



# Data Storytelling Essentials

Effective communication skills for the data driven  
business leader.

“Without data,  
you’re just another  
person with an  
opinion.”

W. Edwards Deming

# About Me

- Business Analyst
- Communications Professional
- Certified Administrator of Volunteer Services (CAVS)

# DATA STORYTELLING ESSENTIALS

A Practical Guide to Data Visualization



Effective Communication Skills for the Data-Driven Business Leader



# Learning Objectives

- Become familiar with a three-step structured process for data visualization
- Identify the right tool to use to represent your data
- Apply design principles for effective communication of data



# S-E-E

## S

SELECT THE RIGHT TOOL

## E

ELIMINATE THE NOISE

## E

EMPHASIZE THE KEY TAKEAWAY

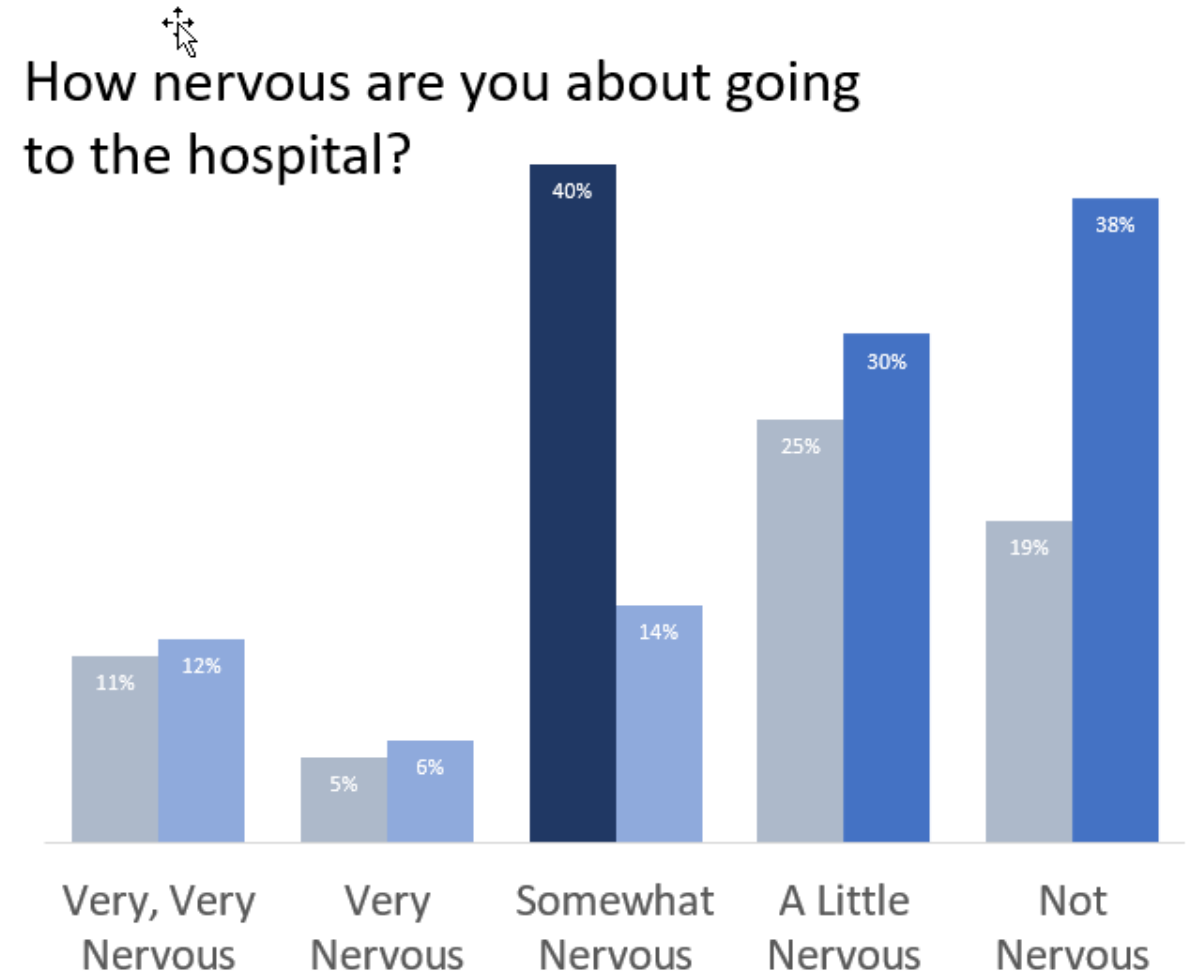
# Data Visualization Tools

Select the right tool



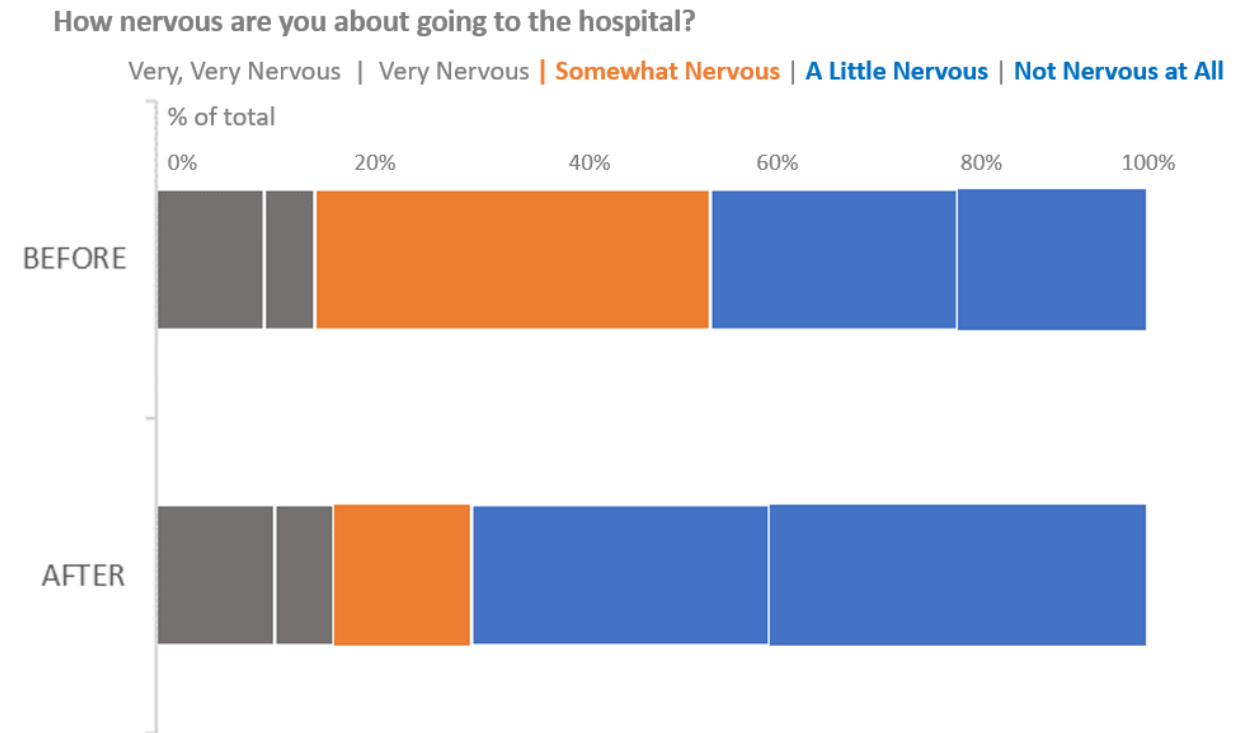
# Vertical Bar Chart

- Best used to show a comparison between two or more categories of data



# Stacked Horizontal Bar Chart

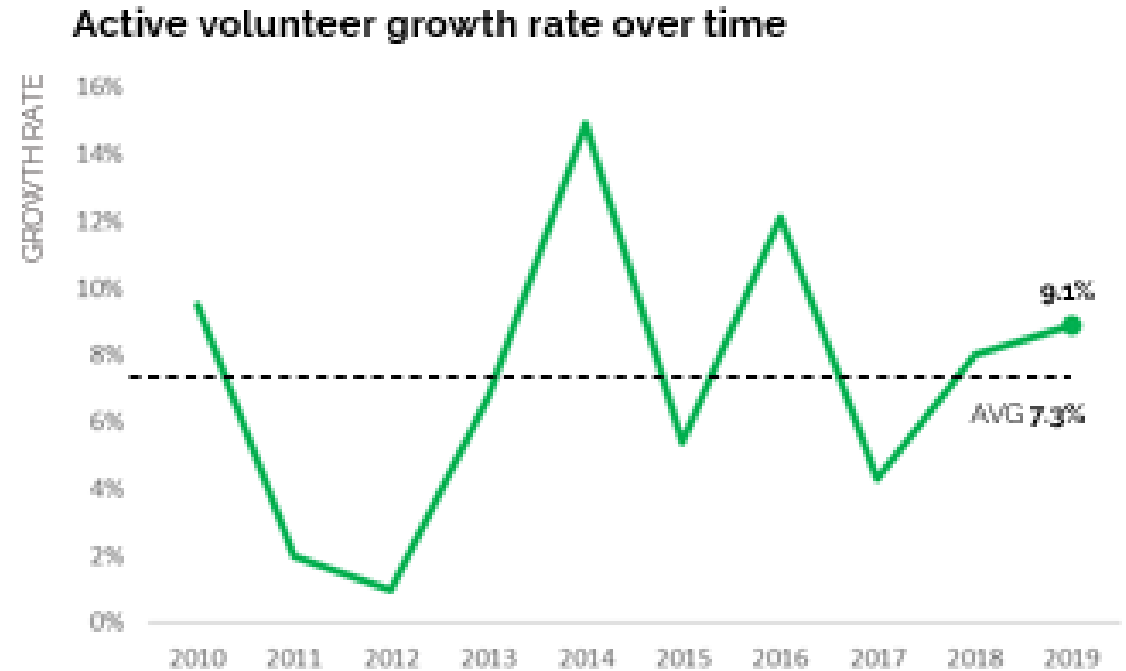
- Best used for showing totals across different categories where totals sum to 100%



Disclaimer: Information in this scenario is based on personal opinion and experience. Scenario content is for illustrative purposes only and in no way is to be considered reportable research.

# Line Graph

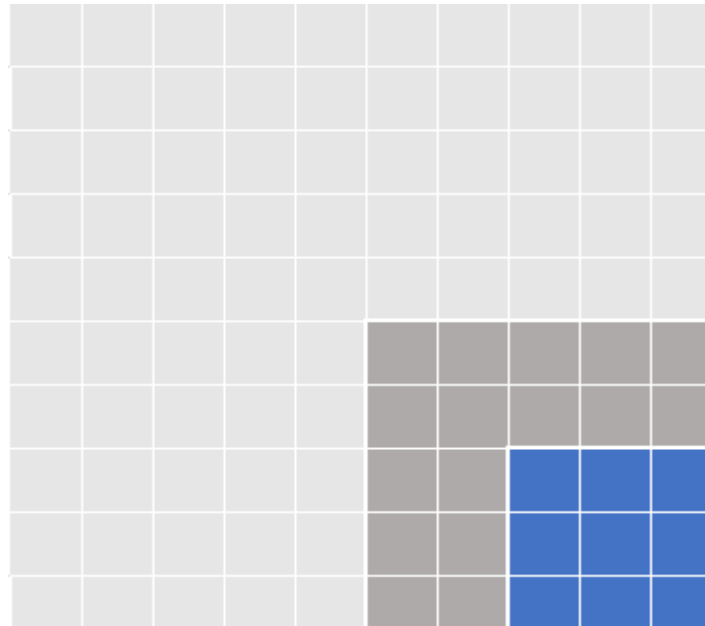
- Best used for graphing trends over time
- Can be used for single or multiple series



# Area Graph

- Best used when needing to visualize numbers of vastly different magnitudes.

New volunteer placement breakdown



Out of every **100**  
**new volunteers**

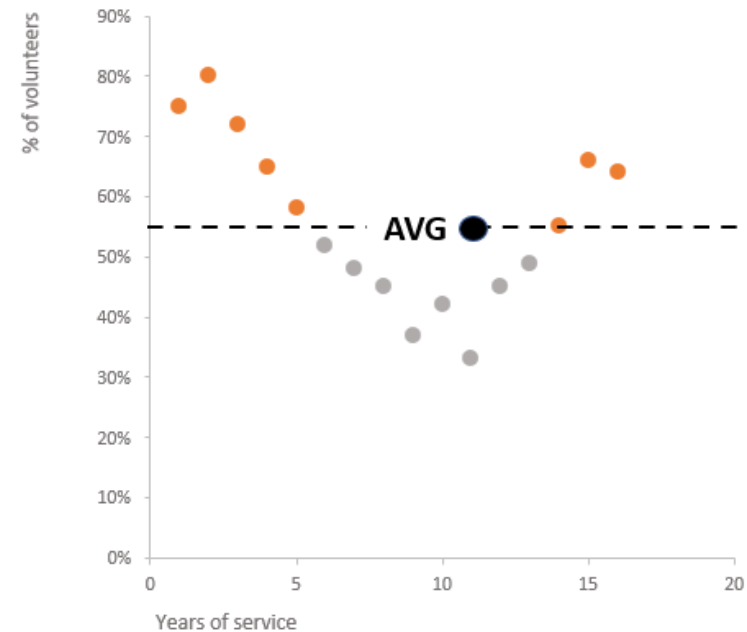
we start **25**  
**training in the emergency**  
**department**

and  
get **9** for the gift shop.

# Scatterplot

- Best used for showing the relationship between two things
- Allows for data to be encoded simultaneously to visually see the relationship that exists

Percent of volunteers attending recognition dinner by years of service



# Simple Text

- Best used when you have just a number or two to share

**20%**

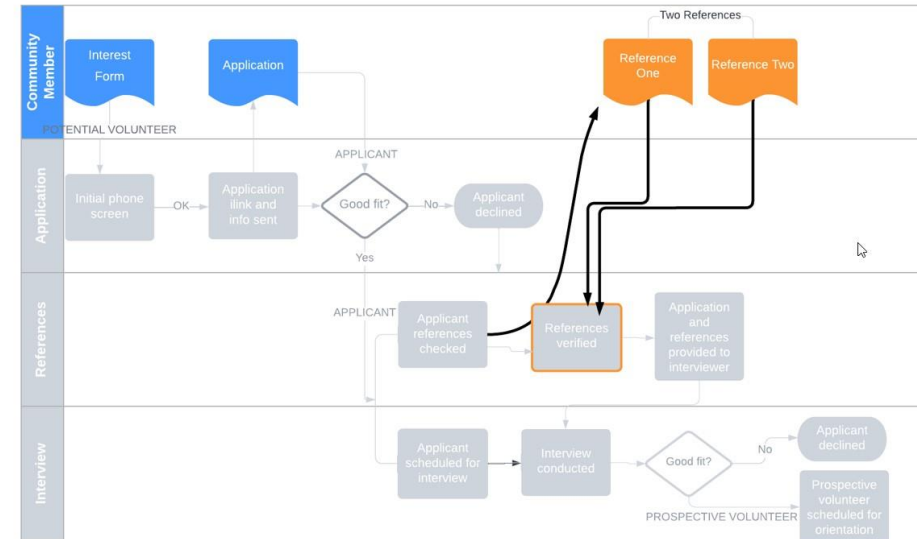
of volunteers provided  
**annual financial support through Foundation  
campaigns** in 2012, compared to 41% in 1970

# Process Maps

- Best used to visually diagram steps in a process
- Provides a method to visualize process steps for exploratory analysis and metric needs.

Volunteer intake process from potential to active

Intake process starts with external form submission.



Intake process is halted by external reference form submission.

# Accessible Software Tools

- Excel
- Powerpoint
- Tableau
- Qlik
- Lucid chart
- Draw.io
- yEd











Inspiration  
Creative  
Bold  
Leader  
Interact



Let's get started and set-up your Menti

Choose type


 Multiple Choice	 Word Cloud	 Open Ended
 Scales	 Ranking	
<p>Quiz competition</p>		
 Select Answer	 Type Answer	 Leaderboard

Do you miss the old add-in?

We are continuously adding more question types to our new PowerPoint add-in. You can still use the old add-in if you prefer.

[Switch to the old add-in](#)

RG  
Account

  
Got  
feedback?

# Data Visualization Design

Eliminate noise

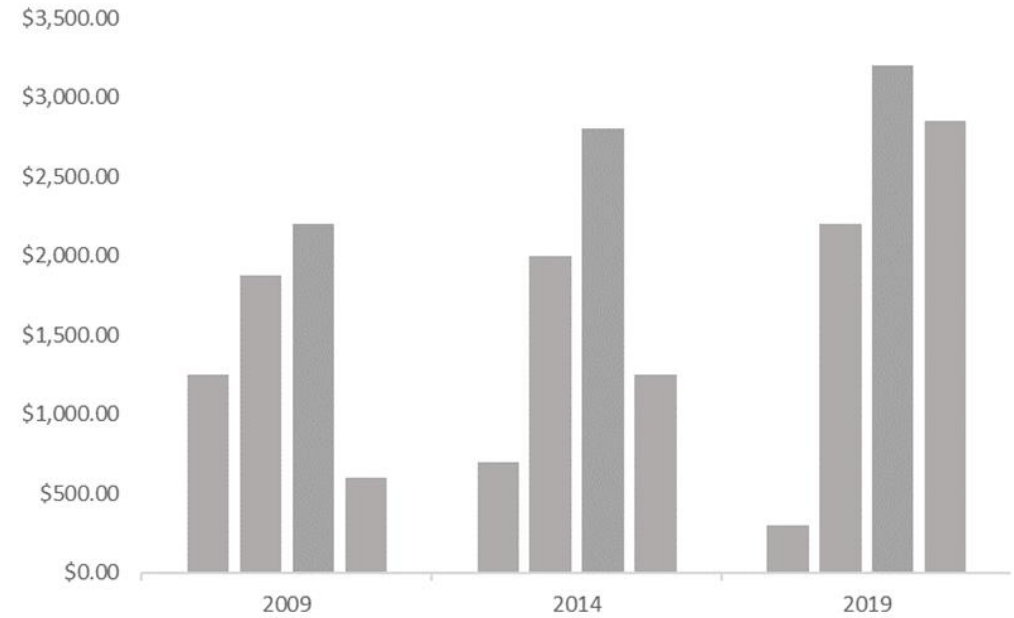
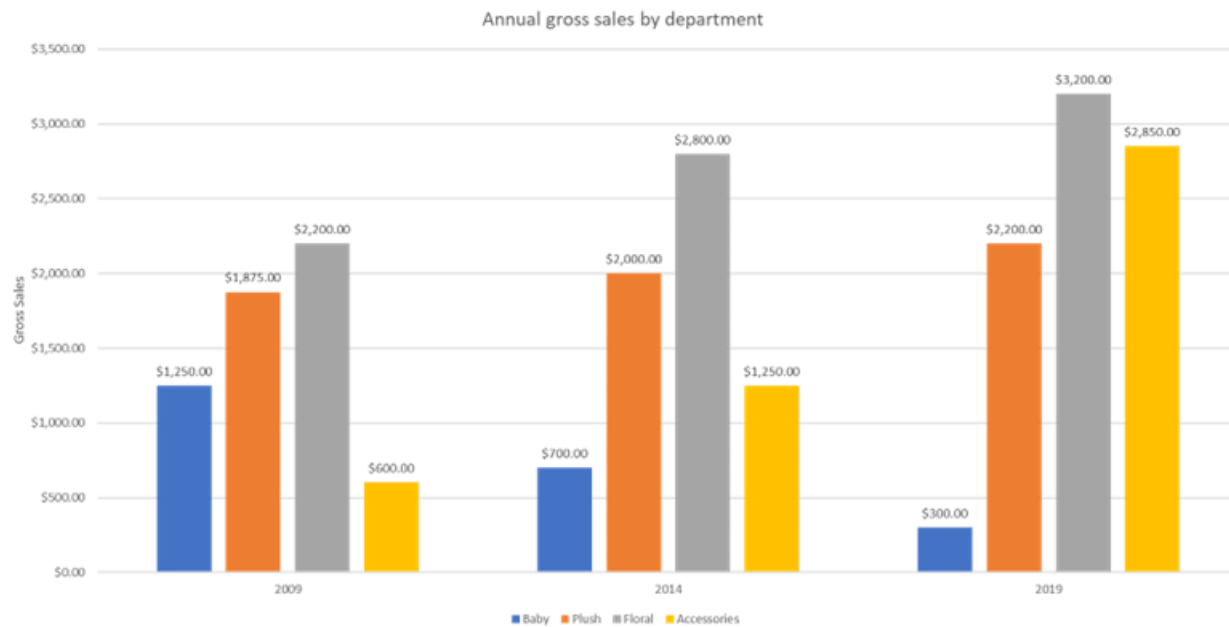
Emphasize key takeaways

How many passes does the team in white make?



# Eliminate noise

- Strip away the cluttering aspects of software generated graphs
- Convert chart elements to gray
- Remove
  - Axis titles
  - Chart title
  - Data labels
  - Legend
  - Gridlines



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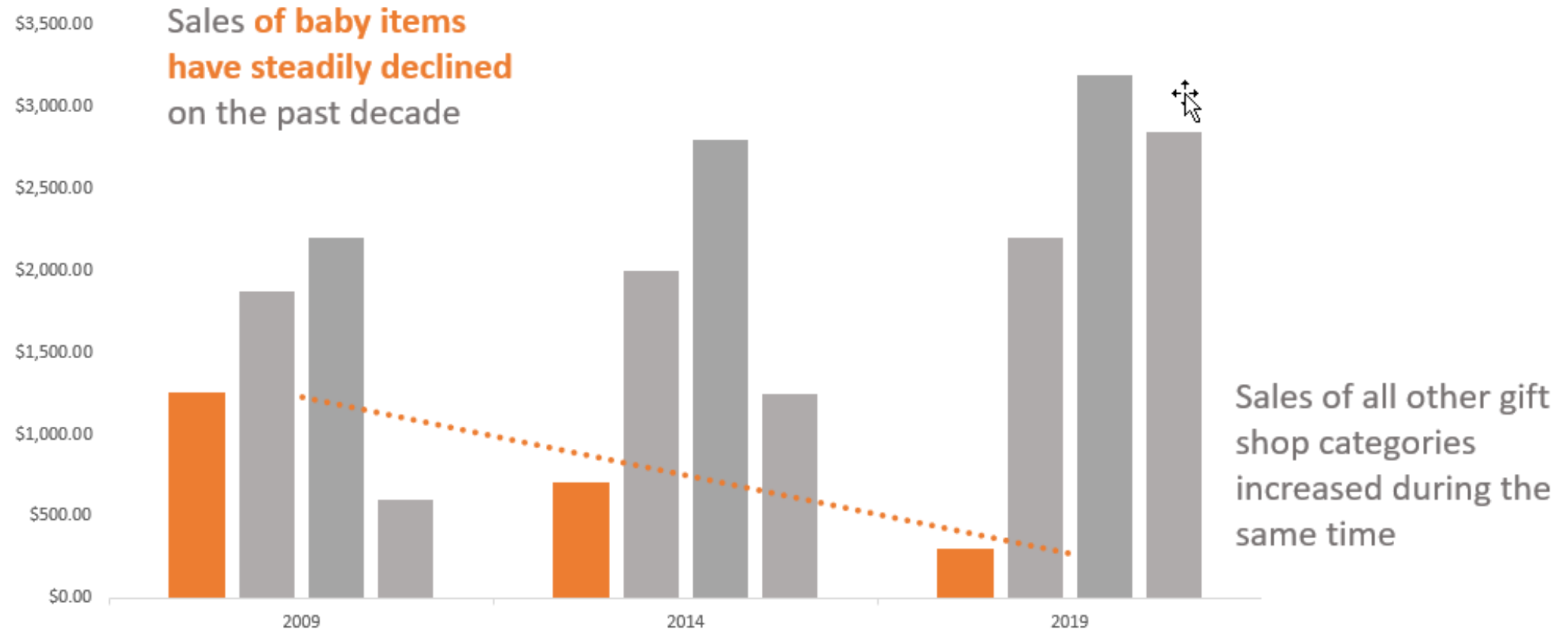
# Emphasize key takeaways

Color

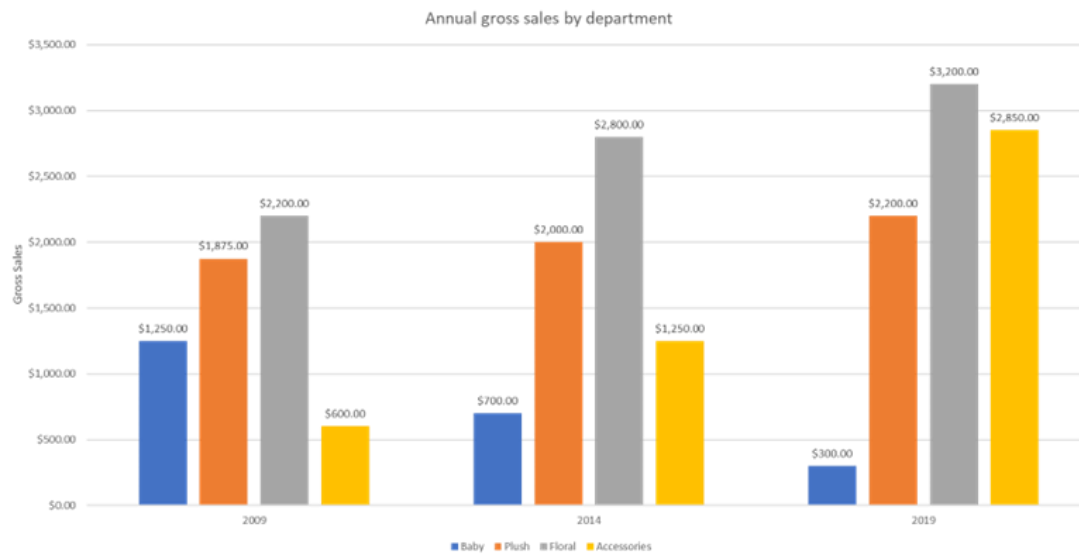
**Bold**

Text

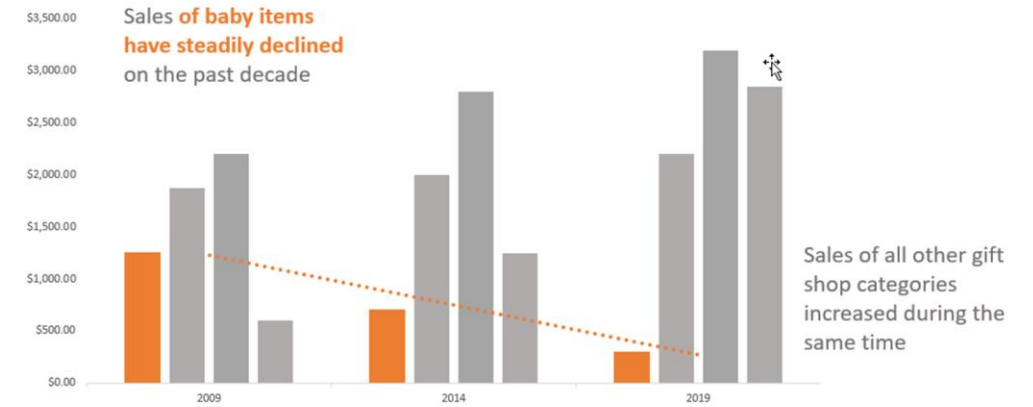
## Annual gift shop gross sales by category



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Annual gift shop gross sales by category



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# Data Story Scenarios

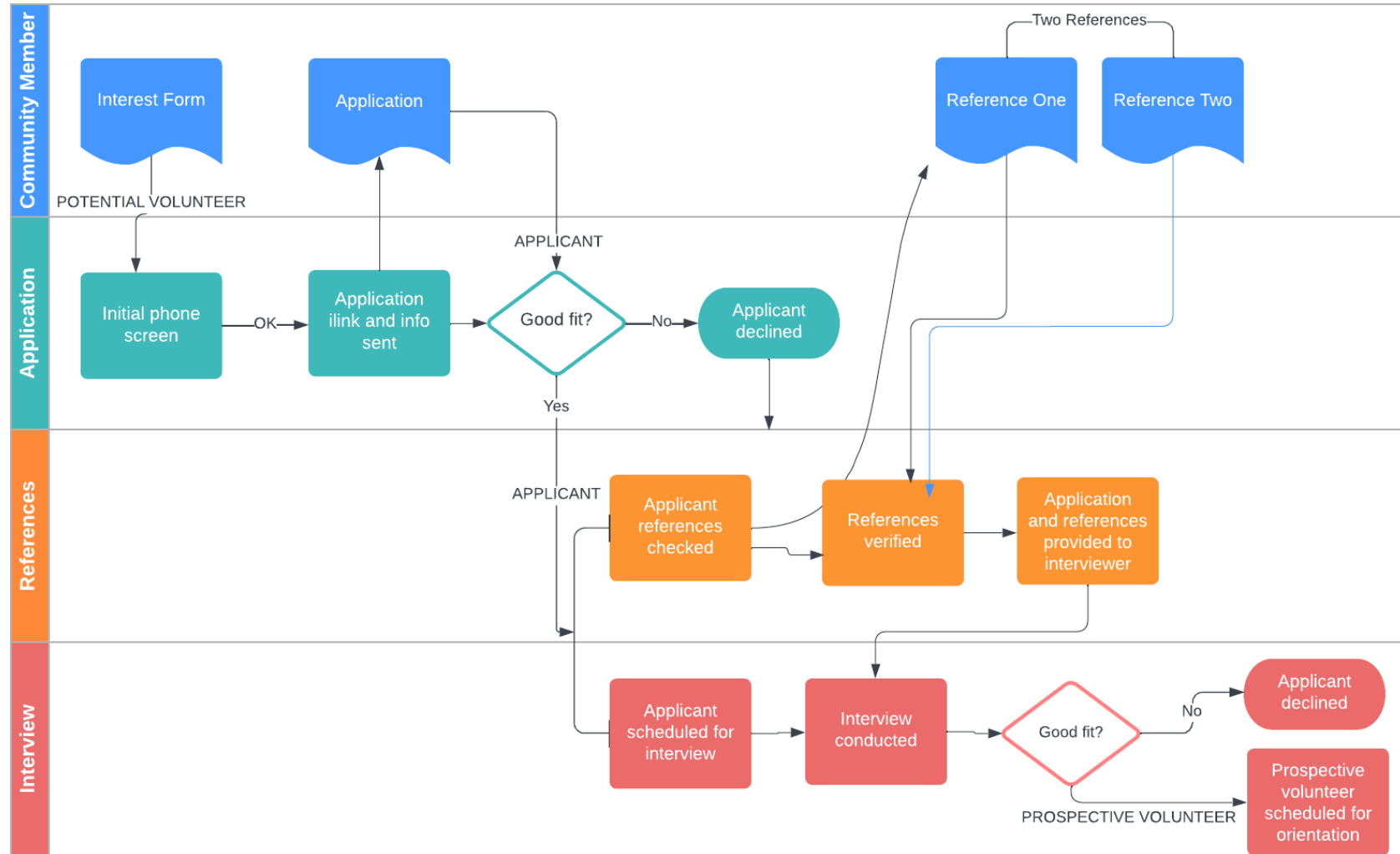
# Scenario

- The onboarding process for volunteers slows down during the staff-initiated reference checks
- You decide to create a visualization in order to perform a process analysis



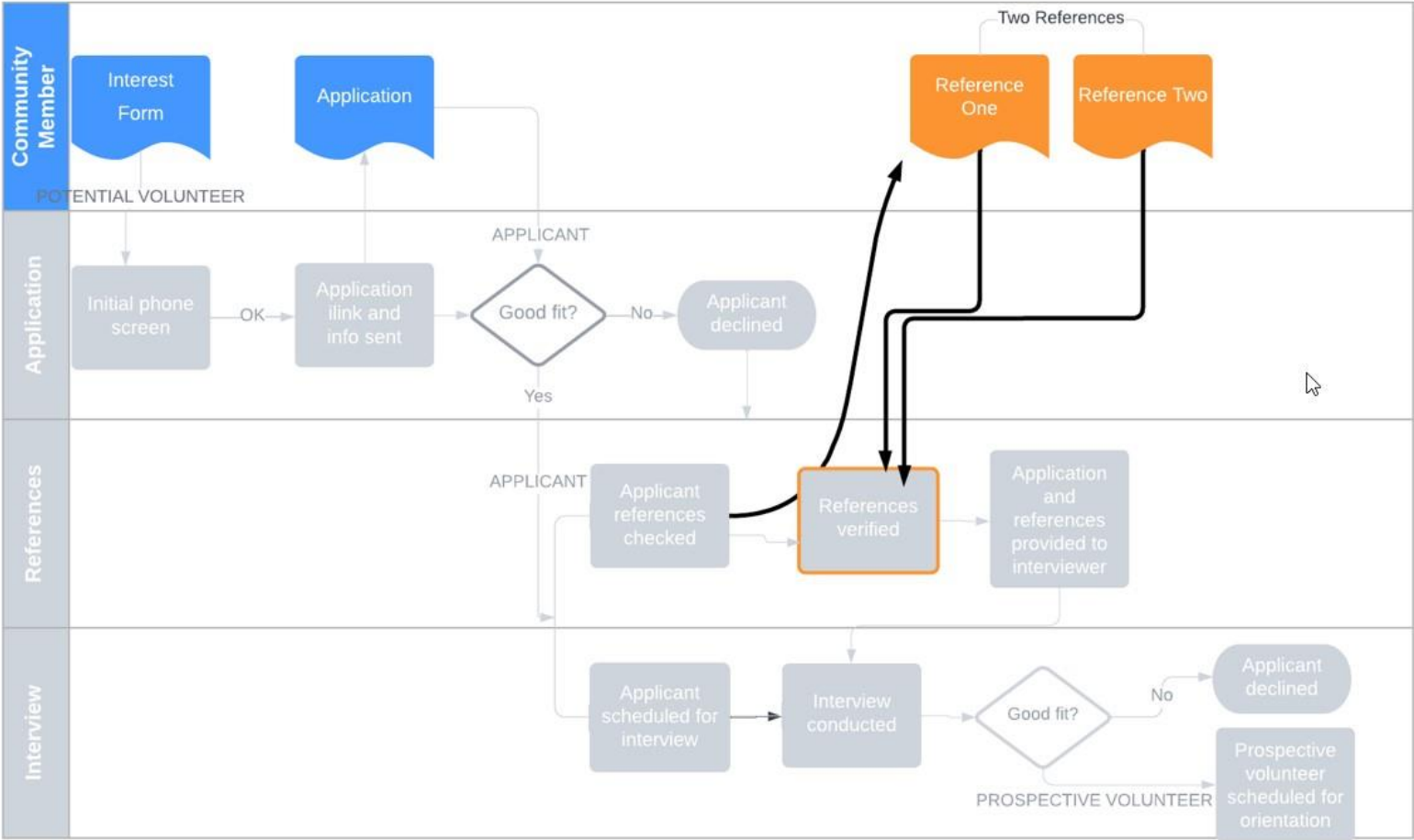
## Volunteer Intake Process

Roseanna Galindo | March 2, 2023

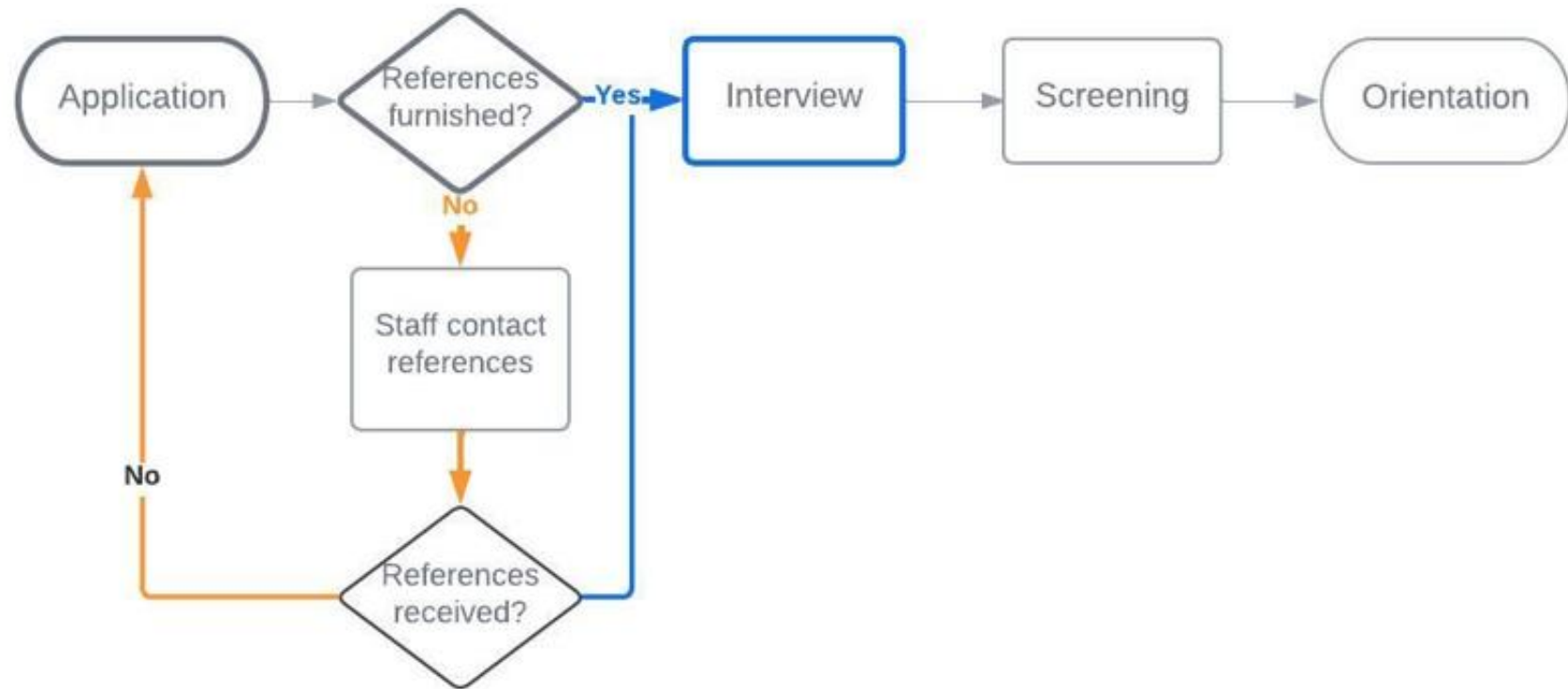


Volunteer intake process from potential to active

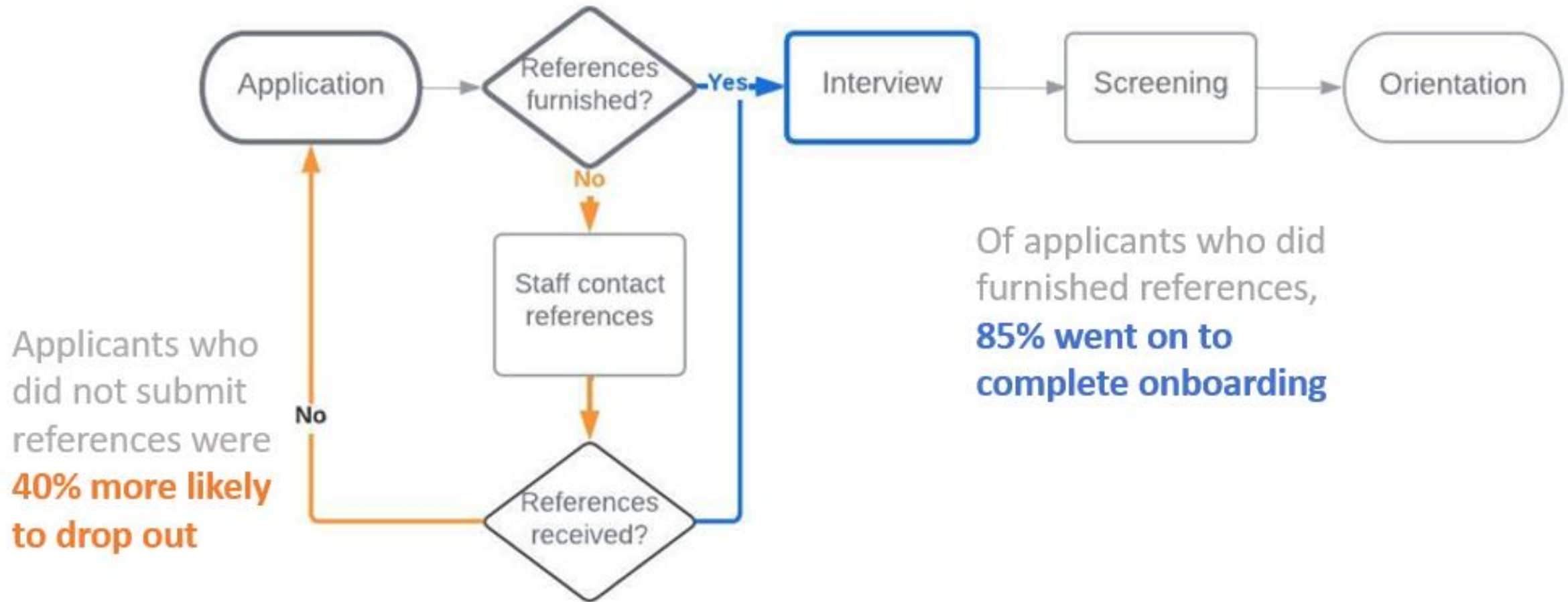
Intake process starts with external form submission.



Intake process is halted by external reference form submission.



Changing the process to have applicants furnish references at the time they submit their application increases onboarding rate



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# Scenario

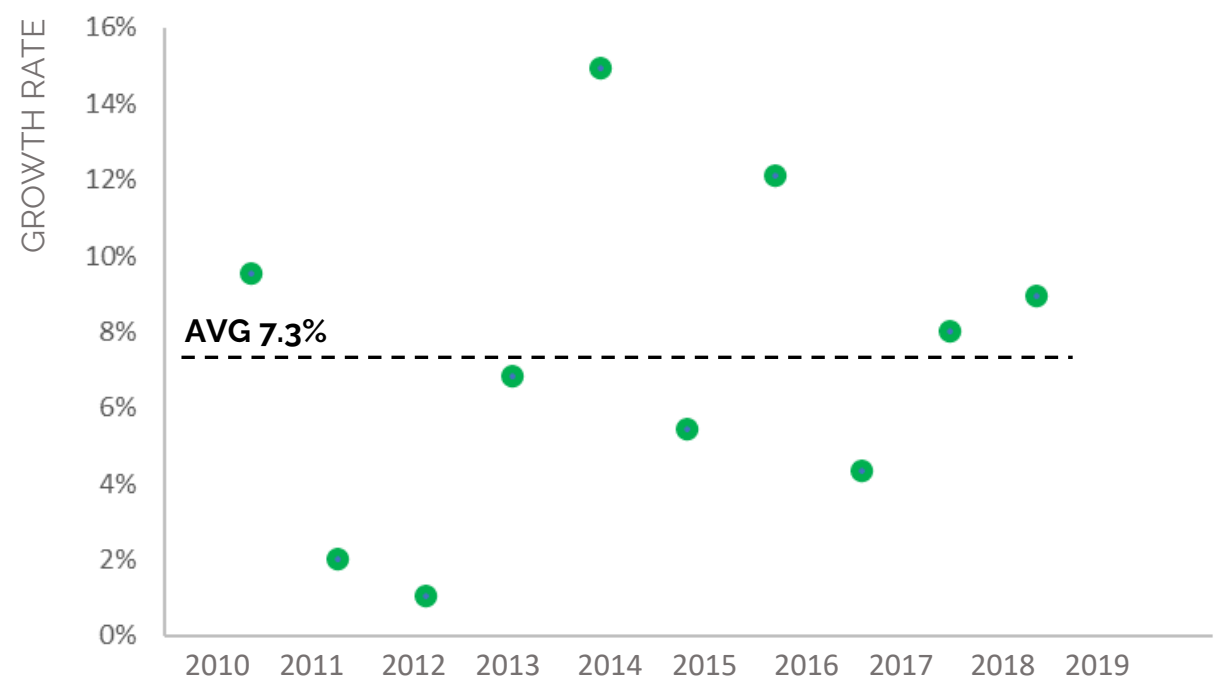
- You are a leader of volunteers in an organization.
- You've made some changes in recruitment approach in the past few years and feel like it is making a difference.
- You are interested in comparing recent program growth rate data with overall average for the past 10 years.

Year	Growth Rate
2019	8.9%
2018	8.0%
2017	4.3%
2016	12.1%
2015	5.4%
2014	14.9%
2013	6.8%
2012	1.0%
2011	2.0%
2010	9.5%
AVG	7.3%

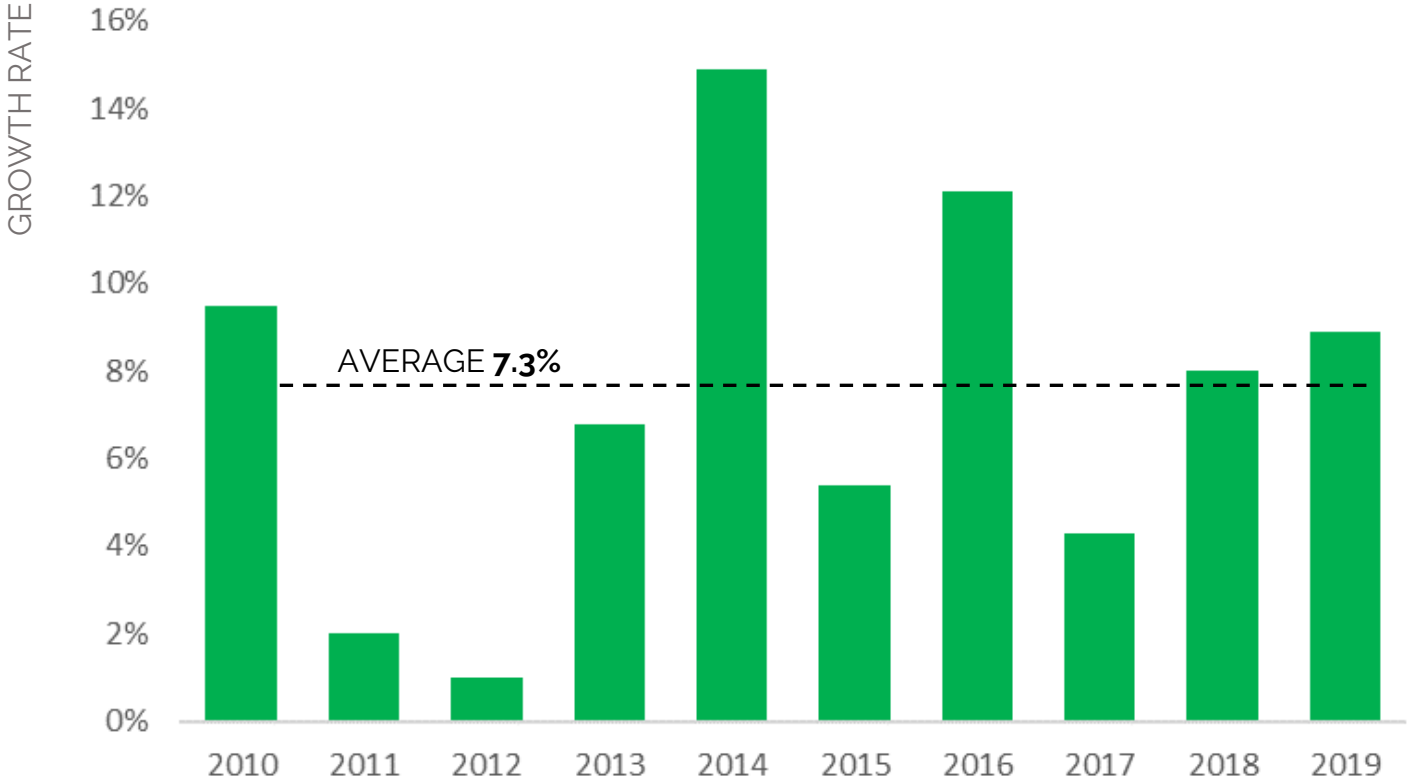
Year	Growth Rat
2019	9%
2018	8%
2017	4%
2016	12%
2015	5%
2014	15%
2013	7%
2012	1%
2011	2%
2010	10%



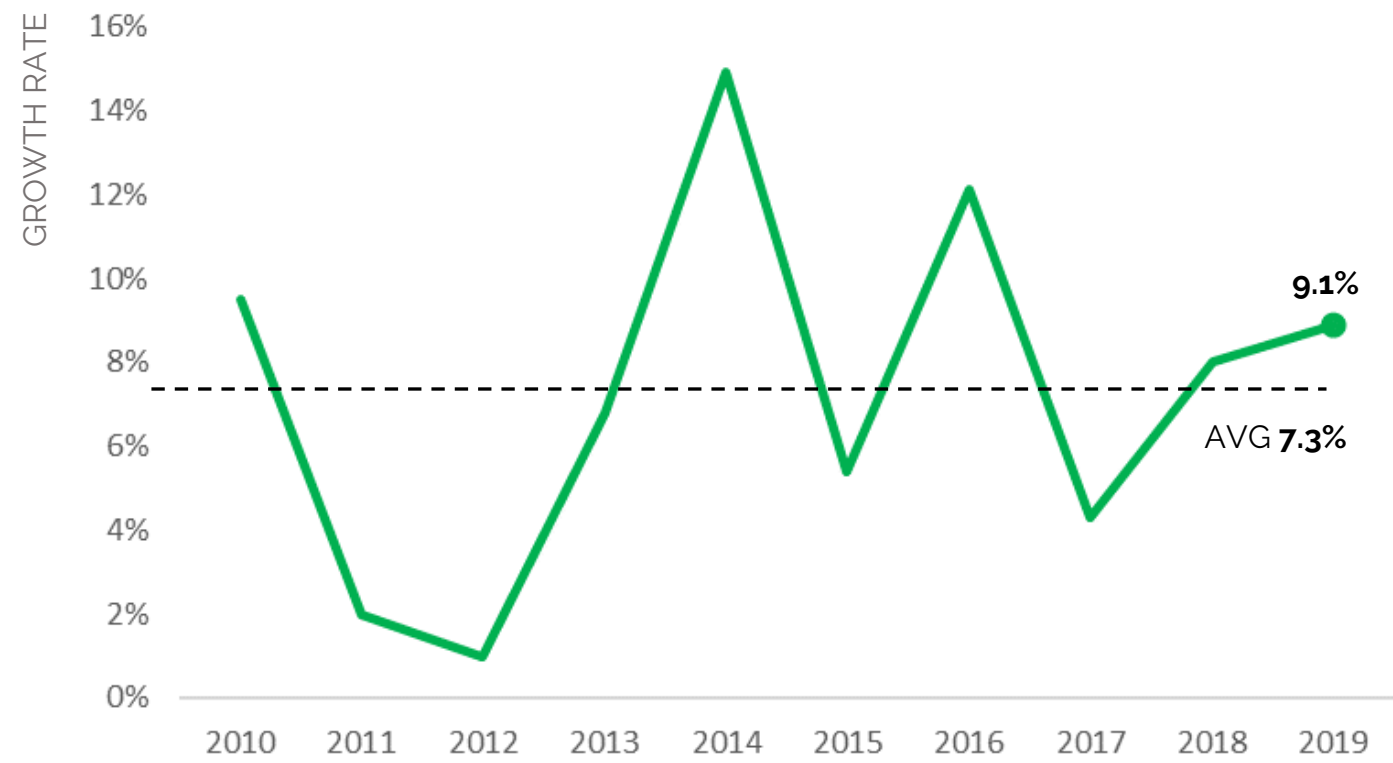
# Active volunteer growth rate over time



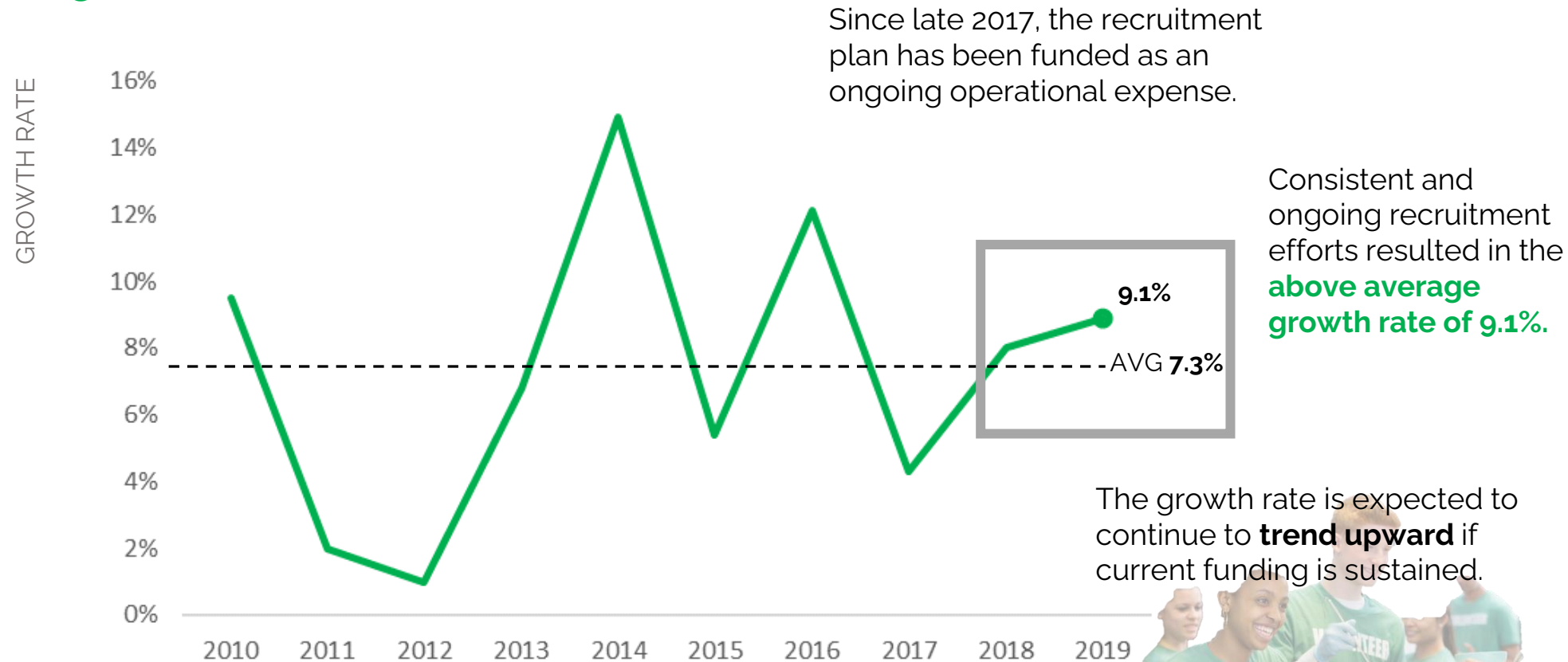
# Active volunteer growth rate over time



Active volunteer growth rate over time



## The volunteer program experienced **an above average growth rate**

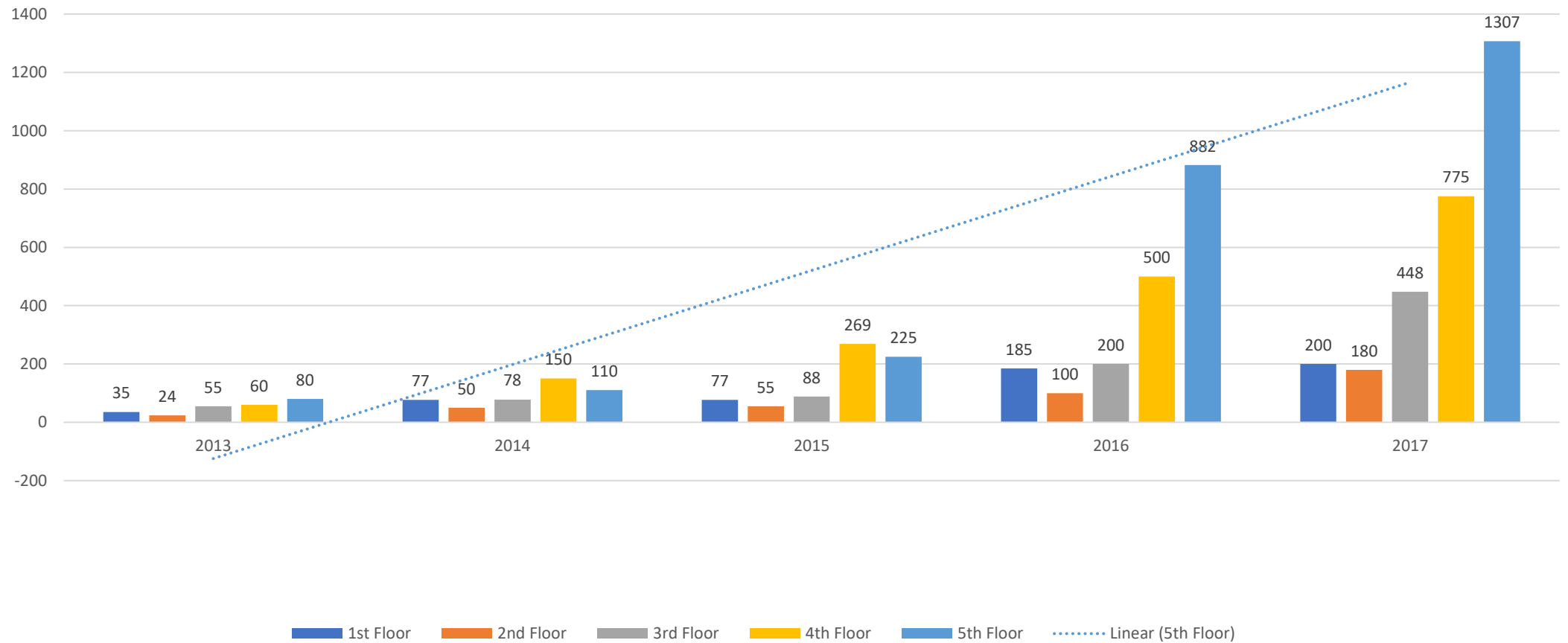


# Scenario

- A patient experience based visitation program you launched is having increasing impact in the past five years.
- You've been invited to a nursing leadership meeting to share about the program's growth in bedside visits

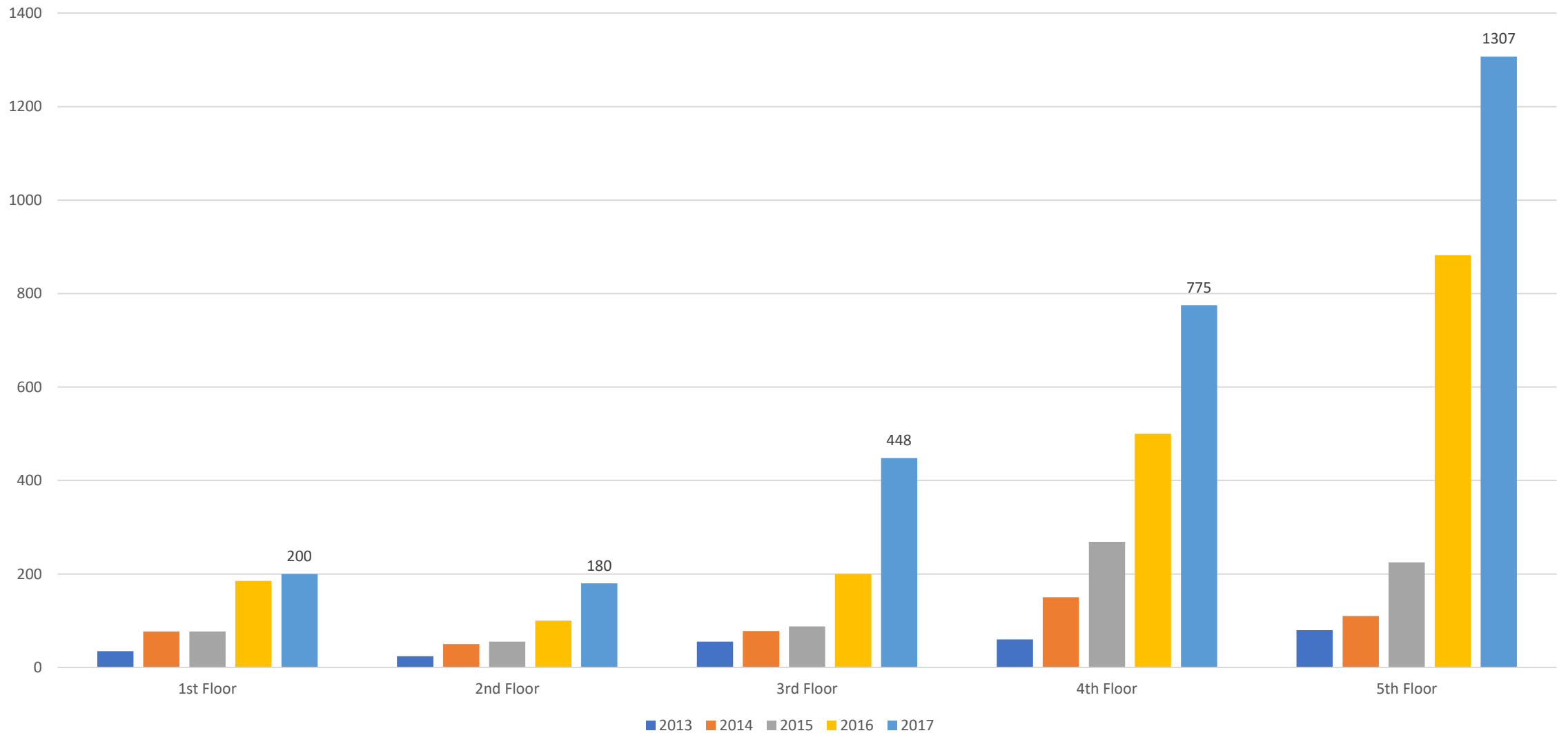
Nursing Unit						
Bedside Visits	2013	2014	2015	2016	2017	
1st Floor	35	77	77	185	200	574
2nd Floor	24	50	55	100	180	409
3rd Floor	55	78	88	200	448	869
4th Floor	60	150	269	500	775	1754
5th Floor	80	110	225	882	1307	2604
	254	465	714	1867	2910	

Number of patients receiving a volunteer visit by nursing floor



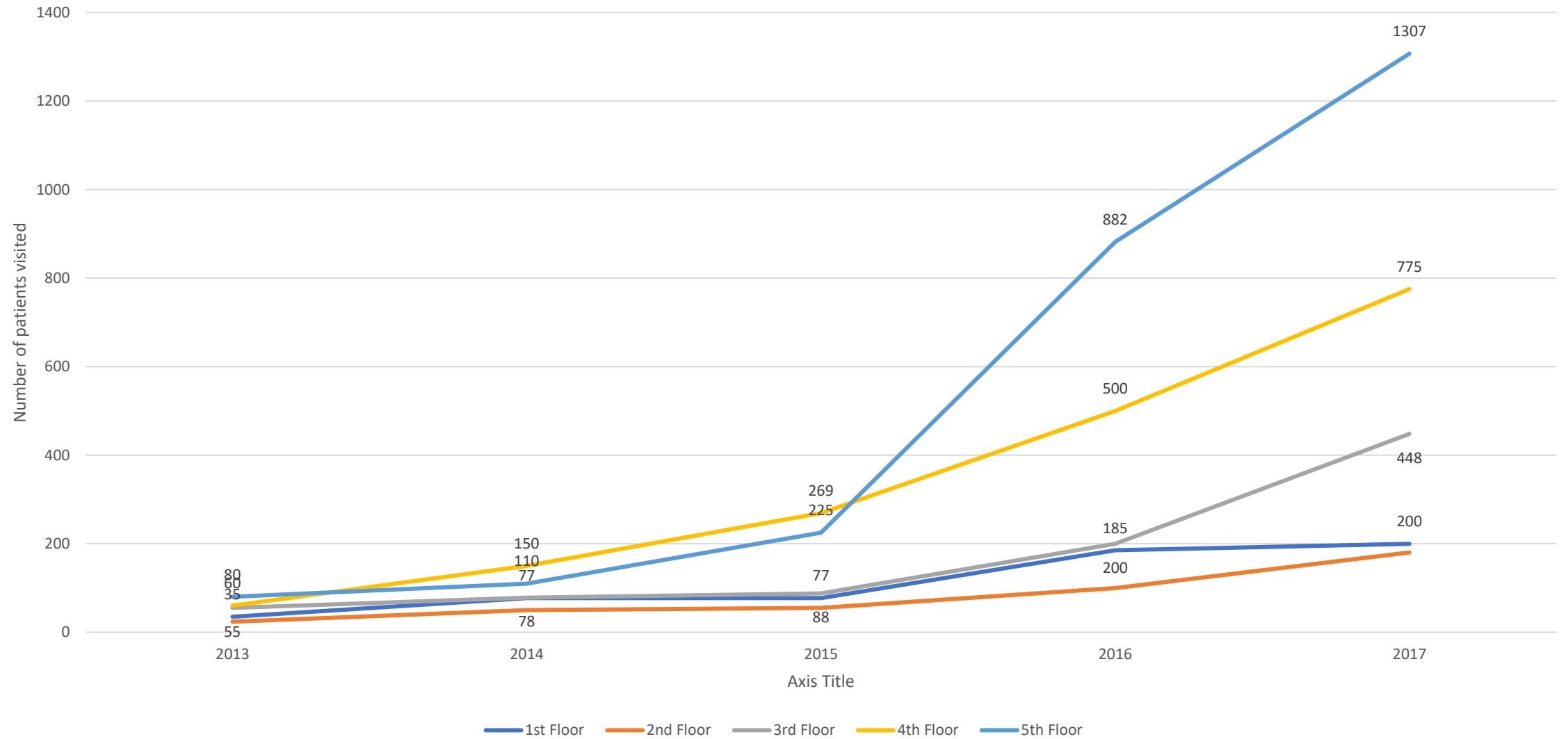
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Number of patients receiving a volunteer visit by nursing floor



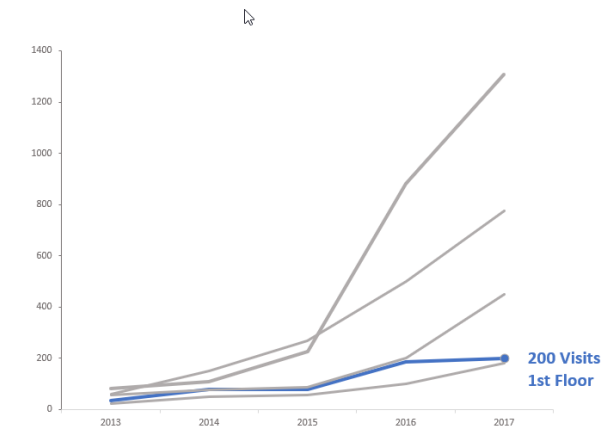
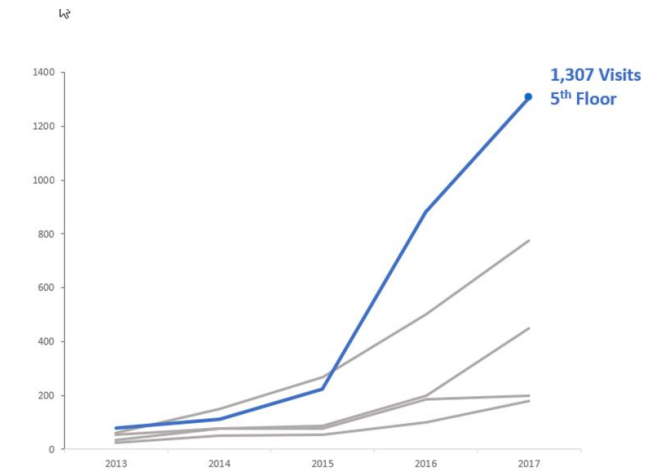
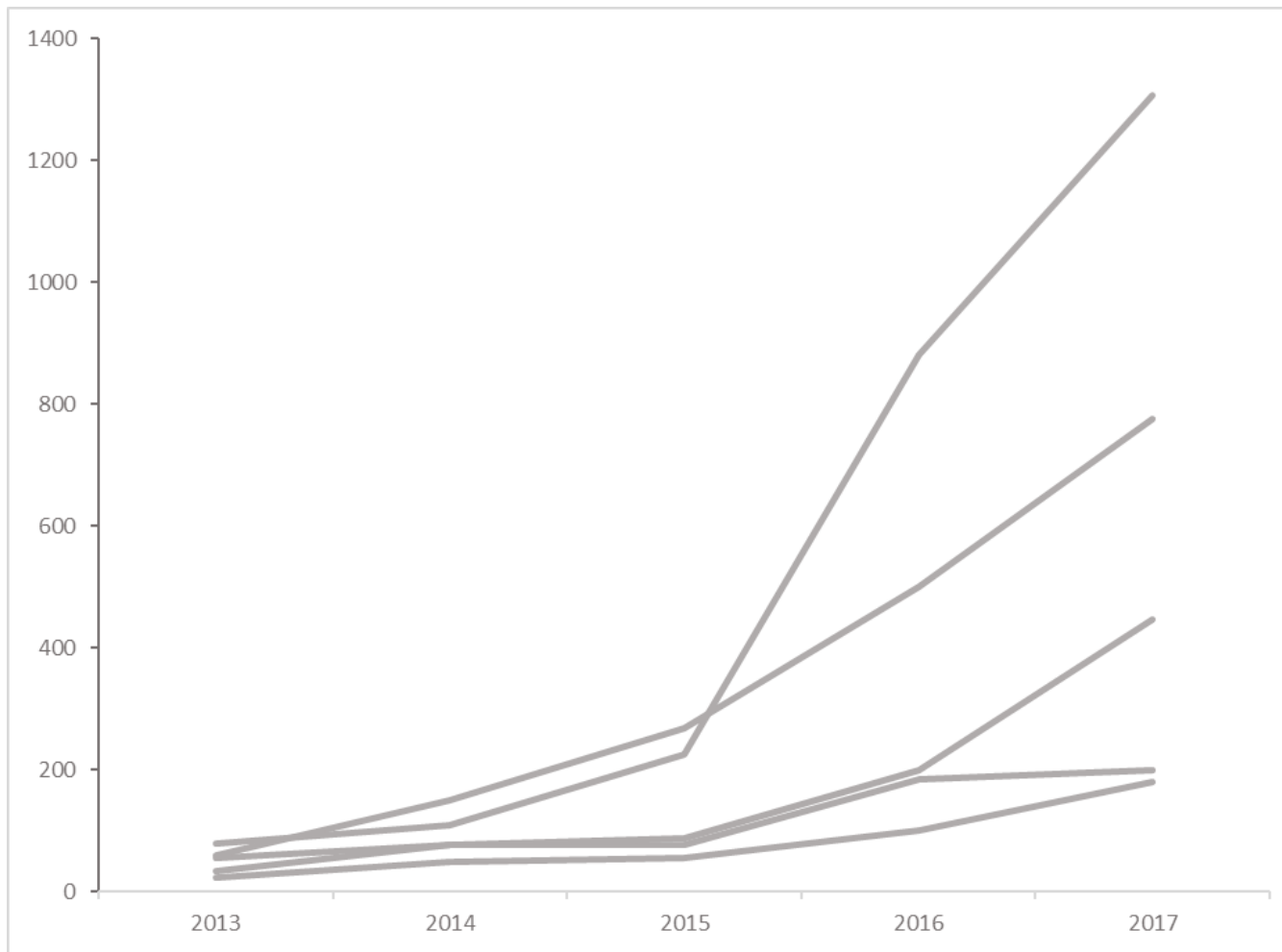
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Number of patients visited by floor



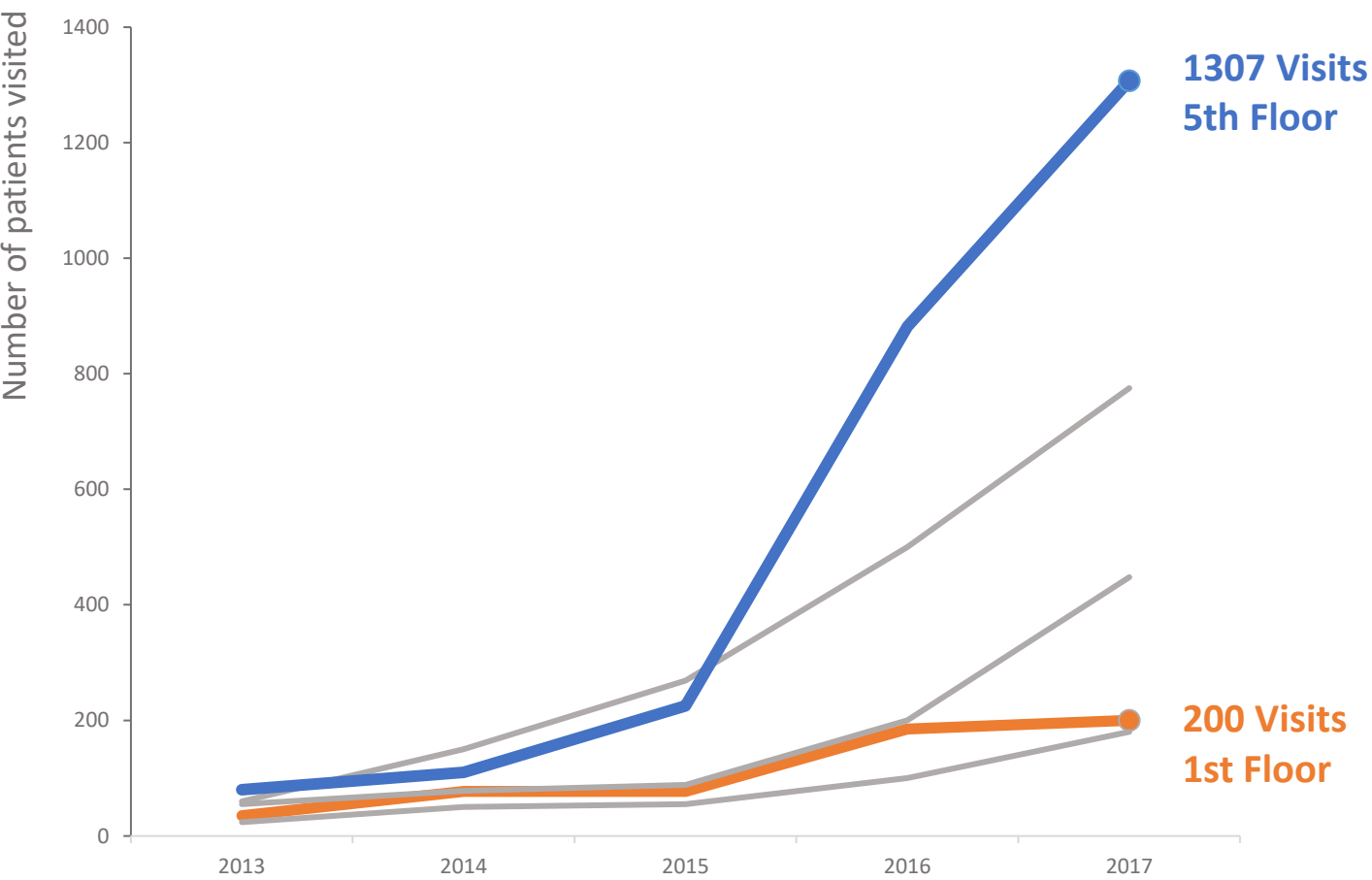
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# Let's connect

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