

How to Create Meaningful Intelligence Reports

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UC



Workshop Goals

- **Introduce the principles for intelligence reporting**
- **Understand why maps are an important way to communicate intelligence information**
- **Examine examples of the good, the bad and the ugly**
- **Demonstrate best practices for visualizing data**
- **Demonstrate workflow for sharing content on the web and creating a finished information product**
- **Provide a check-sheet**



Why do we do intelligence reports?

- Provide insight and analysis
- Provide essential context
- Reduce uncertainty for decision makers

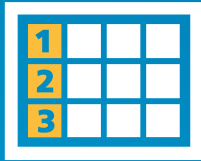
“Help national leaders make better decisions”

- Director National Intelligence, The Honorable James R. Clapper at GEOINT 2016

Essential Elements



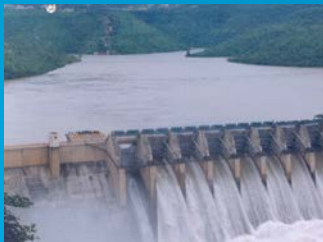
Text—the story and results of analysis



Data and Analysis—essential information



Map—geospatial context



Images and Media

What makes the text meaningful

- Clearly written for the intended audience
- Sources are identified
- Includes enough background to provide context to the report
- Analytic judgments and level of confidence prominent
- Well organized for the busy reader
- No spelling or grammatical errors



Key Principles for Evaluating the Text in an Intelligence Report

What makes a map meaningful

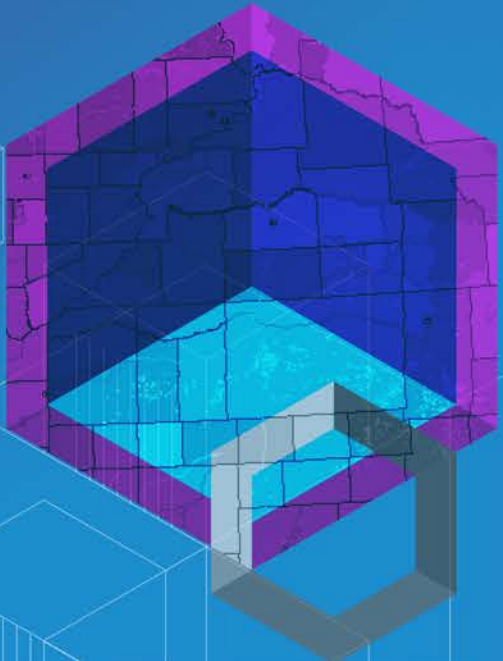
- Clear purpose/message/audience
- Places mentioned in the report are shown on the map
- Shows enough content to provide context to the report
- Simple and not overly complex
- Helps the reader quickly grasp the story, enable quick decision making

Key Principles for Evaluating a Map included with an Intelligence Report

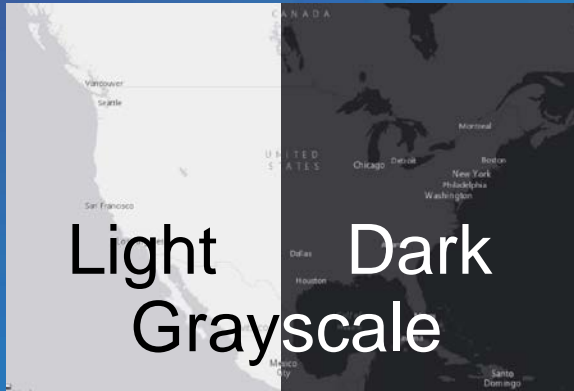


Cartographic Design Decisions

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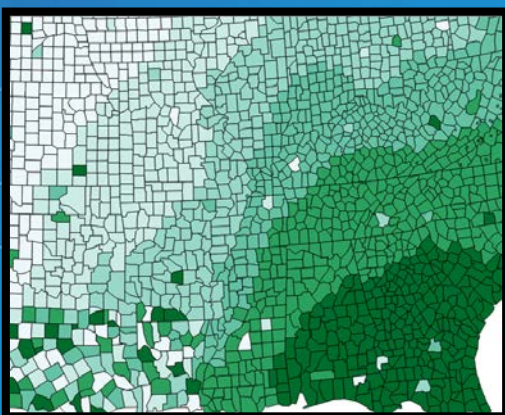
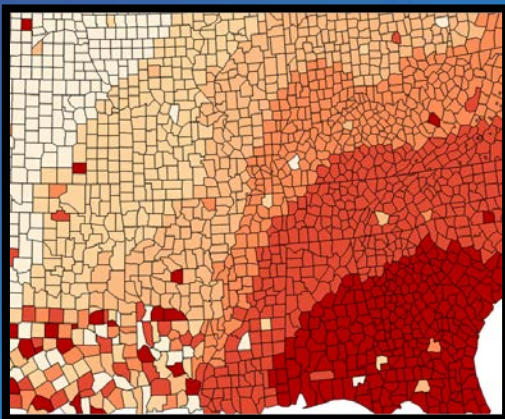
Basemaps



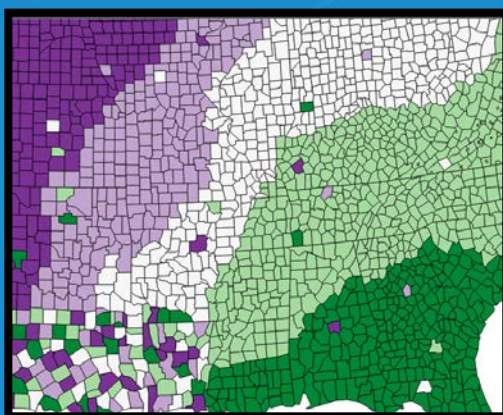
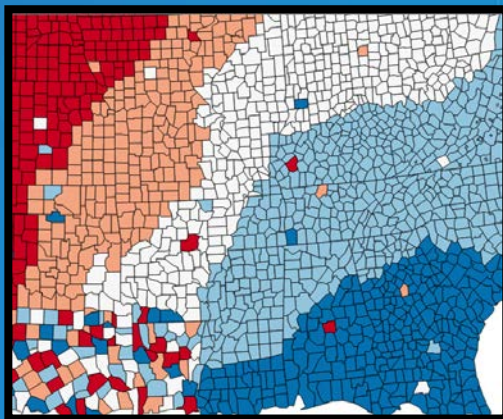
Color Schemes

Visual Hierarchy is the Key

Sequential



Divergent



Checklist

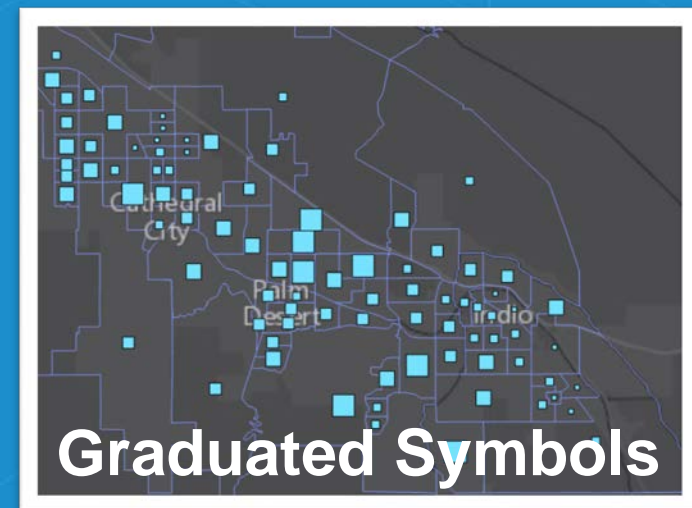
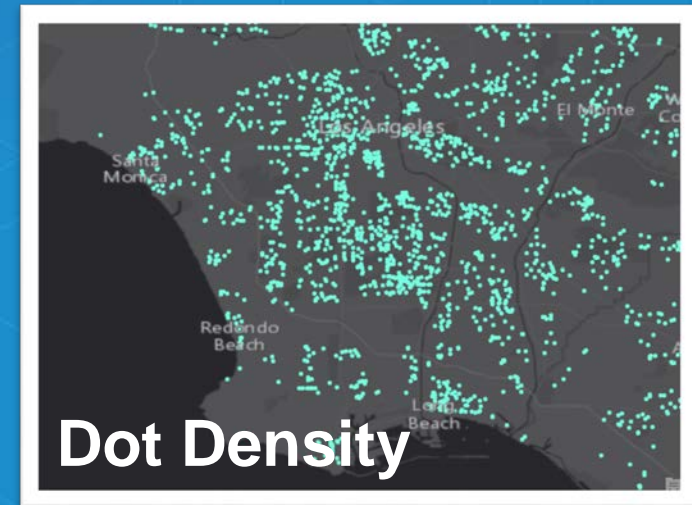
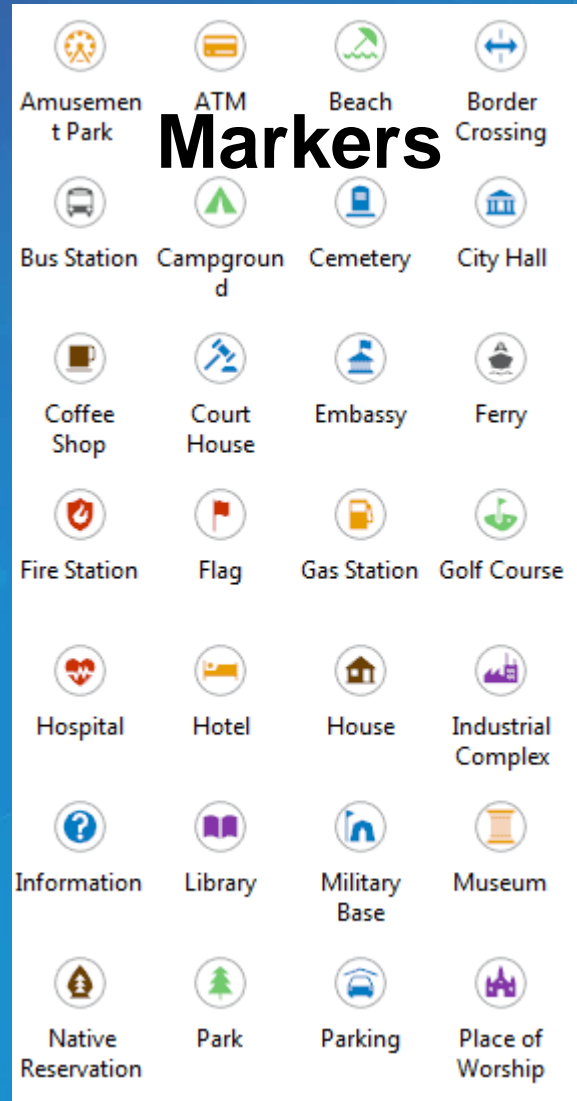
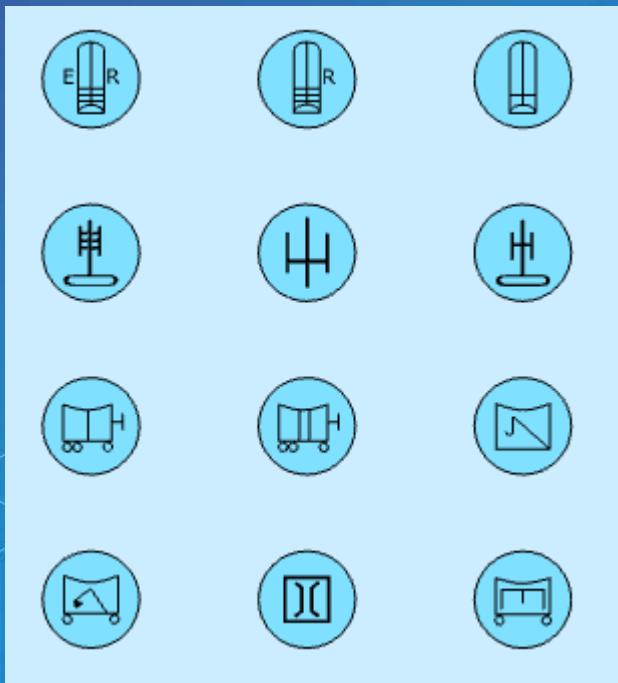
- Print vs. web
- Works for basemap
- Perceptible difference
- Avoid rainbows
- Colorblind safe
- Intuitive Colors
- High values stand out

Map colors based on www.ColorBrewer.org, by Cynthia A. Brewer, Penn State

Symbology

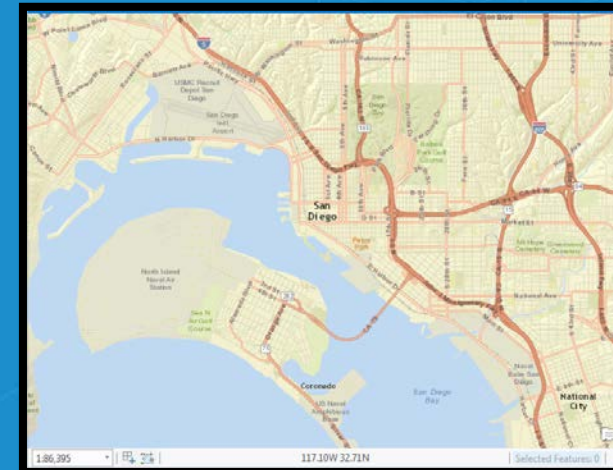
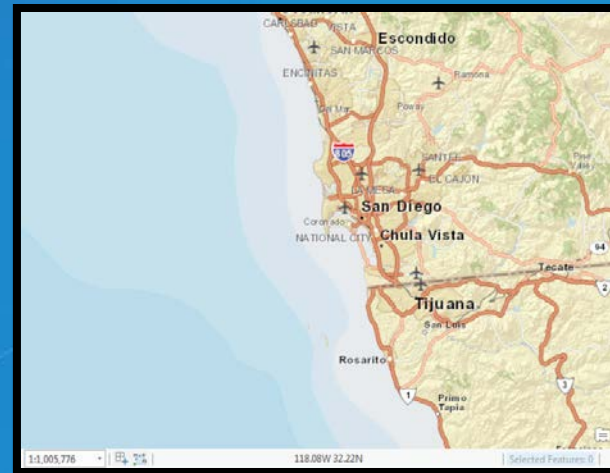
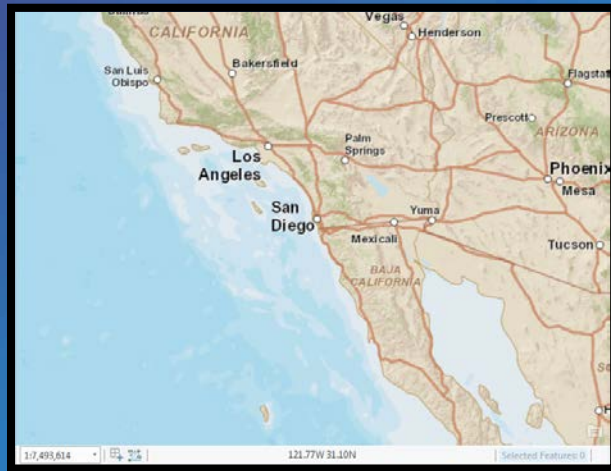
Top of visual hierarchy

Military Symbology



Scale Dependent Drawing

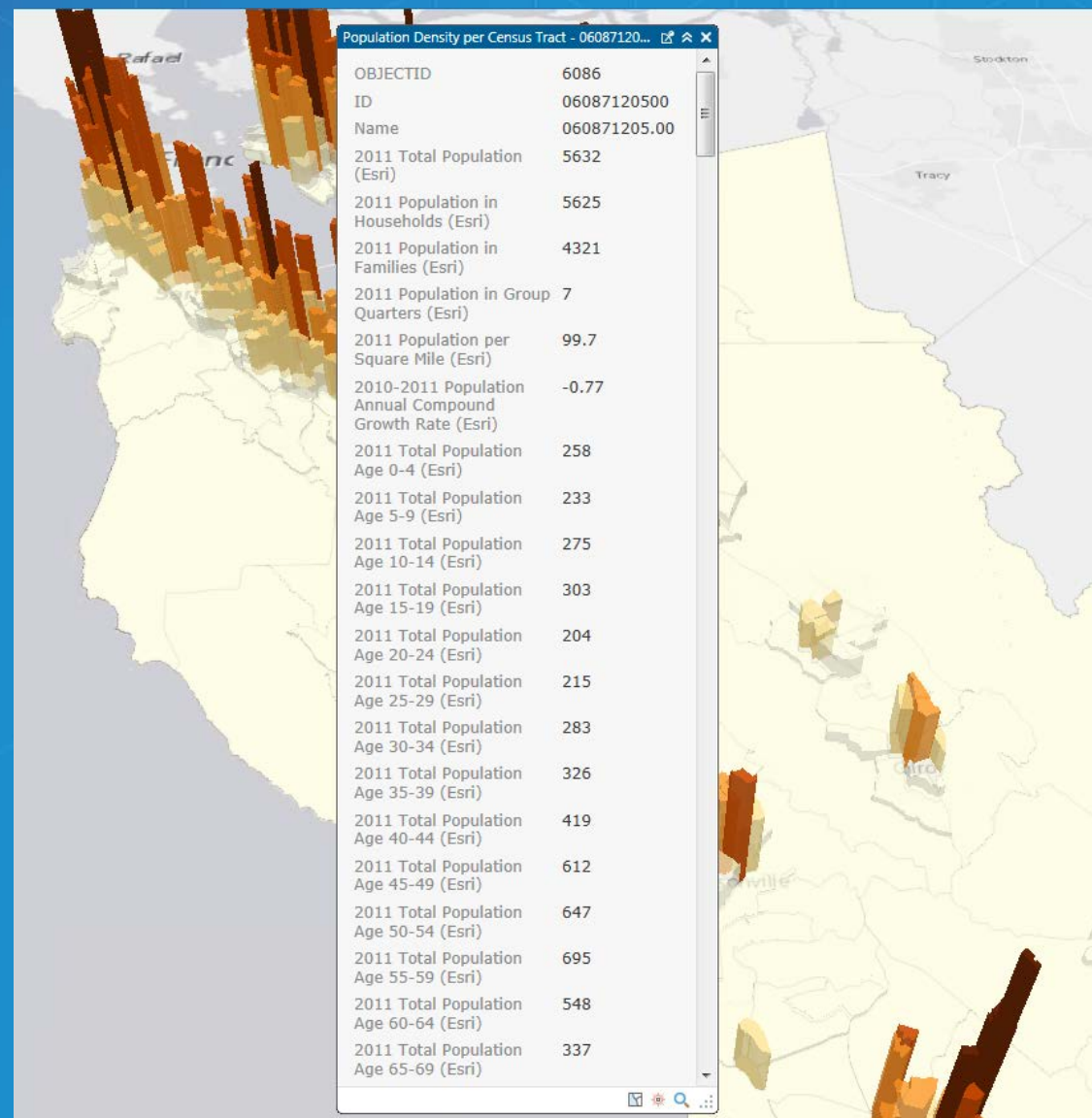
Most useful information changes with scale



Interactivity

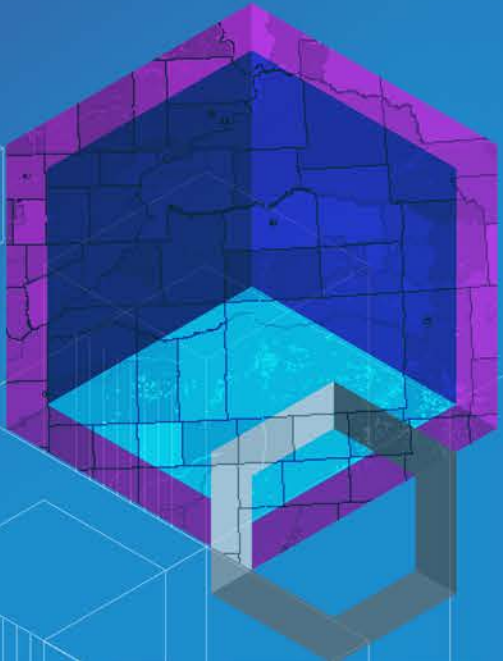
Use to enhance, not distract

- Pop Ups
- Widgets
- Toggle Layers
- Links
- Media (pictures, video)



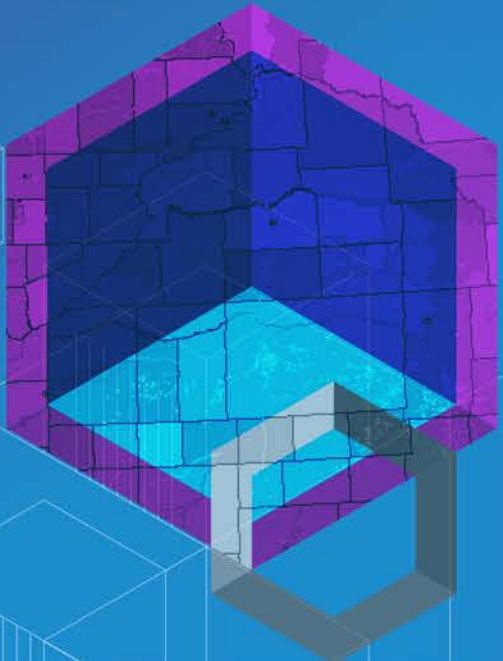
Demo: Building an intelligence report for Monterey, CA

Dan Barnes



Demo: Smart Mapping Overview

Dan Barnes



Checklist

**Effective Cartographic
Communication**



Effective Cartographic Communication: Content

- ✓ **The map supports the key analytical judgments. The map tells the story exceptionally well and could stand alone to convey the issue. The map could be used to brief high-level officials.**
- ✓ **GIS analysis methodology is appropriate for the data and issue; analysis is portrayed clearly. The GIS results must not be overly complicated and represented without a legend if possible.**
- ✓ **The area covered by the map provides adequate context for the issue. The map lends to the complete understanding of the geospatial context of the analysis being reported.**

Effective Cartographic Communication: Content (2)

- ✓ **Key named places identified in the report are shown on the map.**
- ✓ **Annotations (text boxes) are relevant and consistent with the report.**
- ✓ **The depicted features provide useful context without clutter. The features depicted are well chosen so that the map could stand alone to convey the issue. The reader can quickly grasp the implications of the issue.**
- ✓ **The map title is descriptive, concise and relevant to the report. Acronyms and excessive technical terms are avoided.**
- ✓ **Boundaries and country names are correct.**

Effective Cartographic Communication: Presentation and Style

- ✓ The text font style, color and placement is correct, legible and uncluttered. The text portrayal helps the reader quickly grasp information and the geospatial context. If terrain elevation (shaded relief) is relevant to the issue, it needs to be correctly represented.
- ✓ Effective use of color, contrast and balance. The use of color enhances the information so that the reader can quickly grasp the issue. The color palette should be pleasing.
- ✓ Figure-ground relationship is effective. The figure-ground relationship enhances the map so that the reader can quickly grasp the issue. The most important information is visually highlighted.
- ✓ Effective use of symbology and/or icons; legend is necessary and useful. Icons should be intuitive and symbology easily understood by the reader. If a legend is needed, it should be clear.

Maps for Intelligence Reporting—Summary Check Sheet

Maps are an essential part of intelligence reporting. They must be designed to convey the key analytic judgments presented in a report. The map helps the reader understand the geospatial context of a report and the significance of observed or reported activity. Annotations on intelligence report maps need to be relevant and consistent with the text and other graphics in the report. The map is well designed and aimed at busy readers who need to understand key points immediately. Be efficient in using the map to support the report—more maps may not be better.

Guidelines for better maps



Questions?

Thank you