



Storytelling for Cost Estimators

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Background

- Many analytically minded individuals struggle with communicating their insights to others
- Cost estimates and models are meaningless if not communicated effectively
- We can inspire our audiences by using storytelling techniques

"The ability to take data—to be able to understand it, to process it, to extract value from it, to visualize it, to communicate it—that's going to be a hugely important skill in the next decades"

Chief Economist for Google, Dr. Hal R. Varian - 2009

What is a cost estimator's role

- Collect data
- Crunch numbers
- Repeat until death do us part

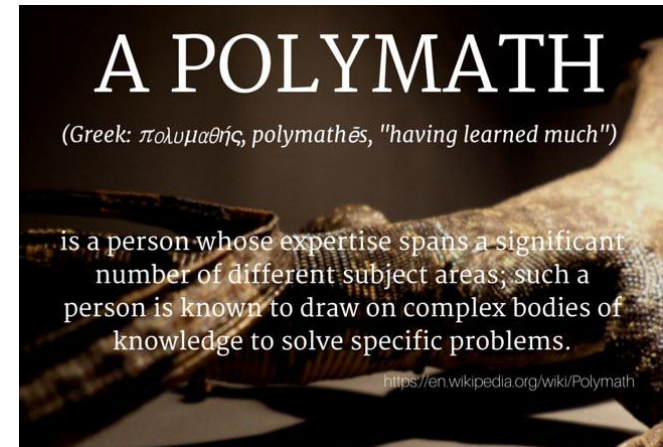


“I math”

What REALLY is a cost estimator's role

The purpose of cost estimating is to “...determine and **communicate** a realistic view of the likely cost outcome, which can form the basis of the plan for executing the work”. - CEBoK®

- Collect data
- Crunch numbers
- Take the information and present it in a way that inspires action in the decision-maker
- We are the guide



Opportunity for action

Initiation and research

Your audience, what you are estimating, and why you are estimating it are of the utmost importance

Assessment

Cost assessment steps are iterative and can be accomplished in varying order or concurrently

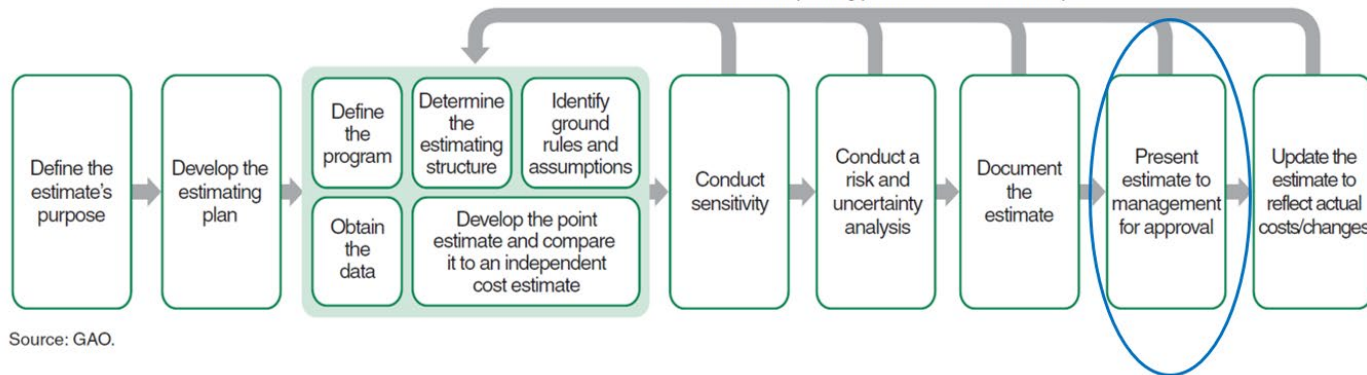
Analysis

The confidence in the point or range of the estimate is crucial to the decision maker

Presentation

Documentation and presentation make or break a cost estimating decision outcome

Analysis, presentation, and updating the estimate steps can lead to repeating previous assessment steps

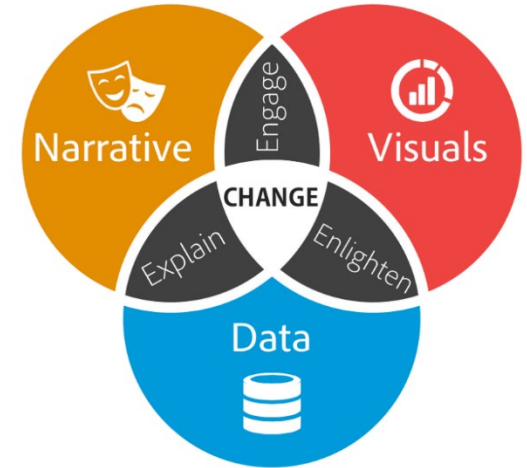


Source: GAO.



How can we improve communication?

- Focusing on the quantitative aspect does not mean the audience understands their role and/or the data
- We can use traditional storytelling techniques to engage audience
 - Not just making better charts or fancier presentation slides
 - Applying the same techniques you do with telling a story with words
- Take the information and present it in a way that inspires action in the decision-maker



“When you combine the right visuals and narrative with the right data, you have a data story that can influence and drive **change**.”

[Brent Dykes, Forbes Magazine](#)

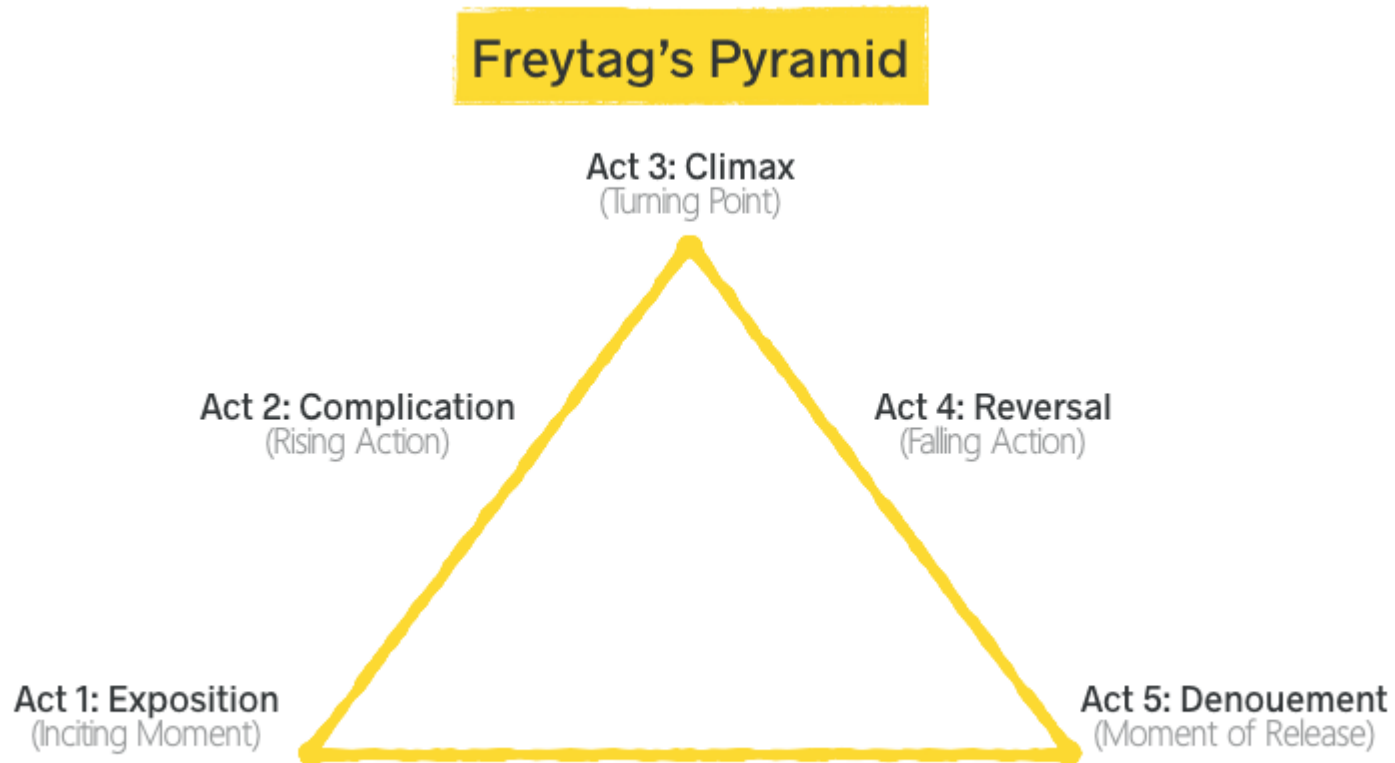


Setting the stage

Questions to ask from *Storytelling with Data*:

- What background information is relevant or essential?
- Who is the audience or decision maker?
- What biases does our audience have that might make them supportive of or resistant to our message?
- What data is available that would strengthen our case? Is our audience familiar with this data or is it new?
- Where are the risks: what factors could weaken our case and do we need to proactively address them?
- What would a successful outcome look like?
- If you only had a limited amount of time what does your audience NEED to know, what would you say?

Story Structure

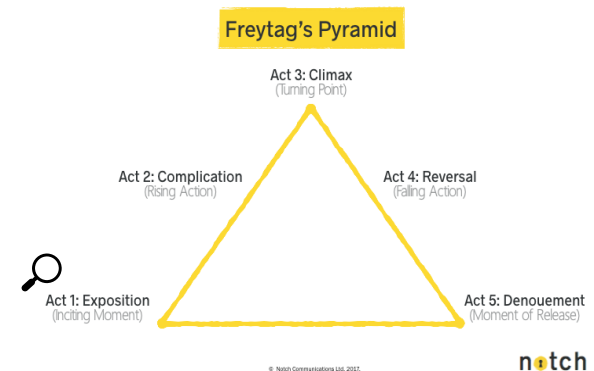


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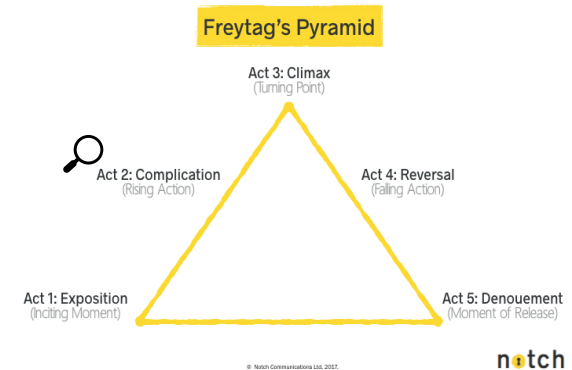
Exposition

- Our first goal is to set the plot
- Take time to make sure the audience understands the who, what, and why of our analysis
- Involve the audience
 - clearly explain what's in it for them
 - what we need from them
 - give them reasons why they should pay attention
- Think of how we want to focus attention on the decision they will have to make



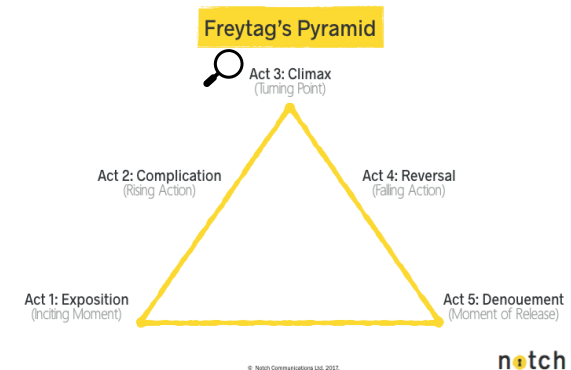
Rising Action

- What action do we want the audience to do after the meeting
- Detail the rising action
- Explain the conflict between what is and what could be
- Pique the audience's interest



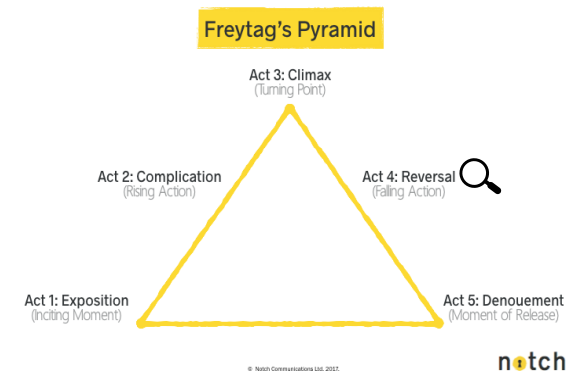
Climax

- Figure out what will motivate action
- Convince audience they should walk away from the presentation ready to do something
- Present data that clearly demonstrates the problem
- Articulate what happens if no action is taken



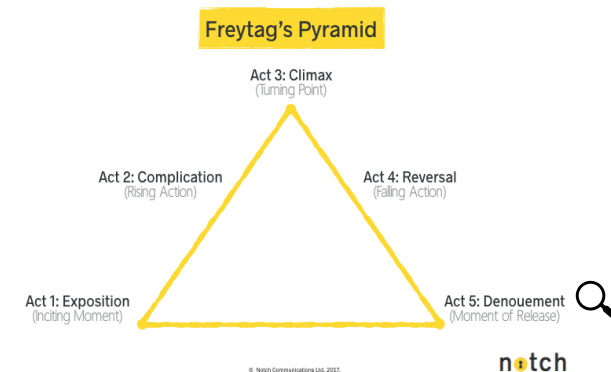
Falling Action

- Audience should feel confident in their understanding of the analysis
- Situation dependent action:
 - Accept a proposed solution
 - Audience engagement
 - Discuss potential options
- Decision-maker should feel empowered
- They are accountable for the next step



Resolution

- Wrap up the story
- Restate the problem and the need for action
- We need them to be the “hero” and walk away:
 - With full understanding
 - Feel compelled
 - Ready to take action



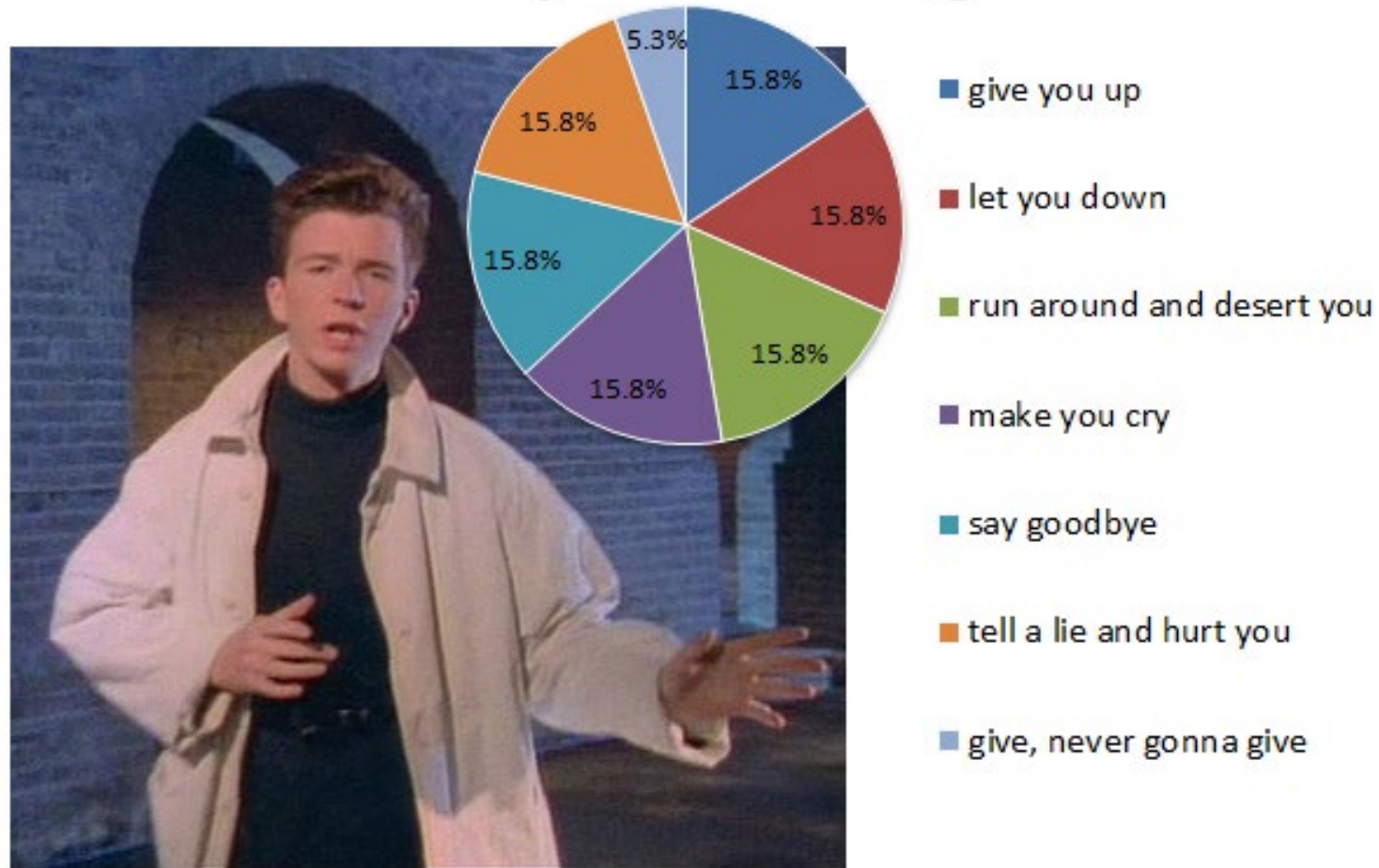


Within the Story Process

- Upfront instead of thinking what you would like to present at the audience – think how will they feel after seeing your presentation
- Build the story and let the data set change their mindset
- Walk the audience through the “how we got here”
- Allow your audience to have the same “aha” moment you did
- You are their guide, they are the hero
- Make it memorable – restate important points and combine with graphics that resonate

Example 1:

Rick Astley is "Never gonna..."





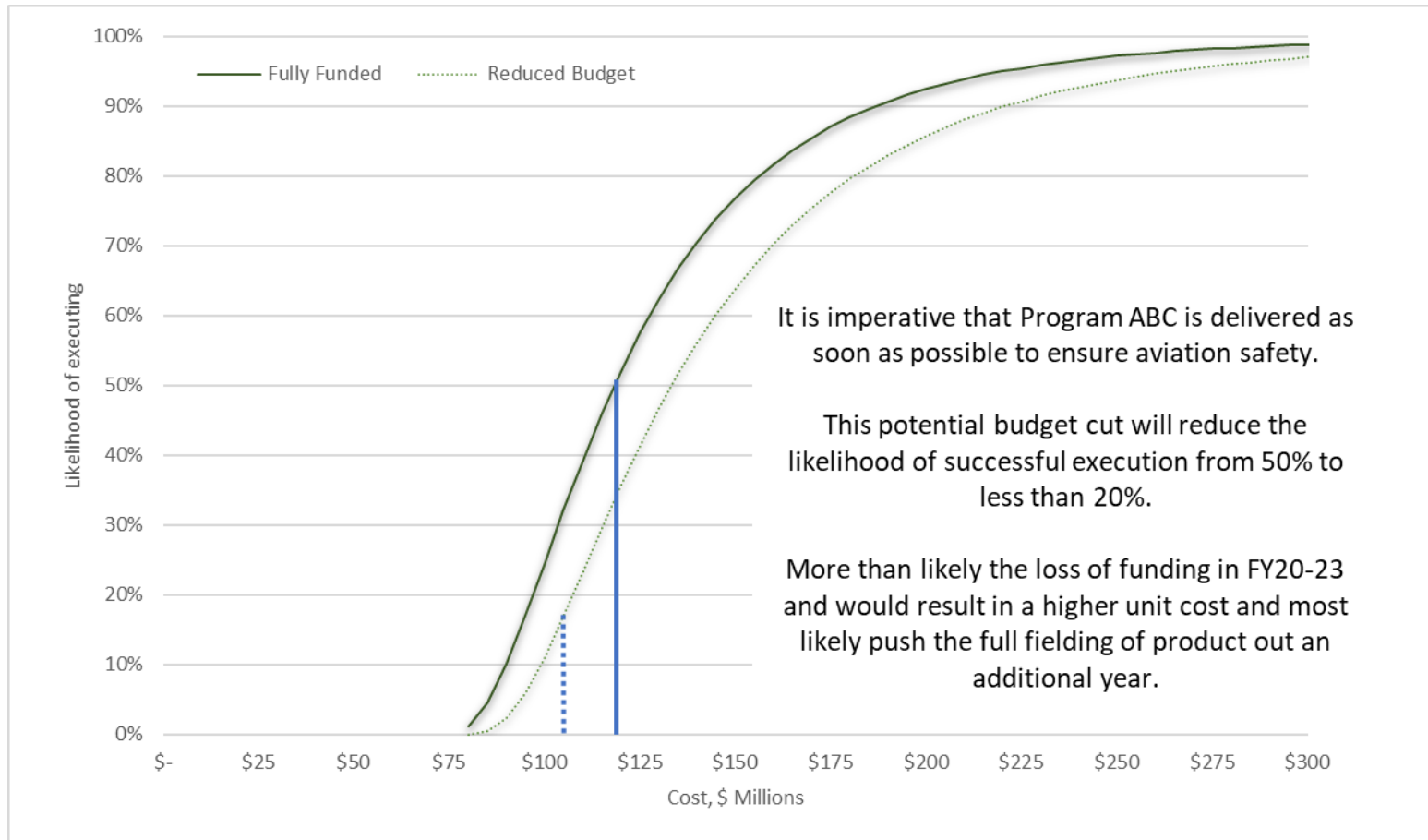
Example 2:

- Assume that you are the cost estimator for Program ABC
- You have created a Life Cycle Cost Estimate (LCCE) for the program
- Incorporated risk analysis in the estimate and is budgeted to 50%tile
- For the next budget cycle, the program office is asked to respond to a funding drill that implements a 10% decrement to the annual budget

(\$ in Millions / Then Year)	FY19	FY20	FY21	FY22	FY23	FY24	FY19-24	To Comp	Prog Total
PROCUREMENT									
Prior \$ (PB20)	22.500	23.063	23.639	24.230	24.836	0.000	118.267	-	118.267
Current \$ (-10% Budget)	22.500	20.756	21.275	21.807	22.352	0.000	108.691		108.691
Delta \$ (Current - Prior)	0.000	(2.306)	(2.364)	(2.423)	(2.484)	0.000	(9.577)		(9.577)
Required¹ \$	22.500	20.756	21.275	21.807	22.352	24.599	133.290		133.290
Delta \$ (Current - Required)	0.000	0.000	0.000	0.000	0.000	(24.599)	(24.599)	-	(24.599)



Example 2:

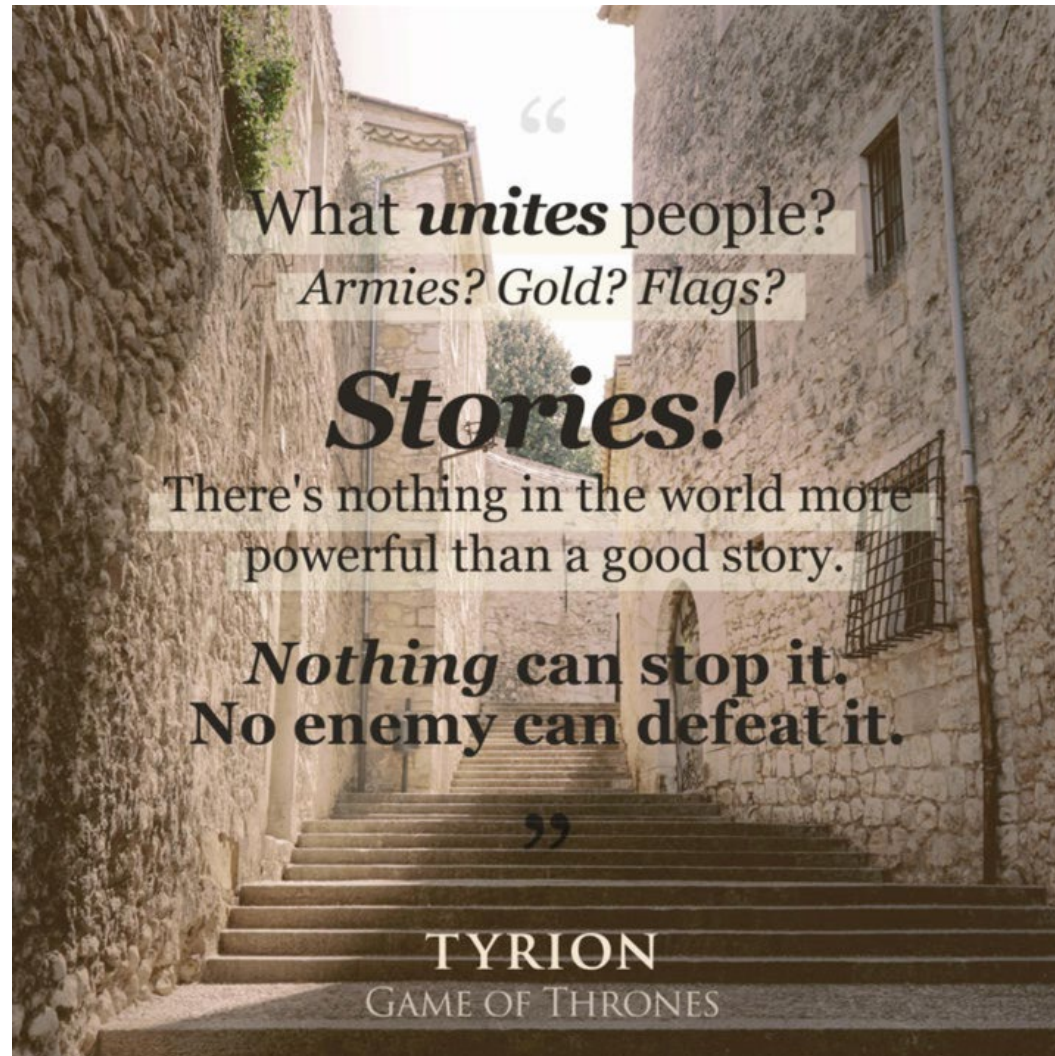




Last Tips and Tricks

- Anytime you make a graph you know exactly what it means, but does a new viewer have the context to understand
- When someone asks for data/graph, get more context of what the “so-what” will be so you can be more efficient
- Relate to people’s experiences and quantify relatable ideas
- Focus on a single idea (having a clear quest)
- Keep it simple and show the story in a way that the cues explain themselves
- We are GREAT cost estimators – let our passion promote trust

Summary





References

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Podcasts:

- www.storytellingwithdata.com/podcast
- <https://www.duarte.com/presentation-skills-resources/podcast-using-storytelling-structure-to-create-motivating-presentations/>

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Abstract Summaries Due November 3, 2020

A black silhouette of a city skyline, likely Minneapolis, is positioned at the bottom of the graphic. Several diagonal rays of light, in shades of yellow and orange, emanate from behind the skyline and extend upwards across the background.

iceaaonline.com/cfp2021