

Heuristic	Heuristic
H1: The dashboard supports specific analytical questions or tasks.	H21: There is sufficient contextual information that describes what the dashboard is about.
H2: The user should be able to explore the data using the dashboard.	H22: The charts within the dashboard make sense as an overall composition to help situate or contextualize the user.
H3: It is clear to the user where they need to start interacting with the dashboard.	H23: The text in the dashboard should emphasize the most salient points of what the visuals in the dashboard convey.
H4: The charts in the dashboard support tasks that represent the overall intended goal to the user.	H24: The dashboard communicates a certain style or mood to the user.
H5: There is a clear reading order within the dashboard and is it logical (e.g., top-down, bottom-up).	H25: The dashboard is interactive and supports the user in completing a new analytical task or starting a new line of inquiry.
H6: The text in the dashboard is legible, easy to read, and useful. The different parts of the chart (e.g. titles, captions, or narration) are well-described.	H26: Tasks in the dashboard should be achieved with minimal friction.
H7: The charts in the dashboard clearly identify, compare, or summarize a particular aspect of the data.	H27: When a user interacts with the dashboard, the dashboard should guide the user with their next step.
H8: The layout, placement of charts, and the flow in the visualization should be easy to follow.	H28: The dashboard should update its view based on what is selected, highlighted or filtered by the user.
H9: The visual systems in place (e.g., a consistent font and color brand) provide guidance in understanding the analysis.	H29: There are text and visual elements to frame or guide salient information.
H10: There is a clear and consistent visual style for elements such as titles, axes, and colors.	H30: There is a clear path and breadcrumbs for user actions within the dashboard.
H11: The conventions used in the dashboard such as icons are easy to understand for the user.	H31: There are clear strategies employed in the dashboard to mark charts or marks more prominently than others to encourage a user to interact with them, as well as de-emphasize items not relevant to the conversation.
H12: There are consistent rules for the formatting of elements such as gridlines, borders, and supporting ink elements.	H32: Functional dead end: The dashboard should not freeze, crash, display errors, or otherwise unexpectedly interrupt the user.
H13: The dashboard should disclose any biases. These can include the author's personal biases, design biases, and/or biases in the data.	H33: Navigational dead end: The dashboard supports interactivity (e.g., filters, search) to help a user navigate between different snapshots of the data being presented.
H14: The dashboard should communicate where the data came from, and what steps were taken to prepare the data.	H34: The dashboard should support input modalities (e.g., natural language interaction, filter widgets, and / or clicks) to answer any analytical question or task.
H15: Charts within the dashboard are at the appropriate level of detail to convey the intended message.	H35: The user can set or adjust their own definition of concepts or metrics, or otherwise include their own knowledge into the dashboard. (e.g., if a user is interested only in "tall" people, can they set their own definition of "tall")
H16: There is a clear presentation of context, theme, and detail as part of the analytical exploration with the dashboard.	H36: There should be a clear takeaway from the dashboard.
H17: The dashboard employs visual symbols and iconography to add meaning to the data being presented or help support the intended message.	H37: The dashboard should not contain any information that distracts from the key takeaway.
H18: If there are icons and symbols in the dashboard, the semantics of their placement and appearance are helpful to communicate patterns in the data. (e.g., changing a plane icon's location and direction for arrival vs. departure)	H38: The conclusions match what the charts in the dashboard show.
H19: The iconography supports or potentially replaces repetitive text directives.	H39: There is adequate evidence that the dashboard is truthful. The dashboard should be able to convince the key takeaway through credibility and trustworthiness
H20: Concepts or metrics (e.g., date formats , time, currency, measurement) are either easily understandable or clearly defined in the dashboard.	



Heuristics for Supporting Cooperative Dashboard Design

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