

Crafting Communication Clarity

A six session course on drafting and negotiating better contracts and file documentation

A Guide for Practitioners and Lawyers

Technical writing for contracts, negotiations, and file documentation

Crafting Communication Clarity: Mastering Business Writing for Influence and Compliance

Session 5

Presenting data that is understandable, reliable, and repeatable. While also helping in the areas of persuasion, data must often be gathered and presented in a comprehensible way. Write with confidence and understanding of the facts.

Scope of Course

This is a six-week (9 hours) course to help writers to craft language in contracts and supporting documentation for clarity and defense of the reasonableness of their decisions.

It will cover material relevant to contract administrators at both the prime and subcontract levels for better persuasion and certainty in the business transaction.

Limitations

This class cannot cover everything you should have learned in high school English or several semesters of College composition classes. Thus the brevity of this material is, at best, an attempt to refresh what you learned or provide a framework within which your contracts and file documentation will stand up to scrutiny or audit.

Additional, continual study of effective communication skills is highly recommended

Course Learning Objectives

- Using Grammar and Punctuation for clarity
- Understanding audience and message
- Using the right words
- Understanding that Business writing is technical writing intended to explain, persuade, sell, or provide documentation related to decisions
- Understanding that all writing must stand on its own and be clear, complete, concise, and convincing
- Crafting Contracts to achieve business certainty

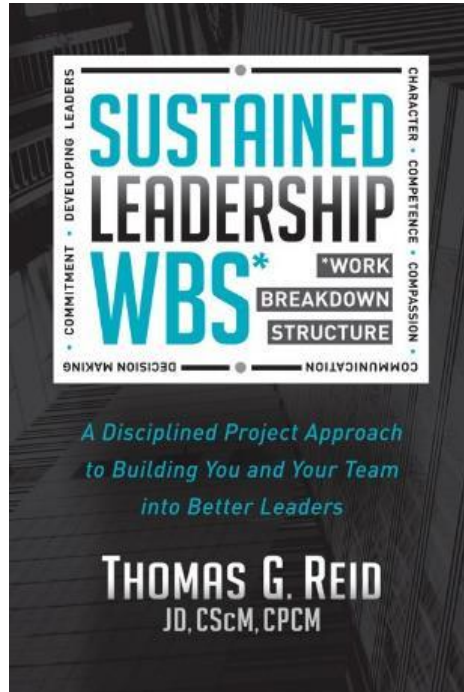
Expected Transformational Experience

"Enhanced Professional Prestige and Advancement Opportunity: Developing greater writing proficiency opens doors to advanced leadership roles and consulting opportunities within contract management disciplines. Clear and compelling communication becomes a hallmark of your professional identity, positioning you for success in a competitive business landscape."

Who am I?

- Thomas Reid, JD, MPA, CPCM,
- Chief Problem Solver, CCS
- Decades in government contracting
- Served in government, large businesses, small businesses, 8(a), non-profit, and start-up
- Speaker, author, trainer, attorney, expert witness, and contract manager

Latest Publication



- Reveals 229 elements of leadership
- Provides a lexicon of leadership by defining each element
- Uses project management tools to help you build yourself into a sustained leader
- Covers the Professional Competencies defined by OPM

New learning platform at www.TalkingHeadAcademy.Thinkific.com provides CPEs for NCMA certification for all classes on the platform.

The Communication of a Sustained Leader

4 Communication

4.1 Style

4.1.1 Speak

4.1.2 Teach

4.1.3 Mentor and Coach

4.1.4 Criticism

4.1.5 Meetings

4.1.6 Write

4.2 Content and Audience

4.2.1 Values and Mission

4.2.2 Positions and Persuasion

4.2.3 Proposals

4.2.4 Clarity

4.2.5 Conviction

4.2.6 Consistency Of Message

4.2.7 Credible

4.2.8 Feedback

4.2.9 Tact

4.2.10 Negotiations

4.2.10.1 Concessions and Compromise

4.2.10.2 Alliances

4.2.11 Enthusiasm

4.2.12 Deals with:

4.2.12.1 Employees or Those You Lead

4.2.12.2 Press

4.2.12.3 Other Stakeholders

4.2.12.4 Regulators

4.2.12.5 Customers and Beneficiaries

4.2.12.6 Problems

4.2.13 Diplomatic

4.2.14 Understands

Importance Of Sound Bite

4.2.15 Saying "Sorry" and "Thanks"

4.3 Charisma

4.3.1 Personable Warmth

4.3.2 Direct

4.3.3 Socially Adept

4.4 Techniques

4.4.1 Good Questions

4.4.2 Good Story Teller

4.4.3 Able to Adjust

Message to Audience Level

4.4.4 Able to Simplify

4.4.5 Body Language

CHAPTER 3 SUSTAINED LEADER

1.0 CHARACTER

- 1.1 Honesty/Trust/Loyalty
 - 1.1.1 Relationships
 - 1.1.1.1 Network
 - 1.1.1.1.1 Business
 - 1.1.1.1.2 Friendships and Acquaintances
 - 1.1.1.2 Followers/Subordinates/Superiors
 - 1.1.1.3 Family
 - 1.1.1.3.1 Immediate
 - 1.1.1.3.2 Extended
 - 1.1.1.3.3 Adoptive
 - 1.1.2 Traits
 - 1.1.2.1 Approachable
 - 1.1.2.1.1 Responsible
 - 1.1.2.1.2 Transparent
 - 1.1.2.2 Socially Adept
 - 1.1.2.2.1 Small Talk
 - 1.1.2.2.2 Networking
 - 1.1.2.3 Uses Influence Rather Than Authority
 - 1.1.2.4 Courage
 - 1.1.2.5 Foresight
- 1.2 Integrity
 - 1.2.1 Values (Heart)
 - 1.2.1.1 Accept Responsibility
 - 1.2.1.2 Fact-Based
 - 1.2.1.3 Reliable/Consistent/Delivers On Commitments
 - 1.2.1.4 Sincerity
 - 1.2.1.5 Loyalty
 - 1.2.1.6 Engenders Mutual Respect
 - 1.2.1.7 Always Pursues Excellence
 - 1.2.1.8 Authenticity
 - 1.2.2 Spiritual (Anchor)
 - 1.2.2.1 Strong Moral Compass
 - 1.2.2.2 Nurture a Strong Conscience
 - 1.2.2.3 Personal Life in Order
 - 1.2.2.4 Respects Natural Law
 - 1.2.2.5 Generous
 - 1.2.2.6 Affirming
- 1.3 Know Yourself
 - 1.3.1 Constant Learner
 - 1.3.1.1 Reader
 - 1.3.1.2 One Major with Lots of Minors
 - 1.3.1.3 Prepares
 - 1.3.1.4 Wisdom Seeker
 - 1.3.1.5 Inquisitive Mind
 - 1.3.2 Self-Motivated
 - 1.3.3 Humility
 - 1.3.3.1 Assesses Self Honestly
 - 1.3.3.2 Teachable
 - 1.3.3.3 Handles Criticism
 - 1.3.3.4 Unselfish
 - 1.3.3.5 Understands Power and Shares Power
 - 1.3.3.6 Aware Of Limitations
 - 1.3.3.7 Controlled Ego
 - 1.3.4 Models Behavior
 - 1.3.5 Belief in Self
 - 1.3.5.1 Confidence
 - 1.3.5.2 Comfortable with Power
 - 1.3.6 Maximizes Intelligence
 - 1.3.7 Good Under Pressure
 - 1.3.8 Is Conscious of Legacy
 - 1.3.9 Thinking
 - 1.3.9.1 Critical Thinking
 - 1.3.9.2 Systems Thinking
 - 1.3.9.3 Strategic Thinking
 - 1.3.10 Courage of Convictions
 - 1.3.11 Coping Ability
 - 1.3.12 Has Mentors
 - 1.3.13 Appreciates the Journey
 - 1.3.14 Politically Savvy
 - 1.3.15 Risk and Fear Tolerance
 - 1.3.16 Emotional Intelligence
 - 1.3.17 Knows How to Have Fun and Celebrate

2.0 COMPETENCE

- 2.1 Business Acumen
 - 2.1.1 Finance/Accounting/Bottom Line
 - 2.1.2 Legal
 - 2.1.2.1 Contracts
 - 2.1.2.2 Human Resources
 - 2.1.2.3 Regulatory
 - 2.1.3 Management
 - 2.1.4 Risk
 - 2.1.5 Global Perspective
 - 2.1.6 Situational Awareness
 - 2.1.6.1 Observant
 - 2.1.6.2 Order From Chaos
 - 2.1.6.2.1 Detail Sorting
 - 2.1.6.2.2 Relevance
- 2.2 Technical Capability
 - 2.2.1 Excellence in One Primary Field
 - 2.2.2 Team Player
 - 2.2.3 Measures What is Important
 - 2.2.4 Academic Achievement
 - 2.2.5 Strong Individual Contributor
 - 2.2.6 Stays Tech Savvy and Uses It Effectively
 - 2.2.7 Understanding Corporate Processes
 - 2.2.8 Versatility
- 2.3 Bias For Action
 - 2.3.1 Goal Setting
 - 2.3.1.1 Realist
 - 2.3.1.2 Dreamer
 - 2.3.1.3 Long- and Short-Term Goals
 - 2.3.2 Problem Solving
 - 2.3.3 Persistent/Patient/Tenacious
 - 2.3.4 Time Management
 - 2.3.5 Tackles the Difficult
 - 2.3.6 Decisive
 - 2.3.6.1 Considers Options
 - 2.3.6.2 Does Not Require Complete Data
 - 2.3.7 Change Agent
 - 2.3.8 Organizational Growth
 - 2.3.9 Intensity
 - 2.3.10 Effective Execution
 - 2.3.11 Focused and Disciplined
 - 2.3.12 Thorough
 - 2.3.13 High Energy
 - 2.3.14 Pushes Results Across the Goal
 - 2.3.15 Knows When to Quit
 - 2.3.16 Hard Work, "Luck," and Timing
 - 2.3.17 Measured by Contribution
 - 2.3.18 Audacity
 - 2.3.19 Avoids Needless Activity and Procrastination

3.0 COMPASSION

- 3.1 Defines Roles
 - 3.1.1 Attracts Talent and Followers
 - 3.1.2 Fills Seats
- 3.2 Develops Leaders
- 3.3 Loyalty
- 3.4 Empathy
 - 3.4.1 Active Listener
 - 3.4.2 Views People as Ends not Means
 - 3.4.3 Respect
 - 3.4.4 Tough Love and Sensitivity
 - 3.4.5 Social Conscience
- 3.5 Inspiring
 - 3.6 Disciplines and Rewards
 - 3.7 Understands 24 Hour People
 - 3.8 Delegates Effectively
 - 3.9 Develops Team Members
 - 3.10 Accountable
 - 3.11 Manages Creative or Constructive Conflicts
 - 3.11.1 Difficult Conversations
 - 3.11.2 Deals Effectively with Negative Stakeholders
 - 3.11.3 Resolves Conflicts
 - 3.12 Team Builder
 - 3.13 Motivates
 - 3.14 Views Diversity as a Strength
 - 3.14.1 Generations
 - 3.14.2 Ethnicity and Gender
 - 3.14.3 Myers-Briggs and Strength Finders
 - 3.15 Fair
 - 3.16 Patience
 - 3.17 Encourages Failure as a Learning Tool
 - 3.18 Servant Leader

RED = ESSENTIAL LEADERSHIP
JOURNEY CHECKPOINT

4.0 COMMUNICATION

- 4.1 Style
 - 4.1.1 Speak
 - 4.1.2 Teach
 - 4.1.3 Mentor and Coach
 - 4.1.4 Criticism
 - 4.1.5 Meetings
 - 4.1.6 Write
- 4.2 Content and Audience
 - 4.2.1 Values and Mission
 - 4.2.2 Positions and Persuasion
 - 4.2.3 Proposals
 - 4.2.4 Clarity
 - 4.2.5 Conviction
 - 4.2.6 Consistency of Message
 - 4.2.7 Credible
 - 4.2.8 Feedback
 - 4.2.9 Tact
 - 4.2.10 Negotiations
 - 4.2.10.1 Concessions and Compromise
 - 4.2.10.2 Alliances
 - 4.2.11 Enthusiasm
 - 4.2.12 Deals with:
 - 4.2.12.1 Employees or Those You Lead
 - 4.2.12.2 Press
 - 4.2.12.3 Other Stakeholders
 - 4.2.12.4 Regulators
 - 4.2.12.5 Customers and Beneficiaries
 - 4.2.12.6 Problems
 - 4.2.13 Diplomatic
 - 4.2.14 Understands Importance of Sound Bite
 - 4.2.15 Saying "Sorry" and "Thanks"
- 4.3 Charisma
 - 4.3.1 Personable Warmth
 - 4.3.2 Direct
 - 4.3.3 Socially Adept
- 4.4 Techniques
 - 4.4.1 Good Questions
 - 4.4.2 Good Story Teller
 - 4.4.3 Able to Adjust Message to Audience Level
 - 4.4.4 Able to Simplify
 - 4.4.5 Body Language

5.0 COMMITMENT

- 5.1 Do
 - 5.1.1 Passion
 - 5.1.2 Vision
 - 5.1.3 Consistency in Vision
 - 5.1.4 Creates a Legacy
 - 5.1.5 Adaptable
 - 5.1.6 Physically Fit
 - 5.1.7 Deals Effectively with Setbacks
 - 5.1.8 Gives Back to Profession/Industry/Society
 - 5.1.9 Knows When to Pull the Plug
- 5.2 Don't Do
 - 5.2.1 Rigidity
 - 5.2.2 One-Dimensional Thinking
 - 5.2.3 Playing Politics
 - 5.2.4 Negativity and Cynicism
 - 5.2.5 False Promises and Deception
 - 5.2.6 Arrogance
 - 5.2.7 Hidden Agendas as a Strategy
 - 5.2.8 Willful Ignorance
 - 5.2.9 Authoritarianism
 - 5.2.10 Sense of Privilege
 - 5.2.11 Gossip and Rumor
 - 5.2.12 Celebrity
 - 5.2.13 Anger/Emotional Extremes/Instability
 - 5.2.14 Imbalance in Positive Traits
 - 5.2.15 Integrity Enemies
 - 5.2.15.1 Self-Interest/Self-Dealing
 - 5.2.15.2 Self-Protection
 - 5.2.15.3 Self-Deception
 - 5.2.15.4 Self-Righteousness

Summary

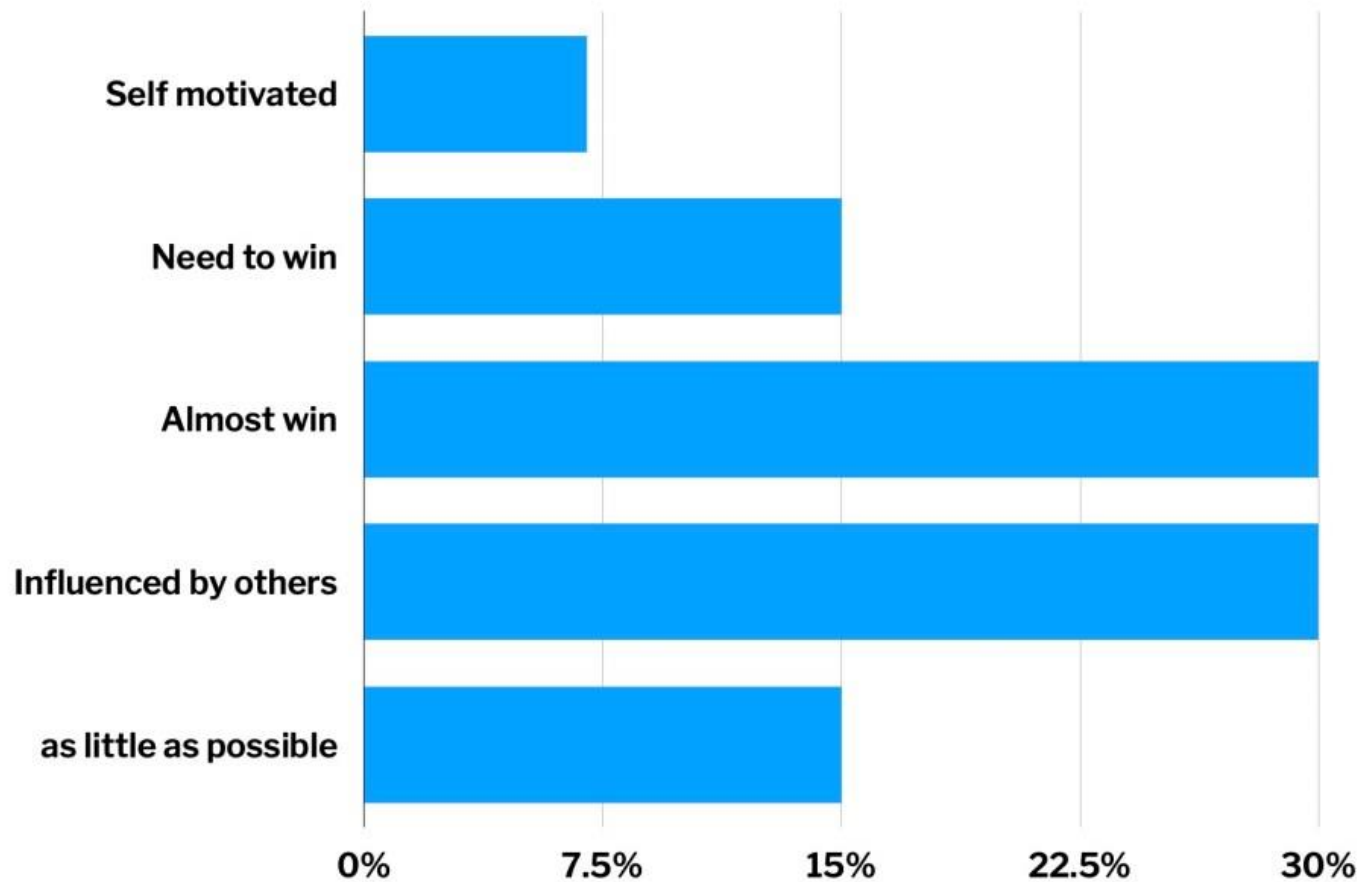
- Session 1 Using Grammar and Punctuation for clarity
- Session 2 Understanding audience and message
- Session 3 Explaining, persuading, selling, and proving reasonableness of decisions through business writing
- Session 4 Creating clarity in file documentation
- Session 5 Understanding and presenting data – technical, financial, statistics
- Session 6 Crafting clear contracts for business certainty

Summary

- Session 5 Understanding and presenting data – technical data, financial information, and statistics
- **Data Interpretation**
- **Visualization Tools**
- **Contextualization**
- **Accuracy and Integrity**
- **Audience Relevance**

How Did You Show Up Today?

Seth Godin:



POLLING QUESTION

How did you show up today?

- A. Self motivated.
- B. Need to win.
- C. Almost win.
- D. Influenced by others.
- E. As little as possible.

Data Interpretation

SECTION 1

The Problem with Data and Statistics

“There are lies, damned lies, and statistics”

Benjamin Disraeli (attrib. by Twain)

“Facts are stubborn, but statistics are more pliable.”

Mark Twain

“All data are lies.”

Scott Adams

<https://scottadams.locals.com/post/1211658/a-micro-lesson-on-the-subjectivity-of-data>

Presenting Past the Sale/ False Premise

Coconuts are
mammals because
they have fur and
produce milk.

Discuss

Data Pitfalls and Misunderstandings

- People are:
 - Gullible
 - Persuadable
 - Not engaged
 - Working their own agenda
- Data is often not understood by the listener and too frequently not understood by the presenter.

How reliable is the data we see?

Data collection is the most easily manipulated part of any argument.

How reliable is the Data?

- **Data Collection Errors:**
 - Sampling errors
 - Measurement errors
 - Data entry errors
- **Improper Comparisons:**
 - Comparing Apples to oranges
 - Undisclosed assumptions
 - Unreasonable projections
 - Not considering human nature and reaction to change
- **Logical Fallacies in Data:**
 - Hasty generalization
 - Post hoc ergo propter hoc
 - Cherry-picking data

Logical Fallacies in Data

- Logical fallacies are errors in reasoning that undermine the logic of an argument. Identifying and avoiding these fallacies is crucial for presenting data accurately and convincingly.
 - Hasty generalization – extrapolating broadly from a single data point
 - Post hoc ergo propter hoc – Sequence of events assumes causation
 - Cherry-picking data – confirmation bias is one mode

Logical Fallacies in Data - continued

Ad Hominem:

- Attacking the person making an argument rather than the argument itself.

False Dichotomy (Either/Or Fallacy):

- Presenting two options as the only possibilities when more exist.
- Often uses “Strawman Argument” as well.

Appeal to Authority:

- Using an authority figure's support as the sole basis for an argument, without additional evidence.

Tips for Identifying Logical Fallacies

Critical Questioning

Seek Independent Verification

Understand the Context

Recognize Biases

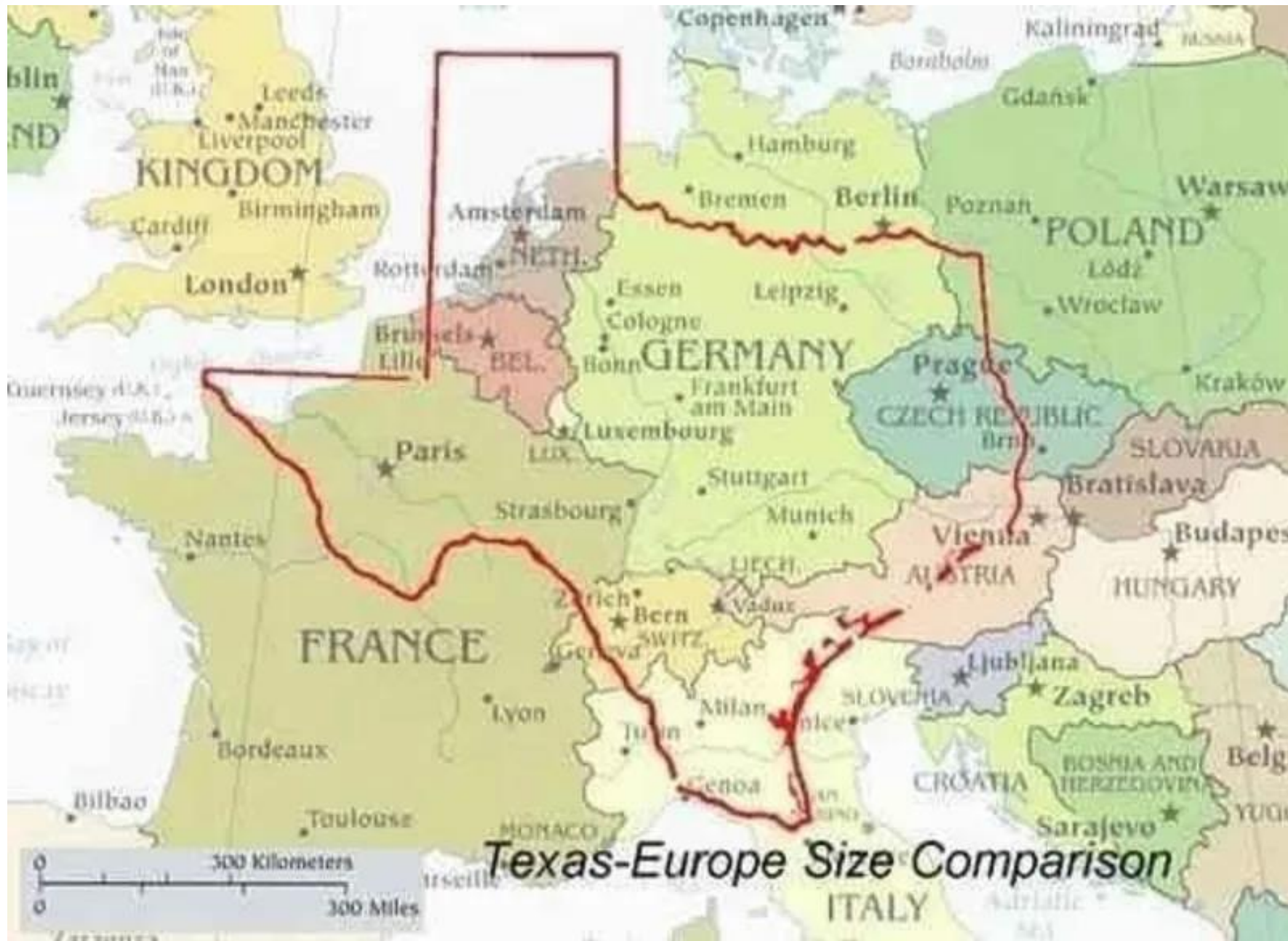
Practice Logical Analysis

Use Checklists

Visualization Tools

SECTION 2

Maps



Maps 2



©2024 CCS, LLC All Rights Reserved

Types of Charts

- **Bar Chart**
 - **Stacked Bar Chart**
- **Line Chart**
- **Pie Chart**
- **Histogram**
- **Scatter Plot**
- **Area Chart**
- **Bubble Chart**

Large Data Set

Customer Name	Invoice #	City	Activity Type	Units	Order Date
Justin Bell	1400045245722	Long Beach	DZ	55	2/9/2020
Jennifer Smith	1600065632685	Shelton	DA	20	1/2/2020
Matthew Miller	3000022873141	Bristol	RV	105	4/25/2020
Nicholas Gonzales	0400018000075	Edison	KG	9643	1/15/2020
Sharon Simmons	1400029738846	Binghamton	DZ	1390	2/9/2020
Robert Nguyen	0100012444958	Jersey City	AB	64	2/17/2020
Linda Lewis	1600043896677	Stamford	DA	933	1/26/2020
Patricia Bennett	1400086691109	New York City	DZ	7236	4/3/2020
Raymond Hughes	3000001403431	Danbury	RV	333	4/12/2020
Kevin Howard	1400099049851	New Rochelle	DZ	33	3/21/2020
Jean Campbell	3000008397055	Glen Cove	RV	467	4/24/2020
Jason Russell	3000045991008	Ansonia	RV	5306	3/26/2020
Kayla Henderson	1500087024125	Norwalk	DG	12713	2/21/2020
Cheryl Cruz	1500004323128	Albany	DG	43	2/22/2020
Juan Thomas	3000082999788	Bridgeport	RV	745	4/20/2020
Julia Watson	3000006620607	Norwich	RV	6441	3/10/2020
Thomas Sullivan	1400014950338	West Haven	DZ	6	1/14/2020
Sara Powell	3000022035919	Clifton	RV	53	1/8/2020
Stephanie Sanchez	1500088622816	Toms River	DG	289	3/1/2020
Marie Gonzalez	0100082081467	New London	AB	1728	1/28/2020
Austin Castillo	1500059987866	New York	DG	234	3/30/2020
Adam Taylor	1500078180853	Utica	DG	67	2/7/2020

Switching Attention

Customer of the Month:
Jean Campbell

Maximum Units:
12713

Sales Contest Winner:
Sam Larson

Customer Name	Invoice #	City	Activity Type	Units	Order Date
Justin Bell	1400045245722	Long Beach	DZ	55	2/9/2020
Jennifer Smith	1600065632685	Shelton	DA	20	1/2/2020
Matthew Miller	3000022873141	Bristol	RV	105	4/25/2020
Nicholas Gonzales	0400018000075	Edison	KG	9643	1/15/2020
Sharon Simmons	1400029738846	Binghamton	DZ	1390	2/9/2020
Robert Nguyen	0100012444958	Jersey City	AB	64	2/17/2020
Linda Lewis	1600043896677	Stamford	DA	933	1/26/2020
Patricia Bennett	1400086691109	New York City	DZ	7236	4/3/2020
Raymond Hughes	3000001403431	Danbury	RV	333	4/12/2020
Kevin Howard	1400099049851	New Rochelle	DZ	33	3/21/2020
Jean Campbell	3000008397055	Glen Cove	RV	467	4/24/2020
Jason Russell	3000045991008	Ansonia	RV	5306	3/26/2020
Kayla Henderson	1500087024125	Norwalk	DG	12713	2/21/2020
Cheryl Cruz	1500004323128	Albany	DG	43	2/22/2020
Juan Thomas	3000082999788	Bridgeport	RV	745	4/20/2020
Julia Watson	3000006620607	Norwich	RV	6441	3/10/2020
Thomas Sullivan	1400014950338	West Haven	DZ	6	1/14/2020
Sara Powell	3000022035919	Clifton	RV	53	1/8/2020
Stephanie Sanchez	1500088622816	Toms River	DG	289	3/1/2020
Marie Gonzalez	0100082081467	New London	AB	1728	1/28/2020
Austin Castillo	1500059987866	New York	DG	234	3/30/2020
Adam Taylor	1500078180853	Utica	DG	67	2/7/2020

Sample Compliance Matrix

PROPOSAL COMPLIANCE MATRIX

For

DRAFT CONTRACT ABC COMPANY

(Sample Pages)

Prepared by:

Tom Reid



KEY:

Abc = Risk

Abc = Flowdown

Abc = ABC PR Approval required

NOTE: This document is a working tool for use in managing the subject contract. While believed accurate, only the contract document contains the full and complete agreement between the parties. While this matrix may provide general guidance, it should not be relied upon for detailed interpretations of the contract language or the rights or responsibilities of either party. When in doubt – read the contract. For additional guidance, please contact your Contracts representative.

Compliance Matrix Sample

Proprietary and Business Sensitive

	31. Government Clauses	Government clauses are incorporated by some reference found elsewhere.	Curious clause, but it says what it says.
	32. Evidence of Citizenship or Immigration Status	All persons entering ABC premises on behalf of XYZ shall be properly documented as to their citizenship and immigration status	
	33. Access to Plants and Property	On ABC property, ABC rules apply and XYZ will follow those rules	
	34. Code of Conduct	Both ABC and XYZ are committed to conducting their business in a fair and ethical manner. Any failure on the part of any ABC employee should be reported to ABC's hotline.	
	35. Seller Financial Review	ABC reserves the right to conduct a financial review of XYZ for credit worthiness.	Typically the rights under this clause are limited to the information filed publically, or contained in an annual report.
	36. Performance and Fee	If XYZ is responsible ("direct and proximate cause") for the loss of fee by ABC on the prime contract, ABC will deduct that amount of lost fee from the fee owed XYZ.	This is an interesting risk, but probably acceptable. Sr. Contracts Person suggested an additional sentence at the end: "Such debit will not exceed the seller's current and accumulated contract Award Fee."
	37. Code of Basic Working Conditions and Human Rights	ABC has a code of basic human rights that applies to all of its operations world wide. It encourages XYZ to do likewise. Material breaches of this clause give rise to ABCs right to cancel for default.	
	38. Entire Agreement	This constitutes the entire agreement of the parties and no changes will be acknowledged unless signed by a ABC Authorized Procurement Representative.	
C306W	Asbestos Free Dunnage	All packing material and filler must be asbestos free.	XYZ warrants that vermiculite and any other dunnage is asbestos-free.
E002	Rent Free Non Interference Use of Government Property	Pricing assumes rent free use of GFP. If status changes, XYZ is entitled to an equitable adjustment. Clause is a required flowdown where rent-free use of GFP is authorized by subcontractor.	

Features

1

Feature #1

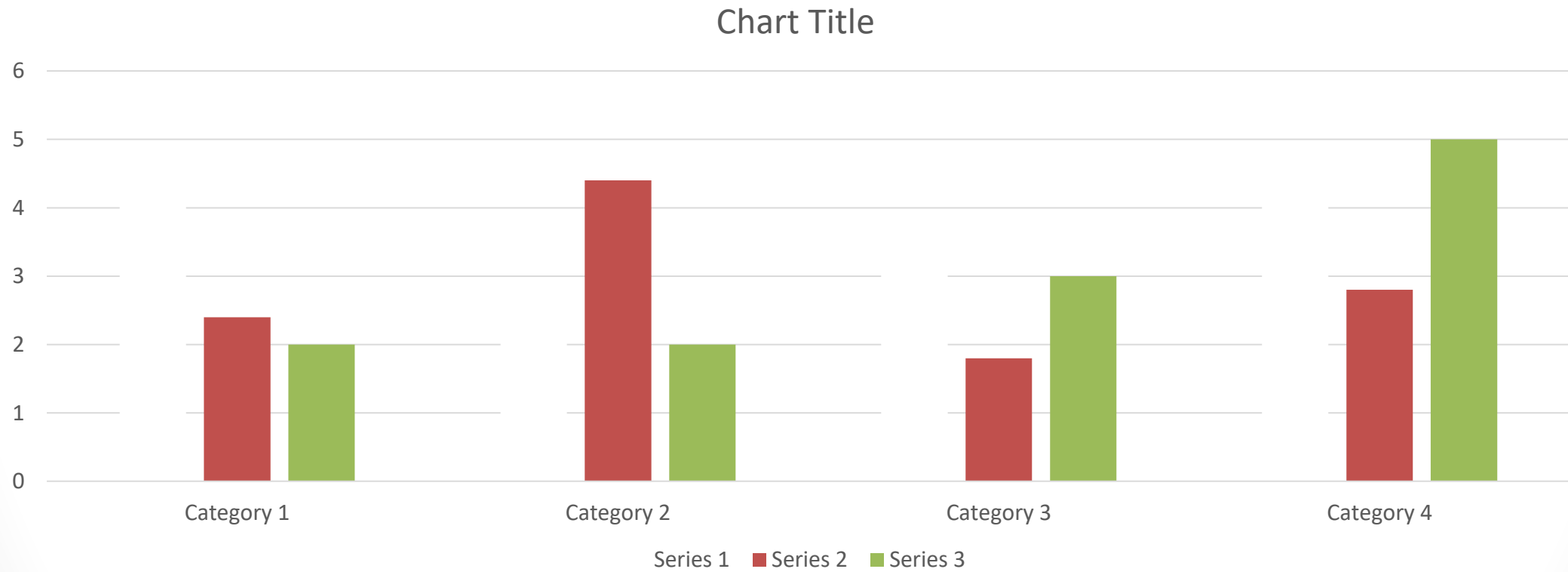
2

Feature #2

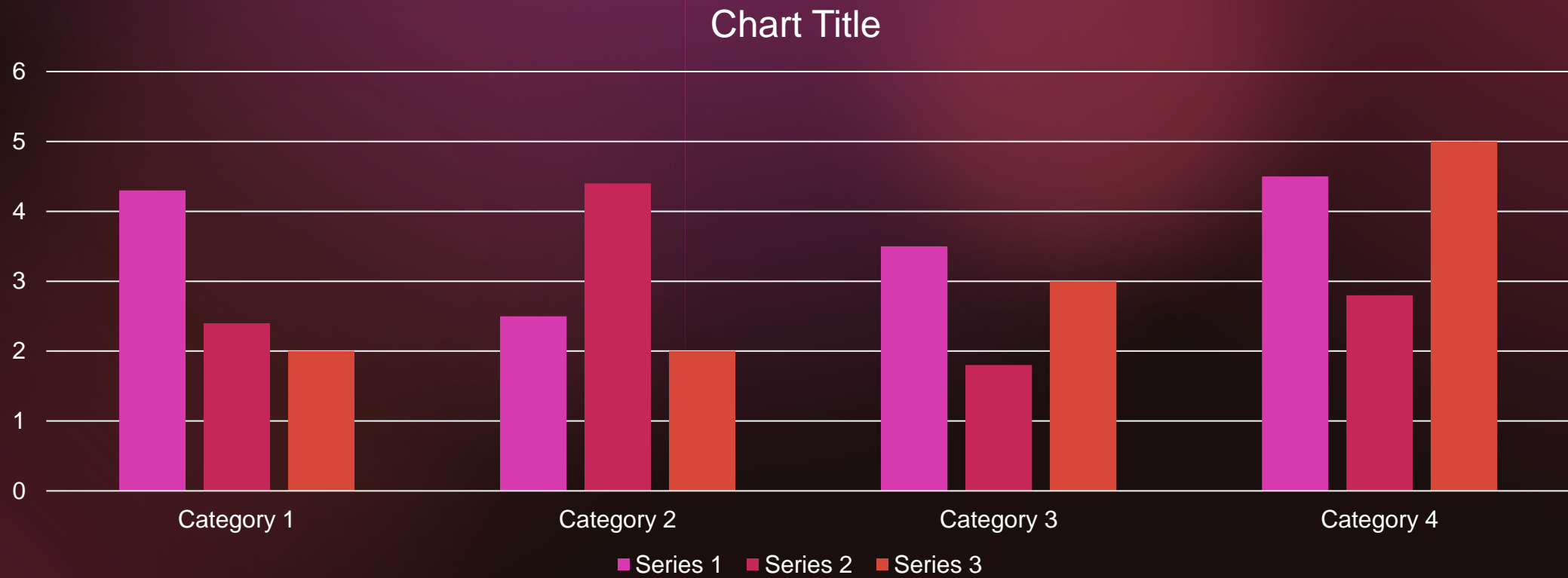
3

Feature #3

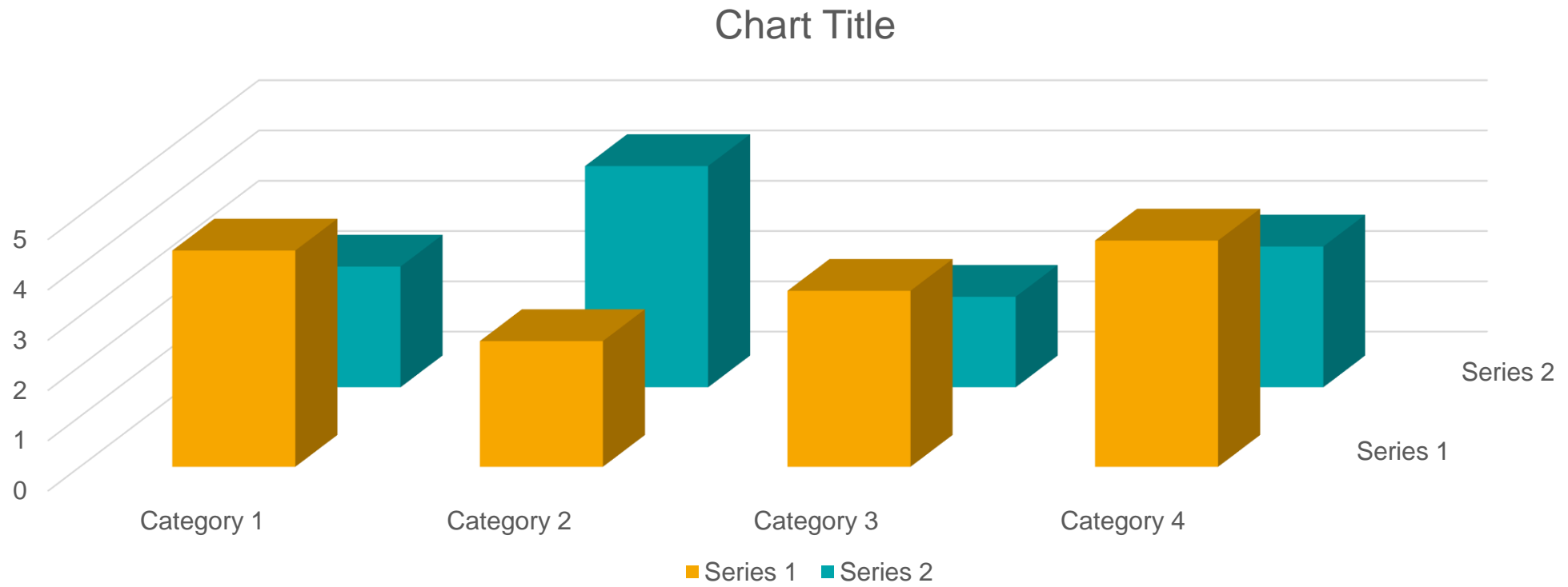
Simple Bar Chart



More Complicated Bar Chart



3-D Bar Chart

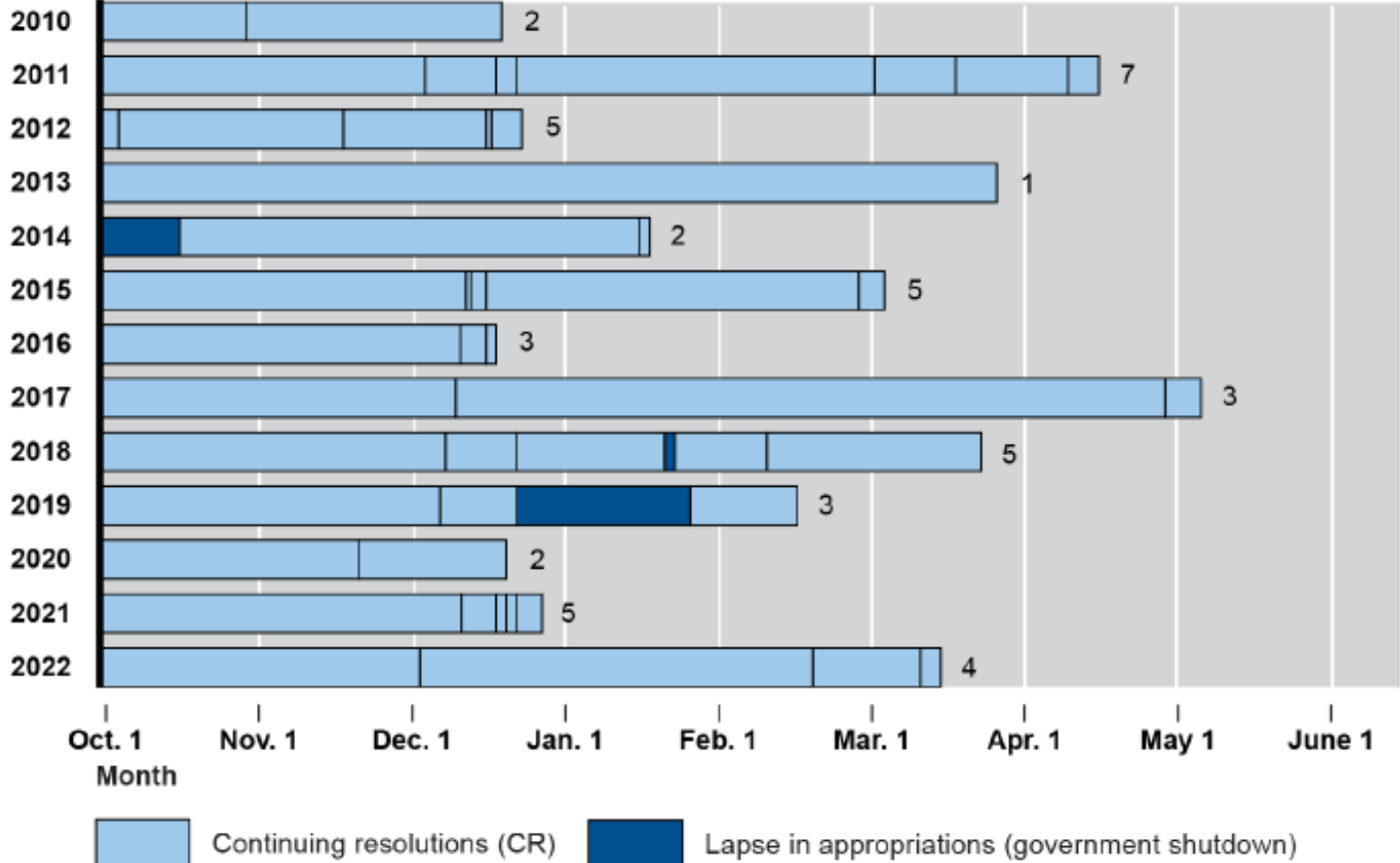


Stacked Bar Chart

What GAO Found

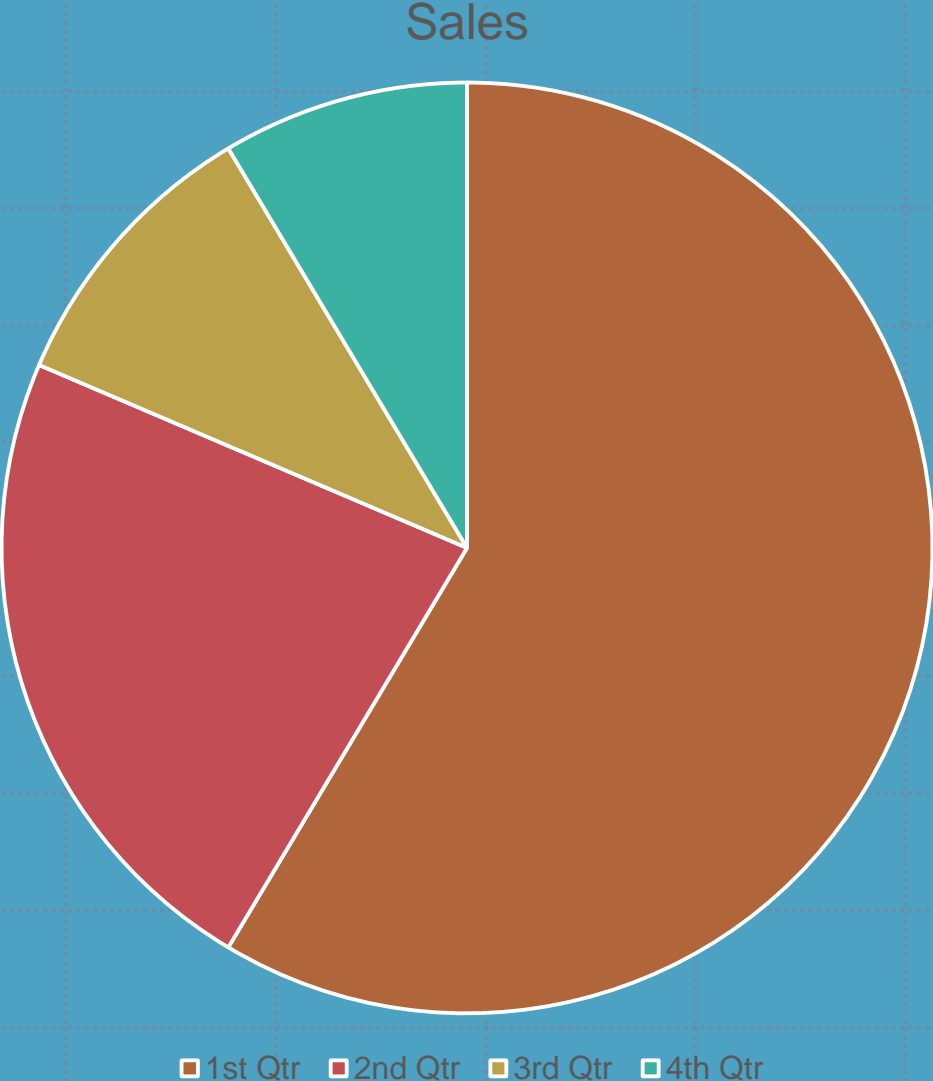
From fiscal years 2010 through 2022, Congress and the President enacted 47 continuing resolutions (CRs) that ranged from 1 day to 176 days (see figure).

Duration and Number of Continuing Resolutions and Lapses in Appropriations, Fiscal Years 2010-2022
Fiscal year



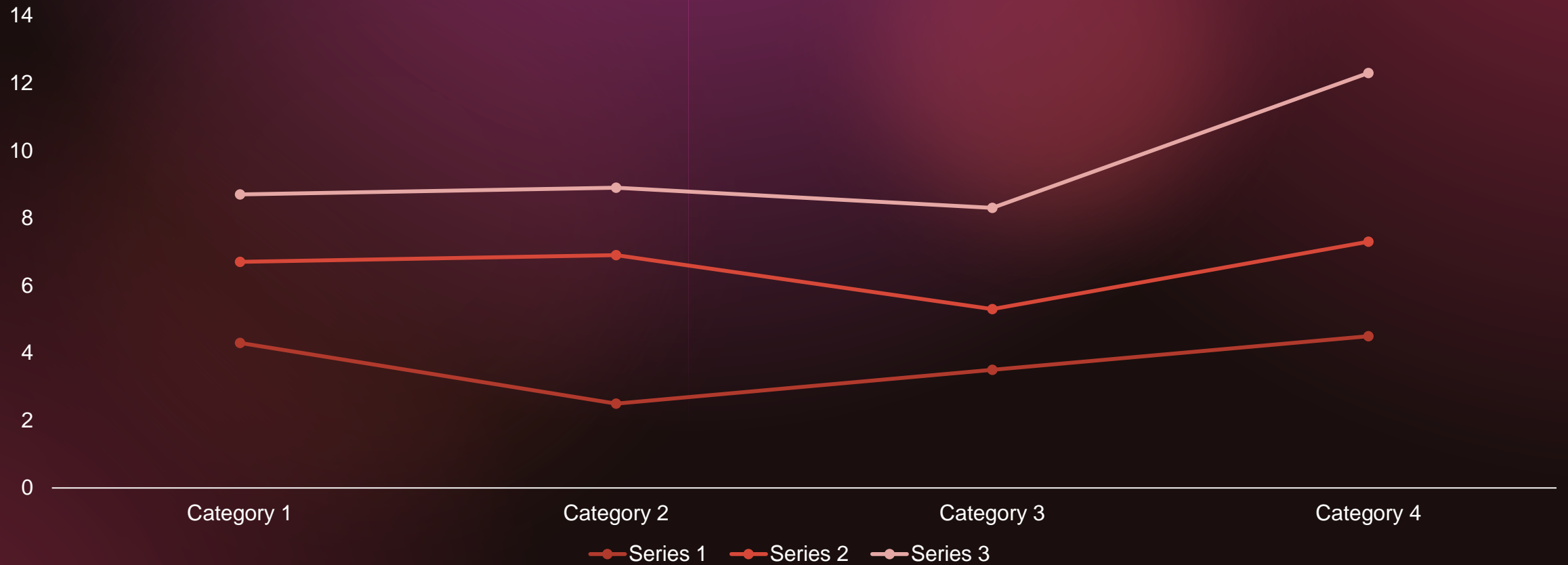
Source: GAO analysis of applicable laws. | GAO-22-104701

Pie Chart



Line Chart

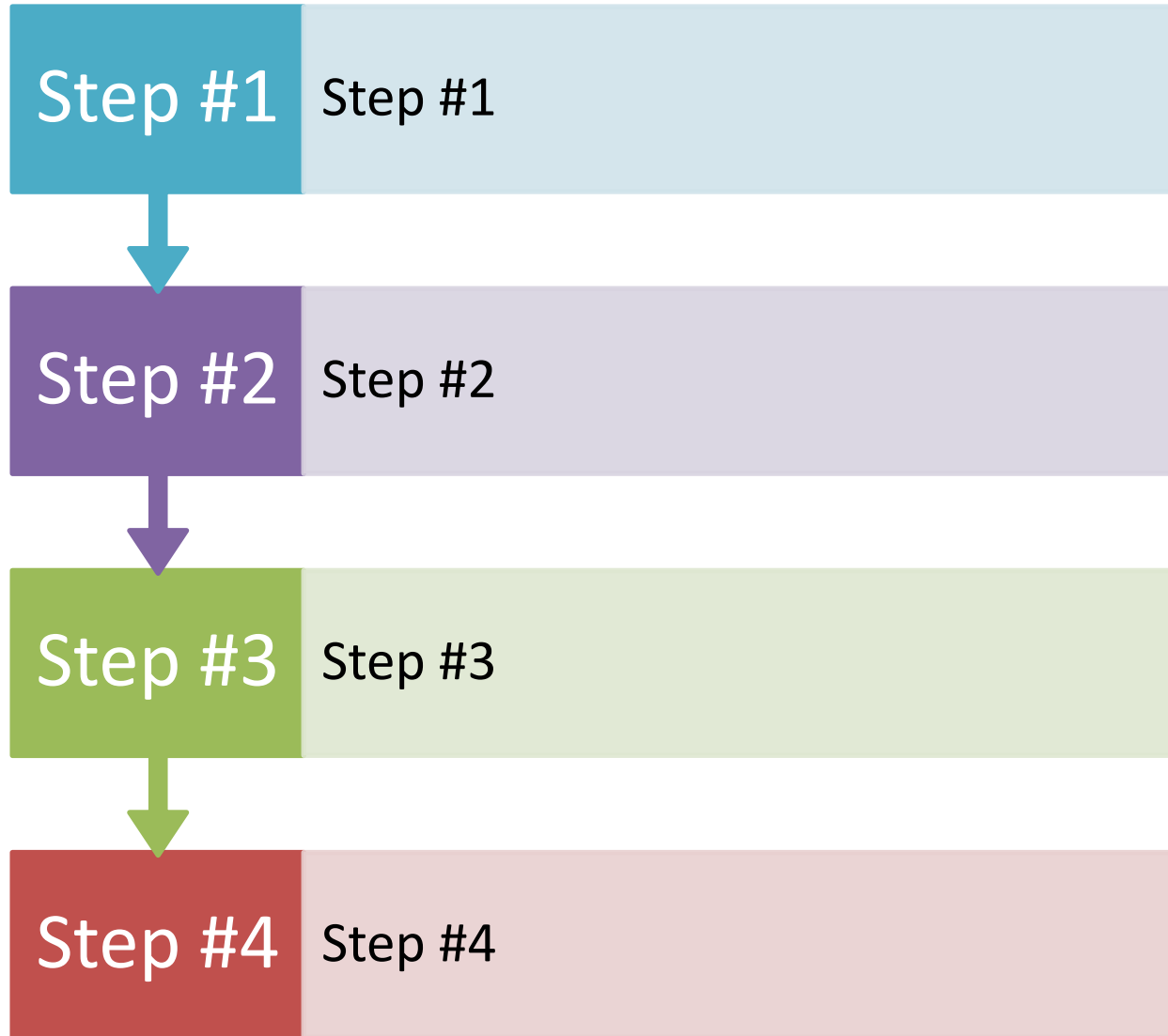
Chart Title



Flowcharts

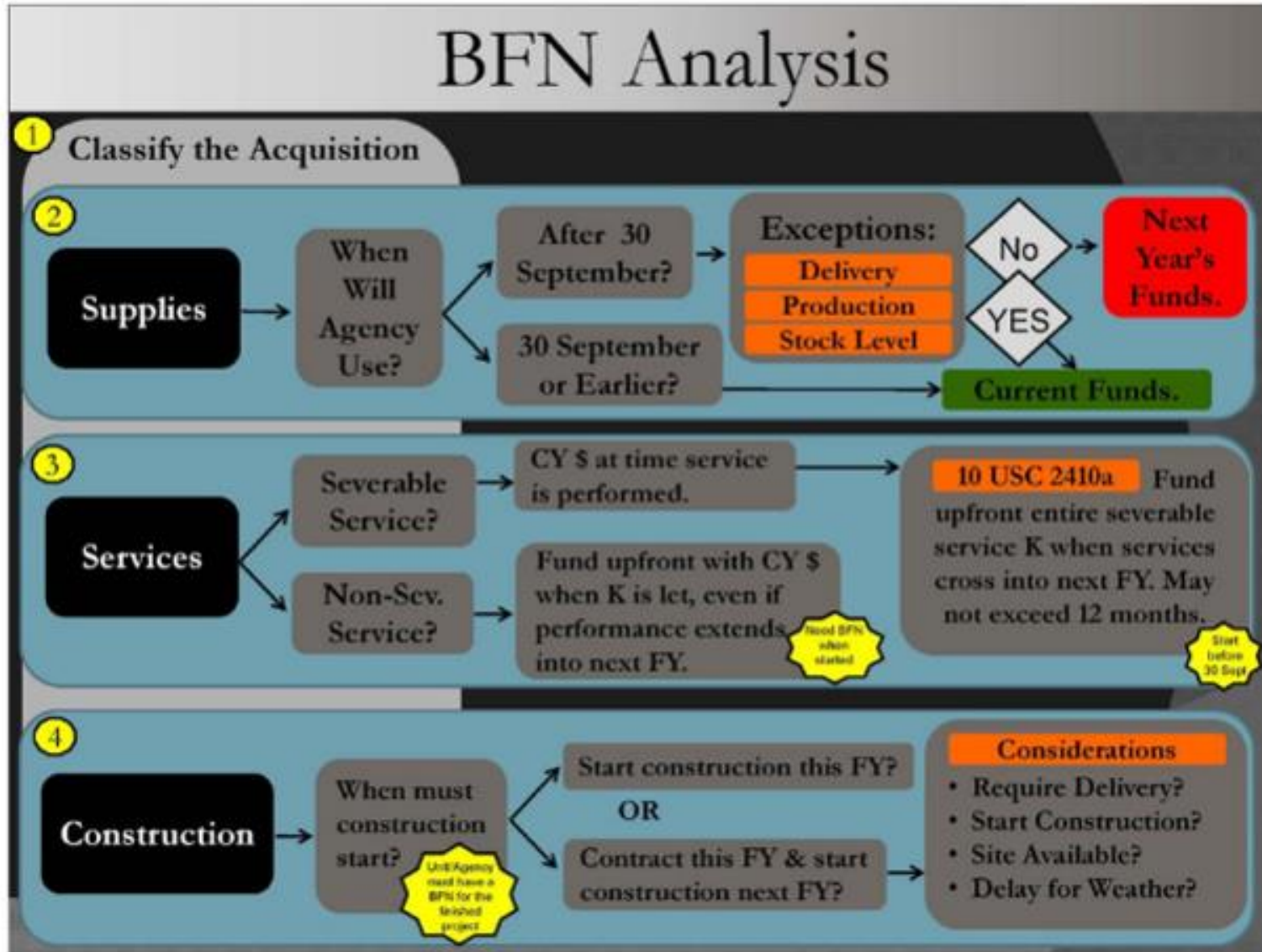
- Process Flow
- Step-by-step Instruction
- Decision Tree
- Aligning predecessors and successors (project plans)
 - Allows identification of the critical path

Steps



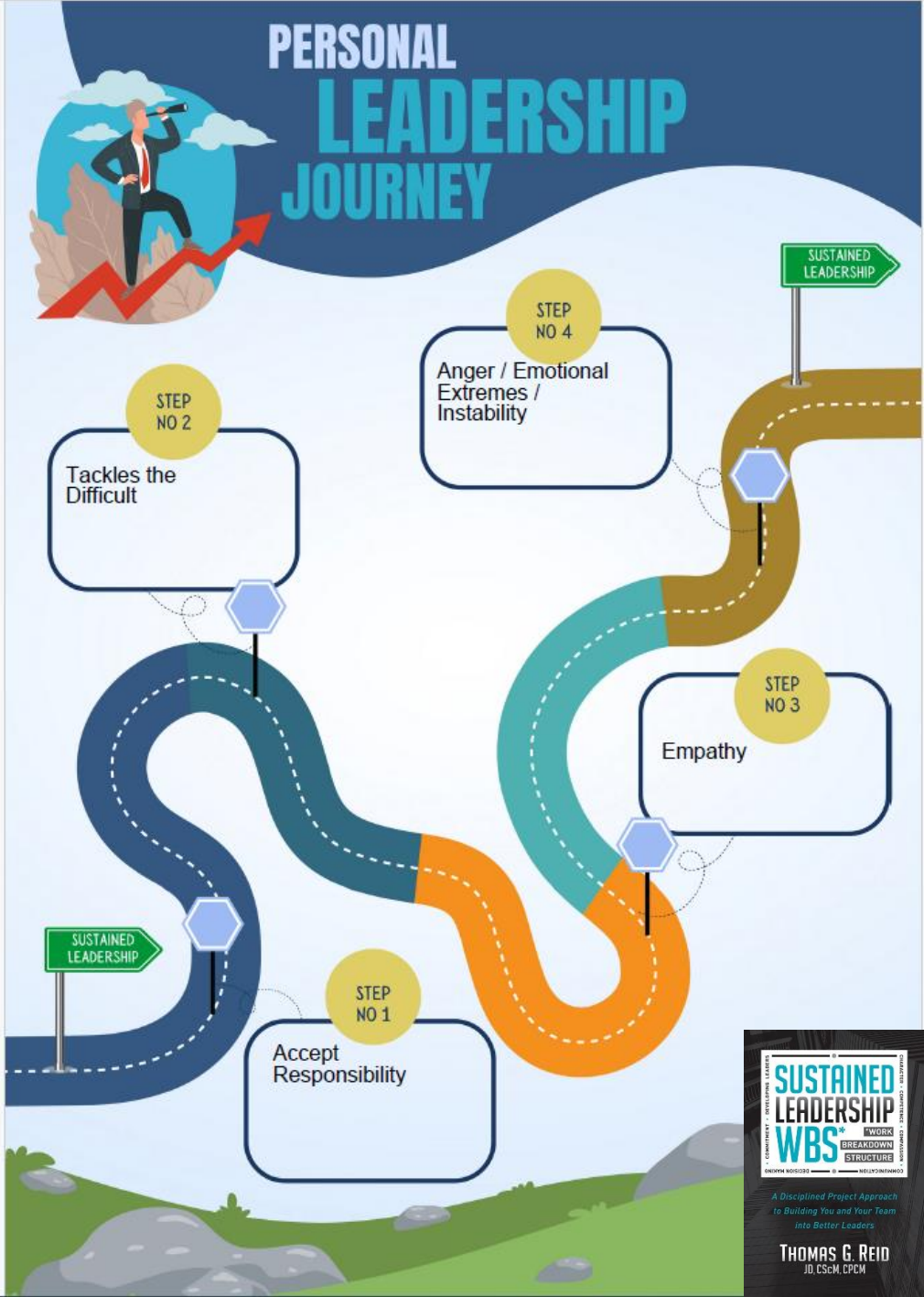
Flowchart or Decision Tree

APPENDIX A –
BONA FIDE NEEDS ANALYSIS



3-45

Progress Path



Timelines

Used when illustrating chronological sequences, historical events, project milestones, or process timelines.

Linear Timeline:

- **Description:** A linear timeline is a simple, horizontal representation of events or milestones arranged in chronological order along a single axis, typically with dates or time periods indicated.
- **Best Use:** Linear timelines are ideal for showing the progression of events over time in a straightforward manner. They are commonly used for historical timelines, project schedules, and event planning.
- **Vertical Timeline:**
 - **Description:** A vertical timeline arranges events or milestones along a vertical axis, with time progressing from top to bottom or bottom to top. Each event is represented by a point or marker on the timeline.
 - **Best Use:** Vertical timelines are effective for displaying a sequence of events in a compact and visually appealing format. They are suitable for illustrating historical timelines, personal milestones, or process workflows.

Timelines

- **Gantt Chart:**

- **Description:** A Gantt chart is a type of timeline that visualizes project schedules, tasks, and dependencies using horizontal bars representing the duration of each task or activity. Tasks are arranged along the timeline axis, with the length of each bar indicating its duration and position indicating its start and end dates.
- **Best Use:** Gantt charts are widely used in project management to plan, schedule, and track project progress over time. They provide a comprehensive overview of project timelines, milestones, and critical paths, enabling project managers to allocate resources effectively and identify potential bottlenecks.

Procurement Funding Process



CONCERNS

- **Decreased or eliminated funding**
- **Contracts not fully funded**
- **Timing of obligations**
- **Continuing resolutions**

Timelines

- **Segmented Timeline:** Consider Government Procurement Process
 - Need Definition
 - Pre-award
 - Award
 - Post Award
 - Closeout

Resource

<https://visme.co/blog/types-of-graphs/>

Samples of 44 different types of charts and graphs

POLLING QUESTION

The best chart format to use is:

- A. Stacked bar chart or a pie hart.
- B. Histogram or a line graph.
- C. The one that is most persuasive to my audience.
- D. The one that best presents the data clearly and objectively.

Contextualization

SECTION 3

Misleading Data Presentation Techniques

- **Circular Reasoning and Data**
- **Correlation vs. Causation**
- **Visual Misrepresentations**
- **False data**
- **Unreliable sourcing**
- **Misrepresenting scale**
- **Statistically insignificant sample size**
- **Allowing self selection in sampling**

because circular reasoning works

Correlation versus Causation

- Shark attacks and ice cream sales are directly correlated
- Murders and ice cream sales are directly correlated
- Drownings and ice cream sales are correlated

What does this tell us?

In summer, the weather gets warmer, people become irritable, go to the beach, and buy ice cream.

Confirmation Bias

Confirmation bias is a cognitive tendency where people favor information that confirms their pre-existing beliefs or values.

It affects how people search for, interpret, and remember information.

This bias can significantly influence the way data is perceived, leading to skewed interpretations and conclusions.

Fighting Confirmation Bias

- Questioning Data Sources
- Cross-Checking Information
- Seeking Contradictory Evidence
- Awareness of Emotional Reactions
- Promoting Open-Mindedness
- Encouraging Critical Thinking
- Engaging in Structured Debates
- Using Analytical Tools
- Implementing Diversity in Teams

The Feel Good Factor

- Putting people in a receptive frame of mind causes them to be more favorably impressed.
- “If it’s sunny on the day of the open house, more people make an offer...” (Seth Godin 5/25/24)
- Most sales are made based on wants (not needs) and give the buyer an emotional dopamine hit.

Reframes Change your Perspective

- Usual Reframe: My odds of success are low.
- Reframe: Maybe I'm bad at estimating the odds.

- Usual Reframe: The experts are in charge.
- Reframe: The best communicator is in charge.

- Usual Reframe: Others think and feel approximately as I do.
- Reframe: Others are unimaginably different.

Adams, Scott. *Reframe Your Brain: The User Interface for Happiness and Success*. Scott Adams, Inc. (2023).

Margin of Error

Margin of Error (MoE) is a statistical term used to describe the range within which the true value of a population parameter is expected to fall, given the results of a survey sample. It provides a measure of the uncertainty or precision of the survey results.

Formula: $MoE = Z \times \frac{\sigma}{\sqrt{n}}$

- **Confidence Level**
- **Sample Size**
- **Population Variability**

MoE Conclusion

- Understanding and correctly interpreting the margin of error is crucial for evaluating the reliability of survey data.
- It allows professionals to assess the precision of the survey estimates and make informed decisions based on these results.
- By practicing the calculation and interpretation of the margin of error, you can enhance your ability to critically analyze survey data and communicate its implications effectively.

Pricing Considerations

Accurate estimating vs precise estimates

- Estimating technique
- Basis of Estimate documentation
- Cost and Price analysis
- DAU Resources:

<https://www.dau.edu/tools/cprg>

<https://www.dau.edu/sites/default/files/tools/CPRG-Volume-2.pdf>

Quantitative Techniques

Accuracy and Integrity

SECTION 4

Data Integrity

- Can you trust the data
- Collection methodologies
- Statistical validity
- Comparison to countervailing data
- Who paid for the study? Financial interests of investigators?

Ensuring Data Integrity

- **Peer Review Process**
- **Data Verification Techniques**
- **Ethical Considerations**
- **Follow the Money**

The Active Defense

- This requires good listening and observation skills
- Ask yourself:
 - Do the facts they are citing support the argument?
 - Are the facts correct?
 - Is the logic wrong?
 - Is the conclusion a *non sequitur*?
 - Is the argument based on false premises?
 - Would the argument lead to a violation of law or regulation?
- Be patient!

Audience Relevance

SECTION 5

How Smart is your Audience?

- Your audience is data stupid.
 - Teaching cost and pricing
 - Balancing a checkbook
 - Calculating a tip or tax
- You must give your audience a reason to care
 - Explain to your audience – Why they care about the data? How does it impact them?
- Credibility/ believability of your data
 - Cite your sources
 - Make it make sense

Putting data in the right context

- Audience – what do they know; what do they want to know?
- How do they usually absorb information?
 - MBTI
 - Learning modes
 - Affinity for data
- What do you want them to DO with the information?

Down 5% then Up 5%

1	\$100.00	95.00
2	\$95.00	99.75
3	\$99.75	94.76
4	\$94.76	99.50
5	\$99.50	94.53
6	\$94.53	99.25
7	\$99.25	94.29
8	\$94.29	99.00
9	\$99.00	94.05
10	\$94.05	98.76
11	\$98.76	93.82
12	\$93.82	98.51

354	\$61.15	64.21
355	\$64.21	61.00
356	\$61.00	64.05
357	\$64.05	60.84
358	\$60.84	63.89
359	\$63.89	60.69
360	\$60.69	63.73
361	\$63.73	60.54
362	\$60.54	63.57
363	\$63.57	60.39
364	\$60.39	63.41
365	\$63.41	60.24

- People do not understand percentages
- The misinterpret data involving percentages

Perception vs. Reality

- Personal Viewpoints Yield Perceptions
- Perceptions ARE Reality
- Misinterpretation
- Misunderstanding
- Prejudice Cycle
 - Scoring points
 - Apportioning Blame

Whether you are making a deal, or settling a claim, presenting evaluation results, or presenting ANYTHING to ANYONE (!) differences are defined by the difference between your thinking and theirs.

Your perception is your reality

Their perception is their reality

Personal Note

Remember: Your perceptions can be as inaccurate as you perceive their perceptions to be.

Which is bigger?

In the 1980s, A&W tried to compete with the Mcdonald's Quarter Pounder by selling a 1/3 pound burger at a lower cost. The product failed, because most customers thought the 1/4 pound was bigger.

This is why I don't argue online.

Best Practices for Effective Data Presentation

- **Clarity and Simplicity**
- **Contextualizing Data**
- **Engaging Visuals**
- **Interactive Data Presentation**

How Good Is Data?

**“There is no such thing as accurate data.
There is only data you believe is accurate.”**

Scott Adams

POLLING QUESTION

The best starting assumption for any presenter is:

- A. Data is persuasive and I must use it to my advantage.
- B. Many audiences are not data savvy and must be ethically guided.
- C. Less is more. Limit the details you give your audience.
- D. Overwhelming your audience with data ensures quicker agreement.

Resources and References

Books:

- "How to Lie with Statistics" by Darrell Huff.
- "The Data Detective: Ten Easy Rules to Make Sense of Statistics" by Tim Harford.
- "Standard Deviations: Flawed Assumptions, Tortured Data, and Other Ways to Lie with Statistics" by Gary Smith.

Websites:

- Websites like Retraction Watch for updates on retracted journal articles. [Center for Scientific Integrity](#)
- Educational resources on proper data visualization techniques.

Summary

- **Question the Source:** Always verify the reliability of data sources and be aware of potential biases.
- **Understand the Methods:** Know the methods used for data collection and analysis to assess accuracy.
- **Check for Consistency:** Ensure that comparisons are made on a like-for-like basis.
- **Avoid Logical Fallacies:** Be vigilant against common logical fallacies and recognize them in others' data presentations.
- **Differentiate Correlation and Causation:** Clearly distinguish between correlation and causation in your data analysis.
- **Use Visuals Wisely:** Design graphs and charts to be clear, accurate, and honest.
- **Maintain Ethical Standards:** Uphold high ethical standards in data presentation to maintain trust and credibility.
- **Engage Your Audience:** Use interactive and relatable techniques to make your data presentation engaging and understandable.

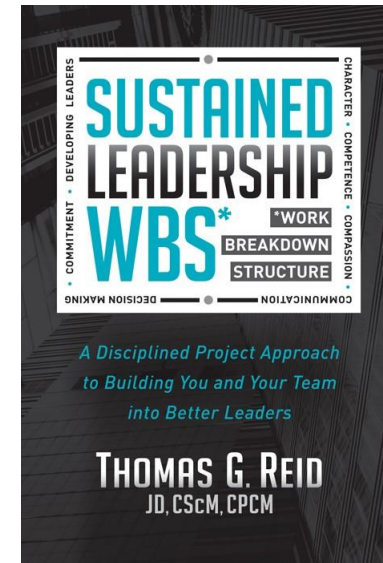
How do build Your Integrity with Data

- **Never lie or mislead**
- **Do not present data you do not understand**
- **Choose the clearest mode to present data**
- **People suck at math; tell them they are brilliant**
- **Never trust the data of others; recognize its limits**
- **Identify missing data; address its impact**
- **Accuracy and Integrity**
- **Don't BS with data; make it relevant**

PCI Instructor, Tom Reid

www.certifiedKsolutions.com

www.TalkingHeadAcademy.Thinkific.com
(Free class there provides 1 CPE credit)



“The first responsibility of a leader is to define reality. The last is to say thank you.”

Max DePree
Author & Business Executive

79