Objective: Present an overview of Tableau, a Data Visualization tool that was recently demonstrated at Sentry Insurance. Attended essentially a sales demo by Tableau, with a few internal implementations.

1. My background experience with static dashboards presents a contrast. Dashboards I've had to construct with a static source. Monthly reports as a data source, with an Excel spreadsheet that limits scope to drill down, due to heavy pre-determined measures, all stored in the Dashboard itself (72 counties = limited measures all loaded in the object itself). Serves a purpose, but other solutions exists as the data source moves to a non-relational database; a datamart with OLAP cubes that allow the pre-determined measures Facts and Dimensions. Pull what is needed, as the visualization requests it, would allow us to see things that might not otherwise be comparable.

Obvious limitations, can only see each historical static dashboard, hard to compare year over year performance, unless specific to that db objective, etc... Also what is a good measure? It might be relative to the per capita of a segment, like county size. These serve a particular need, performance at a glance between state county agencies, relative to a State or Federal measure needing to be met or exceeded.

Xcelsius as was used at DCF, was constrained by a need to get numbers out there, prior to the datamart being built. It will be interesting to see these dashboards evolve to allow drill/comparison.

i.e. ) Facts - some Claim Loss paid amount or count for a Dimension, say timeperiod, Oct 2015) this is pre-established during the building of the OLAP cube, along with other known Dimensions to be tapped.

OLAP is an acronym for online analytical processing, which is a computer-based technique of analyzing data to look for insights. The term cube here refers to a multi-dimensional dataset.

2. Some common themes between where I've been, DCF dashboard just-in time development, and where Tableau can go with exploratory, or dashboards out of blended sources, cubes in house datamart, and external data sources like HDLI, Insurance Institutes, comparisons can be drawn. Similar themes exist:

Left to right scan.

Familiar navigation, color indicators, etc. Green line is good, Red line is bad - exceed or meet goals.

Including either a standard target, or a desired direction, allow compare to Statewide, etc. Some relativity.

Art of balance, not too much info in any one page, but enough to make the user want to dive deeper, or have that capability if another angle is desired. Rates along with counts give additional indications like per-Capita. Sometimes they may intentionally be high-level DCF confidentiality of small numbers.

3. Objective of visual should be kept in focus with the audience as well:

Emotion can be a goal - placing blood red, downward swoops, in place of vertical charts.

Exploratory can be an objective. No real measure/goal. Use of sliders and filters can be illuminating.

Performance Scorecard can be an objective. Careful, Visits vs visits per capita, different answer different result.

Storyline or points of in time might be an objective. How long to a goal, how meaningful was a location, etc. Migration patterns, food sources, etc might best be displayed this way.

Tableau seems to allow variety in the objective, blending of the datasources, and public presence, and sharing of best Viz practices with Tableau Public.

Let's look at some examples. If time, you give me a topic, we'll see what comes up!

Links:

DCF WI:

<http://dcf.wisconsin.gov/cwreview/dashboards/default.htm>

Tableau Public:

Tennis topic, perculiar:

<https://public.tableau.com/s/gallery/grunt-o-meter>

Single graph showing multiple findings - large grunts = 2 different significant outcomes!

Madison theme:

[https://public.tableau.com/profile/todd.d.milewski#!/](https://public.tableau.com/profile/todd.d.milewski%23!/)

Emotional impact:

[https://public.tableau.com/profile/mtmixon3894#!/vizhome/VisualizingAProblemfromHell-TheEffectofWarandGenocide/LifeExpectancyDrops](https://public.tableau.com/profile/mtmixon3894%23!/vizhome/VisualizingAProblemfromHell-TheEffectofWarandGenocide/LifeExpectancyDrops)

Filters and Controls, allow drilling for asking a specific question or exploring the not so obvious.

[https://public.tableau.com/s/profile/grecian#!/](https://public.tableau.com/s/profile/grecian%23!/)

Dashboards tell what, Story Points tell why. A story is a sheet that contains a sequence of worksheets or dashboards that work together to convey information. You can create stories to show how facts are connected, provide context, demonstrate how decisions relate to outcomes, or simply make a compelling case.

This example shows how you can use Tableau to tell a story with data. The story described below considers the question: Are serious earthquakes becoming more common, or is it just that some strong earthquakes in recent years are creating that impression?

<https://public.tableau.com/views/EarthquakeTrendStoryExample/Earthquakestory?%3AshowVizHome=no#1>