

Enabling women's economic empowerment: An AI-and data-driven case study in Mexico

1. Promoting gender equality

Context. Globally, women shoulder 76.2% of total unpaid care work hours—over three times the commitment made by men. This imbalance directly impacts women's opportunities to engage in broader social, cultural, and economic activities. Shockingly, Mexico ranks second lowest globally in men's contribution to unpaid care work, surpassed only by Chile. The challenges exacerbated by COVID-19 have further burdened women with additional domestic responsibilities, severely limiting their chances for meaningful employment. Recognizing that a robust care ecosystem is pivotal to advancing women's economic participation, it's crucial for policymakers to possess concrete information. This includes insights into infrastructure demands that can effectively nurture such an ecosystem.

In response to this pressing need, extensive consultations, and collaborative engagements with local stakeholders, academia, public, civil society, and the private sector, were undertaken by GIZ's [Data4Policy](#) and [Piso Igual](#) (previously Agenda 2030) initiatives. The Data4Policy initiative is dedicated to fostering sustainable data utilization, empowering political decision-makers to champion human rights and sustainable development within their unique contexts. Piso Igual seeks to enable the Mexican government to have framework conditions for the social inclusion of women and girls.

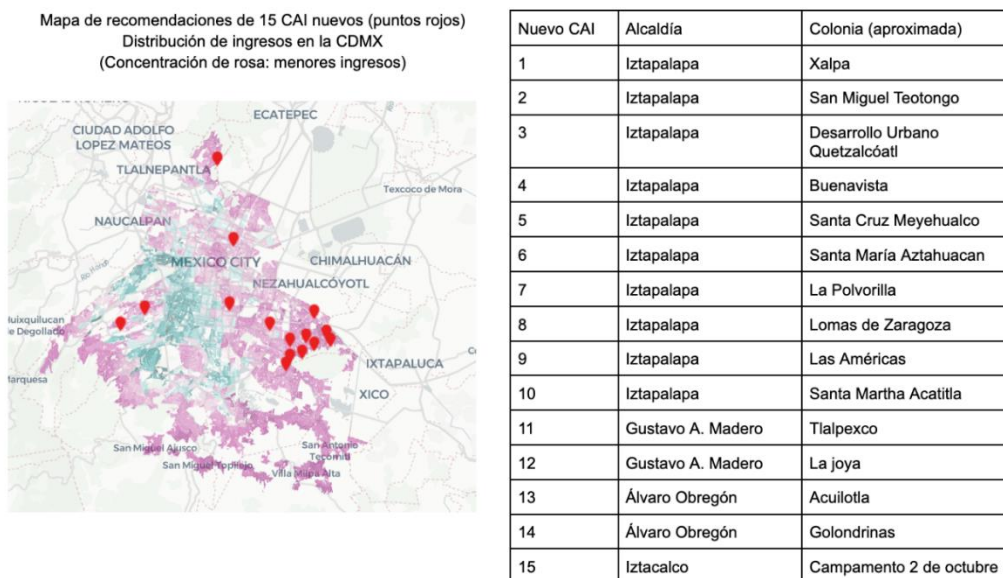
In collaboration with the Piso Igual and Data4Policy, the government of Mexico City, spearheaded by the Ministry of Women's Affairs (SEMujeres), has innovatively crafted an [intelligent platform](#). This platform, a product of collaborative efforts, seamlessly integrates diverse data sources, encompassing AI-processed citizen-generated data (processed with Natural Language Understanding -NLU- algorithms), administrative records, satellite imagery, census, and survey data. The strategic integration of different data sources empowers the Ministry to gain unparalleled insights, facilitating precise and effective actions to enhance women's participation in the labor market across Mexico City. With a user-friendly interface, decision-makers can access information on the availability of public and private childcare facilities, assess transport accessibility, and identify where are the most economic opportunities. The platform's flexibility underscores its forward-looking design, guaranteeing scalability and the ability to seamlessly integrate new information sources to meet the changing requirements of government.

Operating at a granular level (block granularity), the platform provides decision-makers with well-informed, data-driven insights, for example, in which block would the most vulnerable and most number of women with children would benefit from a public childcare facility. This approach not only localizes decision-making but also fuels the formulation of inclusive policies down to the block level. By leveraging this innovative tool, the government is positioned to make impactful decisions that transcend traditional boundaries, fostering a more inclusive and equitable environment.

Results achieved. The outcomes of our co-creative process, drawing upon expertise from diverse sectors, culminated in the successful conceptualization of this pilot. This approach harnesses both existing and emerging data sources, employing advanced analyses to generate meaningful insights that are gender-responsive and have the potential to be gender transformative. The key achievements can be summarized as follows:

- **Crowdsourced Inclusivity:** The crowdsourcing of data is pivotal, ensuring the inclusion of voices from women and the target population. This participatory approach is integral to implementing policies rooted in a feminist development approach.
- **Innovation for inclusion:** Utilizing a cutting-edge NLU model enables the policy makers to incorporate open-ended questions into surveys, enriching existing data with complementary insights beyond traditional survey responses and allows to incorporate women’s voices into the insights used by decision-makers.
- **Scalability and Adaptability:** The NLU model is designed for universal application in all Spanish-speaking countries and contexts, ensuring scalability and adaptability on a broader scale. This exercise can also be replicated in other regions, where the unequal distribution of care work and the missing link between this phenomenon and women’s labor participation wishes to be addressed.
- **Policy Analysis:** The platform's main findings are currently undergoing meticulous processing, consolidating into a comprehensive report. This report will not only present specific policy recommendations but also outline actionable steps for their implementation in Mexico City to foster more gender responsive policies that can enable women’s economic empowerment, such as better transport connections, or localized extended school schedule, among others.
- **Capacity Building:** To empower policymakers to use gender data, capacity-building activities have been conducted, providing them more effectively with the skills to navigate the platform and draw meaningful conclusions from the data, translating insights into effective policy, specially related to the gender data gaps this platform is contributing to address.
- **Consolidation of the Care System:** In tandem with Mexico City's groundbreaking development of the country's first care system, this pilot project's results have been in the core basis for identifying existing and necessary infrastructure for setting up such care system. These insights contribute to expanding the supply of care in the city, fostering a more robust and supportive environment that has the potential to enable women’s participation, not only in the labor market for reaching economic autonomy, but also in other spheres like the social and familiar.

Figure 1. Map of new care centers recommended by the intelligent platform considering the supply and demand for care facilities at a block level.



2. Gender as a quality feature of our work

The results of the pilot have been recognized, first by our counterpart, the Ministry of Women of Mexico City. Initially, the project was conceived from the perspective of providing data for the formulation of public policies to promote women's economic autonomy. However, during the development of the project, the political situation turned towards the development of care systems and the project already had data to support the narrative of the care system in Mexico City. The platform provides relevant insights of the infrastructure needed to strengthen the supply of care in the city, and the data has the potential to guide the development of gender-transformative policies and more inclusive political decisions for everyone. Currently, a thorough analysis of such policies and actions is being carried out. The first findings have been shared with the ministry of women and a selection of the most specific recommendations will be going through a more in-depth analysis to achieve actionable recommendations in the short, medium, and long term.

In addition, the project has the potential to be replicated in other contexts, either at the local or national level, this would eventually mean that the approach has the power to also mainstream gender, equity and inclusion and bring more gender responsive and transformative policies to those contexts where it is deployed. The hypothesis of this causal mechanism starts with the gender data gap, the approach that seeks to bridge it, the availability of the data and relevant insights via the platform and then, the use of it by policy makers to achieve data-informed policies to those groups who are in the most need. The microterritorial intelligence platform approach can be used and adapted to address other social issues where intersectionality plays a big role on the access to opportunities with the same granularity that we have achieved with this project. This means that the government would have the potential to target not only the most economically vulnerable women, but also other marginalized population groups in these areas and know which are the specific barriers and challenges they face in this geographical space.

Our project has been acknowledged as a groundbreaking approach to address gender data gaps and enable a connection between data availability, social participation, and government response. As such, it has been featured in seminars and studies on innovative approaches to reduce gender inequality by leveraging data and technology. Some examples are: [1\) GIZ's Data Lab- Data Pop Alliance' Data Feminism series- session 2 "gender data gaps"](#), [2\) GIZ's gender data gaps baseline study](#); [3\) Featured in GIZ-commissioned Human Rights Based approach study](#); [4\) Paris Peace Forum: space of solutions- Use Case of Data and AI use for human-centered policies \(11.11.2023\)](#); [5\) Global Digital Development Forum: AI for gender equality \(06.04.2023\)](#). [6\) UNDP Data Thursdays \(30.11.2023\): Gender Data Gaps and how to address them.](#)

3. Implementing feminist core principles

The project aligns with the feminist core principles by explicitly tackling gender data gaps and using technological tools to address the specific challenges faced by women in accessing the labor market in Mexico City. More specifically, it focuses on understanding and addressing the desires, expectations, and limitations of women in relation to paid work. By gathering granular data, including employment information, it aims to ensure that women's rights to equal opportunities in the labor market are recognized and addressed. This approach can be leveraged to dismantle structural causes for inequality given its intrinsic acknowledgement of the disproportionate burden of unpaid care and domestic work that women face. The platform seeks to support decision makers to target the uneven distribution of unpaid care work, addressing a structural cause for gender inequality by providing information on specific and actionable recommendations to carry out actions that could support women's integration into the labor market, and hence, foster their economic autonomy.

The data gathered includes intersectional aspects such as age, socioeconomic status, gender (understood as a non-binary construction), and caretaker responsibilities. The visualizations of data on a map allow for an intersectional and geospatial distribution analysis, ensuring that the specific needs of women from diverse backgrounds are considered. Furthermore, this project, in collaboration with local and international civil society organizations, engages in conversations with stakeholders, including the Ministry of Women, to ensure a power-critical approach. By incorporating crowd-sourced data and involving the target population of the government's decisions, it considers the post-colonial context and aims to empower women by addressing their specific needs. At the same time, using Natural Language Processing (NLP) and data analytics provides targeted insights into the challenges women face, enabling the government to follow gender-transformative approaches. In summary, the project aligns with the feminist core principles by leveraging data-driven insights and technological tools to address the specific challenges faced by women in accessing the labor market, with a focus on dismantling.

The project is aligned with feminist policy by incorporating responsive gender and human rights approaches that reduce inequality gaps by explicitly tacking gender data gaps. The project directly addresses one of the principles of feminist policy by promoting the exercise of rights (3R approach). Furthermore, the project provides key elements for the consolidation of a care system that recognizes, reduces, and redistributes the unpaid care work done by women and is fundamental to achieve a greater economic and social inclusion of women. By providing timely information on the supply and demand for care services, public policies can be designed to respond to the specific needs of women, enabling them to reduce their care burdens and to use their time for other types of activities, such as paid employment.

The project embraced a human rights-based approach, prioritizing equality, non-discrimination, and gender sensitivity throughout data collection. Open-ended responses allowed respondents to express factors influencing barriers to paid employment, extending beyond gender to consider various intersectional aspects. Empowerment and participation were actualized through collaboration with a local feminist organization, capturing and analyzing 10,000+ voices of women in Mexico City. The commitment to accountability and transparency is evident in the planned release of resources and methodologies upon project publication.

4. Cooperation

This pilot is being conducted by a global project (G100: GV Digital Transformation – Data4Policy) and a Bilateral Project (Piso Igual, Mexico). It was a perfect match of partnerships in the local context and technical expertise. Furthermore, our counterpart was the Ministry of Women of Mexico City. In the consultation process, we spoke to the statistics office and to the council who evaluates the national social policies for mapping the data ecosystem (INEGI and CONEVAL). We also partnered with local (IMCO and Equidad) and international (White Ribbon Alliance) civil society organizations in different stages of the project. Finally, we also believed in supporting national talent, which led us to partner with an emerging national startup. The 3 key success of the project have been: **1) Need/demand driven approach.** Before we started any conceptualization or proposal, we asked the Ministry of Women which challenges they were facing because of a data gap. **2. Multistakeholder understanding phase:** having local experts with different backgrounds from different sectors, was key to conceptualize an innovative approach. **3. Inclusion of women in the core input for the project.** Having women's demands, perspectives and needs provided the data a depth that could have hardly been achieved had this been done via a traditional survey or census to guide gender transformative actions in the government.