PASOS SEGUROS

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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PASOS SEGUROS

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.

INTRODUCTION

ROAD SAFETY IN NUMBERS


AV CHAPULTEPEC
AV DEL TALLER
2

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

CONCENTRATE

7 out of **10**

of traffic incidents

52%

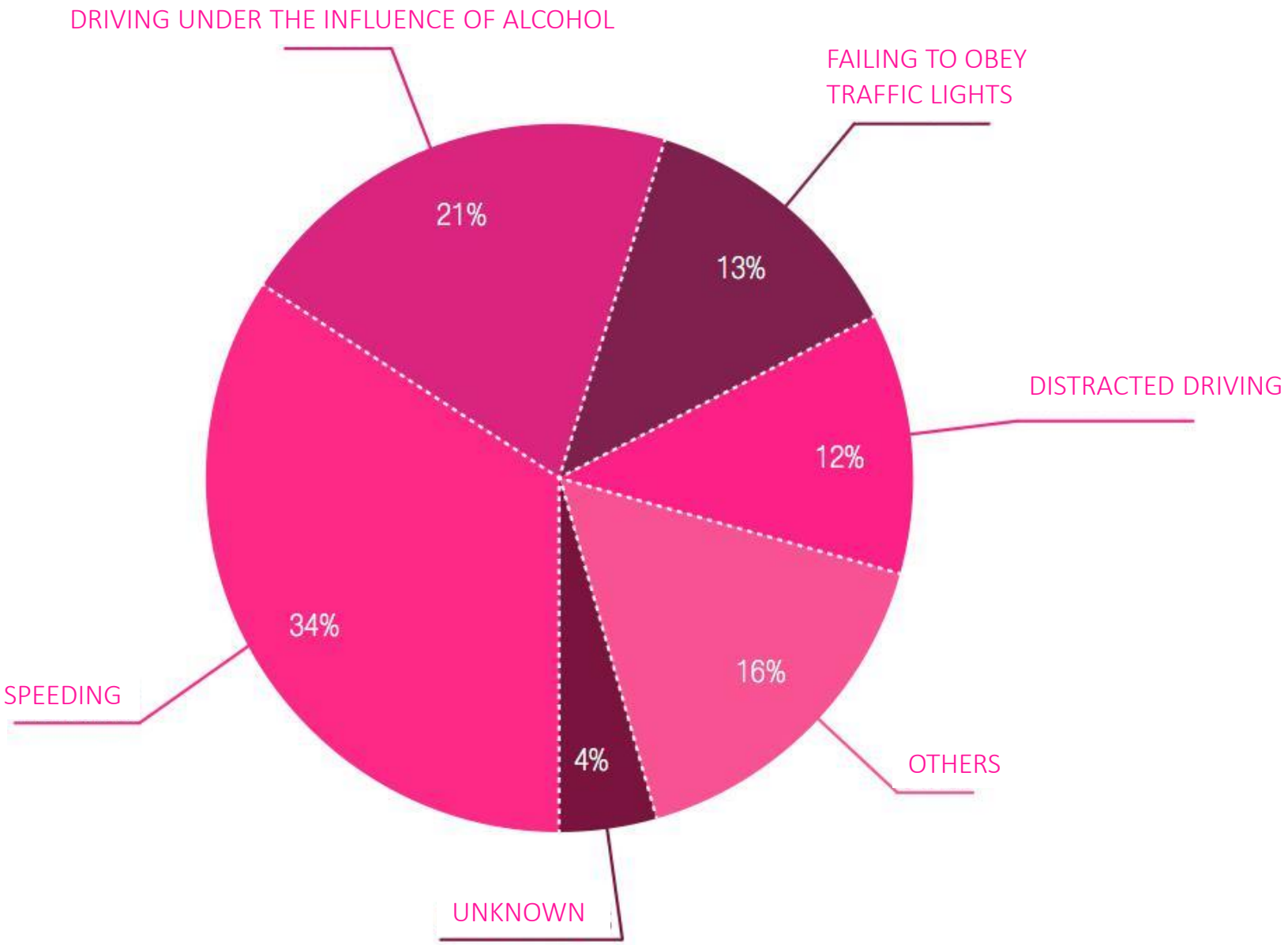
of road fatalities

61%

of pedestrian crashes

TRAFFIC INCIDENTS

CAUSES OF TRAFFIC INCIDENTS



CAUSES

ROAD SAFETY POLICY TIME LINE

TIME LINE

1
Institutional change from SETRAVI (transport) to SEMOVI (mobility)

July 2014

SETRAVI

SEMOVI

July 2014

2
Enactment of CDMX Mobility Law

3
Comprehensive Mobility Plan 2013-2018

October 2014

PASOS SEGUROS

December 2014

4
Pasos Seguro's Taskforce

5
New Rules of the Road with speed limit reductions

Automated enforcement program

August 2015

August 2015

6
Implementation of Phase I of *Pasos Seguros* Program

2 0 1 4

2 0 1 5

More Road Safety Actions

April 2016
Phase II of *Pasos Seguros* Program

April 2017
- Comprehensive Road Safety Program of Mexico City under Vision Zero

Gobierno del Distrito Federal

Autoridad del Espacio Público

Secretaría de Obras y Servicios

Secretaría de Seguridad Pública

Secretaría de Movilidad

Secretaría de Desarrollo Urbano y Vivienda

Procuraduría General de Justicia del Distrito Federal

Secretaría de Salud

Agencia de Gestión Urbana

Instituto de la Juventud

Tribunal Superior de Justicia del Distrito Federal

Cruz Roja Mexicana

Escuadrón de Rescate y Urgencias Médicas

Instituto de Geografía UNAM

EMBARQ México

Consejo Ciudadano de la Ciudad de México

Bloomberg Associates

TASKFORCE AND ALLIES

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Consejo Ciudadano de la Ciudad de México

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TASKFORCE AND ALLIES

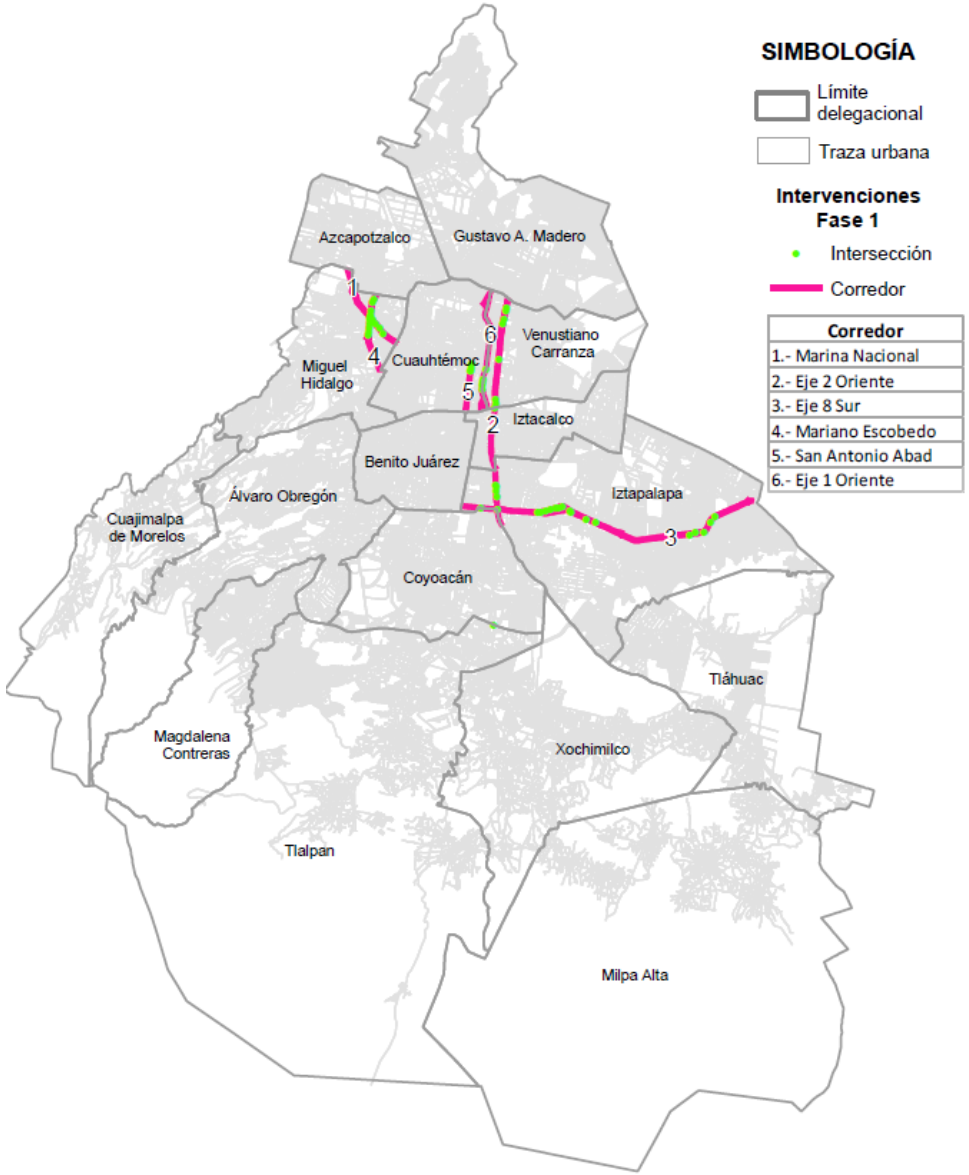
CDMX
CIUDAD DE MÉXICO

PASOS SEGUROS PROGRAM RECAP

Redesign of

54

intersections in 6 corridors of CDMX's high injury network

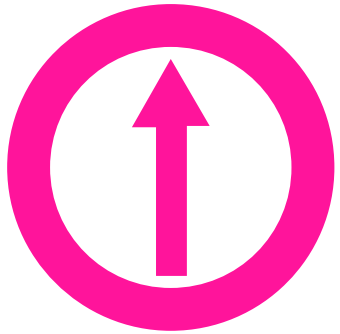


PHASE I

No.	CORREDOR	TRAMO	DELEGACIÓN	NÚMERO DE INTERSECCIONES
1	Marina Nacional	Laguna Mayrán - Felipe Carrillo Puerto	Miguel Hidalgo	6
2	Mariano Escobedo	Lago Alberto - México Tacuba	Miguel Hidalgo	9
3	San Antonio Abad	Izazaga - Chimalpopoca	Cuauhtémoc	4
4	Eje 1 Oriente La Viga	Calzada del Hueso - Zoquipa	Cuauhtémoc - Venustiano Carranza - Tlalpan	6
5	Eje 2 Oriente Congreso de la Unión- La Viga	Eje 8 Sur Ermita Iztapalapa - Aluminio	Cuauhtémoc - Venustiano Carranza - Iztapalapa - Iztacalco	13
6	Eje 8 Sur Ermita Iztapalapa	Vía Láctea - Eje 6 Sur de Las Torres	Iztapalapa - Coyoacán	16

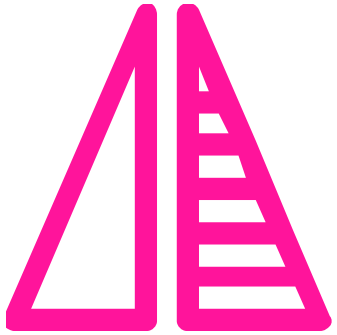
TOTAL DE INTERSECCIONES 54

PHASE I



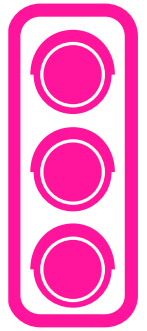
traffic control devices

(Pavement markings and traffic signs)



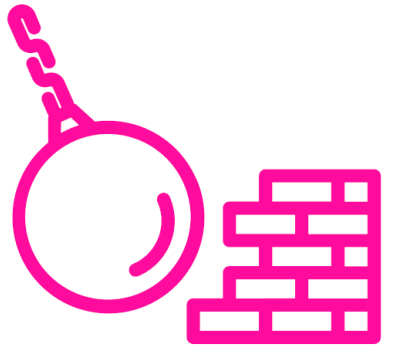
geometry redesign

(Pedestrian islands, curb extensions and traffic lanes)



traffic signals and operation

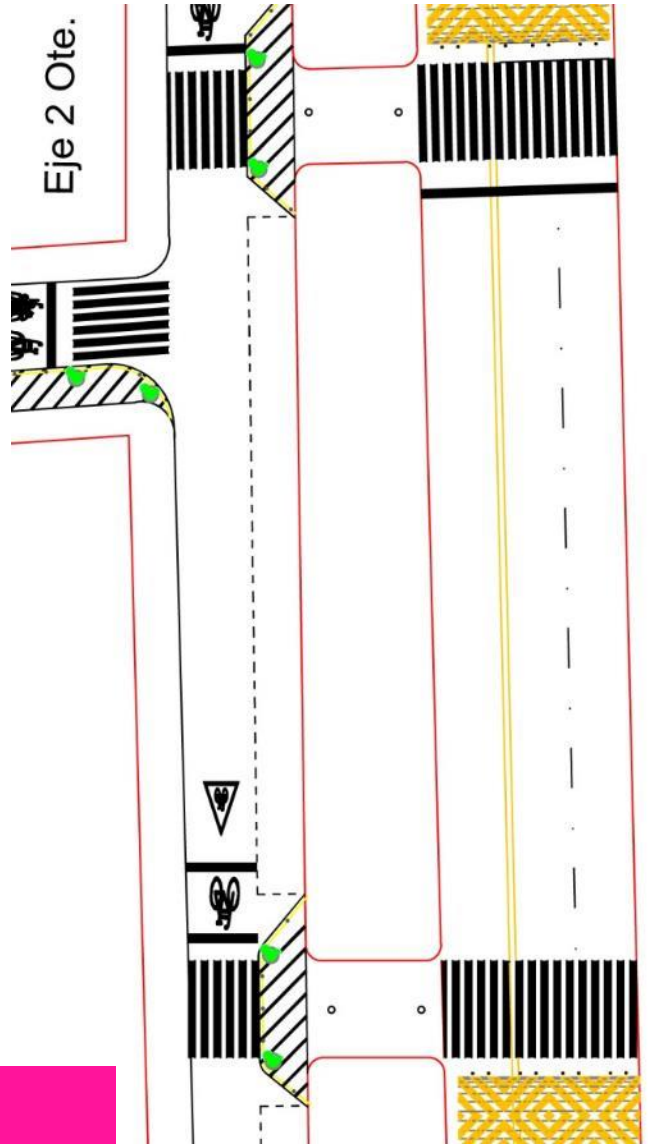
(Signal programing, pedestrian signals & cycle reprograming)

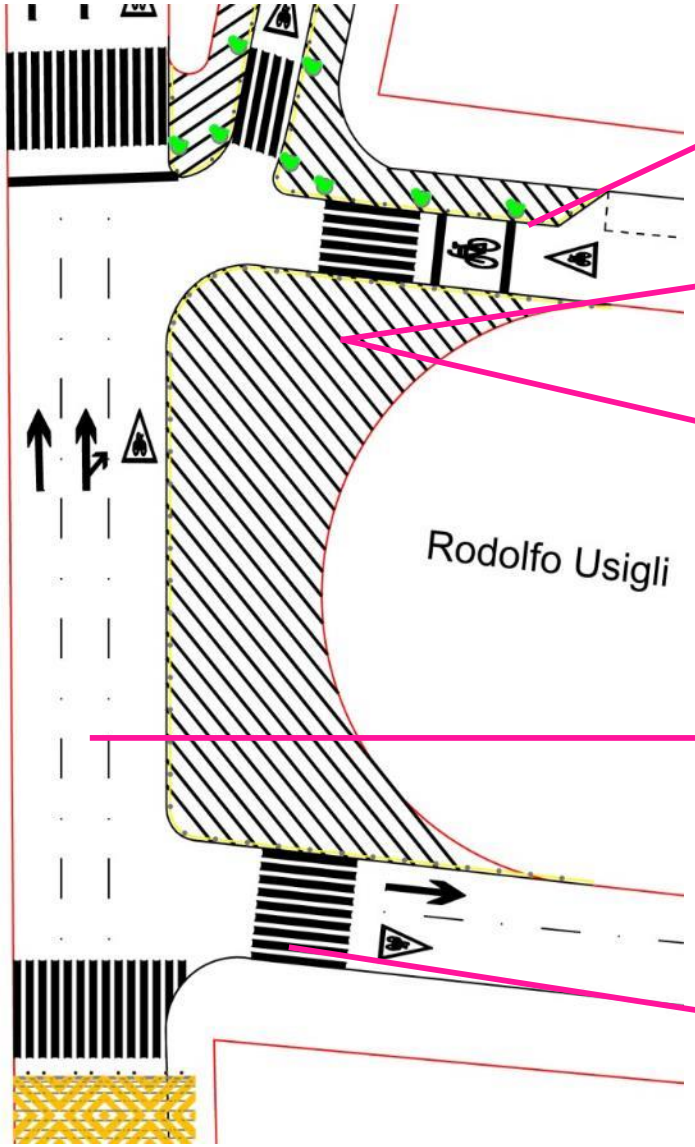


obstacle removal in corners

(obsolete posts, signs & street furniture, and relocation of informal vendors)

HARDWARE





Delimitation with elements such as planters or flexible delineators for vehicular restriction.

New surface with a change in texture and color (eg. 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.

DESIGN

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)

SOFTWARE

Calzada de la Viga and Av. del Taller

BEFORE & AFTER

Av. Fray Servando

BEFORE & AFTER

Izazaga and Pino Suárez

BEFORE & AFTER

PASOS SEGUROS

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

$6.5

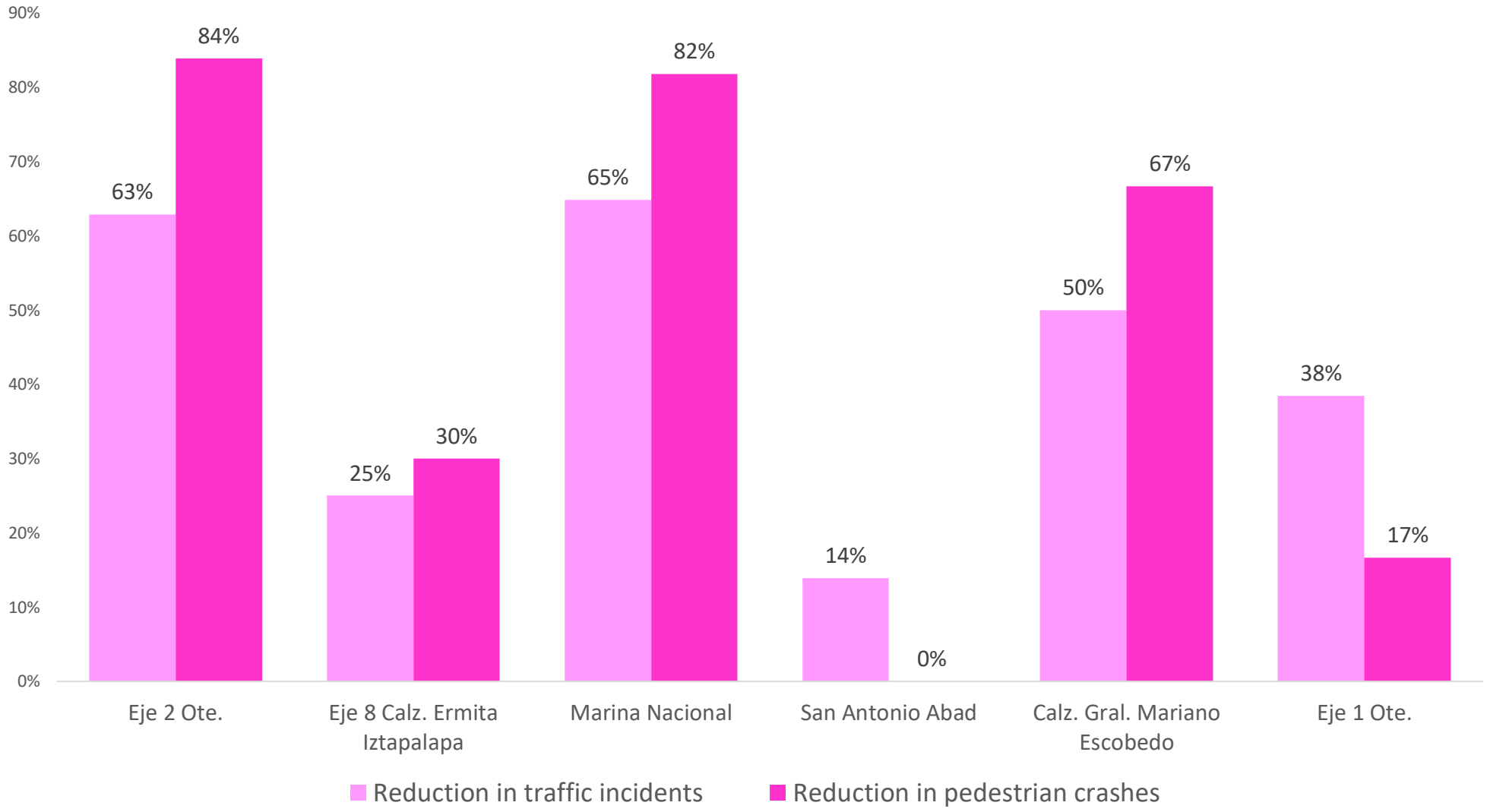
million dollars for 54 intersections**

PHASE I OUTCOMES

**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.*



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

PHASE I OUTCOMES

THE PROCESS BEHIND THE SUCCESS STORY

Road safety as public policy

>

International support and overseeing

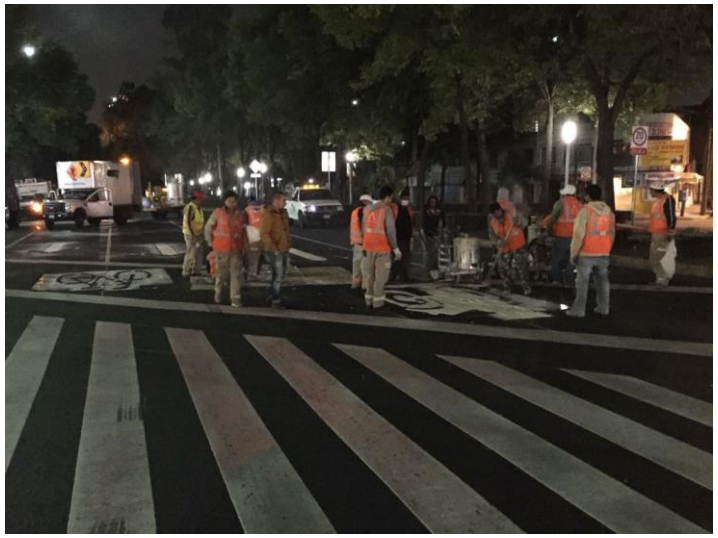
>

Leadership and creation of Task Force

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

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.

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.



Task Force workplan

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)

>

Task Force accountability

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.

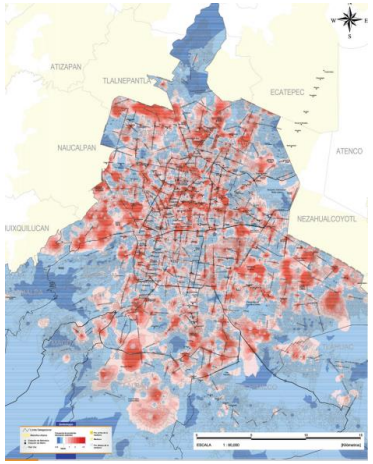
>

Implementation Oversight & Evaluation

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.

THE PROCESS

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**.

STRATEGIC COMPONENTS

En la Ciudad de México los hechos de tránsito son la segunda causa de muerte de niños en edad escolar, la quinta causa de fallecimiento en edades productivas y representan el 15% de las causas de discapacidad en los jóvenes. Adicionalmente, el 70% de los fallecimientos por esta causa se encontraba en edades productivas (20 a 60 años).

Ante este panorama, desde los primeros días de esta Administración hemos asumido el compromiso de hacer nuestras calles más seguras para reducir la ocurrencia de hechos de tránsito y consecuentemente, las muertes y lesiones que estos eventos producen.

Los incidentes viales pueden prevenirse, al diseñar calles para velocidades eficientes pero seguras y modificando el diseño de las intersecciones en donde suceden la mayoría de los conflictos entre los distintos actores de la vía.

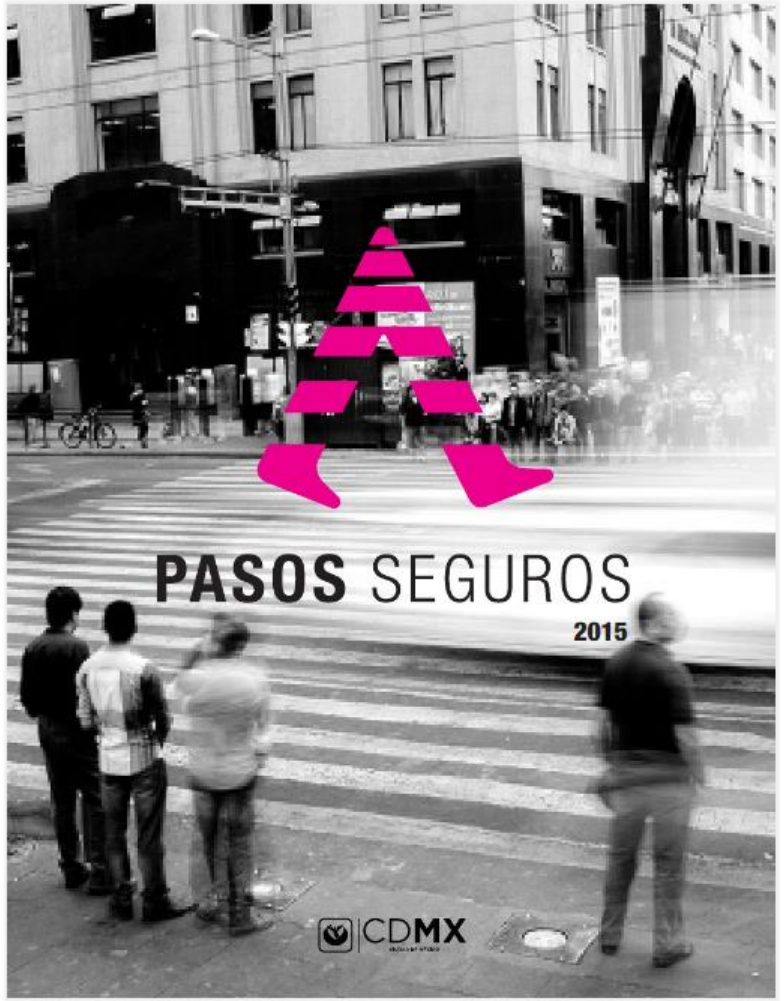
A través del Programa Pasos Seguros, el Gobierno de la Ciudad de México emprende un primer esfuerzo para transformar los corredores e intersecciones con los mayores índices de accidentalidad en lugares más seguros y así reducir el

La primera fase de este programa requirió del trabajo coordinado de la Secretaría de Movilidad, la Secretaría de Obras, la Secretaría de Seguridad Pública, la Autoridad del Espacio Público, la Agencia de Gestión Urbana y la Secretaría de Medio Ambiente. Adicionalmente, participaron Organizaciones No Gubernamentales e instituciones educativas; todo esto bajo la asesoría de Bloomberg Associates, quienes tienen amplia experiencia a nivel global en la implementación de este tipo de soluciones.

Pasos Seguros es uno de los componentes de la estrategia general de Seguridad Vial para la Ciudad que se centra en el mejoramiento de la infraestructura para la movilidad; sin embargo, además de diseños seguros, la seguridad vial depende de diversos factores como la conducta de todos los en las calles, el respeto al señalamiento y a las reglas de circulación, entre otros.

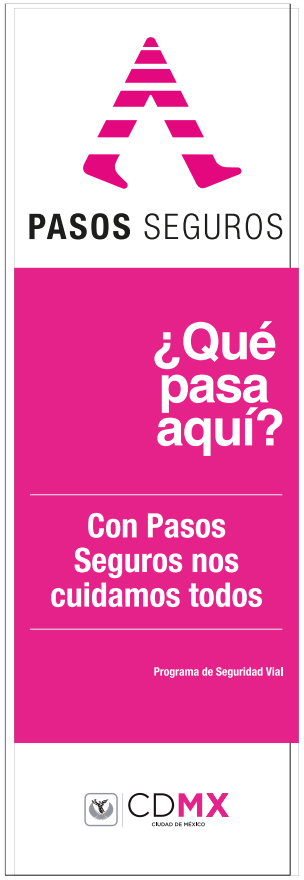
Reconocemos que la seguridad vial en la Ciudad de México es una responsabilidad compartida que requiere del trabajo conjunto y la participación de todas y todos los que transitamos en las calles. Las acciones de gobierno, sociedad civil y ciudadanos repercuten directamente en la meta de reducir el

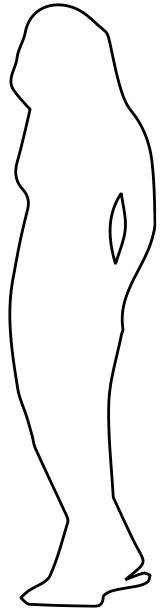
Program website

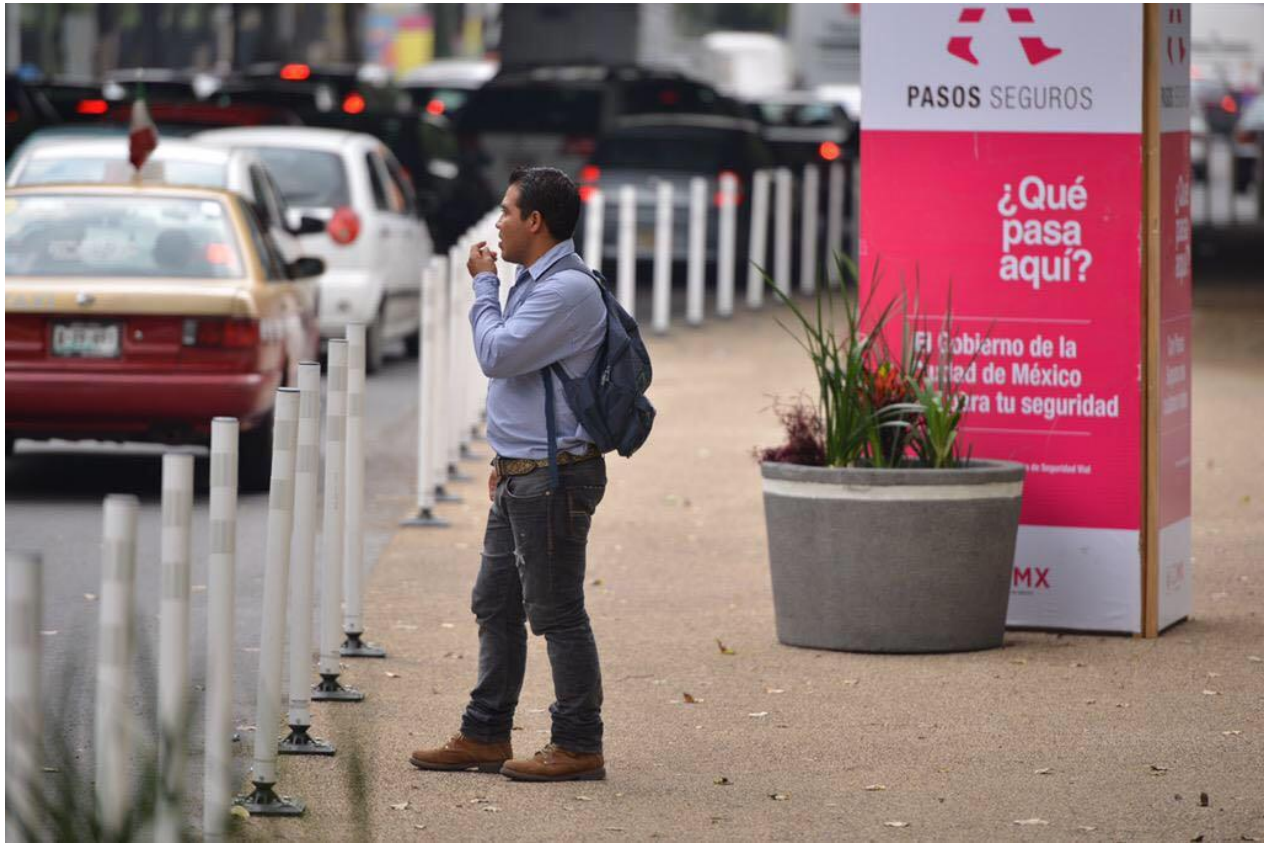


Brochure

COMMUNICATION'S CAMPAIGN





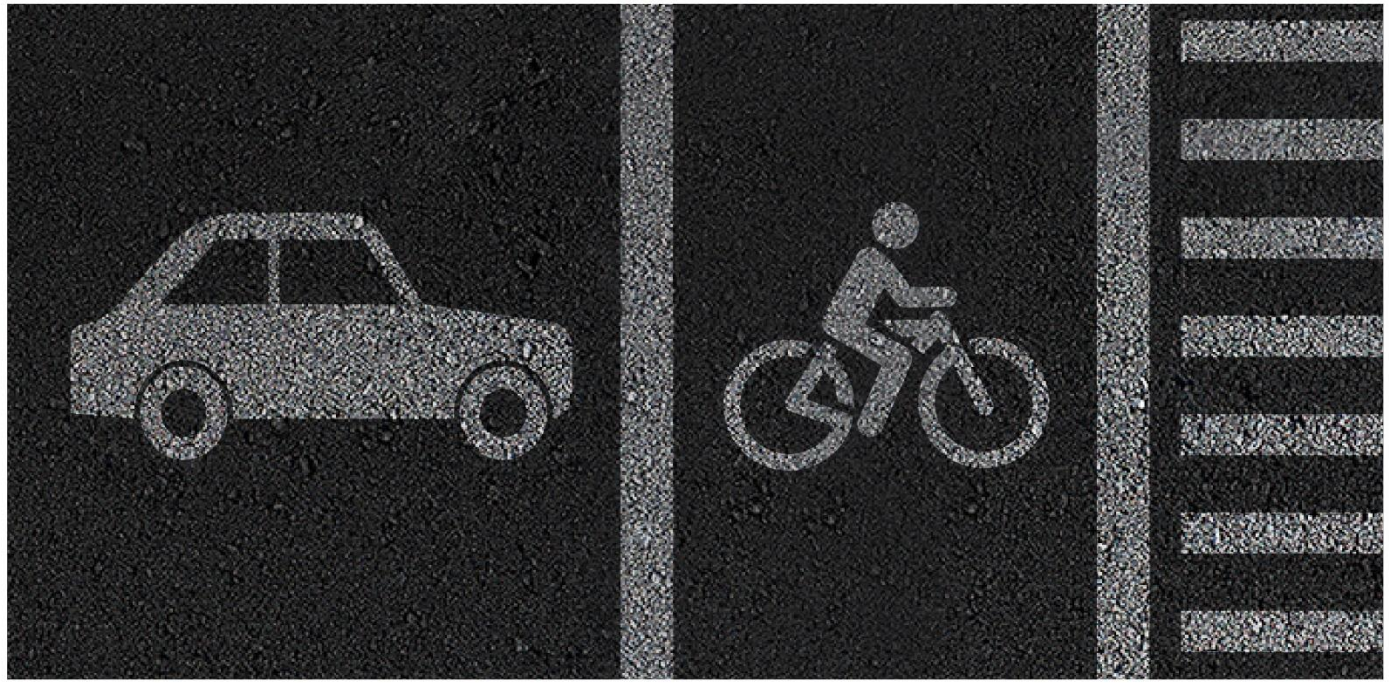


Totems at construction sites and during program launch

COMMUNICATION'S CAMPAIGN

Branding at the construction work site

COMMUNICATION'S CAMPAIGN



Deja libres los Pasos Seguros
respeta el espacio de todos

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PASOS SEGUROS
Nos cuidamos todos

Al llegar a los Pasos Seguros
cede el paso al peatón

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Nos cuidamos todos

Campaign for bus shelters on each corridor

COMMUNICATION'S CAMPAIGN

Mimes and banners during the first 2 weeks at strategic intersections

COMMUNICATION'S CAMPAIGN

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.

CONCLUSIONS & LESSONS LEARNED

- 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).

CONCLUSIONS & LESSONS LEARNED


EJE 1 ORIENTE
FCO DEL PASO Y T 3
C DE LA UNION 2

- 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.

CONCLUSIONS & LESSONS LEARNED

PASOS SEGUROS

PHASES II & III (2016-2017)

PHASE I
2014-2015

54

intersections with a capital investment of $6.5 million USD

PHASE II
2016-2017

42

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

PHASE III
2017

10 + 20

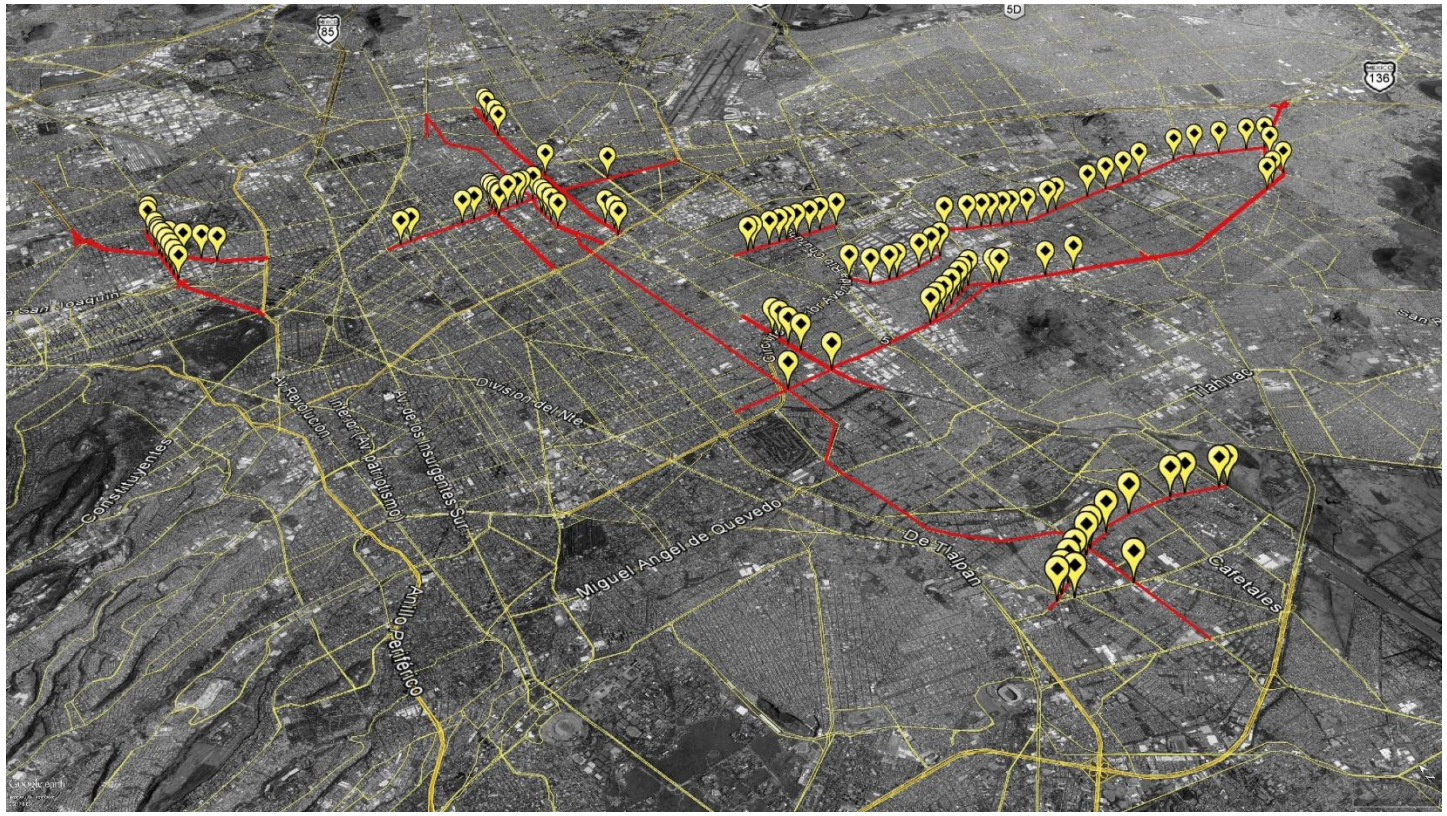
10 intersections with a capital investment of $1.7 million USD and $1.1 million USD for program maintenance (all phases). 20 intersections are being redesigned with recycled materials from the road's maintenance unit at the Agency of Urban Management of CDMX.

PHASES II & III

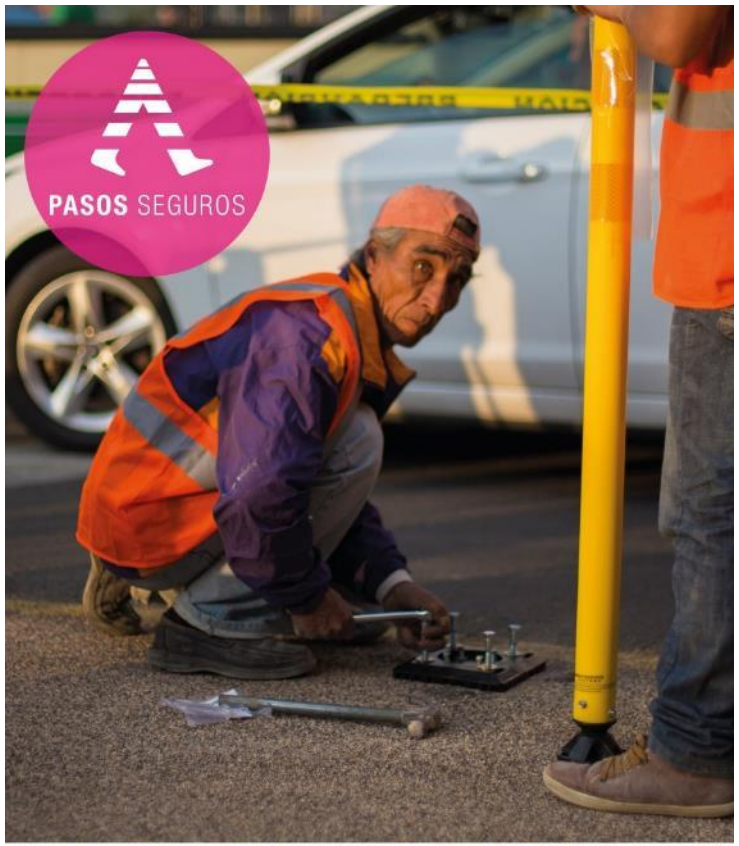
Redesign of

106

intersections in 10 corridors of CDMX's high injury network



PASOS SEGUROS TO-DATE



CDMX

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PHASE III

PASOS SEGUROS

THANK YOU