

# Visualization Design Process

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FIGURE 01

## 1 INFORM

Have a shared vision for the project.

### Activities

- Define goals,
- Define contents,
- Define intent,
- Define audience,
- Define timing,
- Define scope,
- Define challenges,
- Define strategies,
- Define the deployment environment,
- Define technical constraints
- Involve stakeholder
- User Experience research
- Design and visualization research

### Outputs

- Requirements document
- Competitive landscape
- User scenarios
- User personas

## 2 PREPARE

Have the data ready for usage.

### Activities

- Identify the data set
- Gather the data set
- Assess data quality
- Assess data quantity
- Clean the data
- Mine the data
- Parse the data
- Normalize the data
- Format the data
- Massage the data
- Organize the data
- Develop data structure

### Outputs

- Data structure

## 3 EXPLORE

Understand the texture of the data.

### Activities

- Explore the data
- Analyze the data
- Inspect the data
- Interview the data
- Translate the data to form
- Encode the data differently
- Use standard tools (R, Processing, Tableau, Excel)

### Outputs

- Rapid exploratory visualizations
- Different views on the data

## 4 DISCOVER

Understand and connect with the contents of the data.

### Activities

- Find patterns
- Find tendencies
- Find stories
- Find structures
- Find relationships
- Find facts
- Find hotspots
- Find a tweak
- Find something interesting
- Find something novel
- Find areas to expose
- Solve challenges
- Check facts
- Identify insights and problems
- Answer questions

### Outputs

- Insights documentation

## 5 SKETCH

Testing ideas out visually to come to a quick conclusion.

### Activities

- Explore range of visualization ideas
- Create rapid exploratory visualizations
- Find more interesting ways to represent the data
- Experiment with algorithms
- Imagining forms of interaction
- Break away from traditional tools
- Ask questions visually
- Explore how the data answers your questions

### Outputs

- Visualization concepts
- Hand-drawn sketches
- Digital sketches
- Computational sketches

## 6 QUESTION

Verify the selected visualization method.

### Activities

- Review the visualization concepts
- Consult coworkers
- Get feedback
- Get fresh perspectives
- Ask questions of the sketches
- Validate assumptions
- Question does it meet the expected goals
- Question is it useful
- Question does it offer insights
- Question does it tell a story
- Collaboratively rework the concepts

### Outputs

- Answers to the questions of the sketches
- More options of and sophistication for the visualization concepts

## 7 DESIGN

Prepare the specification for implementation.

### Activities

- Apply inspiration from other areas
- Alignment
- Color studies
- Font studies
- Visual design
- Interface design
- Functional design
- Copywriting
- Audio design
- Animations and transitions

### Outputs

- User flows
- Information architecture
- Wireframes
- Mood board
- Mockups
- Hierarchical structure
- Composition ideas
- Interaction model
- Prototype

## 8 DEVELOP

Build a flawlessly working application.

### Activities

- Technical assessment
- Technical design
- Develop the application
- Develop the visualization
- Server side implementation
- Client side implementation
- Iterate

### Outputs

- Prototype
- Working application

## 9 EVALUATE

Ensure the result is readable, understandable, useful and usable.

### Activities

- Expert review
- Design evaluation
- Usability testing
- User surveys
- Performance tests
- Interface tests
- User mechanics tests
- Usage observation
- Quality assurance
- Reconsider everything
- Make adjustments
- Care about the details

### Outputs

- Refine the visual design
- Refine the functional design
- User interactivity adjustments
- Interface motion adjustments

## 10 DELIVER

Conclude the project.

### Activities

- Deploy the application
- Launch the application
- Promote the project
- Document the project
- Describe main findings
- Review of the project
- Celebrate

### Outputs

- Public relation campaigns
- Ambassador outreach
- Traditional public relations methods
- Use of social media channels
- Tweak your approach