What does success look like?

1. Has clear purpose and focus.
2. Contains (only) the right information.
3. Is structured correctly.
4. Has useful formatting.
What does success look like?

1. Purpose
2. Content
3. Structure
4. Formatting
What does success look like?

**Purpose** informs **Content**

**Purpose & Content** inform **Structure**

**Purpose & Content & Structure** inform **Formatting**
What does success look like?

Purpose > Content > Structure > Formatting
Purpose > Content > Structure > Formatting

Two domains:

• **analysis**: ok to not know what you’ll find... (not this talk)

• **presentation**: you *must* know what you want to communicate.
For creators, do you know:

- Why am I creating this visualization?
- Who is it for?
- What do they need to understand?
Purpose > Content > Structure > Formatting

How will it be consumed?

http://www.apple.com
For consumers, can you tell:

- Why did they create this visualization?
- Who did they create it for?
- What do they want you to understand?
Purpose > Content > Structure > Formatting

Purpose gives you a target.
Different destinations require different maps.

http://maps.google.com
Visualization Options Available in Many Eyes

Finding the right way view your data is as much an art as a science. The visualizations provided on Many Eyes range from the ordinary to the experimental.

**See relationships among data points**
- Scatterplot
- Matrix Chart
- Network Diagram

**Track rises and falls over time**
- Line Graph
- Stack Graph
- Stack Graph for Categories

**Analyze a text**
- Word Tree
- Tag Cloud
- Phrase Net
- Word Cloud Generator

**Compare a set of values**
- Bar Chart
- Block Histogram
- Bubble Chart

**See the parts of a whole**
- Pie Chart
- Treemap
- Treemap for Comparisons

**See the world**
- Ottawa Neighbourhood Map
- US County Map
- World Map
- Massachusetts Map
- New Jersey Map

http://many-eyes.com/manyeyes/page/Visualization_Options.html
You must be able to articulate your purpose to be successful.
What data matters?
What relationships matter?
Informed by purpose!
What’s excluded is as important as what’s included.
Purpose > **Content** > Structure > Formatting

http://bmander.com/dotmap/index.html#4.00/40.00/-100.00
Purpose > **Content** > Structure > Formatting

http://bmander.com/dotmap/index.html#4.00/40.00/-100.00
Purpose > Content > Structure > Formatting

http://bmander.com/dotmap/index.html#14.00/45.5122/-122.7040
• How do we best reveal the important data and relationships?
• Choose meaningful layout and axes!
• Informed by purpose and content!
Structure fail.
Choose meaningful axes!
Use both axes!
(yes, both, not all three...)
http://bitaesthetics.com/posts/visualizing-flight-options.html
Purpose > Content > **Structure** > Formatting

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[http://many-eyes.com/manyeyes/page/Visualization_Options.html](http://many-eyes.com/manyeyes/page/Visualization_Options.html)
Purpose > Content > Structure > **Formatting**

- How does it look and feel?
- How will it be consumed?
- Informed by purpose, content, structure!
- Makes data and relationships accessible.
- Makes importance visible.
How fast is LAFD where you live?

An analysis by the Los Angeles Times Data Desk

Rescuers are expected to arrive to nearly all 911 calls within six minutes, a national standard LAFD leaders concede they routinely fail.

The Times analyzed more than a million runs by the Fire Department over the last five years and found that what Angelenos can expect often depends on where they live. You can read about the causes and patterns in the Times story.

Use this map to compare the LAFD’s performance across L.A.

Average full 911 response in minutes (2007-2012)

From 2007-2012: 1.351 total responses

7 min., 14-second average response

Medical 93.9% Fire 6.1%

74 seconds slower than national standards
How fast is LAFD where you live?

An analysis by the Los Angeles Times Data Desk

Enter an address in the Los Angeles city limits

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Total number of 911 arrivals (2007-2012)

From 2007 - 2012:
1,351 total responses
7 min. 14-second average response
93.9% Medical
6.1% Fire
Ave. dispatch 1:34
Avg. arrival 5:40
74 seconds lower than national standards

http://graphics.latimes.com/how-fast-is-lafd/#11/34.0635/-118.5854
## Visual Encoding Properties and Best Uses

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<th>Properties</th>
<th>Best Uses</th>
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http://complexdiagrams.com/properties

Noah Iiinsky • ComplexDiagrams.com/properties • 2012-10
Checklist

• Is the purpose well defined?
• Does the content support the purpose?
• Does the structure reveal the content?
• Does the formatting facilitate consumption?
Thank you!

Office hours 1:30 pm and before & after at the IBM booth.

Book signing 3:00 pm at the O’Reilly booth.

@noahi