# Usability

* **Learnability**: How easy is it for users to accomplish basic tasks the first time they encounter the design?
* **Efficiency**: Once users have learned the design, how quickly can they perform tasks?
* **Memorability**: When users return to the design after a period of not using it, how easily can they reestablish proficiency?
* **Errors**: How many [errors](https://www.nngroup.com/articles/slips/) do users make, how severe are these errors, and how easily can they recover from the errors?
* **Satisfaction**: How pleasant is it to use the design?

**For Learnability:**  
**Task 1: View the space population for 2023, 2028, and 2043.**

How easy is it for you to accomplish task 1? (1-5)

**Task 2: Turn on the time change and change the time multiplier.**

How easy is it for you to accomplish task 2? (1-5)

**Task 3: Search the COSPAR ID: 1975-016A.**

How easy is it for you to accomplish task 3? (1-5)

**Task 4: Switch to the Orbits page (or any other pages) and then back to the home page.**

How easy is it for you to accomplish task 4? (1-5)

**Task 5: On the Orbits page, filter the specific type of orbits for visualization.**

How easy is it for you to accomplish task 5? (1-5)

**Task 6: On the Owners page, filter the objects belonging to the Top 1 Owner by using the selection bar and/or filter button.**

How easy is it for you to accomplish task 6? (1-5)

**Task 7: On the Radar page, find the point in the radar window where the main window is located through the click event**.

How easy is it for you to accomplish task 7? (1-5)

**Task 8: On the Custom Orbit page, create your own orbit.**

How easy is it for you to accomplish task 8? (1-5)

**Task 9: On the Dashboard page, change the style of visualization for the height distribution part.**

How easy is it for you to accomplish task 9? (1-5)

**For Efficiency:**

**After reading the user guidelines, were you able to complete all the Tasks in Learnability easily and quickly? (1-5)**

**For Memorability (Next Generation-1 week after):**

**After 1 week, how easily for you to perform all the tasks in the Learnability parts? (1-5)**

**For Errors:**

**Are there any errors in the use process?**

**How serve with this error? (Option)**

**how easily can they recover from the errors? (Option)**

**For Satisfaction:**

**(1-5)**

How pleasing is the layout of the design?

How pleasing is the design of the separate page?

How pleasing is the search bar?

How pleasing is the filter function (button and selection bar)?

How pleasing is the background information design in the Orbits and Custom Orbit pages?

How pleasing is the design of click events (highlighting selection objects and adding orbits)?

How pleasing is the optional display style dashboard design?

How pleasing is the addition of legend on the radar page?

How pleasing is the adding user guideline?

How pleasing is the Custom Orbit design?

**Text**

Are there any enhancements to the above design?

What kind of enhancement will you do to improve the visualization?

# Utility

Does this visualizer support you to understand the future space population variation in the next few years? (1-5)