The process has two main phases

Phase One: what to visualize
• Consider your inputs
    • your goals
    • their needs
    • shape of the data
• Write a spec for your visualization
    • select data to include

Phase Two: how to visualize
• Select axes for your most important data & relationship
• Consider & apply encodings for all other data dimensions
• Experiment, iterate, etc.

Phase One: what to visualize

Define desired knowledge *before* structure
1. What actions/decisions are you trying to enable?
    1.1. What questions are you trying to answer?
    1.2. What specifically do you need to show?

2. Who is consuming this data?
    2.1. What are their needs?
    2.2. If not you:
        2.2.1.What are their priorities?
        2.2.2.What are their biases?
        2.2.3.What are their limitations?
        2.2.4.What don't you know about them?

3. What data dimensions do you have to play with?

Data has properties
4. What types of data do you have?
    4.1. categorical (grouped)
    4.2. ordinal (ranked, time)
    4.3. quantitative (numeric)
    4.4. relational (hierarchy, influence, etc.)
    4.5. location (... it's complicated...)

5. What are the key relationships? (probably)

6. What data is required to show them?

Statement of goals
7. Show the relationship between A and B [and C...] across X [and Y] from m to n.
      7.1. ("in order to determine our best and worst performing widgets.")

8. What data are you actually going to use, based on that goal?
      8.1. [A, B, X (from m to n)]

Phase Two: how to visualize
(*Now* we start drawing)

Position is everything
9. How can you use position to reveal your key relationship(s)?

10. Is there a good default format for this kind of relationship?

11. List (at least) three possible combinations of axes.
      11.1. Try graphing each of these permutations.

Appropriate encodings
12. What are good options for encoding your other data dimensions?
      12.1. (see the properties table)

13. Pick encodings for your remaining data dimensions.
      13.1. See how that looks

Design Strategies
• Limit the data & detail you include
• Use position for your most important relationship(s)
• Try different axes
• Consider default formats
• Use color for categories, not rank
• Encode other data and relationships with appropriate properties
• Iterate, iterate, iterate