**Chapter 13 Visualization is the Key to Understanding Data**

A chapter outline for [Sport Business Analytics, by Harrison & Bukstein](https://www.crcpress.com/Sport-Business-Analytics-Using-Data-to-Increase-Revenue-and-Improve-Operational/Harrison-Bukstein/p/book/9781498761260)

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|  | Concept | Definition |
| 1 | % of world’s data created in past 2 years | 90% |
| 2 | Visualization | The tactic used to make sense of the data, discover insights and communicate actions that will improve the respective organization’s bottom line. |
| 3 | 3 Benefits of Visualization | 1. Reduce time to insight 2. Increased accuracy of insights 3. Improved stakeholder agreement |
| 4 | Preattentive processing | The human ability to rapidly process certain visual properties (size, color, density, motion or orientation) subconsciously. Users are more efficient, confident & engaged. |
| 5 | INSIGHT framework | 1. Identify the business question. Common pitfall: answering too many questions in one view. 2. Name the KPIs. 3. Shape the data. (headers/unique fields) 4. Initial concept. Sketch the direction. 5. Gather feedback. Ask end users. 6. Hone the dashboard. Incorporate feedback. 7. Tell the story. Distribute to users. |
| 6 | Why stories work | Humans are wired to retain stories not facts and statistics (63% retain stories; 5% retain stats). |
| 7 | Storytelling elements | 1. Plot or story line (the insight) 2. Characters (KPIs/measures) 3. Narrative (data visualization) |
| 8 | Tip 1. Know your audience (examples) | 1. C-level: Keep it simple. Focus on KPIs and progress toward goals. 2. Colleagues (fellow analysts): Build interactivity to allow others to find their own stories. 3. Public (mass audience): Be creative with graphic design. |
| 9 | Highlight tables | Simplest form of data visualization that leads to much shorter time to insight. |
| 10 | Tip 2. Keep it simple | Less is almost always more to communicate data-driven stories. Use a maximum of 12 widgets (charts, titles and filters). Ask/answer a single question. Simple maximizes effectiveness to largest audience possible. |
| 11 | Tip 3. Retell an old story | Data tables are the least effective way of communicating data. Retell an old story to reinvigorate reporting, engage your audience and maximize impact. |
| 12 | Tip 4. Use comparisons | Comparisons help avoid the “so what?” question. Lack of context makes it difficult to understand, engage and take action. |
| 13 | Design enhancements | 1. Simple color palettes and mute w transparency. 2. Switch up typography (font and size). 3. Layout: guide user through store with spacing 4. Pay attention to details: minimal lines, add borders, use transparency to show overlaps 5. Don’t neglect the setup: title & description ask a single question 6. Use in-line insights: Add a textbox to add thoughts/insights 7. Don’t underestimate the power of annotations: Add context, such as offline (external) factors that may explain changes 8. Tell a story—literally, if in a room with a user |