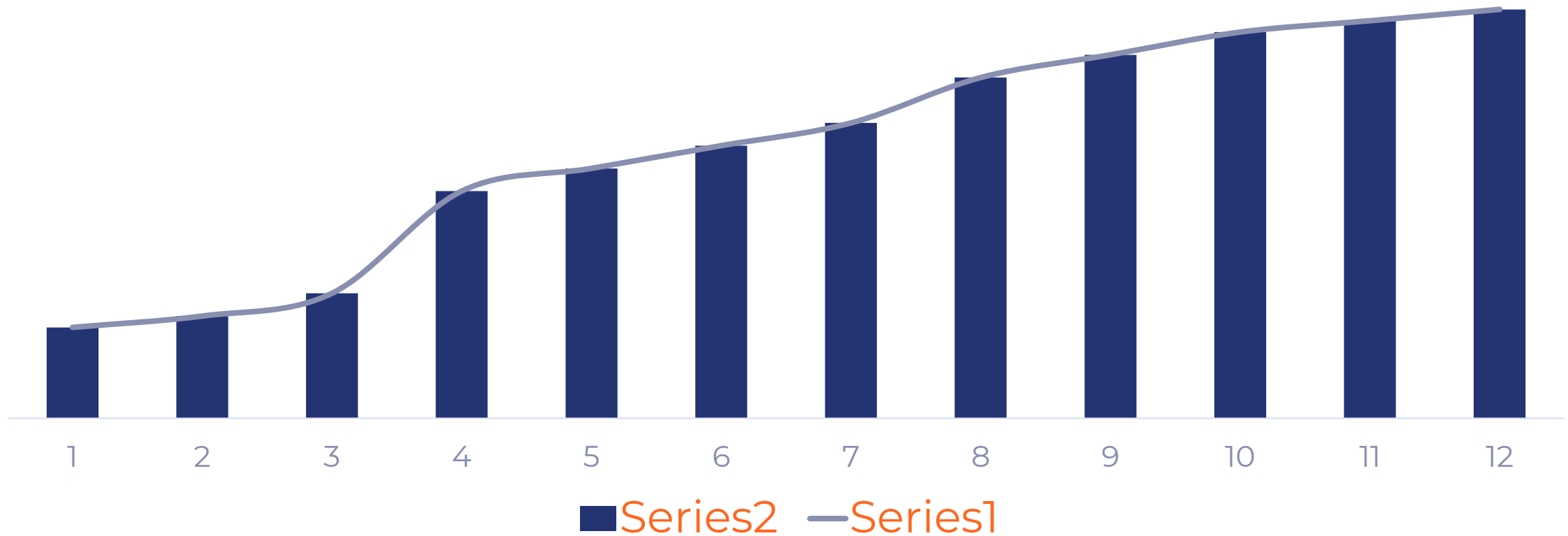
# BAR & COLUMN CHARTS: COMPARING CATEGORIES



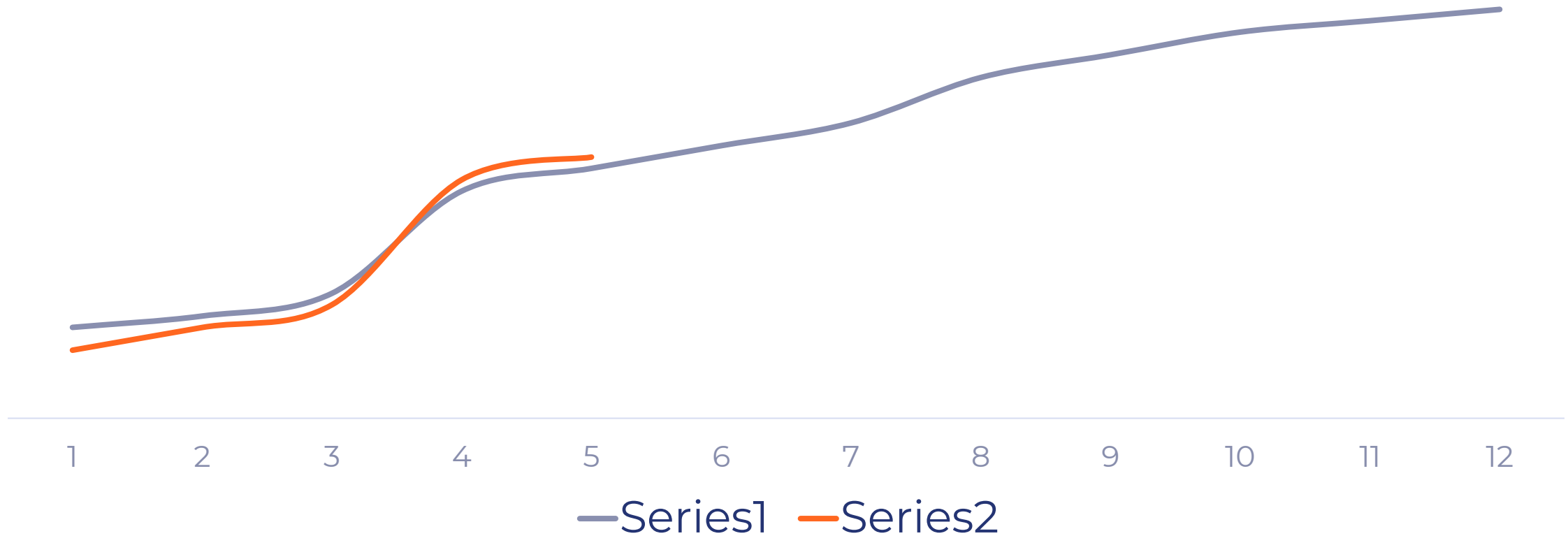
## RUNNING TOTAL REVENUE



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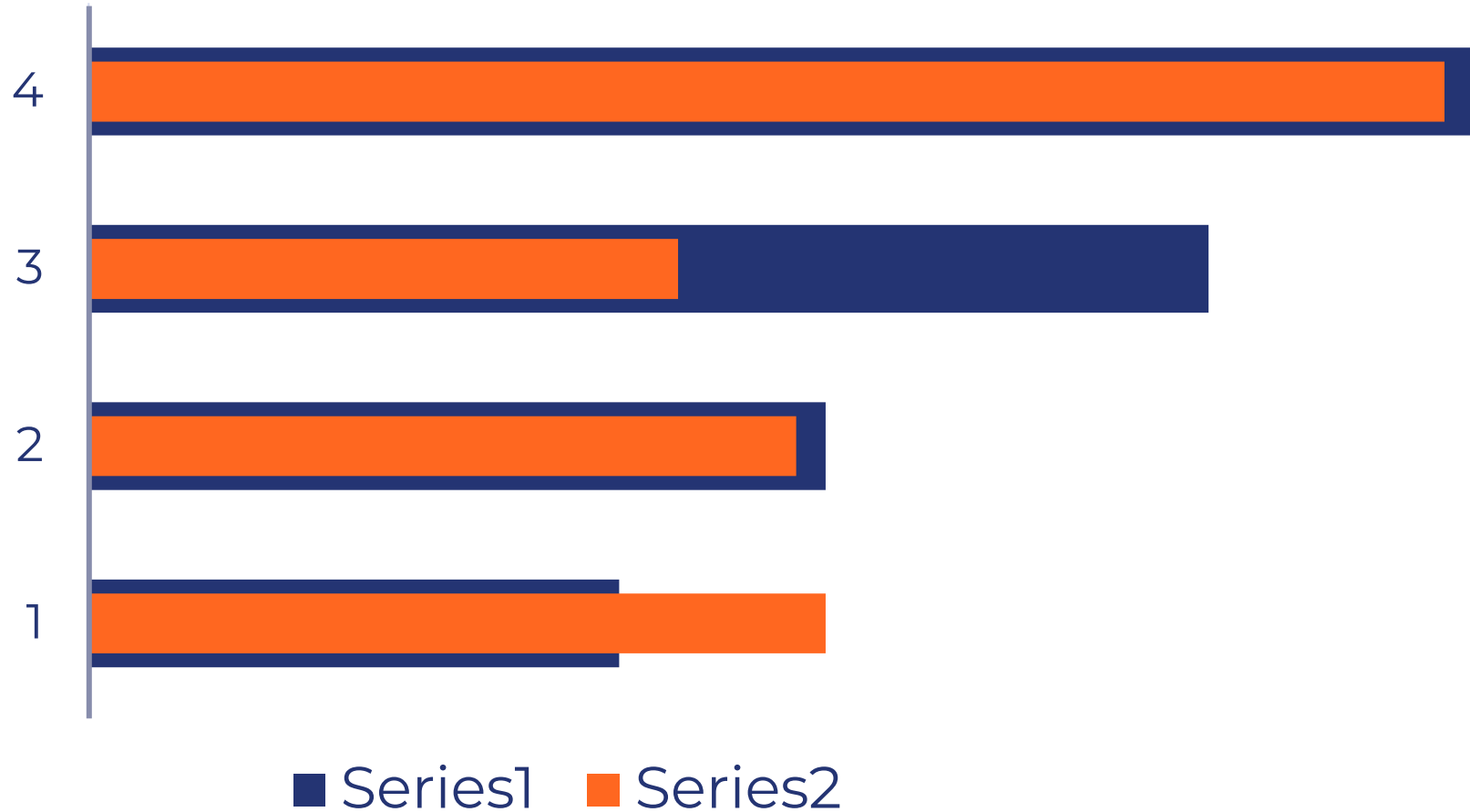


## RUNNING TOTAL REVENUE

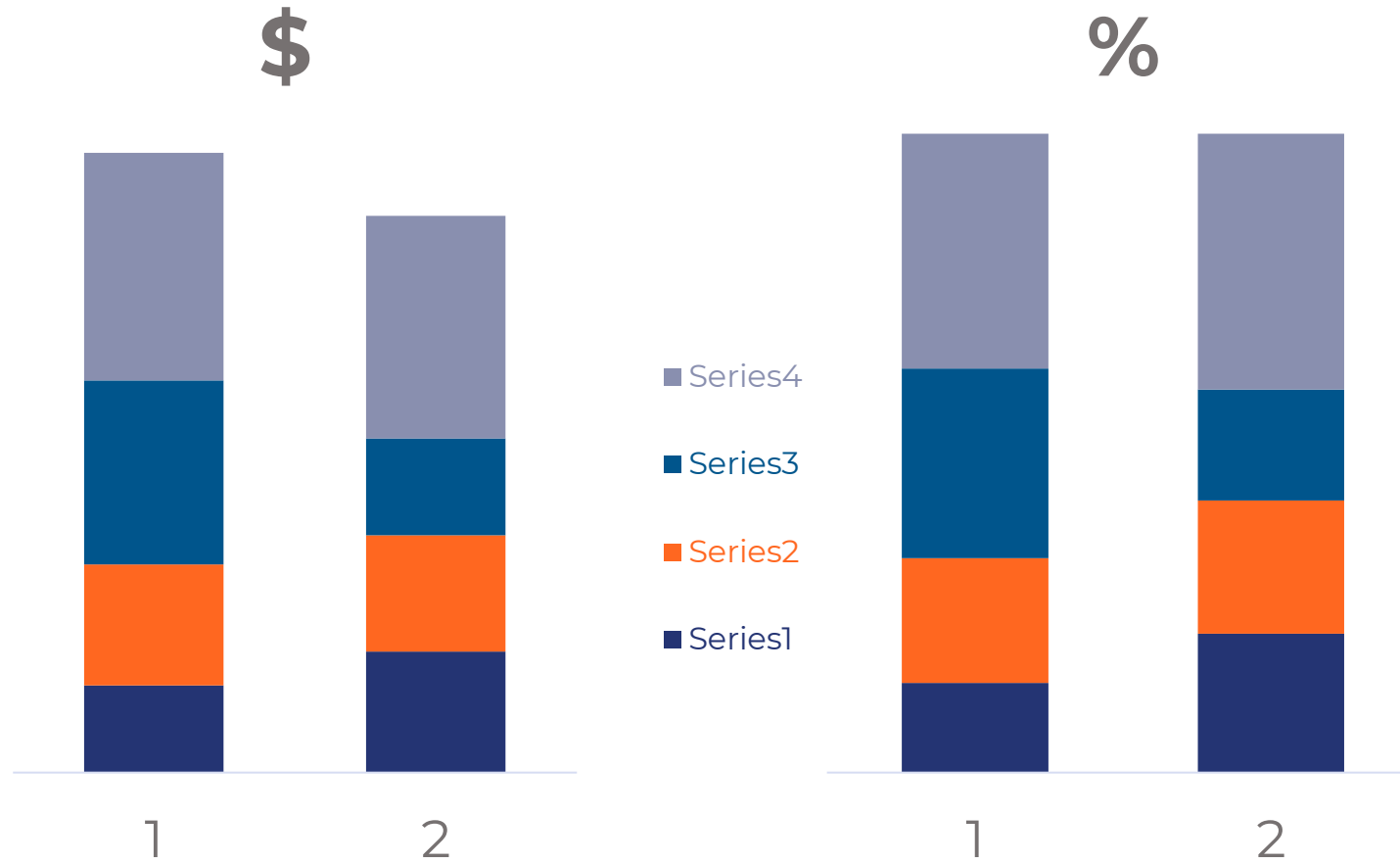




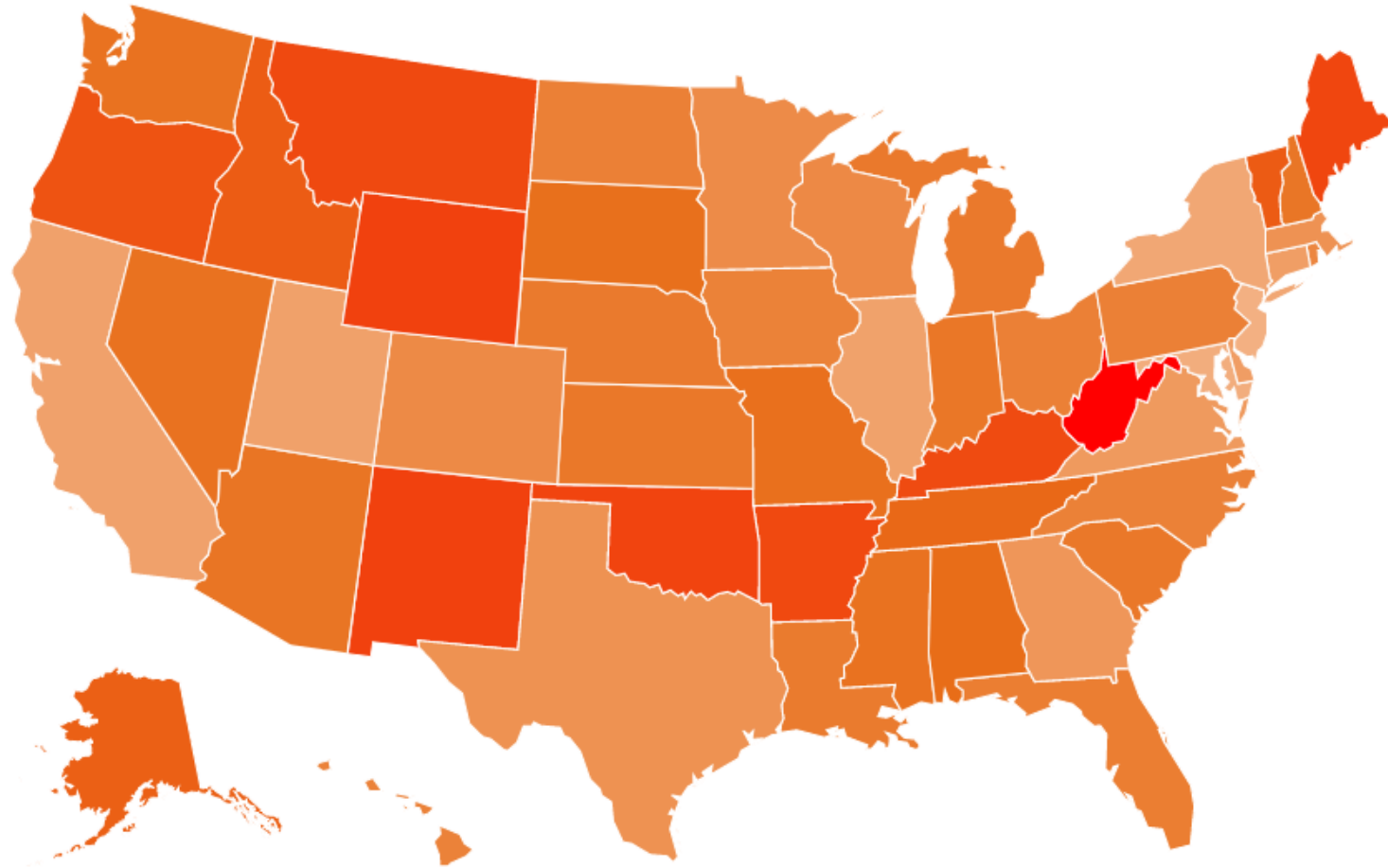
## YTD REVENUES



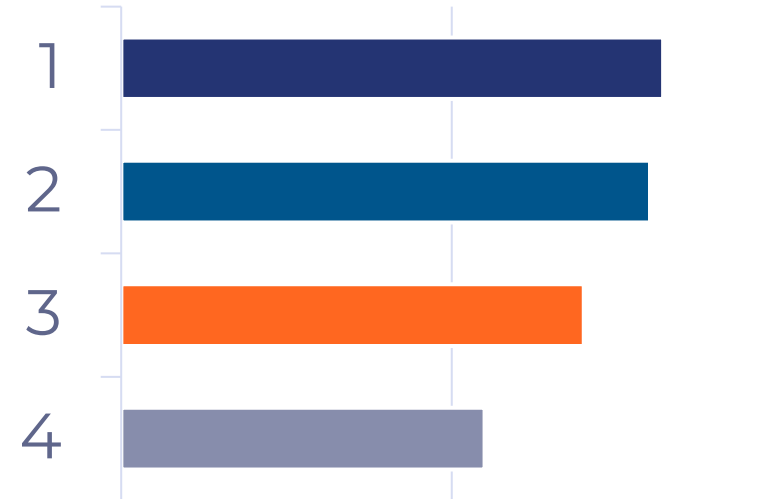
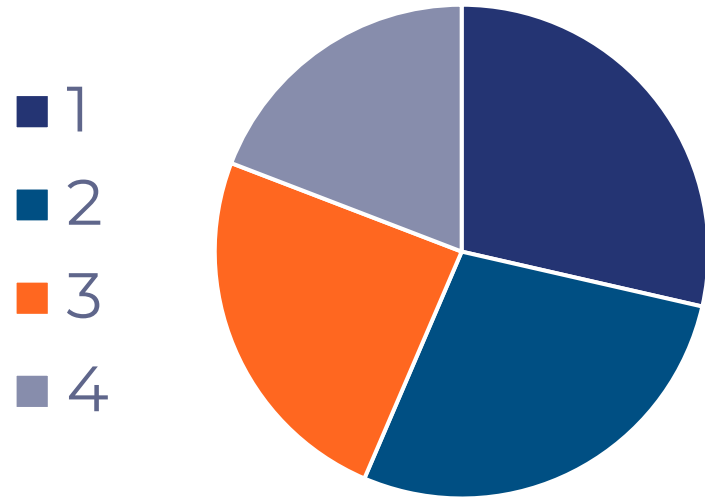
# MORE BARS: STACKED AND 100% STACKED



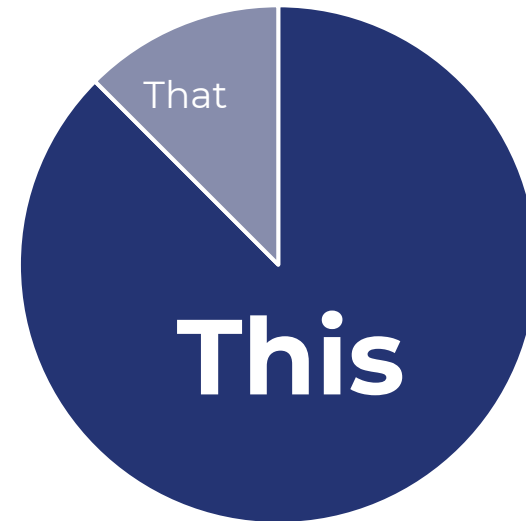
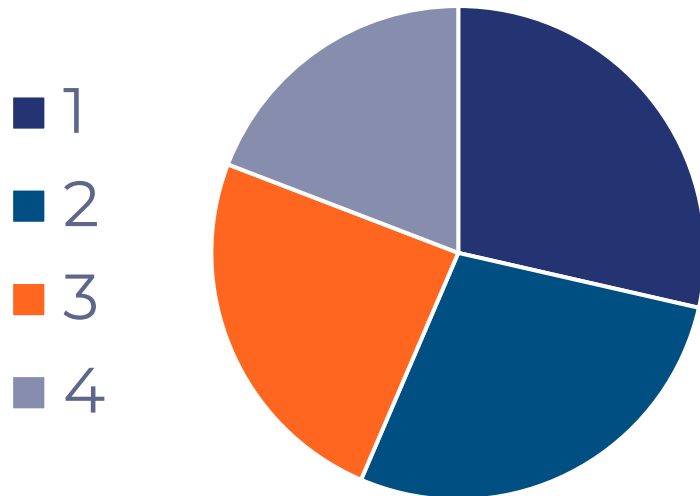
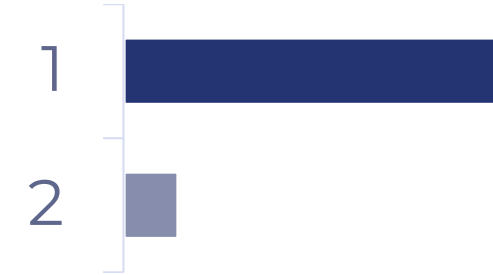
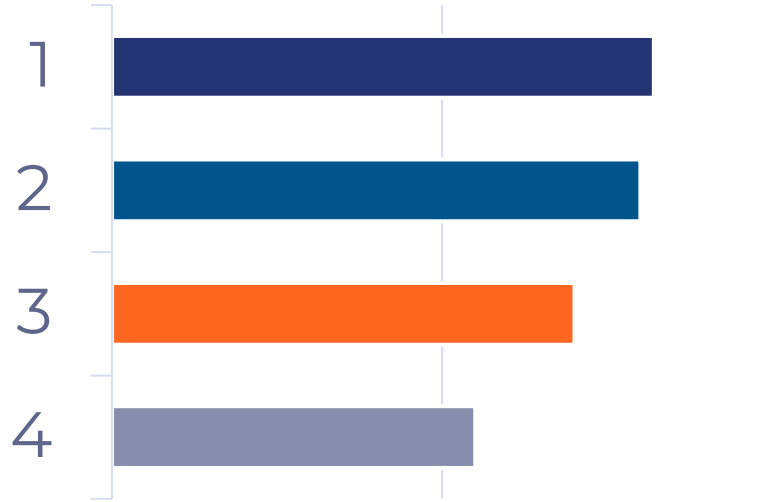
# MORE BARS: HEAT MAPS AND CHOROPLETHS



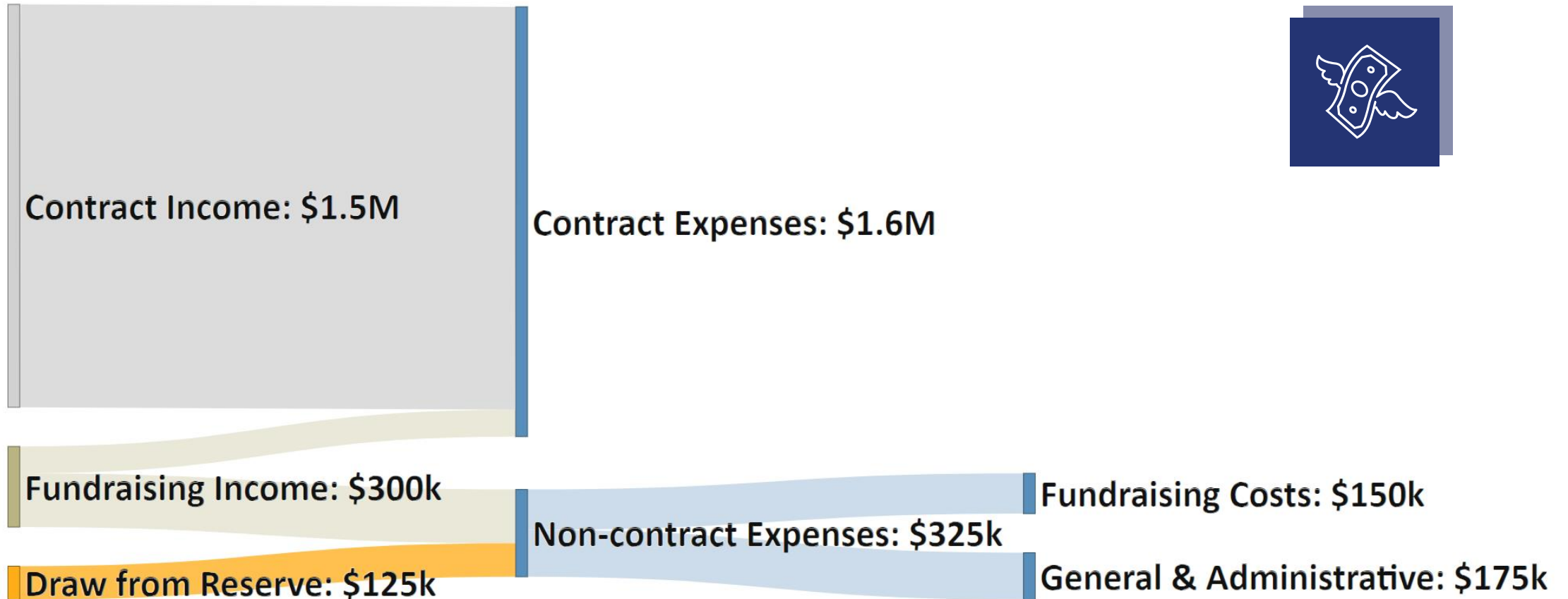
# MORE BARS: SAVE THE PIE FOR DESSERT?



# MORE BARS: SAVE THE PIE FOR DESSERT?



# FLOW CHARTS: WHERE DO THE DOLLARS GO?



# 3

## CASE STUDIES

that illustrate data visualization storytelling



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# CASE STUDY #1: MEMBERSHIP ASSOCIATION OVERHEAD

## Total Revenue is Trending Up...

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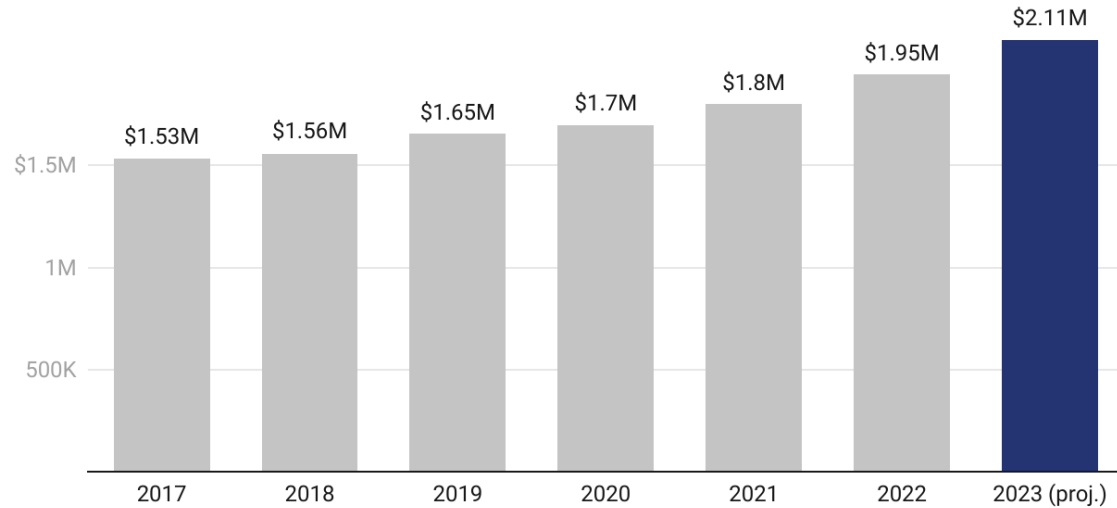
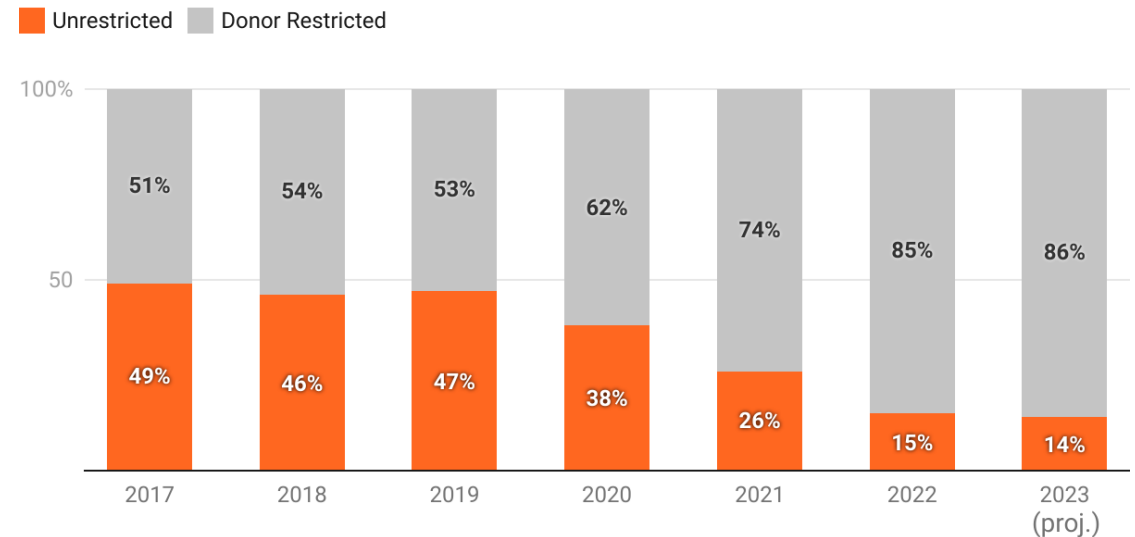


Chart: Staff Artist / YPTC • Source: QuickBooks Online

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As expected, our overhead costs are increasing in step with our program growth. Yet our revenue is increasingly restricted only to programs. **In 2017, 49% of our revenue was unrestricted; by 2022, that number had fallen to 15%.** We are projected to be even lower in 2023. *In order to continue covering the essential overhead functions that enable our programs, we must raise more unrestricted funds.*



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Chart: Staff Artist / YPTC • Source: QuickBooks Online



# CASE STUDY #2: SELF-SERVICE ANALYTICS

## Service Fees Increasing, Complementing Grants as Steady Revenue

Program service fees have gradually increased since 2020, adding a steady stream of revenue that can reduce our reliance on widely fluctuating grant revenues. As shown below, we recently collected as much as **\$66K in fees in a single month**, nearly as much as our lowest recent month for grants (\$75K).

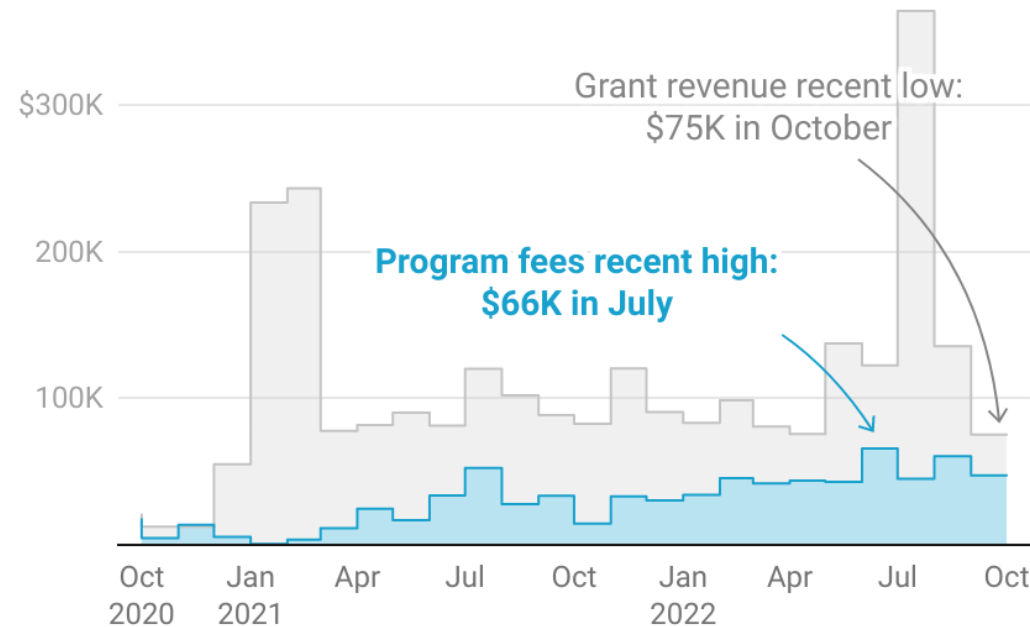


Chart: Staff Artist / YPTC • Source: Financial Edge

# CASE STUDY #3: DIVERSIFYING REVENUE

## Service Fees Increasing, Complementing Grants as Steady Revenue

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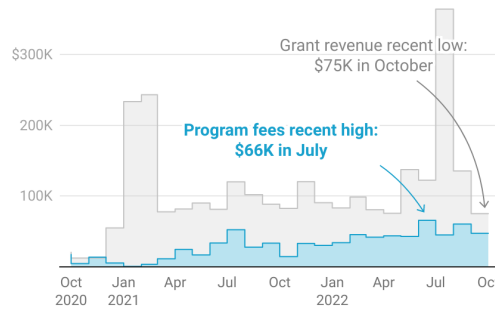


Chart: Staff Artist / YPTC • Source: Financial Edge

## Service Fees Averaging Over \$50K Per Month, Consistently Supplementing Contributions

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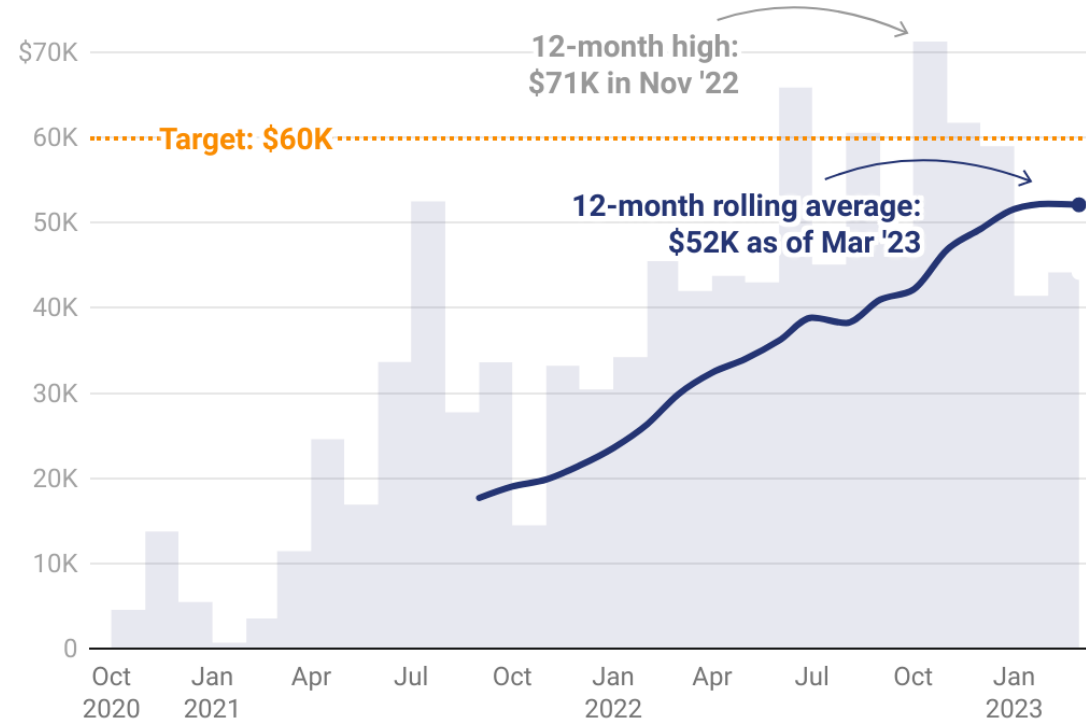


Chart: Staff Artist / YPTC • Source: Financial Edge



**ASK:** What's the story, and who's the audience?



**CHOOSE:** Static graphics to tell stories explicitly, or dynamic graphics to enable self-service analytics?



**KNOW:** Common chart types and what they emphasize.



**CONSIDER:** For any chart you see, what story is it supposed to tell, and how could you improve it?

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## CONTACT US



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844.358.4023



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