Process of PASOS SEGUROS Program in Mexico City: Lessons Learned and Beyond
Global Street Series 4.2 – Designing for Road Safety Webinar – July 6, 2017

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A road safety effort by the Government of Mexico City with the goal of saving lives by redesigning intersections in the city’s high-injury road network, with a focus on pedestrian crashes.
ROAD SAFETY IN NUMBERS
TRAFFIC FATALITIES AND INJURIES IN MEXICO CITY

1,091
Traffic fatalities per year
(yearly average for the 3 previous years)

60%
of fatalities
were pedestrians

11%
of roads
Primary Road Network:
Main roads, avenues and urban freeways

7 out of 10
of traffic incidents

52%
of road fatalities

61%
of pedestrian crashes
CAUSES OF TRAFFIC INCIDENTS

- Speeding: 34%
- Driving under the influence of alcohol: 21%
- Failing to obey traffic lights: 13%
- Distracted driving: 12%
- Others: 16%
- Unknown: 4%
ROAD SAFETY POLICY TIME LINE
1. Institutional change from SETRAVI (transport) to SEMOVI (mobility) - July 2014

2. Enactment of CDMX Mobility Law - July 2014


4. Pasos Seguros Taskforce - December 2014

5. New Rules of the Road with speed limit reductions - August 2015
   Automated enforcement program

6. Implementation of Phase I of Pasos Seguros Program - August 2015

More Road Safety Actions

April 2016
Phase II of Pasos Seguros Program

April 2017
- Comprehensive Road Safety Program of Mexico City under Vision Zero
PASOS SEGUROS PROGRAM RECAP
Redesign of 54 intersections in 6 corridors of CDMX’s high injury network
<table>
<thead>
<tr>
<th>No.</th>
<th>CORREDOR</th>
<th>TRAMO</th>
<th>DELEGACIÓN</th>
<th>NÚMERO DE INTERSECCIONES</th>
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<tr>
<td>1</td>
<td>Marina Nacional</td>
<td>Laguna Mayrán - Felipe Carrillo Puerto</td>
<td>Miguel Hidalgo</td>
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<td>2</td>
<td>Mariano Escobedo</td>
<td>Lago Alberto - México Tacuba</td>
<td>Miguel Hidalgo</td>
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<td>San Antonio Abad</td>
<td>Izazaga - Chimalpopoca</td>
<td>Cuauhtémoc</td>
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<tr>
<td>4</td>
<td>Eje 1 Oriente La Viga</td>
<td>Calzada del Hueso - Zoquipa</td>
<td>Cuauhtémoc - Venustiano Carranza - Tlalpan</td>
<td>6</td>
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<tr>
<td>5</td>
<td>Eje 2 Oriente Congreso de la Unión - La Viga</td>
<td>Eje 8 Sur Ermita Iztapalapa - Aluminio</td>
<td>Cuauhtémoc - Venustiano Carranza - Iztapalapa - Iztacalco</td>
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<tr>
<td>6</td>
<td>Eje 8 Sur Ermita Iztapalapa</td>
<td>Vía Láctea - Eje 6 Sur de Las Torres</td>
<td>Iztapalapa - Coyacán</td>
<td>16</td>
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</tbody>
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TOTAL DE INTERSECCIONES 54
traffic control devices
(Pavement markings and traffic signs)

geometry redesign
(Pedestrian islands, curb extensions and traffic lanes)

traffic signals and operation
(Signal programing, pedestrian signals & cycle reprograming)

obstacle removal in corners
(obsolete posts, signs & street furniture, and relocation of informal vendors)
Delimitation with elements such as planters or flexible delineators for vehicular restriction.

New surface with a change in texture and color (e.g., epoxy gravel) for easy identification.

Neutral areas allow the free movement of all types of vehicles around them, minimizing vehicle turning speeds due to the curb radii. It reorganizes and recovers space previously used for car traffic through simple geometric adjustments.

Traffic is not affected by the neutral areas gained, it only restricts the space for misuse such as parking or street vendors.

Neutral areas reduce crossing distances for pedestrians and provide pedestrian protection and shelter areas.
communication strategy

(press releases, website, social media, brochure, communication campaign, mimes)

traffic police engagement

(training & vulnerable road users awareness)

Evidence-based analysis & evaluation

(traffic incident geospatial analysis, safety perception survey, before and after crash data analysis)
Calzada de la Viga and Av. del Taller
PHASE I OUTCOMES

A reduction of 44% of total traffic incidents in the 54 intersections after one year*

A reduction of 53% of total pedestrian crashes in these intersections after one year*

Capital investment of $6.5 million dollars for 54 intersections**

*Automated enforcement and new rules of the road with speed limit reductions and harsher sanctions also contributed to this result.

Source: ERUM Ambulance and Red Cross data, 2015-2016.

**This does not include communications strategy, traffic police training, and some road improvements such as street light maintenance, sidewalk ramps with universal design, pothole repair, done with city programs with running budgets.
*Automated enforcement and new rules of the road with speed limit reductions and harsher sanctions also contributed to this result.

Source: ERUM Ambulance and Red Cross data, 2015-2016.
THE PROCESS BEHIND THE SUCCESS STORY
Road safety as public policy

Mayor Mancera since the onset of his administration has given priority to structural changes in mobility and road safety.

International support and overseeing

Bloomberg Associates played a key role in pushing the City administration towards making Pasos Seguros as a priority and providing technical assistance, guidance and strategy.

Leadership and creation of Task Force

Mayor Mancera appoints the head of the Authority of Public Space as the Pasos Seguros Task Force coordinator. Strategic team selection was done in each department to support this effort.
The Task Force developed a strategic workplan with evidence-based analysis choosing high-risk corridors (technical criteria), but also considering which of these were easier to implement (politics with informal vendors and investment requirements).

Weekly meetings were held to review traffic engineering studies, intersection designs and maintenance requirements for each location. These tasks were reported every two weeks to the Mayor to ensure institutional accountability.

The Task Force’s technical staff established an implementation oversight and training for the construction company’s work plan for quality assurance given the lack of experience in this type of projects. Decisions were made on the site for changes in the design when required.

Before & after data analysis was crucial for the program’s success.
Technical Analysis and Capacity

- Geospatial analysis by the National Autonomous University of Mexico’s Geography Institute
- Multimodal traffic engineering studies for each intersection to inform the designs and signal operation cycles.
- Technical staff with 3+ years of experience in pedestrian and bicycle infrastructure design, with technical assistance from Bloomberg Associates (NYC experts).
- Technical drawings with all the design elements.

Communication’s Strategy

- Messaging, Q&A and shared facts for spokespeople
- Timeline for press releases and media strategy
- Website with branding, brochure and basic information about the program, where the public could follow implementation progress.
- A social media strategy with messaging to interact with the public through AEP’s account.
- Branding and messaging during construction process.
- Printed brochures were distributed in participating agency’s offices and at sites with implementation conflicts.
- Mimes and young activators were present at 6 strategic intersections during the launch of the program for 2 weeks inviting users to follow traffic rules.

Traffic Police Engagement and Public Perception

CTS-EMBARQ (now WRI Mexico) supported the Pasos Seguros Program process:

- They provided training to over 200 traffic police officers that would be appointed to guard the most critical intersections. The focus was on sanctions on the new rules of the road applicable at traffic stops, as well as vulnerable street user awareness. This created pride and recognition to their daily role.
- They carried out a Safety Perception Survey in a sample of intersections along the 6 corridors. 60% of pedestrians and cyclists felt unsafe before the implementation of the program.
En la Ciudad de México las heridas de violencia han sido causas de muerte de niños en edad escolar, la siete causa de fallecimiento de niños productivos y representan el 15% de las causas de discapacidad en los jóvenes. Adicionalmente, el 28% de los fallecimientos por este causas se registraron en niños productivos y adultos (en la calle).

Ante este panorama, desde los primeros días de esta administración se formó el comité de fechas en el fallecimiento para reducir la ocurrencia de hechos de violencia en la ciudad.

Los probables causas pueden presentar al realizar caída para volatilizaciones, almorzar para adolescentes y reducir el uso de las intersecciones en donde se registraron los conflictos como los accidentes anuales en niños.

A través del Programa Pasos Seguros, el Gobierno de la Ciudad de México emprendió un programa para transformar los comportamientos y satisfacer las nuevas fases de coexistencia, en lugares más seguros y sin reducir el consumo de alcohol y drogas.

Los inicios de este programa se realizaron en el año 2014 con una tasa anual del 7.9% de los fallecimientos en los accidentes.

La primera fase de este programa, se realizó en el año 2015, coordinado con la Secretaría de Movilidad, la Secretaría de Obras, la Secretaría de Seguridad Pública, la Secretaría de Medio Ambiente Ambiental, la Delegación Intervención, y la Secretaría de Obras Públicas, entre otras.

PasosSeguros fue uno de los componentes del Programa de Seguridad Ciudadana de la Ciudad que se enfocó en el mejoramiento de la infraestructura con la movilidad, se implementaron simulaciones de emergencia, se realizaron sesiones de formación para la seguridad en el uso de las calles, se implementó el nuevo sistema de vigilancia (videojuego) y se realizó la renovación de la infraestructura en los hitos.

Reconocemos que la seguridad en la Ciudad de México es una responsabilidad compartida que requiere del trabajo conjunto de la participación de todos los que residen en la ciudad. Las acciones del gobierno, sociedad civil y ciudadanos repercuten directamente en la meta de reducir el
Totems at construction sites and during program launch
Branding at the construction work site
Campaign for bus shelters on each corridor
Mimes and banners during the first 2 weeks at strategic intersections
CONCLUSIONS & LESSONS LEARNED
PHASE I
• *Pasos Seguros* led to a public and institutional understanding of safe street design as an effective strategy to reduce traffic fatalities.

• The success of Phase I has institutionalized road safety efforts and the *Pasos Seguros* Program by ensuring continuity through Phases II & III, as well as a yearly maintenance budget to-date.

• Intersections that have proven functional and safe should undergo a more permanent capital construction phase, along with continuous education campaigns.

• The Task Force created a new inter-department work process for both the *Pasos Seguros* Program as well as other road improvement project within the government.
• The **leadership role behind the Task Force** is key and should be results-oriented, providing recognition of each department internally towards the Mayor.
  • Public recognition should not be given to a single department, all merit should be given to the Mayor. This avoids ego-battles and sensitivities that hinder collaboration among departments.

• **Team-building is critical** for the cohesiveness and collaboration of the technical team (Task Force). Motivation, inspiration and sense of transcendence in the collective work is key to drive the enormous effort behind the program’s success.

• A well thought-out **communication’s strategy** is key, supported with evidence-based arguments.

• **Context-sensitive solutions** are needed (adapt-paste vs. copy-paste), learning from the NYC experience with CDMX challenges in mind (negotiations with informal vendors, no ramps & poor sidewalk conditions that required repair, scattered attributions among departments).
• Phase I of the program **didn’t consider community outreach** which caused **NIMBYism** in certain corridors as well as media backlash. This requires a large government effort and investment in time and human resources, but it is recommended.
  • The only “outreach” that was done was with strategic stakeholders such as certain businesses that were being affected by the changes as well as with informal vendor leaderships.

• The **lack of experience from construction companies** in these type of projects (i.e. new materials, new road design tracing, new pavement markings, new blue prints to interpret on the ground) led to **initial implementation mistakes** that had a media and social backlash and criticism. This required the technical team to **establish oversight of the works** in progress (very demanding hours).

• Mexican cities have a context of poor enforcement of traffic regulations, thus requiring additional police presence on top of the physical redesign to change drivers’ behavior in certain intersections.
PHASES II & III (2016-2017)
Intersections with a capital investment of $6.5 million USD

Intersections with a capital investment of $6.7 million USD and $1.1 million USD for Phase I maintenance.

10 intersections with a capital investment of $1.7 million USD and $1.1 million USD for program maintenance (all phases). 20 intersections are being redesigned with recycled materials from the road’s maintenance unit at the Agency of Urban Management of CDMX.
Redesign of 106 intersections in 10 corridors of CDMX’s high injury network
PHASE III