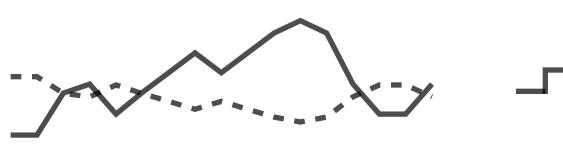
TREND

Line Trend of a variable

Multi-line

Trends comparison

A variable changing intermittently



HIGH AM D3

AM

Step line

Bar

COMPARISON

Comparing categories



HIGH AM

Multi-bar

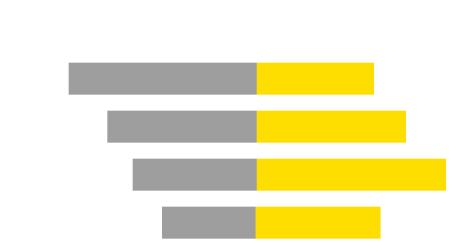
Comparing multiple variables



HIGH AM D3

Tornado

Comparing two variables side by side



HIGH AM D3

Pie Part-to-whole

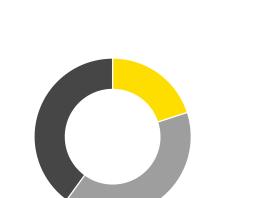
COMPOSITION

relation

HIGH AM D3

Donut Part-to-whole

relation relation



HIGH AM D3



Semi-donut

Part-to-whole

HIGH

Area Trend of an

HIGH AM D3

Stacked area accumulative value over time

HIGH AM D3

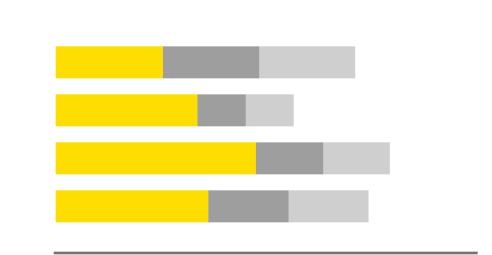
Composition changing

HIGH AM D3

Stacked % area Standardized composition over time

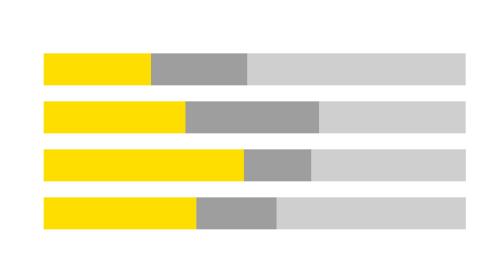
HIGH AM

Stacked bar Comparing composition by category



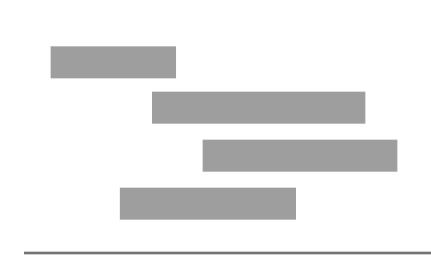
HIGH AM

Stacked % bar Standardized composition by category



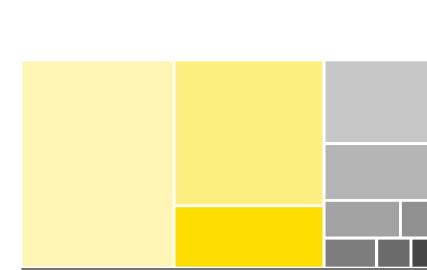
AM

Floating bar Comparing ranges by category



HIGH AM D3

Tree Composition by category

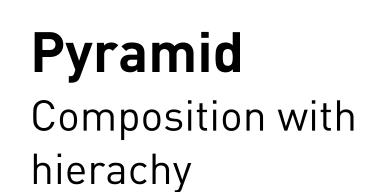


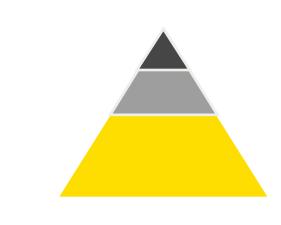
HIGH D3

Compostion by category

Sunburst

HIGH D3

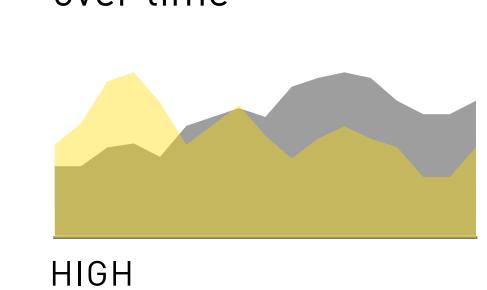




HIGH AM

Overlap area

Comparing accumulative values over time



GEO

by location

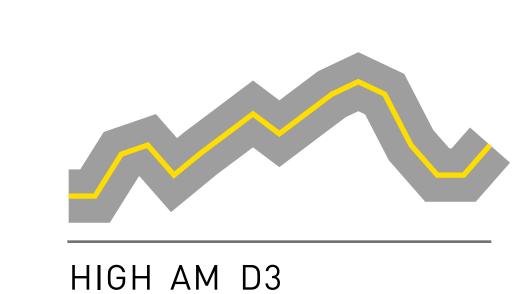
Pin map

Geographical

distributiion

HIGH AM

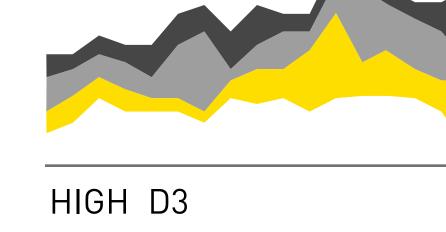
Area range Trend with range



Composition changing

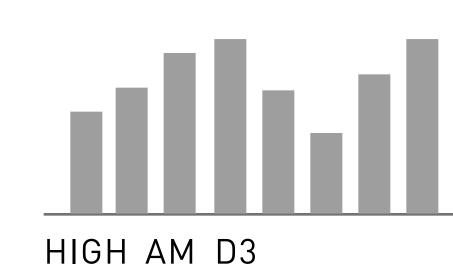
Streamgraph

over time around a central axis



Column

Comparing categories or trend



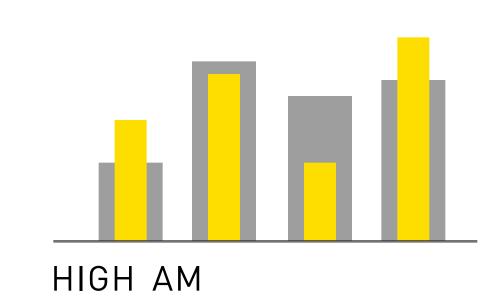
Multi-column Comparing multiple

variables



Layered column

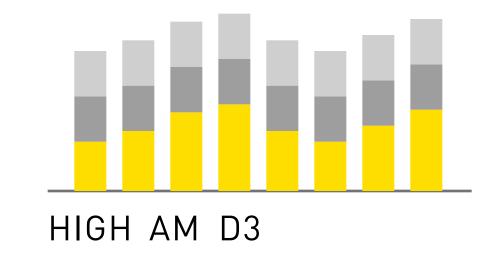
Comparing two variables by category



SINGLE VALUE

Stacked column

Comparing composition by category or over time



Column & Line

variables by category

Comparing two

or over time

Stacked %column Standardized composition by category

or over time

HIGH AM D3

Bubble

Comparing a data

series by bubble size

Negative column Comparing a variable with negative value by category or over time



Solid gauge Speedometer Single value on a



HIGH AM D3

Sparkline

without axes

HIGH AM

Trend of a variable

120

radial scale

Single value on a radial scale

HIGH AM

Progress

Percentage

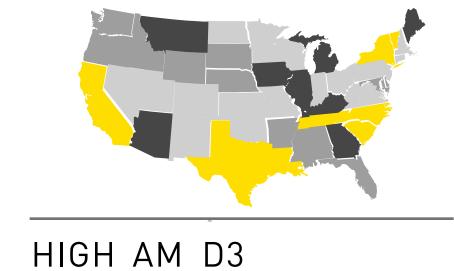


Multi gauge

radial scales

Multiple values on

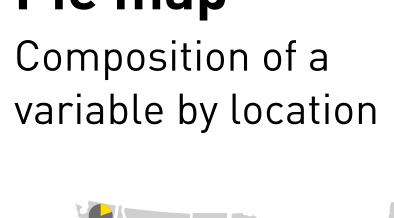
HIGH AM



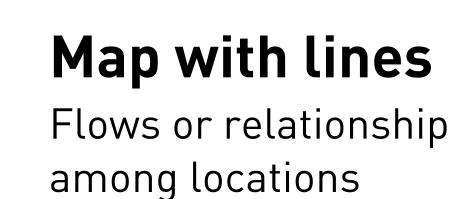
Thematic map

Comparing a variable

Pie map



HIGH AM



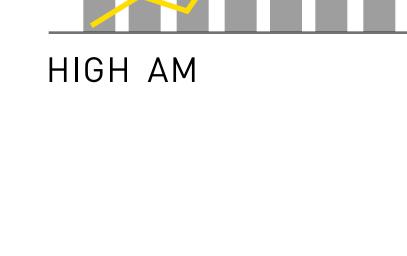


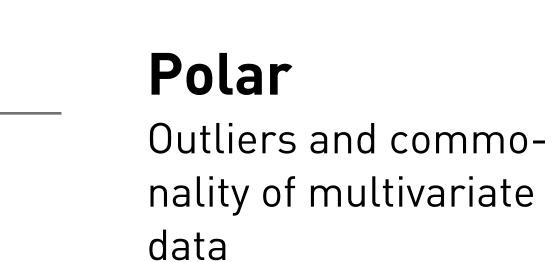
Bubble map Comparing up to two variables by location











HIGH AM D3

HIGH AM D3

Radar Outliers and commonality of multivariate



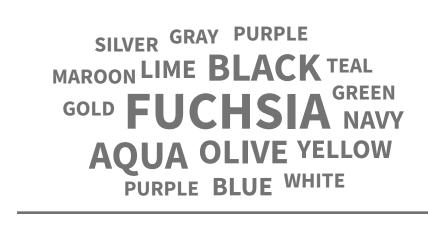
HIGH AM D3

Comparing a data

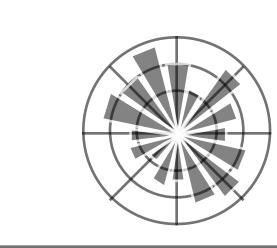
HIGH D3

Word cloud

series by font size

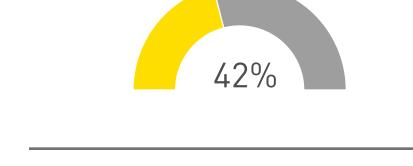


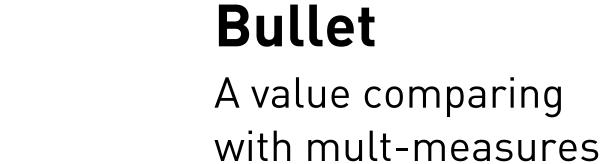
Wind rose Wind speed and

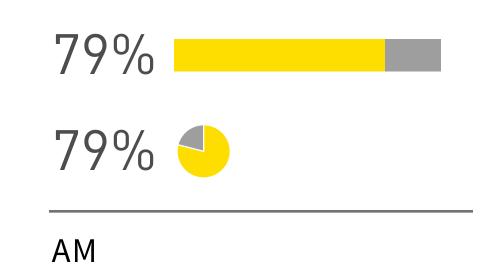


HIGH D3

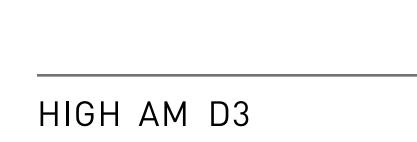
directions











DISTRIBUTION

Histogram

HIGH D3

Distribution of a continuous variable

Bubble on XY

series with three

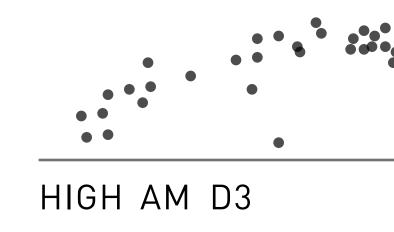
variables

Distribution of a data

Distribution of a data series with two

Scatter

variables



Polar scatter

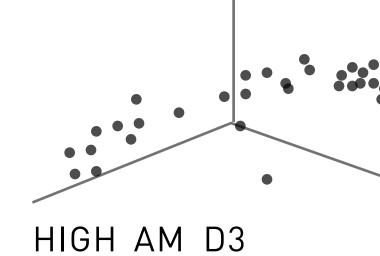
Distribution of a data

series in polar axis

 AM

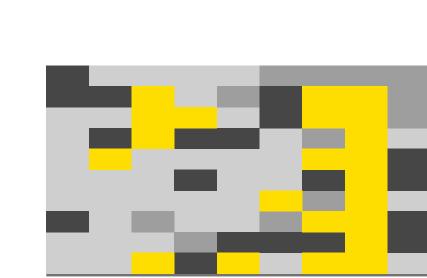
Distribution of a data series in three dimensions

3D scatter



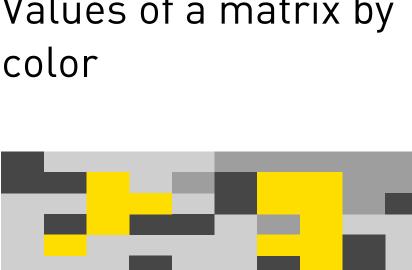


Heat map Values of a matrix by

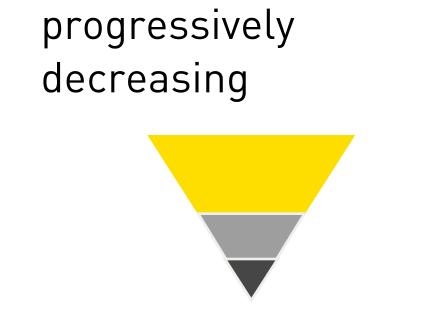


HIGH D3

SEQUENCE



Funnel



HIGH AM

Stages of a variable

Gantt

Project schedule



Waterfall

contributions

HIGH AM D3

Cumulative effect of

positive and negative

D3

Inter-relationships

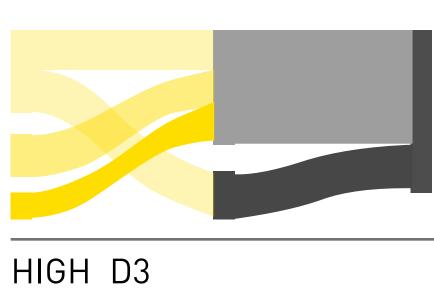
among data series

Chord

RELATIONSHIP



Sankey Flows with quantity



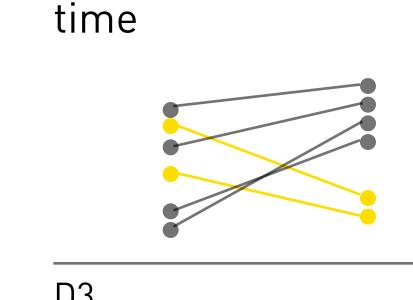
Slopegraph Changes of data series, usually over

D3

Network with nodes

and links in two or

three dimensions



Parallel Coordinates Multiple variables of a

Tree hierachy with

nodes and links



60 charts to visualize your data

CHART DESIGN CHECKLIST

☐ Know your users What's their domain

frequent will they use your charts?

☐ Iterate and pick the most effective and

attractive chart Have you explored all

- ☐ Understand your data How large is your data set? How many units of measures? What's the timeframe?
- ☐ **Clear about your story** Frame it as a question. Can users get the answer from your chart?

knowledge? What tools do they use? How

appropriate charts in the cheatsheet? Validate with real data Your design will never \Box be done until you validate it with real data.

ALSO CONSIDER

 Benchmark, median, start value, peak value Hover, expand, zoom, slide

Force-directed Node-link tree

D3

- Hybrid chart, companion chart Color-blindness
- Meaning of red Motion
- Emotional design

WHEN TO USE TABLE

- More than two units of measure (columns) Long data series (rows)
- No specific pattern among whole sets of values Need to look up individual values

WENJUN WU | 2017 OCT