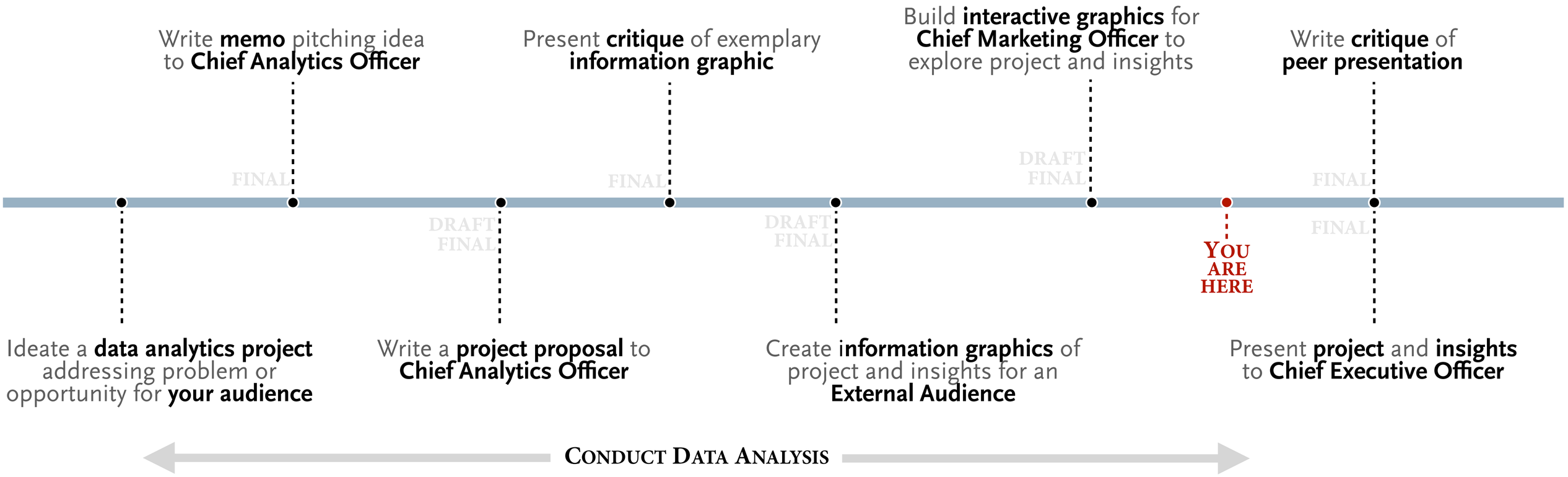
Storytelling with data

12 | Verbal with the (data) visual; scrollytelling; user-centered, content design

course overview, main course deliverables



verbal with the visual — *limitations* and *advantages*

verbal with the visual, limitations of presentations

PowerPoint, compared to other common presentation tools, **reduces the analytical quality** of serious presentations of evidence.

This is especially the case for the PowerPoint **ready-made templates**, which **corrupt statistical reasoning**, and often **weaken verbal and spatial thinking**.

— Tufte, 2006

verbal with the visual, limitations of presentations

verbal with the visual, limitations of presentations

Powerpoint can have low resolution and it

verbal with the visual, limitations of presentations

Powerpoint can have low resolution and it encourages

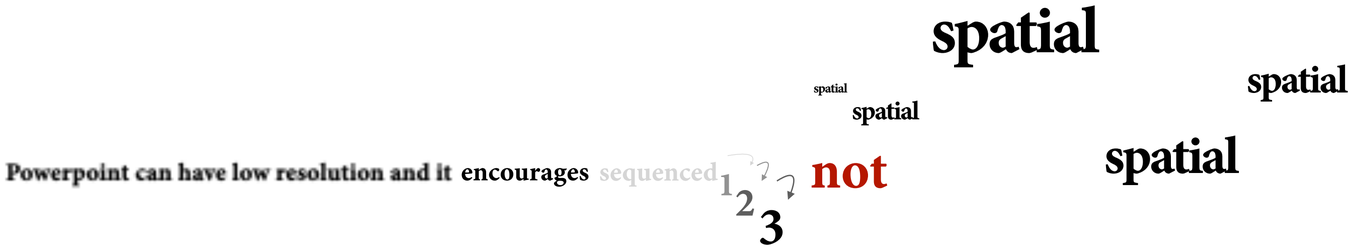
verbal with the visual, limitations of presentations

Powerpoint can have low resolution and it encourages sequenced 1 2 3

verbal with the visual, limitations of presentations

Powerpoint can have low resolution and it encourages sequenced 1 2 3 not

verbal with the visual, limitations of presentations



verbal with the visual, limitations of presentations

Powerpoint can have low resolution and it encourages sequenced 1 2 3 not spatial spatial spatial spatial spatial review.

Information stacked. in. time. makes it difficult
to understand context and evaluate relationships.

verbal with the visual, **addressing limitations**

show comparisons
adjacent in space

verbal with the visual, **addressing limitations**

show comparisons
adjacent in space

increase data-ink on
slides too, within reason

verbal with the visual, **addressing limitations**

show comparisons
adjacent in space

one alternate approach,
document & discussion

increase data-ink on
slides too, within reason

verbal with the visual, advantages of presentations

show comparisons
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one alternate approach,
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consider advantages of
sequential presentation

verbal with the visual, advantages of presentations

show comparisons
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one alternate approach,
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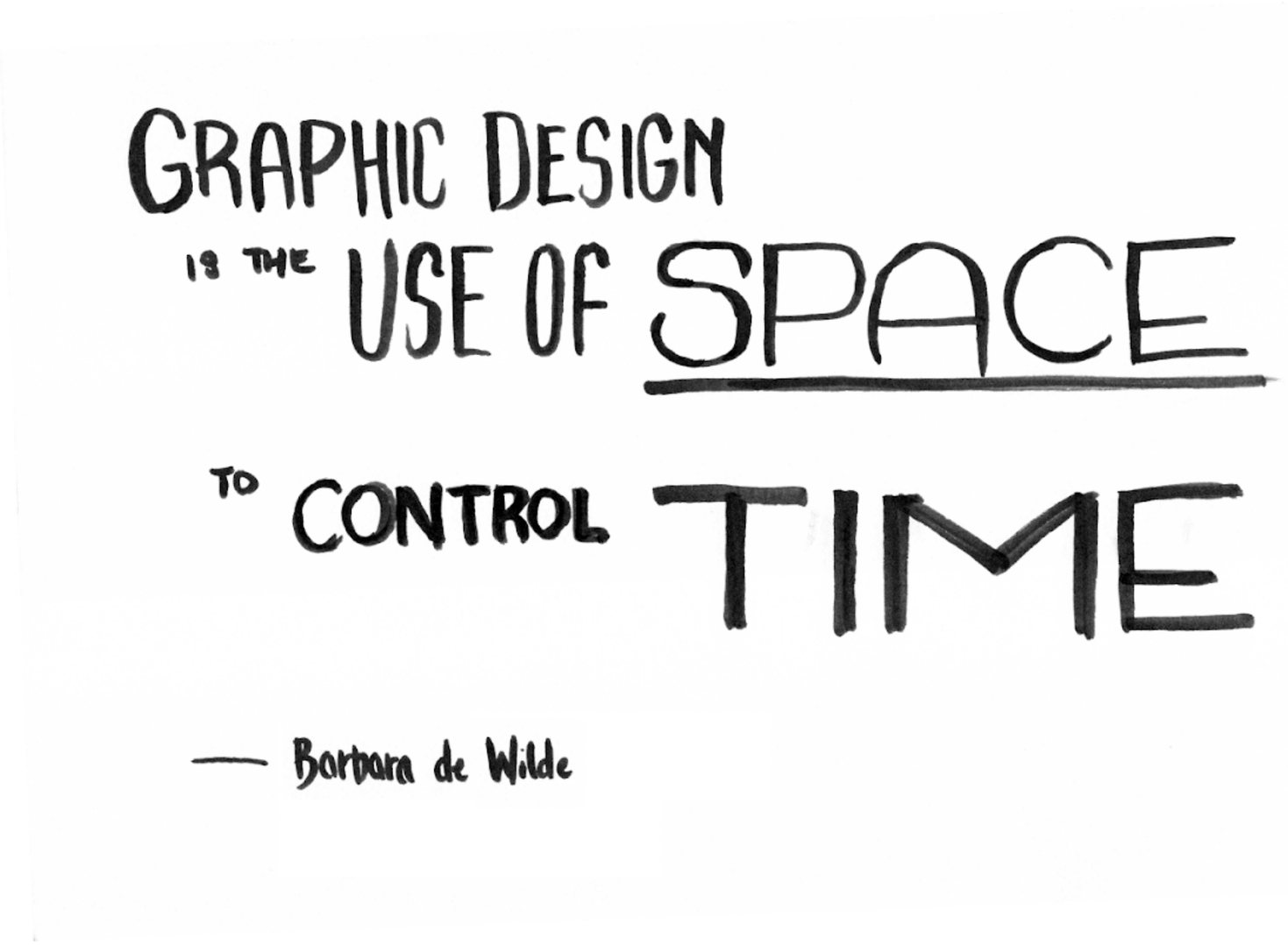
slides too, within reason

consider advantages of
sequential presentation

We control when our audience receives information!

verbal with the visual, advantages of presentations

— Chu, 2016

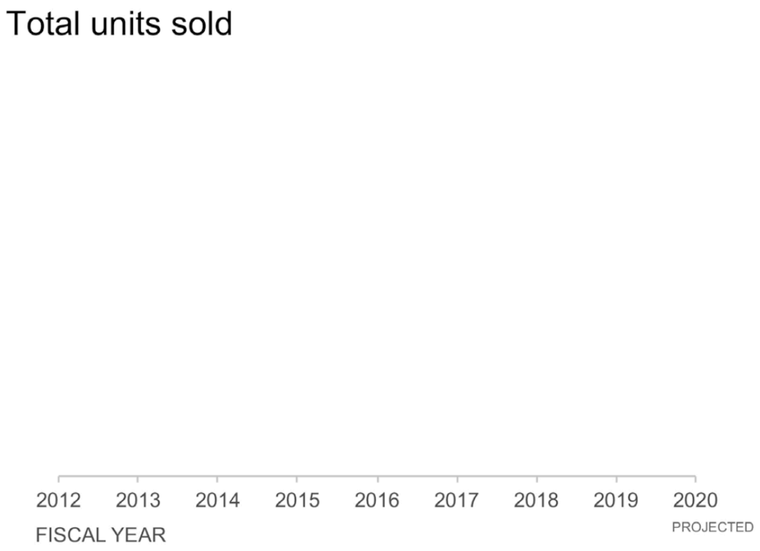

GRAPHIC DESIGN
IS THE USE OF SPACE
TO CONTROL TIME
— Barbara de Wilde

— Chu, 2016

verbal with the data visual

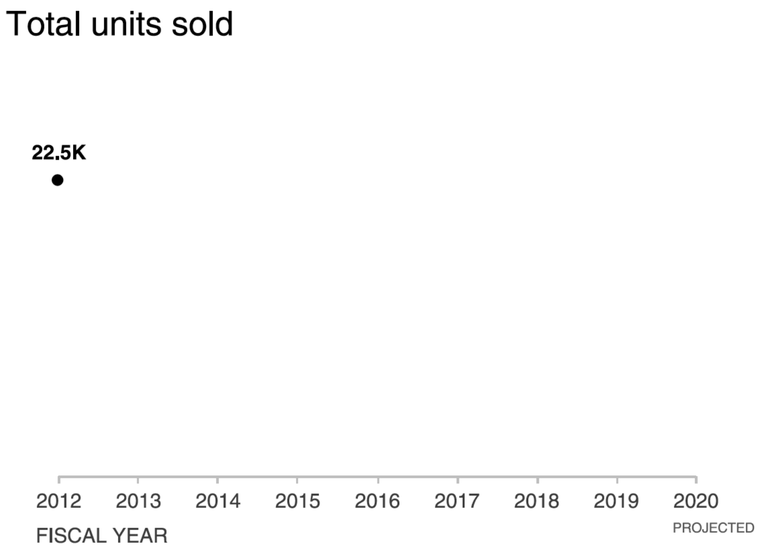
verbal with the (data) visual, temporal layering of spatial comparisons

verbal with the (data) visual, **temporal layering of spatial comparisons**



— Knaflic, 2019

verbal with the (data) visual, **temporal layering of spatial comparisons**



— Knaflic, 2019

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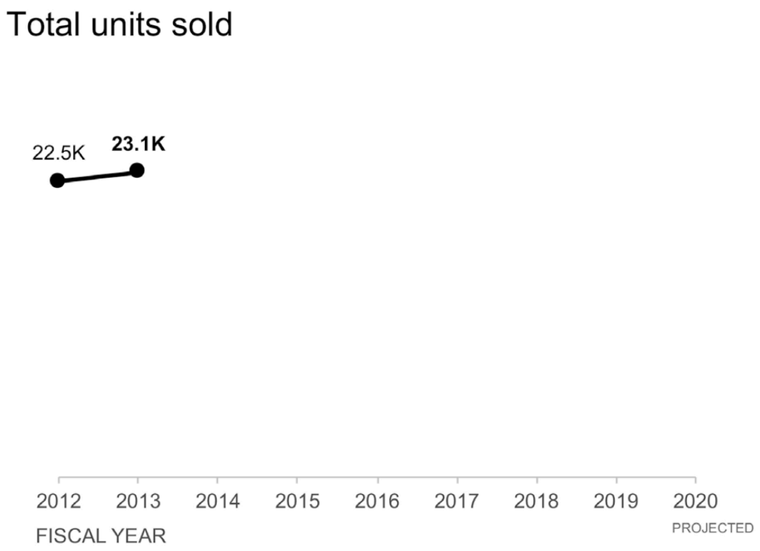
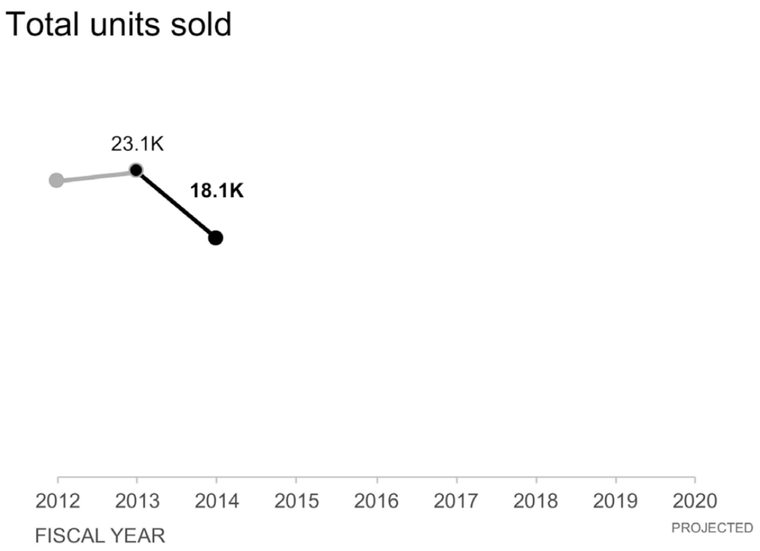


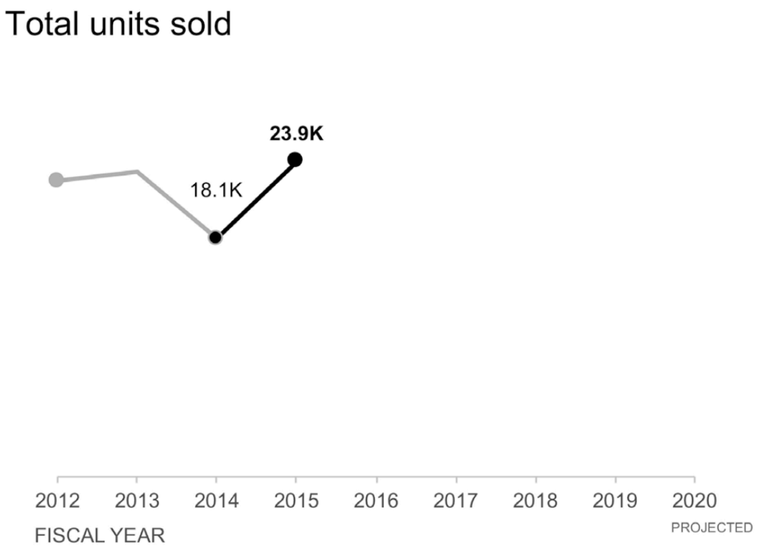
— Knaflic, 2019

verbal with the (data) visual, **temporal layering of spatial comparisons**



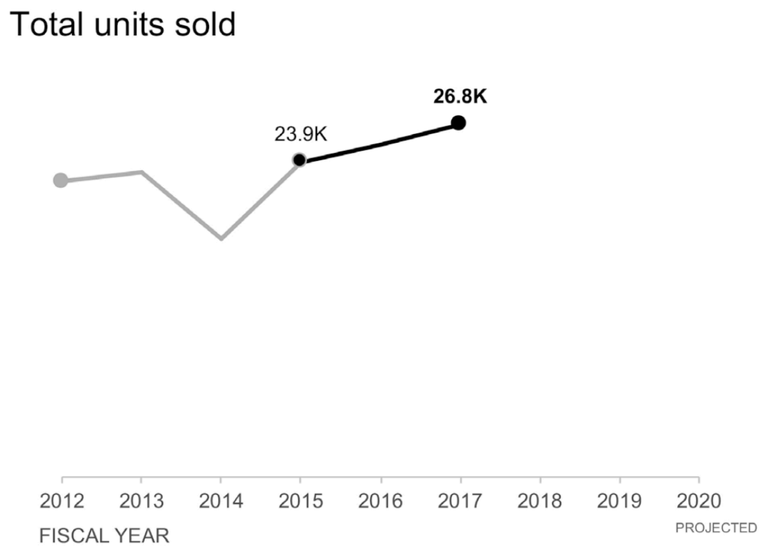
— Knaflic, 2019

verbal with the (data) visual, **temporal layering of spatial comparisons**



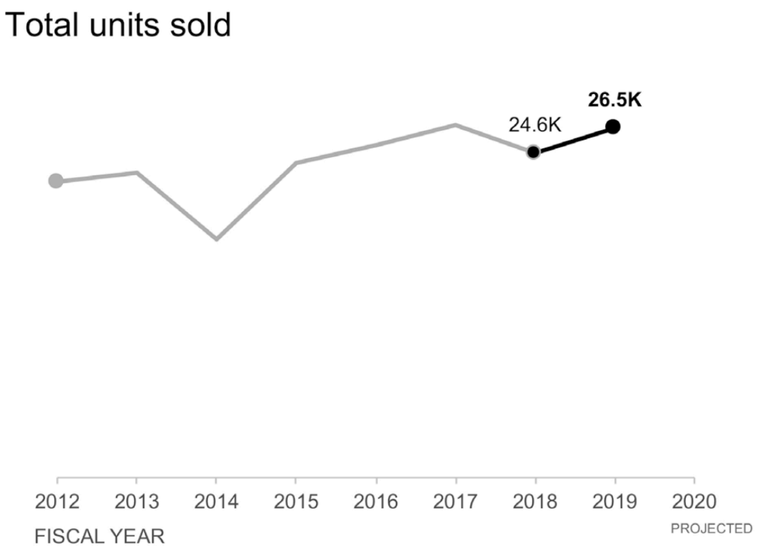
— Knaflic, 2019

verbal with the (data) visual, **temporal layering of spatial comparisons**



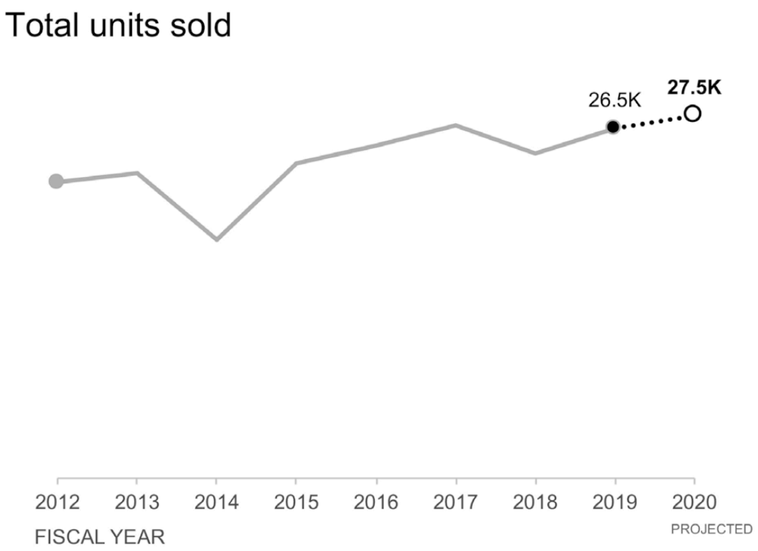
— Knaflic, 2019

verbal with the (data) visual, **temporal layering of spatial comparisons**



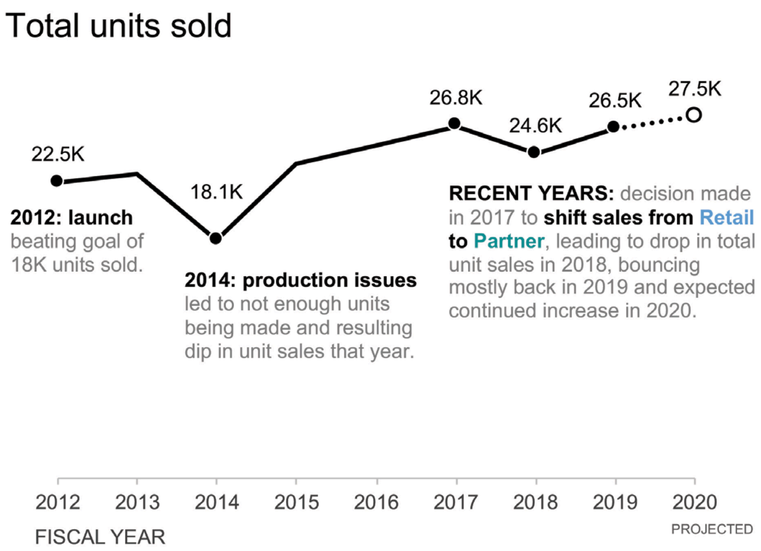
— Knaflic, 2019

verbal with the (data) visual, **temporal layering of spatial comparisons**



— Knaflic, 2019

verbal with the (data) visual, possible stand-alone version



— Knaflic, 2019

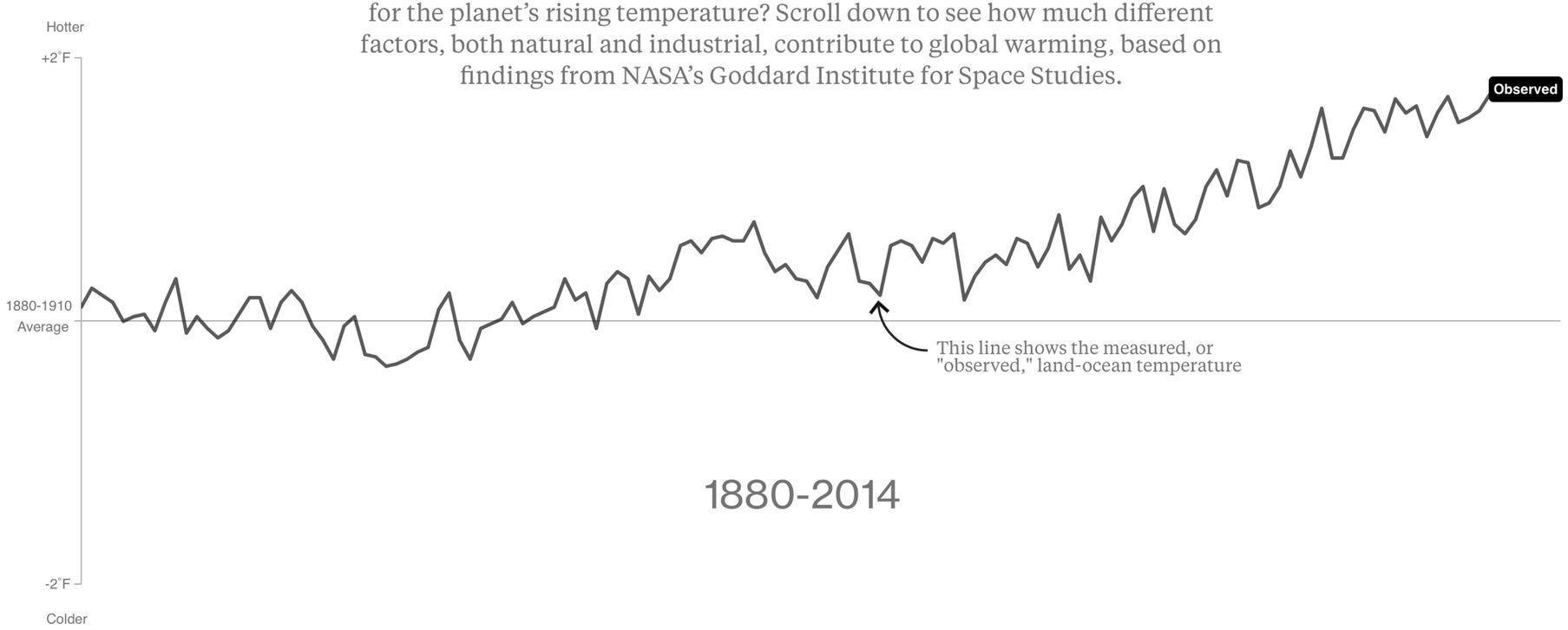
scrollytelling

scrollytelling, an example — notice *when* and *how* information is presented to the audience

What's Really Warming the World?

By Eric Roston and Blacki Migliozzi | June 24, 2015

Skeptics of manmade climate change offer various natural causes to explain why the Earth has warmed 1.4 degrees Fahrenheit since 1880. But can these account for the planet's rising temperature? Scroll down to see how much different factors, both natural and industrial, contribute to global warming, based on findings from NASA's Goddard Institute for Space Studies.



— Roston, 2015

scrollytelling, minimal code in an `r markdown` to scroll explainers past *stay-in-place* data graphics

css

```
<style>

section {
  display: flex;
  flex-direction: row;
  margin-top: 1rem;
  margin-bottom: 5rem;
}

section > * {
  flex: 1;
}

article {
  padding: 0 1rem;
}

article p {
 font-size: 0.8rem;
  line-height: 1.4;
}

article p:not(:last-of-type) {
    min-height: 20vh;
}

article p:last-of-type {
    min-height: 50vh;
}

figure {
  display: flex;
  align-items: start;
  justify-content: center;
  height: 30rem;
  top: 5rem;
  position: sticky;
}

figure * {
  max-width: 100%;
  object-fit: contain;
}

</style>
```

Of note: Apply any text formatting you want to <h1>, <p>, and <article><p>

Place code chunks for **interactive graphics** here.

Write your **explainers** that scroll past the figures here.

Specify white space for *between* article paragraphs, and for *after* the last article paragraph here. **20vh** means 20 percent of the viewfinder height. Experiment.

When **scrolling**, the <figure> element stops — **sticks** — when its **top** is at **5rem** (that's near the top of the viewfinder, adjust where you like). And it will stay in place while the article paragraphs scroll up until pushed up by the bottom of its <section> element.

html

```
<h1>...</h1>

<p>...</p>

<section>

  <figure>

```{r, echo=FALSE}
# graphics go here
```

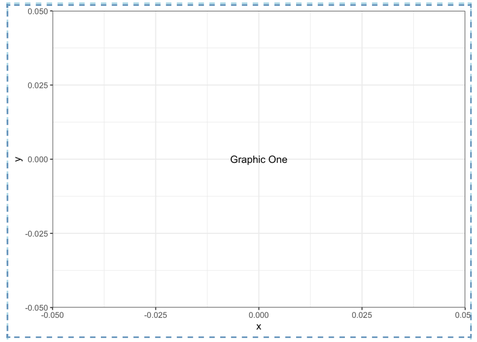
  </figure>

  <article>
    <p>...</p>
  </article>

</section>
```

Minimal Scrollytelling Example

This is a paragraph outside the scrollytelling sections. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec interdum tellus felis, at lobortis orci sollicitudin ac. Donec lobortis sapien ac posuere faucibus. Mauris lectus neque, pretium non volutpat eget, vestibulum at magna. In sollicitudin augue nunc, non bibendum augue ornare quis.



This is a first article paragraph inside the first scrollytelling section. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec interdum tellus felis, at lobortis orci sollicitudin ac. Donec lobortis sapien ac posuere faucibus. Mauris lectus neque, pretium non volutpat eget, vestibulum at magna. In sollicitudin augue nunc, non bibendum augue ornare quis.

This is a second article paragraph inside the first scrollytelling section. Integer accumsan interdum justo eu pretium. Aliquam maximus mi sit amet dapibus efficitur.

This is a third article paragraph inside the first scrollytelling section. Sed condimentum lacus sit amet turpis aliquam varius nec a lacus. In facilisis convallis ante sit amet consequat. Aenean a lorem mollis, bibendum nibh nec, maximus orci. Nulla facilisi.

user-centered, content design

resources

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