

Non functional requirements

With the user research process we discovered 2 factors on which we will focus for our prototyping:

- The difficulty of the use of map interfaces.
- The rate of errors that the users make when using the form on the CURP, email and phone number inputs.

With this in mind we aim for the following non functional requirements of our prototypes:

Requirement code	Usability component	Description	Metrics to use
NFR-001	Error rate	It must ensure that the user makes the least errors possible when filling out the form. Errors are described as submitting wrong information to the application.	User errors count.
NFR-002	Intuitive	It must be easy and straightforward for the user to fill out the form.	Questions raised during usability test count.
NFR-003	Satisfactory	The sign-up information fields must be pleasant to the user to use and input their information on.	Answered the information field was pleasant to use count

We will apply this metric for each of the proposed components in the prototype, making that the one that got us the least amount are the ones

Now for each metric we will need a decision criteria to analyze and interpret the results, the main heuristic will be following the example of a expert user, making the ranges be:

Excellent: [average expert result - (1*standar deviation), average expert result + (1*standar deviation)]

Acceptable: [average expert result - (2*standar deviation), average expert result + (2*standar deviation)]

Unacceptable: [average expert result - (3*standar deviation), average expert result + (3*standar deviation)]

With this we can describe the metrics results as follow:

User errors count.

We will measure the error count of 5 expert users for all prototypes. We'll then measure the error counts of the participants of the test participants for each prototype. We'll use then the standard deviation of the experts data to measure how far were the results from the expert data. We'll classify it as follows:

- Excellent: The mean of the participant errors goes 1 standard deviation away from the mean of errors from the expert users
- Acceptable: The mean of the participant errors goes 2 standard deviations away from the mean of errors from the expert users
- Unacceptable: The mean of the participant errors goes 3 standard deviations away from the mean of errors from the expert users

Questions raised during usability test count.

We'll measure using the same method as for the user error counts. We'll categorize it as follows:

- Excellent: if one standard deviation away from the mean questions raised by the expert users.
- Acceptable: if two standard deviations away from the mean questions raised by the expert users.
- Unacceptable: if three standard deviations away from the mean questions raised by the expert users.

Answered the information field was pleasant to use count

For this metric we will be using a satisfaction survey after testing each prototype. This survey has 5 possible answers for each question ordered in ordinal scale. We assigned values that go from 1 to 5 considering maintaining the ordinal scale. We'll get the average score of the answers for each prototype and categorize the satisfaction level depending on the following categories:

- Very satisfactory: between 5 and 4.5 in average satisfaction score.
- Satisfactory: between 3.5 and 4.49 in average satisfaction score.
- Neutral: between 2.5 and 3.49
- Unsatisfactory: between 1.5 and 2.49
- Very Unsatisfactory: between 1 and 1.49