

# A tale of two cities: wheelchair mobility in Bogota & Munich



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**Individuals with disabilities have great difficulties navigating and accessing essential services in cities. In this project, we use maps and digital storytelling to communicate to a broad audience the daily challenges and obstacles they face.**

**We created immersive maps and 3D scenes to tell the story of three people we interviewed, all electrical wheelchair users. One of them is from the city of Bogota, Colombia; the other two live in the city of Munich, Germany.**

## OBJECTIVE

Our objective is to present the difficulties of three people with disabilities in Bogota and Munich. We created maps and 3D models that show how they travel around and the places they visit. We also included auditory variables in our visualizations to create an immersive and compelling experience.

## METHODS

We used structured questionnaires to conduct interviews; we based our surveying methods on social cartography theory [1]. We processed and displayed our data using ArcGIS Pro software to show our results [2]. We also required basic image and sound editor software to manage and edit pictures and sounds.

## OUTCOMES

Our visual essay is structured for easy navigation. After the introduction, the content is divided into three blocks, one for each city. The last has a comparison of cities and concluding remarks. In each city content block, three sub-blocks are navigated by scrolling. The first shows pictures and explanations of essential elements related to the experience of disability in the city (Fig. 1). The second presents thematic maps of routes and transport means used by the interviewees to showcase their mobility capabilities (Fig. 2). Last sub-block contains the interviewees' specific trails and obstacles they encountered (Fig. 3). In between the blocks, we add text that summarizes and connects the different parts of the essay. Finally, we discuss the difficulties people face in wheelchairs in each city and conclude how their situation can be improved.

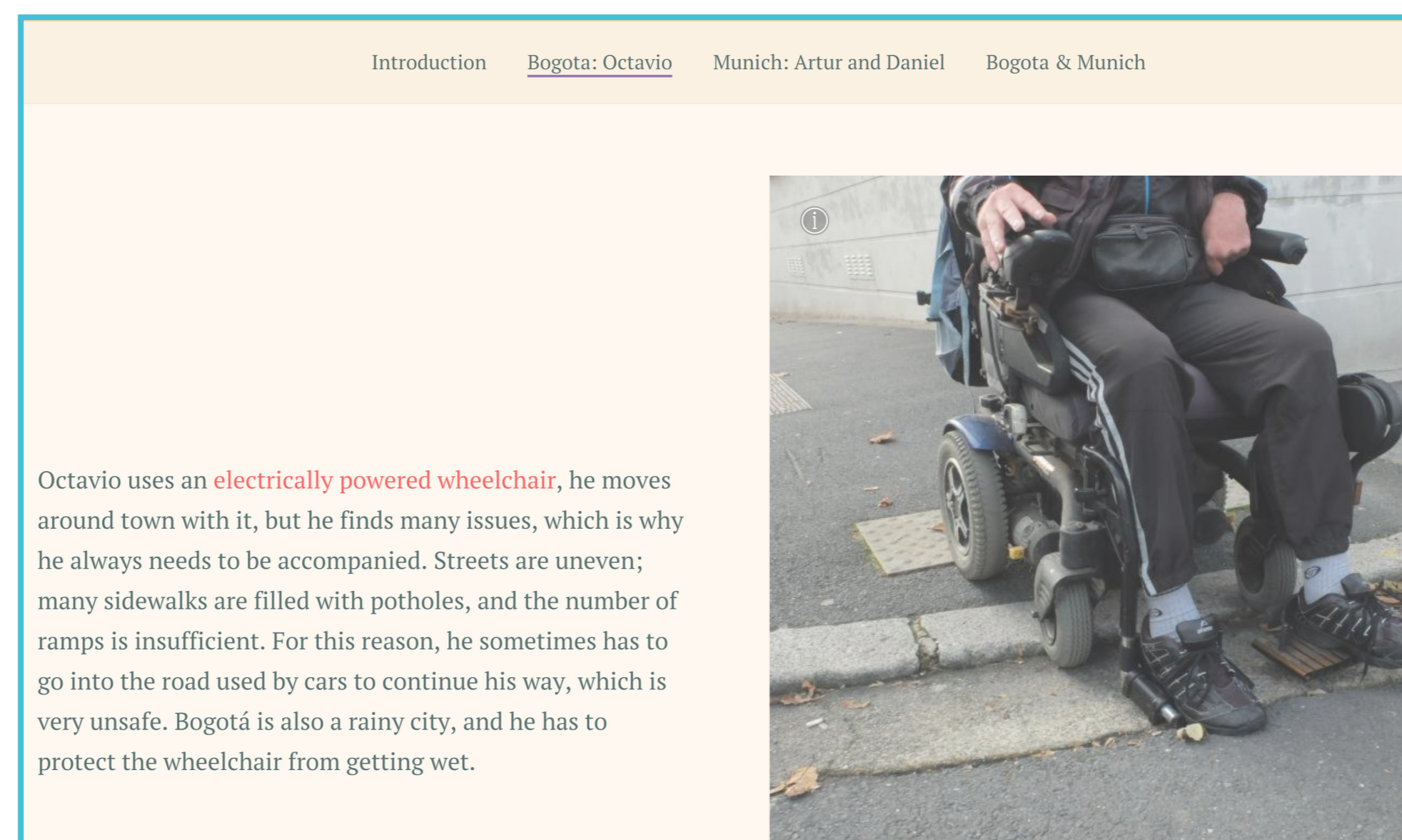


Figure 1. Content block 1

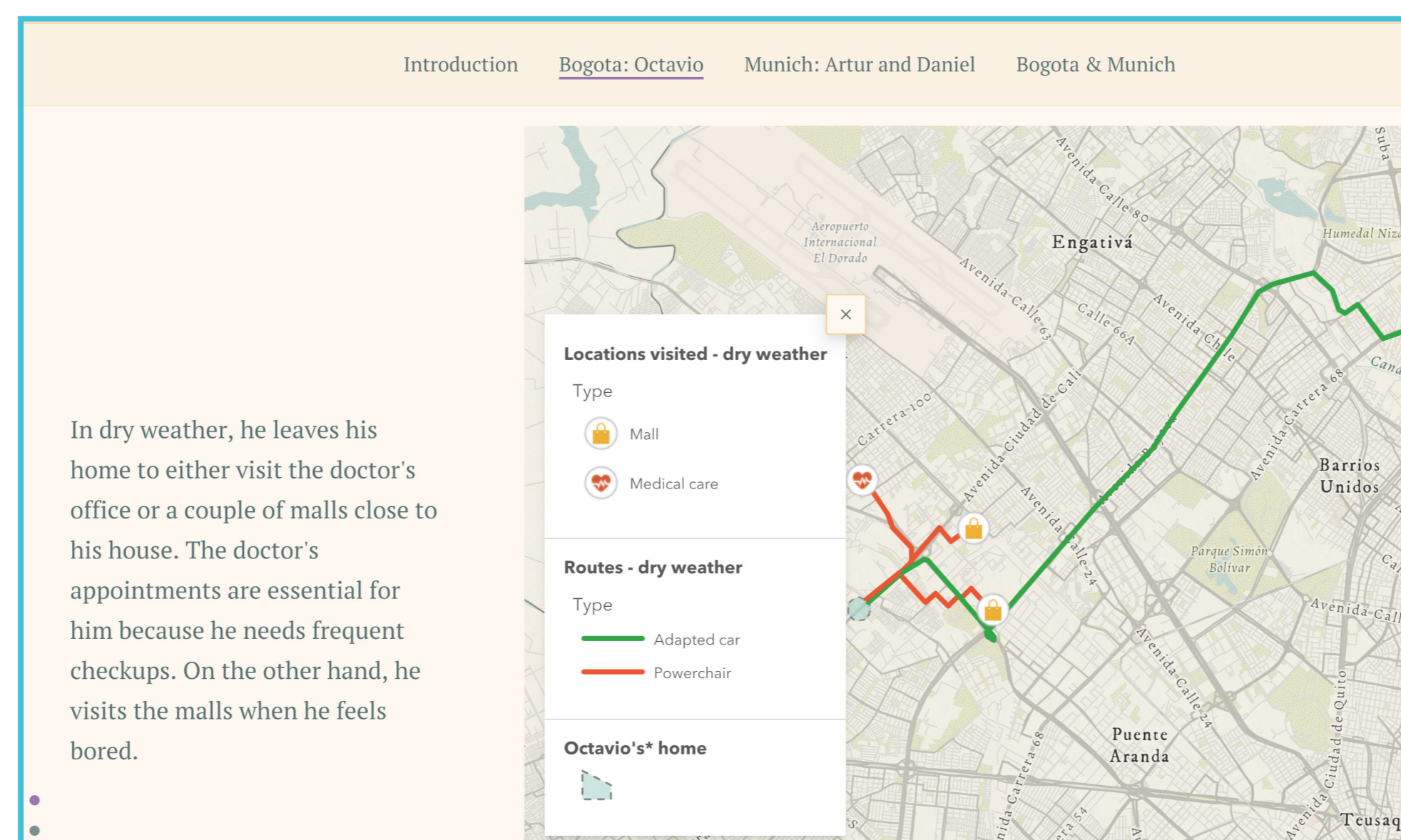


Figure 2. Content block 2



Figure 3. Content block 3

## IMPRINT

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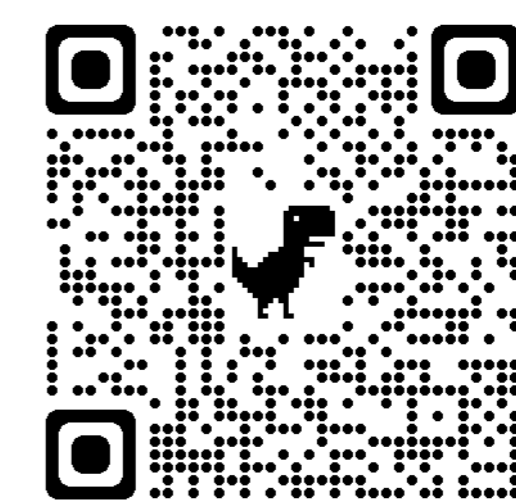
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## KEYWORDS

storymap, storytelling, experience, disability, urban, city

## LINK



## FUTURE WORK

We would like to edit and run the source code of Storymaps ourselves to increase the flexibility of our layout and contents. We want to expand and find ways to add more participants and elements to our content and find ways to structure and present the information.

## REFERENCES

- [1] Barragán-León, Andrea Natalia. "Cartografía Social: Lenguaje Creativo Para La Investigación Cualitativa." *Sociedad y Economía* 36 (April 2019): 139–59. <https://doi.org/10.25100/sye.v0i36.7457>.
- [2] "Digital Storytelling with Maps | ArcGIS StoryMaps." Accessed November 4, 2022. <https://www.esri.com/en-us/arcgis/products/arcgis-storymaps/overview>.

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