

Category: Student work

Project: The Sidewalk Atlas: A multi-scalar approach through interdisciplinary lenses



Pic. 1: A regular scene in Mexico City's sidewalks. Photo: Nora Morales.

What was the challenge?

When information design students learn how to visualize spatial data they usually tend to jump into the representation stage right away, but how can we teach our students to reflect and value previous stages of the process, like getting involved in data collection instruments with other researchers or analyzing which platforms are pertinent for the budget and context of the research.

This was the situation which the Spatial Information Design Class faced during the Winter of 2019 trimester, as part of their Master Degree Program (MADIC) at UAM University in Mexico City.

Based on an ongoing research project: "Walkability, social and material production of space" done by Social Scientists and The Laboratory of Analysis and Socio-Territory (LAST) at the same University, students were asked to design and develop a data collection instrument to collect data, compute it and represent and suggest an open information dashboards platform in order to characterize the urban sidewalk: The Sidewalk Atlas.

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There is no formal data generated that characterizes the urban sidewalks of this Megacity, than the usual, shown as a satellite image from Google or Street View maps, which shows the street location and visual information that corresponds to a specific moment in time but only considers the scale to street level.

Imagine if we want to know more detailed qualitative and quantitative aspects of the sidewalk, such as width, type of material, height, tilting or objects or obstacles that compromise people's walkability to be able to inform or assess public space more efficiently (See Fig. 2 & 3).

The first prototype collection of data in 14 different locations is giving some preliminary good insights like: the maximum and minimum of street length covered by sidewalks, type of material, quantity and density of objects. Like 82% of the objects in the sidewalks are permanent, while 18% are mobile, and the main producer of them is the Government 42% while 32% percent relies on residents (See Fig. 4 & 5).

What was the solution?

Students immersed in a process in close relation to the social scientist, which started from the design of an analogous survey, collection and coding instrument that each of them prototyped and used, considering metrics and aggregation data from the scalable

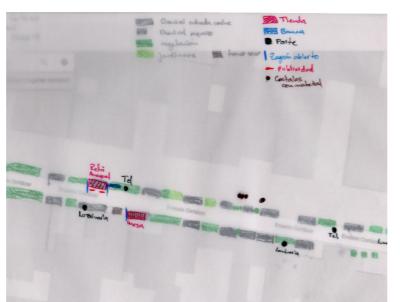


Fig. 2 & 3: Sketches for the analog instrument by Daniela Pérez.

model that considered attributes from street, sidewalk materials dimensions, objects, actors and activities that could define a more robust typology density and diversity for sidewalks in the city. They also explored interfaces for a mobile device for collecting the data and a suggestion for a website and did a comparative study for the "state of the art" of different digital platforms that could be used to show results and analysis for the research (See Fig. 2 & 3).

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Fig. 4 & 5: Collecting instrument designed by the MADIC's information design students: Andrea Aguilar, Daniela Pérez, Ivonne Ramírez, Laura Álvarez, León Arango, Mónica Aguilar, Mónica Canto, Vanessa Hernández, Xiadani Álvarez. Teachers: Angélica Martínez and Nora Morales.

What was the effect?

The project is in the indicator construction stage as well as the generation of communication materials and webpage design. We believe that it is important to encourage this type of projects where involvement of information designers from the first stages of the research process is an advantage to experiment allowing to come up with a clear planning and organizations since the beginning (See Fig. 6 & 7).

From the learning perspective, the interdisciplinary experience was an important factor, since other University departments and faculties were involved and students from different disciplines get to work from a wider social and learning range, our students took SIG classes from the social science teachers and the design students were in charge of tutting other students and surveyors on how to use the instruments.

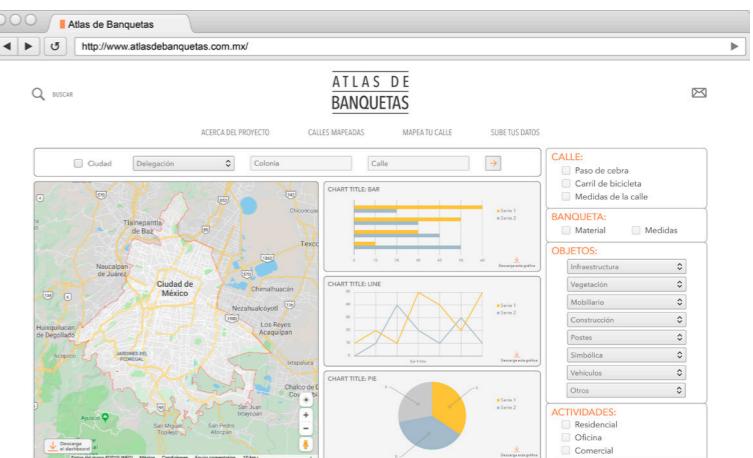


Fig. 6: Dashboard proposal to visualize the data by Ivonne Ramírez.

Fig. 7: Proposal of app to capture the data of the sidewalks by Xiadani Álvarez.

**"Walkability, social and material production of space" is an academic research project in which participate the following teachers: Dr. Salomón González, Mtra. Laura Quiroz, Guénola Capron, Jerónimo Díaz, Mtra. Nora Morales and Dra. Angélica Martínez de la Peña.