

## CEP Magazine – February 2022 Applying actionable data from concept to reality: Part 2

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By Joe Perez, ThD

Dr. Joe Perez ([jwperez@gmail.com](mailto:jwperez@gmail.com)) is a Senior Systems Analyst for the North Carolina Department of Health & Human Services and Chief Technology Officer for SolonTek Corporation in Raleigh, North Carolina, USA.

- [linkedin.com/in/jwperez/](https://www.linkedin.com/in/jwperez/)

As was mentioned in Part 1 of this series,<sup>[1]</sup> your *data storytelling journey* can be viewed as a spectrum made up of five stages for best practices (Figure 1) in getting from the idea (“Conception” on the left) to the completed visualization (“Direction” on the right). These five stages (Conception, Inception, Perception, Inspection, and Direction) make up the subtopics that are expounded upon in this article series.



Figure 1. The Five Stages of the Spectrum



Part 1 of this series dealt with the first stage, Conception, and covered its related key word, “articulate,” showing the importance of clearly articulating the need at the time the initial ideas are being conceived. That first stage was also depicted as a race—an appropriate metaphor, because both this stage and the data storytelling journey have a starting point, a progression, and a finish line indicating completion. We now come to the second and third stages.

### **Second stage: Inception—Make the case**

After starting the race, the next stage is when the analytics professional must make the case for expressing the concept visually; “advocate” is the associated key word.

Mike Parkinson, CEO and founder of Billion Dollar Graphics, advocates that humans are affected by graphics in two ways: cognitively and emotionally. Regarding the cognitive aspect, Parkinson said, “Graphics expedite and increase our level of communication. They increase comprehension, recollection, and retention. Visual clues help us decode text and attract attention to information or direct attention increasing the likelihood that the audience will remember.”<sup>[2]</sup> Regarding the emotional aspect, Parkinson also said, “Pictures enhance or affect emotions and attitudes. Graphics engage our imagination and heighten our creative thinking by stimulating other areas of our brain (which in turn leads to a more profound and accurate understanding of the presented material).”

To summarize these assertions, graphics get ahold of both our brains and our hearts. Any educational endeavor that manages to touch both the brain and the heart is bound to be successful.

### **Making the case with graphics**

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British data journalist David McCandless said in his 2010 TED Talk that sight, by far, has the highest bandwidth of any of the five senses: “About 80% of the information we take in is by eye.”<sup>[3]</sup>

Additional research in the years since McCandless’ statement suggests that that number is likely closer to 90%.<sup>[4]</sup> Two European research professors, Robin Hogarth and Emre Soyer, teamed up on an experiment in which three groups of economic professionals were asked the same question regarding a specific data set, the results of which appear to bring credence to McCandless’ claim.<sup>[5]</sup> The first group of economists was given the data and an accompanying analysis. Seventy-two percent of them answered the question incorrectly. A second group was given the data, the analysis, and a graph, and although they did better than the first group, 61% of those economists were still incorrect in their answer. A third group was provided only a graph (no data, no analysis), and a mere 3% of this group got the answer wrong.

These results *make the case* for visual representation of data and, as such, should be *advocated* for the *inception* of effective business intelligence and analytics reporting strategy.

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