**Elements of a Good Story**

<table>
<thead>
<tr>
<th>CONFLICT</th>
<th>CHARACTER</th>
<th>SETTING</th>
<th>PLOT</th>
<th>THEME</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are you solving?</td>
<td>Who is this story about?</td>
<td>What will set the scene?</td>
<td>What is going on?</td>
<td>What did we learn?</td>
</tr>
<tr>
<td>Balancing tensions</td>
<td>Who benefits?</td>
<td>Give context</td>
<td>What caused events?</td>
<td>Main takeaway from data</td>
</tr>
</tbody>
</table>

**conflict**

**What are we solving?**

What is our strategic goal or business need?
- Example: Reduce impact of service disruptions for our customers (minimize downtime)

**Possible Metrics**
- Prioritization of incidents based on scope and severity (P1, P2, P3, P4)
- Set goals for time to resolution
  - P1 incidents in 4 hours, P2 the same day
- Target: goals achieved for 80% of incidents
**Character**

**Who is this story about?**

Who benefits from the IT Help Desk?
- Customers of IT services (Faculty, Staff, Students)

Possible Metrics
- Number of customers supported
- Customers impacted by incidents
- Value to customers of minimizing service disruptions

**Setting**

**What will set the scene?**

What context do we need to understand the data?
- Definitions of metrics
- Baselines and trends (What is high? What is low?)

Possible Metrics
- Average number of incidents (and distribution)
- Which direction are things moving?
- Median time to resolution for incidents

**Plot**

**What is happening?**

How is the story unfolding now?
- Timely information
- Significant recent changes

Possible Metrics
- Daily or weekly views
- Incidents active now
- Comparisons to same time period last week/year
What should we do with this information?

- Actionable insights
- Advocate effectively for IT
- Projects, new resources, or process changes

Possible Metrics

- Indicators of overall health of service
- Thresholds that automatically trigger actions
Pitfall #2: Pitching Your Story to the Wrong Audience

Audience - CIO with little survey experience

- Audience confused by too much detail
- No clear story
- Not connecting data to a strategic goal or business need
- No clear action
pitfall #2
causes

- Lack of familiarity with how data will be used
- Lack of confidence (tendency to “show your work”)
- Desire to cover all the bases
- Focus on allowing another analyst to replicate work or see all the data, rather than communicating findings in a simple manner

audience
who is listening to our story?

- CIO
- Advisory Boards
- University Leadership
- Faculty
- Staff
- Students
- Alumni
- Community
- Data Analysts

audience
what do they need to know?

Consider the following:

- What part of our story is most important to our audience?
- How familiar is our audience with the subject of our story?
- How familiar is our audience with the data and the methods used to collect them?
- How will our audience use the data?
Audience tips for communicating with leadership

- Focus on the main takeaway
- Less is more; be concise
- Use non-technical language
- Simplify visuals
- Aim to spark discussion and action
  - Leadership should walk away with ideas on how to respond to the information shared

Original Story

Faculty Reported Policies on Device Use Compared to Student Perception of Faculty Policies on Device Use (by Percentage Difference Reported)

![Graph showing differences between faculty reported and student perceived policies on device use.]

Note: Data have been modified for this example.

Improved Story

Classroom policies on device use
Faculty are more welcoming of devices than students think, especially when it comes to student smartphones.

![Bar graph showing student and faculty perceptions of device policies.]

Note: Excerpt from actual EDUCAUSE Infographic.
Activity: Audience Exercise

Read the exercise
Work with a partner to answer the questions

Takeaways - Storytelling

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AUDIENCE

Who is listening to our story? What do they need to know?

CHOOSING DATA
challenge #1a
where to find good internal data

- Student Information System
- LMS
- IT Service Desk Management System

Things to consider
- Governance issues
- Collaborating with data owners and stakeholders
- Aligning data systems

challenge #1b
where to find good benchmarking data

- Industry Data
- Sector
- Institutional Data
  - EDUCAUSE Core Data Service (COD)
  - EDUCAUSE Technology Research in the Academic Community (TRAC)
  - TELI
  - Measuring Higher Education Library & IT Services (MISE)
  - IT Service Desk

challenge #2
defining data

- What is a student?
- What is a service?
- What is a disaster?
- What is an incident?
challenge #3
creating meaningful metrics

Consideration
Your audience’s familiarity with data

<table>
<thead>
<tr>
<th></th>
<th>Data novice</th>
<th>Data savvy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big picture</td>
<td>Consider stories and anecdotes</td>
<td>High-level stats</td>
</tr>
<tr>
<td></td>
<td>Anticipate questions</td>
<td>Do your homework. Be a data expert</td>
</tr>
</tbody>
</table>

Takeaways - Choosing Data

1. Use only the data you need to support your story.
2. Be the expert on your data.
3. Consider your audience’s familiarity with data.
4. Use clear, simple metrics.
Design is *design* "making things pretty"

Design is *communication*
### How many number 3’s?

<table>
<thead>
<tr>
<th>Number</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>697042593473493</td>
<td>3</td>
</tr>
<tr>
<td>58729294954642</td>
<td>3</td>
</tr>
<tr>
<td>44396854634235</td>
<td>3</td>
</tr>
<tr>
<td>66587893768596</td>
<td>3</td>
</tr>
</tbody>
</table>

The whole is different from the sum of its parts

Max Wertheimer

**display**

- applications - gestalt

![Graph](source-url)

**display**

- pie chart - random colors

![Pie Chart](source-url)
### Takeaways - Display

<table>
<thead>
<tr>
<th>VISUAL CUES</th>
<th>BE INTENTIONAL</th>
<th>ELIMINATE DISTRACTION</th>
</tr>
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<tbody>
<tr>
<td>Help guide your audience's attention</td>
<td>Colors Elements Contrast</td>
<td></td>
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<tr>
<td>Who is listening to our story? What do they need to know?</td>
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Takeaways - Choosing Data

1. Use only the data you need to support your story.
2. Be the expert on your data.
3. Consider your audience’s familiarity with data.
4. Use clear, simple metrics.

Takeaways - Display

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<td>Colors Elements Contrast</td>
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Activity: Case Study

Read the case study.

Work with your table and use the elements of good storytelling and supporting data to develop a message to shift perception for a specific campus audience. Ideally, your message will improve your reputation and increase morale.
**delivery**

- Pick a structure that fits the content

**PIXAR**

- Intro with a story, not about your university (but keep them relevant and succinct)

**TED**

**EOUCASE**

**delivery**

- Make sure there is something in there for everyone
Cognitive Load
“The goal is to free limited working memory from irrelevant mental effort.”
Ruth Clark
Blaise Pascal

What's the one big idea when they tell their spouse that night?
Daniel Pink

Make the talk your own. Play to your strengths and give a talk that is truly authentic to you.
Chris Anderson
practice with someone different than yourself. Listen.

Get the audience engaged right off the bat.

Really know the content. Anticipate tough questions. Create answer notes.
“Women are less confident and it impacts them professionally, people often hired/promoted based on confidence”
The Atlantic

**delivery**
**confidence**

**tips on nerves**

**Practice & Frequency**

**Power Pose**

**Start with audience engagement**

**breathe**
Activity: Elevator Pitch

Pair up and work on the same exercise (case study):
5 minutes to prep
1 minute to talk (each)
Feedback

Takeaways - Storytelling

<table>
<thead>
<tr>
<th>STORYTELLING</th>
<th>CHOOSING DATA</th>
<th>DISPLAY</th>
<th>DELIVERY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Tell a compelling story for your audience</td>
<td>Use the best metrics for your audience</td>
<td>Use visual elements strategically to communicate your idea</td>
<td>Bring it all together</td>
</tr>
</tbody>
</table>

References

- Pixar Pitch
- “Start With Why” by Simon Sinek
- “Storytelling with Data” by Cole Nussbaumer Knaflic
- Color-blindness simulator
- Stock photos: unsplash.com
- Icons: theounproject.com
### Audience Exercise

**Time:** 5-7 Minutes  
**Format:** Pair discussion

**Activity:**
1. Find a partner at your table
2. Consider the dashboard on the next page (from earlier in the presentation)
3. Select faculty or students as your audience
4. Identify at least 1-2 changes you would make to better communicate this information to your selected audience

**Notes:**
Audience Exercise: Dashboard

Service Center Performance - This Month

- Customers Disrupted: 2132
- Total Hours Lost: 516

High-Priority Incidents
- 2017 (Oct): 20
- 2018 (Oct): 103

Time To Resolution Achievement (Target = 80%)
- Yes: 77%
- No: 23%

Customer Hours Saved This Month: 87.2
(Compared to same month in previous year)
A Thousand Words and a Picture: Storytelling with Data

Case Study

**Time:** 20 minutes

**Format:** Table discussion followed by group presentation

**Scenario**

You just celebrated your five year anniversary as CIO at Common College. As you reflect on all of the great achievements you and your team have made over the past five years you get an email from a vocal leader of the student government. The email summarizes the focus of discussion from a recent town hall meeting. The meeting was held to discuss campus IT and it is now clear that the general campus perception is that IT is a joke at Common College. During the meeting students listed the issues they have with IT:

- WiFi doesn’t work and is unreliable
- The IT fee has been increased and no one knows what this fee supports
- The LMS is changing AGAIN

The town hall meeting has been generating buzz on campus. The student leader has met with the president of Common College and a vocal group of faculty members are now jumping on the bandwagon - they are adding “poor IT in the classroom” to the list of grievances. New leaders on the board and throughout campus are hearing complaints from folks coming out of the woodwork. You feel like you have made great strides the past five years, but it dawns on you the story hasn’t been told - you assumed everybody felt the improvements as you did.

**Your Challenge**

Use the elements of good storytelling and supporting data to develop a message to shift perception for a specific campus audience. Ideally, your message will improve your reputation and increase morale.
**Worksheet**

**Step 1: Select your audience**

- CIO
- IT Staff
- Students
- Faculty
- Fiscal Managers
- Other: ________________

**Step 2: In one sentence, define the problem this audience is trying to solve.**


**Step 3: In one sentence, define who will benefit when the problem is solved.**


**Step 4: Choose 2-3 pieces of supporting data.**

- Review the supporting data provided.
- Select appropriate data for your audience.
- Briefly describe what is happening (based on the data) that supports your story.
- Sketch an example of how you would visualize these data for your audience.
- Make note of elements you want your audience to focus on.

**Step 5: Write a one sentence takeaway for your audience.**
### Supporting Data

#### LMS Accessibility Comparison

<table>
<thead>
<tr>
<th>Functionality</th>
<th>Old LMS</th>
<th>New LMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text-alternatives for non-text content</td>
<td>Full Functionality</td>
<td>Full Functionality</td>
</tr>
<tr>
<td>All content accessible via keyboard</td>
<td>Limited Functionality</td>
<td>Improved Functionality</td>
</tr>
<tr>
<td>Content does not flash (to avoid triggering seizures)</td>
<td>N/A</td>
<td>Full Functionality</td>
</tr>
<tr>
<td>Content appears and functions in predictable ways</td>
<td>Limited Functionality</td>
<td>Improved Functionality</td>
</tr>
<tr>
<td>Closed captioning</td>
<td>Limited Functionality (fee per use)</td>
<td>Full Functionality</td>
</tr>
<tr>
<td>Compatible with assistive technologies</td>
<td>Limited Functionality</td>
<td>Full Functionality</td>
</tr>
<tr>
<td>Assistance to help correct mistakes during input</td>
<td>Limited Functionality</td>
<td>Full Functionality</td>
</tr>
</tbody>
</table>
Supporting Data

List of Key Projects Completed Over Last 5 Years

• LMS transition--product selection
• Campus policy on surveillance and drone use
• Computing lab computer and printer refresh
• Campus mobile app update (Version 5.0)
• Wi-fi system upgrade for south campus
• Makerspace in library (sponsored by industry partner)
• Active learning classroom in new Engineering building
• Student success initiative--advising and degree planning modules
• Campus cell tower expansion (partnership with cell vendors)
• Campus software license renewal (new contract and payment plan)
• Phishing education program
• Duo implementation (dual factor authentication)
• HR system update for direct deposit
• Data center expansion
• Network monitoring dashboard
• Amazon Echo pilot
Supporting Data
Support for student success initiatives

![Student Success - Staff Hours]

- 114 (2016)
- 423 (2017)
- 1102 (2018)
Supporting Data

Number and resolution time for tickets

**Support Tickets - 2018**

**Average Resolution Time in Minutes - 2018**
Supporting Data
WiFi & network stats - demand vs. access points

<table>
<thead>
<tr>
<th>Campuswide Wireless Stats</th>
<th>Fall 2017</th>
<th>Fall 2016</th>
<th>Fall 2015</th>
<th>Fall 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concurrent Wireless Network Devices - Peak</td>
<td>15,363</td>
<td>15,381</td>
<td>14,059</td>
<td>11,600</td>
</tr>
<tr>
<td>Average Unique Wireless Devices Per Day</td>
<td>22,146</td>
<td>22,172</td>
<td>20,266</td>
<td>16,722</td>
</tr>
<tr>
<td>Wireless Access Points - Main Campus - 802.11n</td>
<td>1,139</td>
<td>1,100</td>
<td>1,039</td>
<td>1,023</td>
</tr>
<tr>
<td>Wireless Access Points - Main Campus - 802.11ac</td>
<td>346</td>
<td>103</td>
<td>48</td>
<td>0</td>
</tr>
<tr>
<td>Wireless Access Points - Residence Halls - 802.11n</td>
<td>784</td>
<td>783</td>
<td>784</td>
<td>574</td>
</tr>
</tbody>
</table>
## Supporting Data

**Costs of standard software licenses**

<table>
<thead>
<tr>
<th>Top Software costs for Campus</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>511,000</td>
<td>Ellucian/Banner</td>
</tr>
<tr>
<td>289,000</td>
<td>D2L</td>
</tr>
<tr>
<td>247,000</td>
<td>Oracle</td>
</tr>
<tr>
<td>162,000</td>
<td>Hyland</td>
</tr>
<tr>
<td>122,000</td>
<td>Microsoft Desktop Bundle</td>
</tr>
<tr>
<td>88,000</td>
<td>CommVault</td>
</tr>
<tr>
<td>85,000</td>
<td>Atlassian</td>
</tr>
<tr>
<td>56,000</td>
<td>Blackboard Collaborate</td>
</tr>
<tr>
<td>55,000</td>
<td>Advantel</td>
</tr>
<tr>
<td>53,000</td>
<td>PeopleAdmin</td>
</tr>
<tr>
<td>50,000</td>
<td>MuleSoft</td>
</tr>
<tr>
<td>45,000</td>
<td>Talisma</td>
</tr>
</tbody>
</table>
## Supporting Data

### Distribution of how student IT fee is spent

<table>
<thead>
<tr>
<th>Student Tech Fee</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fee per quarter</td>
<td>30.00</td>
<td>35.00</td>
<td>40.00</td>
<td>45.00</td>
<td>50.00</td>
</tr>
<tr>
<td>Average Student Population</td>
<td>17,300</td>
<td>17,200</td>
<td>17,000</td>
<td>16,500</td>
<td>16,900</td>
</tr>
<tr>
<td>Total Fee</td>
<td>1,557,000</td>
<td>1,806,000</td>
<td>2,040,000</td>
<td>2,227,500</td>
<td>2,535,000</td>
</tr>
</tbody>
</table>

### Fee Usage

<table>
<thead>
<tr>
<th>Usage</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
</tr>
</thead>
<tbody>
<tr>
<td>WiFi on campus</td>
<td>165,000</td>
<td>178,250</td>
<td>193,750</td>
<td>208,000</td>
<td>239,250</td>
</tr>
<tr>
<td>Instructional Design</td>
<td>200,000</td>
<td>220,000</td>
<td>300,000</td>
<td>360,000</td>
<td>438,750</td>
</tr>
<tr>
<td>Student Success/Degree planning</td>
<td>118,750</td>
<td>157,500</td>
<td>247,500</td>
<td>302,500</td>
<td>437,500</td>
</tr>
<tr>
<td>Duo and Direct Deposit</td>
<td>-</td>
<td>100,000</td>
<td>150,000</td>
<td>175,000</td>
<td>200,000</td>
</tr>
<tr>
<td>Refresh lab computers</td>
<td>256,300</td>
<td>289,000</td>
<td>323,600</td>
<td>293,300</td>
<td>329,900</td>
</tr>
<tr>
<td>Printing in labs</td>
<td>252,260</td>
<td>266,777</td>
<td>272,029</td>
<td>275,042</td>
<td>293,775</td>
</tr>
<tr>
<td>New Amazon Echo pilot</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100,000</td>
<td>200,000</td>
</tr>
<tr>
<td>Subsidize of Student Software Costs</td>
<td>100,000</td>
<td>105,000</td>
<td>110,250</td>
<td>115,763</td>
<td>121,551</td>
</tr>
</tbody>
</table>

| Total Tech Fee Funds Remaining     | 464,690| 489,473| 442,871| 397,895| 274,275|
## Supporting Data

### Funding over time

<table>
<thead>
<tr>
<th></th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Operating Budget</td>
<td>$13,394,337</td>
<td>$13,162,941</td>
<td>$14,875,899</td>
<td>$15,482,660</td>
<td>$16,308,240</td>
<td>$16,762,818</td>
<td>$17,177,212</td>
</tr>
<tr>
<td>Personnel</td>
<td>$8,777,489</td>
<td>$8,780,214</td>
<td>$10,570,770</td>
<td>$11,094,892</td>
<td>$11,787,145</td>
<td>$12,606,166</td>
<td>$13,283,532</td>
</tr>
<tr>
<td>Services and Supplies - S&amp;S</td>
<td>$4,616,848</td>
<td>$4,382,727</td>
<td>$4,305,129</td>
<td>$4,387,768</td>
<td>$4,521,095</td>
<td>$4,156,652</td>
<td>$3,893,680</td>
</tr>
<tr>
<td>S&amp;S Contractual Oblig</td>
<td>$3,373,190</td>
<td>$3,391,866</td>
<td>$2,824,393</td>
<td>$2,907,638</td>
<td>$3,110,643</td>
<td>$3,049,103</td>
<td>$3,302,960</td>
</tr>
<tr>
<td>Equipment Replacement</td>
<td>$2,298,742</td>
<td>$990,861</td>
<td>$1,480,736</td>
<td>$1,480,130</td>
<td>$1,410,452</td>
<td>$1,107,549</td>
<td>$590,720</td>
</tr>
</tbody>
</table>
Supporting Data

FTE and $ spent per institutional FTE