Marks and channels

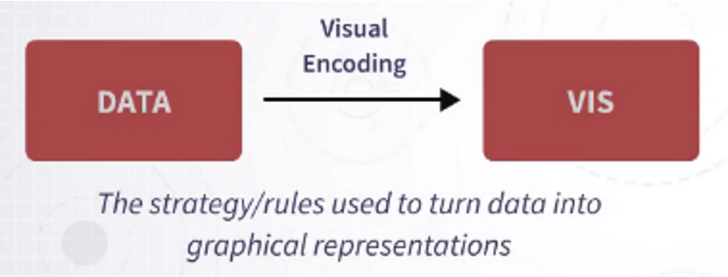
Tuesday, October 16, 2018 14:24

Graphical components and mapping strategies

1. Basic graphical components
2. Mapping strategies

What for?

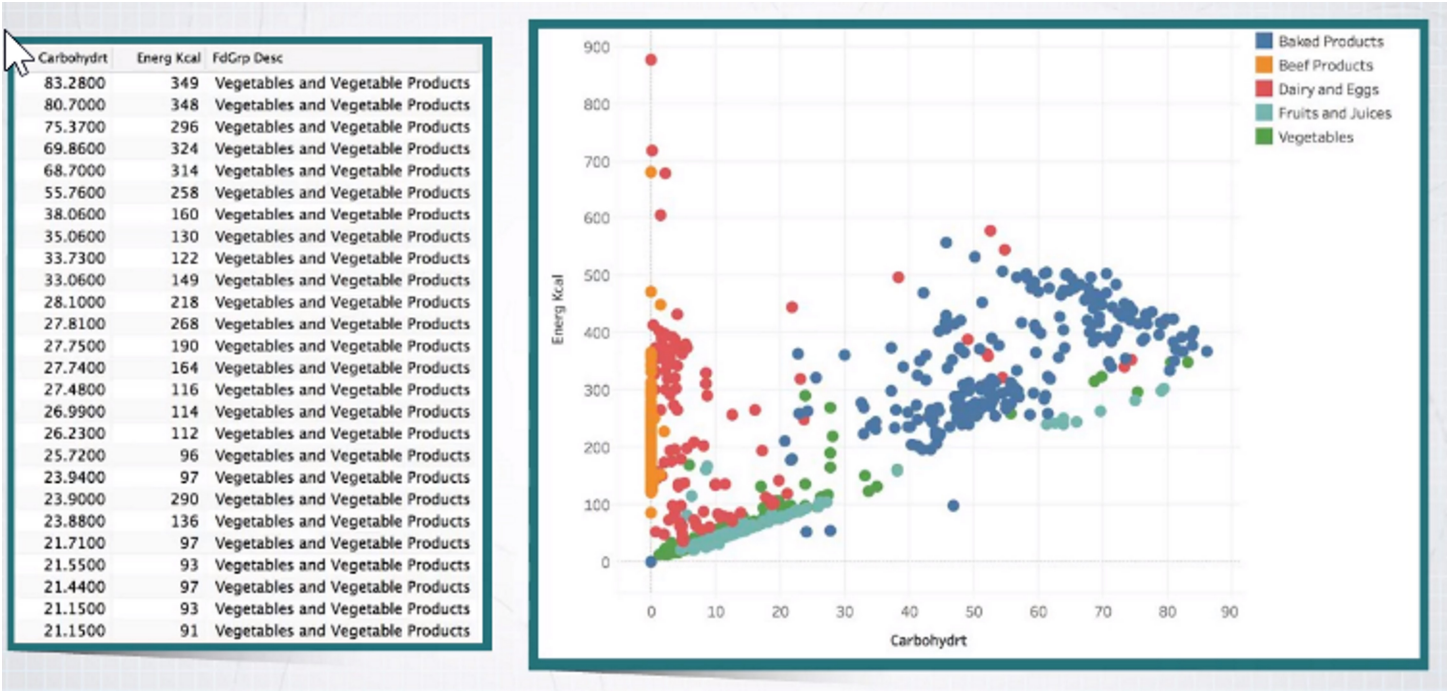
- Evaluate visualizations
- (re) design visualizations



Data encoding

A set of mappings between:

1. Data items <-> visual marks -> Dots in the example
2. Data attributes <-> visual channels -> X-position (carbs), Y-position (Calories), Color (food group)



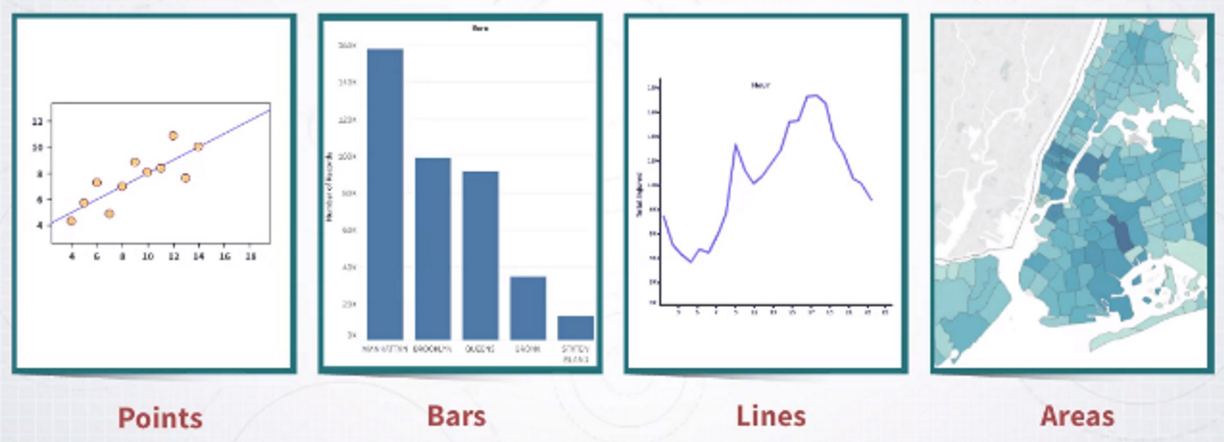
Carbohydrt	Energ Kcal	FdGrp Desc
83.2800	349	Vegetables and Vegetable Products
80.7000	348	Vegetables and Vegetable Products
75.3700	296	Vegetables and Vegetable Products
69.8600	324	Vegetables and Vegetable Products
68.7000	314	Vegetables and Vegetable Products
55.7600	258	Vegetables and Vegetable Products
38.0600	160	Vegetables and Vegetable Products
35.0600	130	Vegetables and Vegetable Products
33.7300	122	Vegetables and Vegetable Products
33.0600	149	Vegetables and Vegetable Products
28.1000	218	Vegetables and Vegetable Products
27.8100	268	Vegetables and Vegetable Products
27.7500	190	Vegetables and Vegetable Products
27.7400	164	Vegetables and Vegetable Products
27.4800	116	Vegetables and Vegetable Products
26.9900	114	Vegetables and Vegetable Products
26.2300	112	Vegetables and Vegetable Products
25.7200	96	Vegetables and Vegetable Products
23.9400	97	Vegetables and Vegetable Products
23.9000	290	Vegetables and Vegetable Products
23.8800	136	Vegetables and Vegetable Products
21.7100	97	Vegetables and Vegetable Products
21.5500	93	Vegetables and Vegetable Products
21.4400	97	Vegetables and Vegetable Products
21.1500	93	Vegetables and Vegetable Products
21.1500	91	Vegetables and Vegetable Products

Marks + Channels

(The alphabet of visual encoding)

Marks

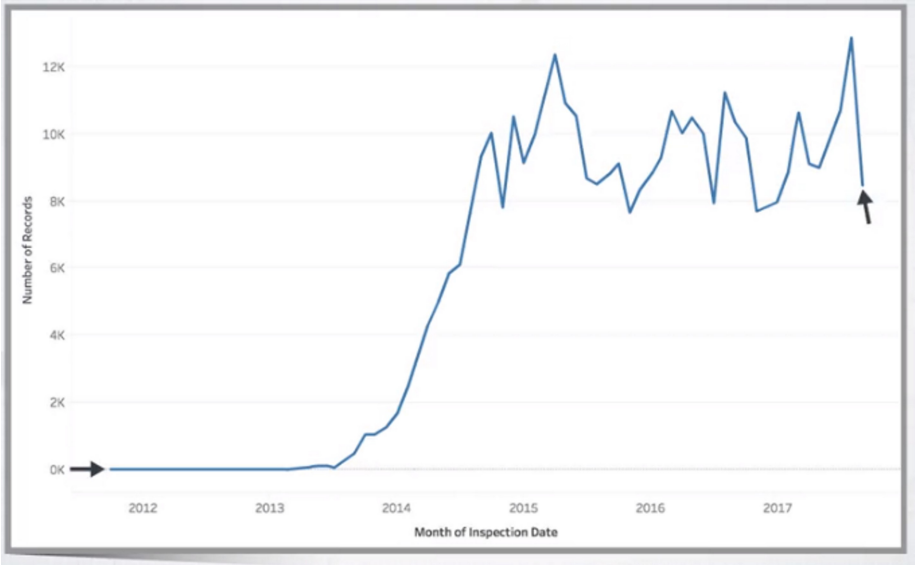
-> visual objects that represent data items



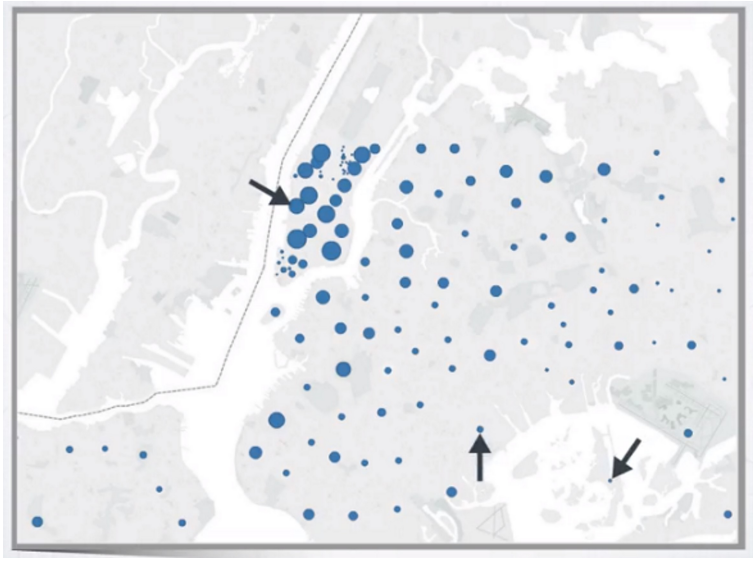
Channels

-> visual/graphical properties that encode the data attributes

- Position -> *virtually every visualization uses position channel*

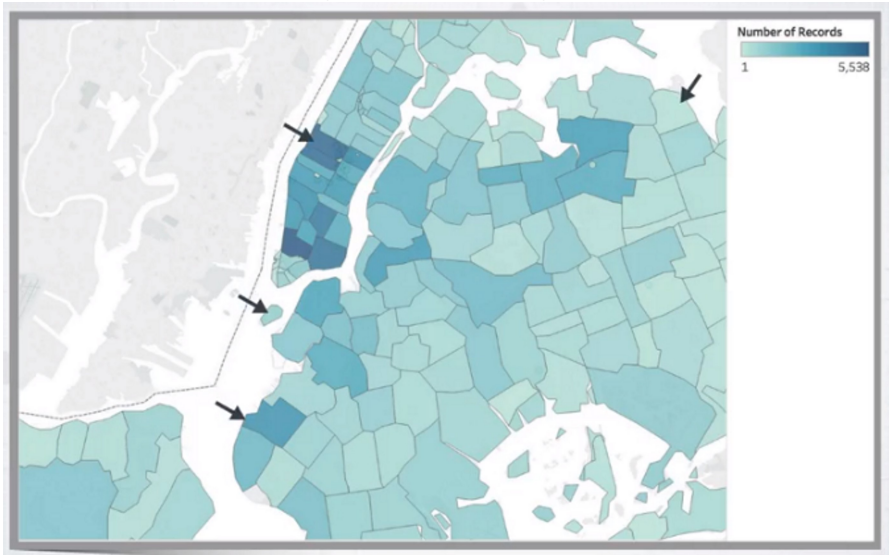


- Size: they can be classified in 1D or 2D
  - Length (1D)
  - Width / thickness (1D)
  - Area (2D)



- Angle and slope
  - Rate of change (in a time chart)
  - Pie charts -> angle represents the proportion

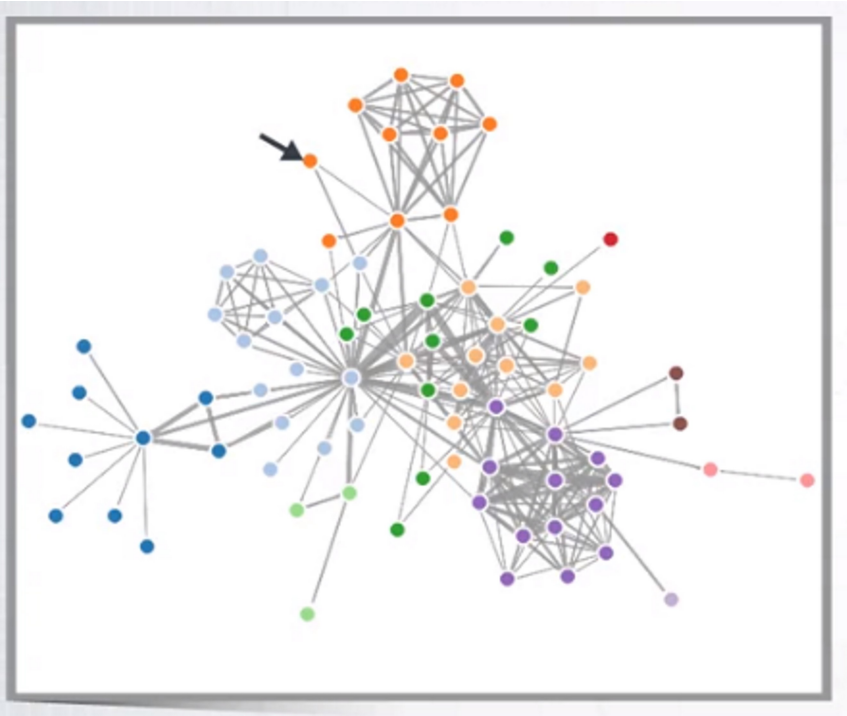
- Color -> is not one single channel! -> Powerful channel
  - Intensity: "brightness" -> good for encoding quantitative information



  - Hue: "the name of the color" -> good to encode categorical information

- Shape & texture

Example:



Channels:

- Position
- Thickness
- Color
- Length