

## Colvis Workshop Moderator's Guide

Introduction	
Introduction	Introductions and thanking participants for their participation.
Explanation	Who are we? What is the purpose of the project? (Explain the purpose of the visualization project)
	<p>The aim of this workshop is finding visualization solutions in a user-oriented way.</p> <p>What is visualization? What is the point we want to reach with this workshop? Data visualization is the expression of data using a visual language. It makes it easier to understand the data. It allows to see patterns, trends and relationships. In this workshop, we will discuss how to design a data visualization tool for the purpose of the project.</p> <p>How will our discussion be? What is the structure of the workshop? Our discussion will focus on specific issues, one at a time. Since we have limited time, we'll discuss, identify important points and move on to the next topic.</p> <p>What tools do we use?</p> <p>Post-it: In order to make discussions visible, we will write down every point we discuss on post-its. We will use keywords instead of whole sentences, and write only one idea to a post-it.</p> <p>Boardmarker: We'll use boardmarkers to make post-its visible when photographed from a distance.</p> <p>Cards and Sheets: We'll use cards and sheets for quick idea generation and prioritization.</p> <p>How long it will take?</p> <p>The workshop can last between 2-5 hours, depending on the discussions. We can take a break at any point.</p>
User and Goal	
Opening	<b><i>(Remind the purpose of the project) Let's say we have a data visualization tool to realize the objectives of the project. Who could be the user? Who could use such a tool?</i></b>
Open discussion	(Write the user types suggested by the participants to the post-it and collect them under the user part on the wall)
If participants are stuck	Give an example: 'For example, would you use such a person (teacher / elementary school student, etc.)?'
When the discussion reaches to a saturation point	Add your own pre-defined user types: 'When we started thinking about the project, we thought about these users, where do you think they can be added to this pool?'
If more than 5 user types are available	Would you be able to group some of these user types? (Group the grouped post-it together, identify the group name with the participants and add as a title)
	<b><i>Who are the main / secondary users we want to focus on?</i></b>
Voting	To understand the general trend, let's point to the types of users we find important. (Paste stickers the important post-its, or mark them with a colored marker)
	In the following stages, we will continue on the user types that we find important, and I'll separate the rest. Which ones should stay? (Remove the post-its other than the ones with the most votes.)
If participants wish to include more than 3 user types	<i>All user types are important and worth discussing but because of our limited time we will discuss over a few of them today.</i>
Documentation	Take photos with all the prioritized post-it's.
Goals	<b><i>Which purpose can these users use this visualization for?</i></b>
Open discussion	(Participants write their suggestions in the post-it, collect and align them so that they are associated with the user types)
Participants are stuck	Give an example: 'For example, could a teacher explore this data in order to find course material?'
	<b><i>What are the primary and secondary goals we want to focus on?</i></b>
Voting	To understand the general tendency, let's point out the goals we find important. (Paste stickers the important post-its, or mark them with a colored marker)
	Remove the unprioritized goals from the board or table.
Documentation	Take photos with all the prioritized post-it's.
Questions and Tasks	

	<b><i>In relation to our goal: What does the user ask to this visualization?</i></b>
Open discussion	(Write the answers of the participants in the post-it and collect them under the questions and tasks title)
Participants are stuck	Give the example: For example, the researcher who would do a research about the best directors could ask the question: Who is the top 10 directors of the last 10 years?" (Fisher & Meyer 2017)
voting	"Which of these questions are important and interesting for the types of users we have identified?" (Paste stickers the important post-its, or mark them with a colored marker)
	If the questions are uncertain; Eliminate ambiguities using proxy data: 1- Refine the question to include one or more tasks. For each mission: (Who is the top 10 directors of the last 10 years?) 2- Find the parts of the mission: (Find the directors of the last 10 years. Find the best directors.) 3- Search for unspecified parts en that is, parts of the data that the data cannot directly point to: (What is the best director? Is the director who directed the most movies, or the one with the most awards?) 4- For each indeterminate part, set a proxy question for the group (Who are the most awarded directors) and return to step one with that question. 5- Repeat until there are no missing parts and the task becomes digitally operable.
Documentation	Take photos with all the prioritized post-it's.
<b>Data</b>	
Specify data types / medium	<b><i>To answer the questions, what type of data do we need?</i></b>
Open discussion	Post the participants' answers to the post-it and place them close to the related question / task. Try to write the data types associated with all prioritized questions / tasks.
Data collecting	<i>How can we find / collect these data? (You can write this question to post-it and collect it under the answers)</i>
(If applicable) Reviewing data	<b><i>What data do we have? (Present samples of data to users and let them explore)</i></b>
(If applicable) Organizing data	<i>How can we organize data types? Organization methods: Card Sorting / Affinity Diagram / Mind Map / Dot voting</i>
Connections	<b><i>What are the links between our questions and our data?</i></b>
Voting	<i>What are the important or interesting points about our data? (Paste stickers the important post-its, or mark them with a colored marker)</i>
Ethical Concerns	<i>What are the ethical concerns about data collection or presentation? (You can write the answers to post-it and collect them under "Ethical Concerns")</i>
Documentation	Take photos of the post-its.
<b>visualization</b>	
Description: Visualization Functions	<i>"Different data visualization methods serve different functions. The basic visualization objectives are: Comparison, Relationship building, Distribution vision, Geographical view, View in the form of parts-whole and seeing trends over time." (From the Data Viz Catalogue link, you can click the function in the top menu to display examples of the above functions.)</i>
Example: Data Viz Catalogue	<a href="https://datavizcatalogue.com/">https://datavizcatalogue.com/</a>
Idea Production Stage	<i>At this stage, the participants will discuss how the data can be visualized and produce sketches. This discussion can be done collectively, as a group, or individually, depending on the number of people and the purpose. The important point is to consider the priorities in the previous stages when creating ideas.</i>
Presentations	Individuals or groups present visualization sketches.
Group Discussion / Feedback	What do you think of the ideas that emerged?
	What do you think about the process?
Documentation	Photograph the sketches and videotape the presentations of the groups if possible. Take notes in the collective discussion section.
<b>After Workshop</b>	
Google Forms Feedback form	<a href="https://forms.gle/puqytbidxysvujhv9">https://forms.gle/puqytbidxysvujhv9</a>
<b>General Notes</b>	
If the focus is lost	<i>If the discussion loses its focus, gently guide it back to the workshop stage.</i>
If participants propose visualization ideas at the user stage	<i>We will discuss the visualization a little later, so let's go back to our discussion of the user.</i>
<b>References</b>	
	Fisher, D., & Meyer, M. (2017). Making Data Visual: A Practical Guide to Using Visualization for Insight. " O'Reilly Media, Inc."