



# *CPTED in Latin America*

## Measurement & Evaluation

A piloted model

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# Partnership

## Our Credentials:

- International CPTED Association
- CPTED Corporación Region LAC
- UK Institute of Community Safety
- UK Design Out Crime Association
- Community Safety Europe
- Caribbean Crime Prevention International
- PBK Consulting
- Griffin Research & Consultancy
- Catalyst In Communities
- Community Coaching Academy





## Context is Everything

- Latin American context is different to traditional CPTED environments typified by North America, Europe and Australasia.
- LA is one of the most dangerous areas in the world.
- UN suggest it is the only region in the world where murder rates are increasing. Robberies have nearly trebled over the past 25 years; extortion is growing fast. Fear of crime is twice that of North America.



## Historic Approaches

- Traditionally most Latin American countries have focused on dealing with crime with a reactive and enforcement led approach known as the “*mano dura*”, or the militarised iron-fist policy.
- However, since around the year 2000 community approaches have become more common. For example in 2010 the Colombian police implemented a “Quadrant Plan” dividing urban areas into territorial beats in order to adopt a more localised approach. The Chilean police implemented also the same plan since 2000 in Chile.



## Latin America CPTED Approach

- Led by Macarena Rau and CPTED Chilean Team.
- Regional and National ICA's (Corporación CPTED Chile, 2004; Corporación CPTED Region, 2011)
- CPTED methodologies were introduced into four countries in the early 2000's: Chile, Brazil, El Salvador and Honduras. Now CPTED is very spread in Mexico also.
- More recent work – part of this project



## CPTED Approach Issues

CPTED in Latin America is seen as a relatively new concept and there is no scientifically validated model yet to measure and evaluate the impact of these strategies on:

- urban settings
- the processes of citizen participation
- local municipal management

This makes slowly to justify its application!



## Research Question

1. Does the implementation of Crime Prevention Through Environmental Design strategies have a positive impact on communities by reducing crime (murder and robbery) and fear of crime ?; and if it is true.
2. How can you measure the impact?



## Expectations

- Low impact on murder
- Medium impact on robbery
- High impact on fear of crime





# Research methodology

- Before and after comparisons of CPTED cases in Chile, Honduras & Patagonia.
- Compare action sites to control sites in same locations.
- Design both quantitative and qualitative collection tools.
- Recognise that this is an action based research – pragmatic.
- Analyse the data taking a problem solving approach.



## Reducing Crime

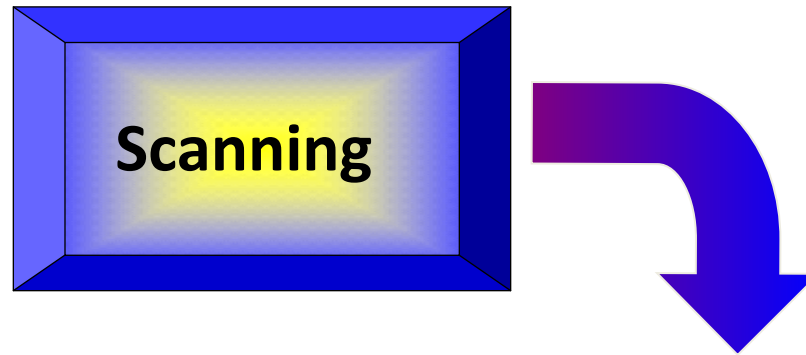
- There is never a “Silver Bullet” solution to crime & disorder problems.
- No single agency that holds all the solutions.
- Permanent police presence is not sustainable.
- Community engagement is essential.
- A simple model exists for framing this approach to problems – **the “S.A.R.A.” model.**



# Evidence Based – SARA Problem Solving Model

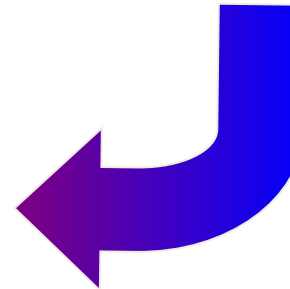
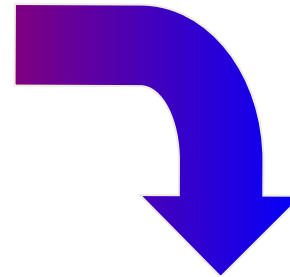


## Evidence Based – SARA Problem Solving Model



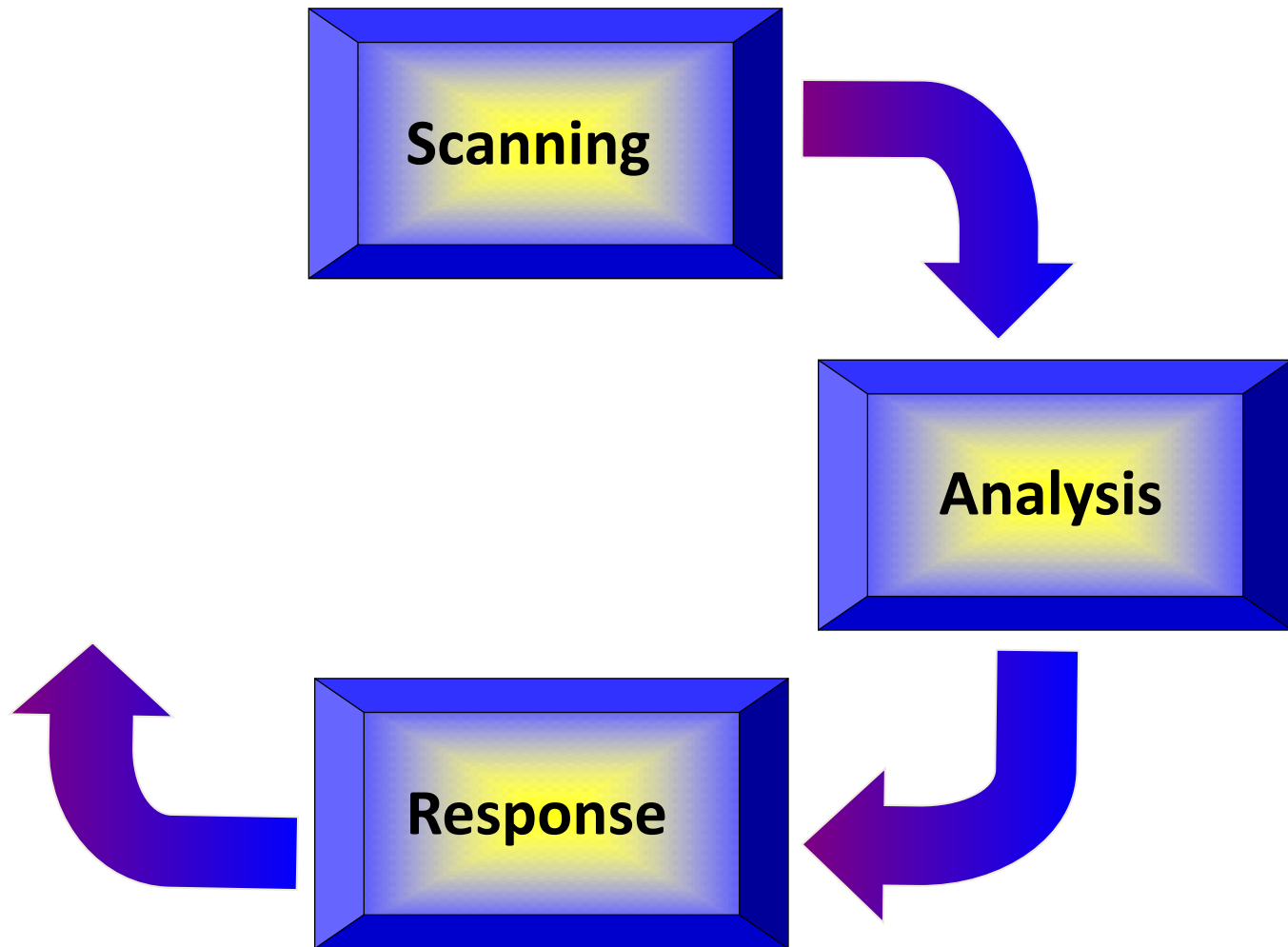


# Evidence Based – SARA Problem Solving Model



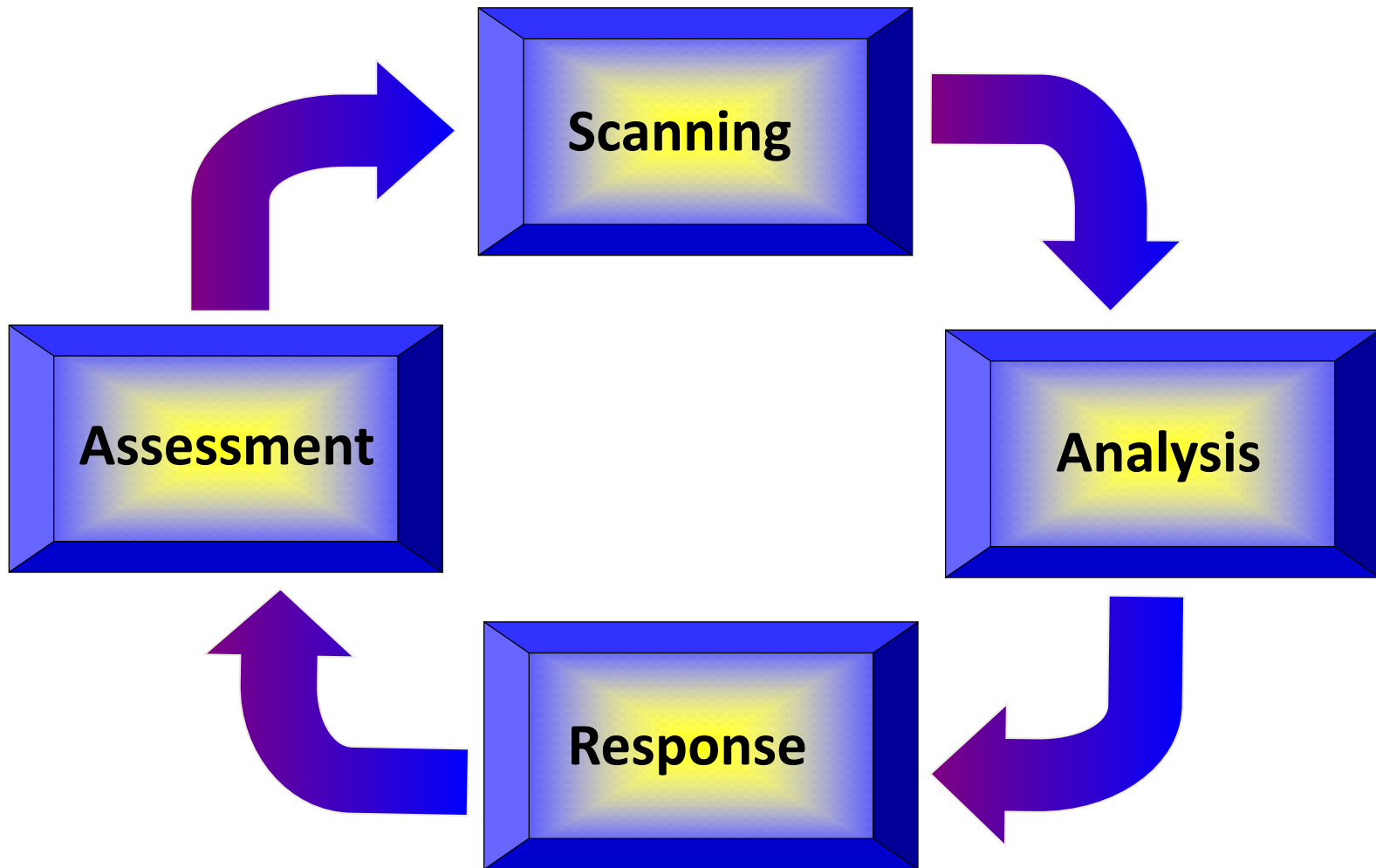


# Evidence Based – SARA Problem Solving Model





# Evidence Based – SARA Problem Solving Model





# Basic “action” evaluation model



**Establish the start point for measurement (baseline)**

**Agree performance measures**

**Set targets**

**Decide responsibilities**



**Collect progress data**

**Compare with targets**

**Provide feedback**

**Intervene if necessary**



**Collect achievement data**

**Compare with targets**

**Seek explanations**

**Disseminate results**





# Data Collection

- Official data e.g. crime data
- Questionnaires completed by residents & professional stakeholders
- Interviews residents, offenders & professional stakeholders
- Workshops
- Community group support



# Data collection

Data is being collected using the methods indicated in the test site and a matched control site in Chile, Honduras and Patagonia.

The variables of this data will be under the three headings::

**Urban Setting, Community Involvement, Local Governance.**



# Urban Settings

We link CPTED methodology to define variables according to 5 fundamental principles.

1. Natural surveillance: lighting, formal surveillance.
2. Territorial reinforcement: mural graffiti, territorial marks in commerce and equipment v/s marks territorial in squares.
3. Natural access control: urban access, residential passages, alarms.
4. Maintenance: vandalism and signage.
5. Community participation: neighbours or residents take up space.



# Community Involvement

- Residents use of public space
- Participation of neighbours in the design of situational prevention project
- Presence of young people



## Local Governance

- Municipal coordination meetings
- Mobile security in the neighbourhood
- Operational policing
- Police staffing in the neighbourhood



# Benchmark Data

- Benchmark data will be collected for all sites with community involvement.
- Then the data will be analyzed to set the benchmarks for comparison and to identify Interventions under our 3 variables headings and to supervise actioning those interventions.



## On-going data

- Periodically additional data will be collected and progress measured.
- Results from this analysis will be used to adjust any interventions if needed.



# Final Data

Once the interventions have been completed and have been running for a period of time the final results will be analyzed. These will show:

1. If we had a  $\pm$  effect on the neighborhoods and what caused those effects
2. If our model of evaluation worked and how it can be improved
3. Answer the research question





# Pilot Sites & Progress to Date

- Honduras
- Chile
- Patagonia



# Early Results

Chile



**Pedro Aguirre Cerda (PAC), Puente Alto, Chile.**

- The Pedro Aguirre Cerda population is located in the west of the commune of Puente Alto in Santiago de Chile between streets Concha y Toro, Covadonga, Abate Molina and Ramón Barros Luco.
- It has peripheral features, which leads to poor accessibility to public transport and services.



# Drugs and Robbery Are Significant Issues





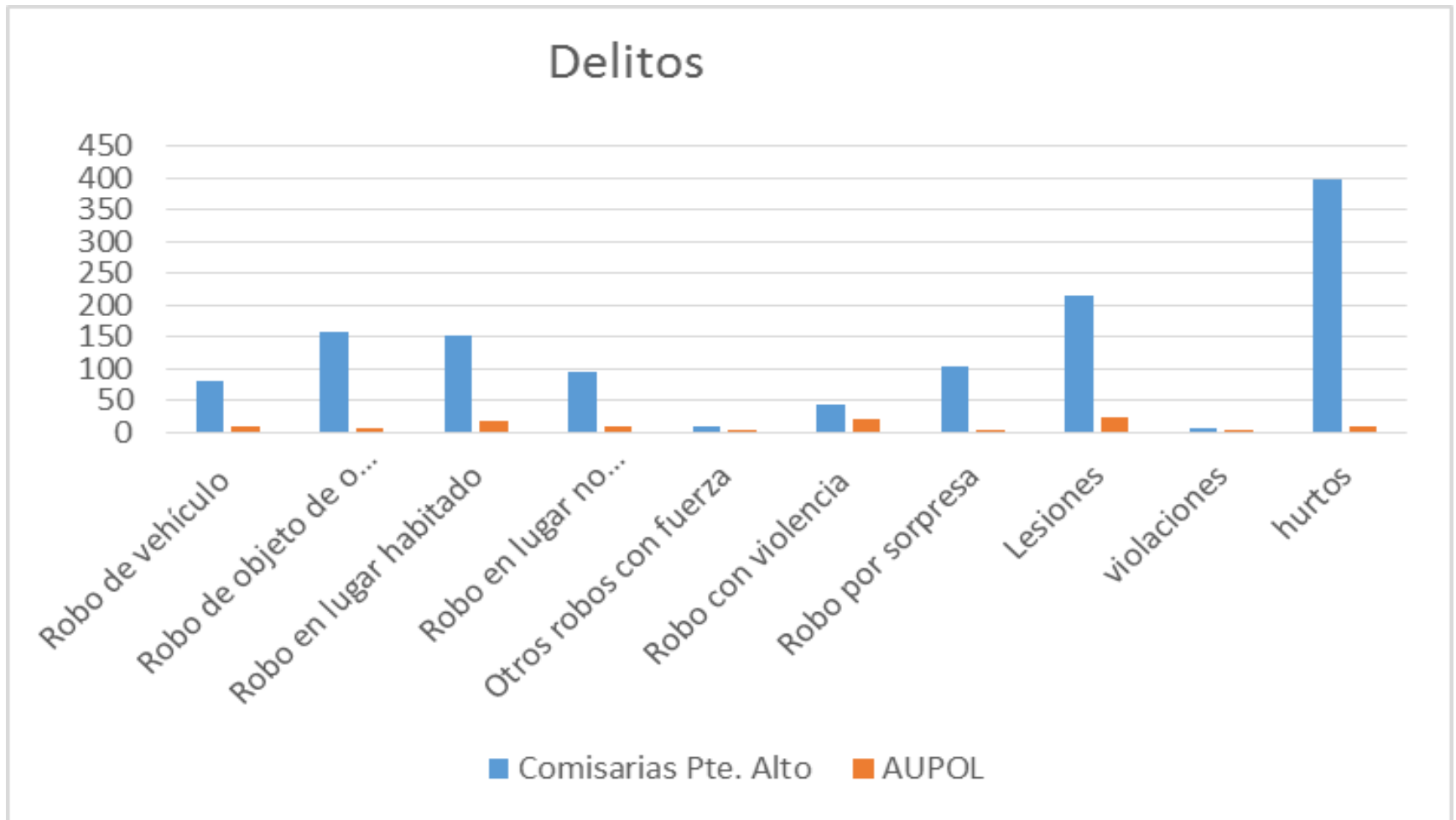
# Population Breakdown

<b>Rango etario/sexo</b>	<b>Mujer</b>	<b>Hombre</b>
<b>0 – 5 años</b>	<b>65</b>	<b>38</b>
<b>6 – 10 años</b>	<b>85</b>	<b>55</b>
<b>11 – 17 años</b>	<b>99</b>	<b>79</b>
<b>18 -29 años</b>	<b>105</b>	<b>65</b>
<b>30 – 59 años</b>	<b>79</b>	<b>35</b>
<b>60 años en adelante</b>	<b>65</b>	<b>39</b>
<b>Total</b>	<b>498</b>	<b>311</b>

Cuadro N°1 Fuente: Datos ficha de protección social 2012.

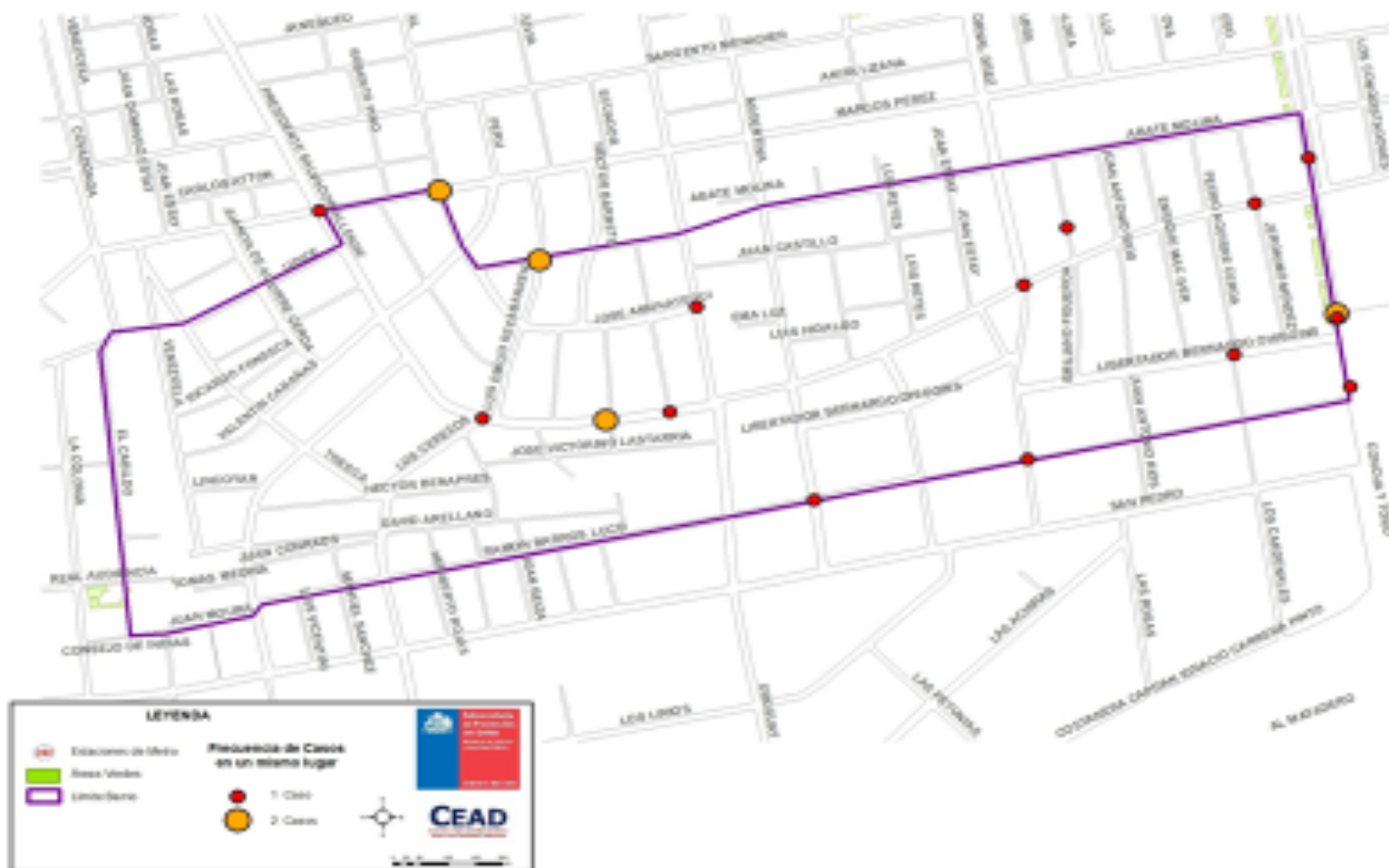


# Robbery with violence or intimidation.



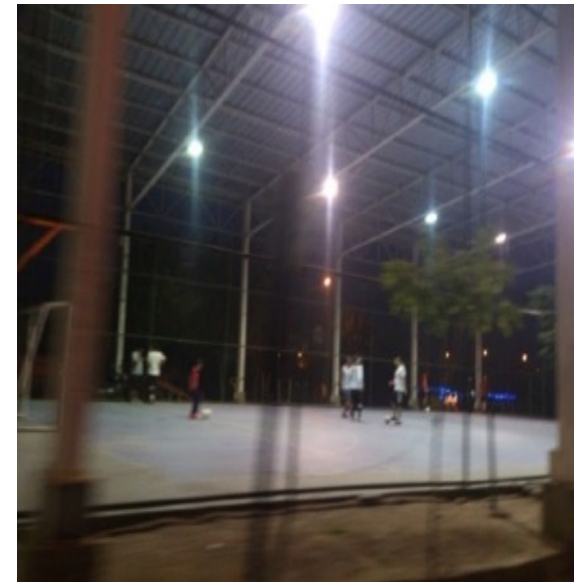


## Robo con Violencia o Intimidación – 2013





## Intervention – Recreational Area







## Intervention – Street Improvements.





# Intervention – Drug Hot Spots & Poor Environmental Areas





# Early Results

Honduras



## La Laguna, Honduras.

La Laguna was founded in 2002 and is adjacent to the North with Col. 15 of September, to the South with El Retiro neighborhood, on the East by neighborhood of Las Lomas, West with Río Hiland Creek and Hiland Creek neighborhood



Imagen: Colindantes del barrio La Laguna



## 6.2.1. Aspectos Demográficos

LINEA DE BASE INTRAMUNICIPAL (Aldeas, Caseríos, Barrios y Colonias)																
1	2	3	Pobreza por NBI		Educación				Salud		Vivienda		Grupos Vulnerables			
			Departamento, Municipio, Aldea, Caseríos, Barrios y Colonias	Población Total	Total Hogares	Viviendas con NBI	Viviendas con 2 y Más NBI	Tasa de Analfabetismo	Cobertura Prebásica	Cobertura de 1 a 6 grados	Cobertura de 7 a 9 grados	Cobertura de 10 a 12 grados	Población en Viviendas sin Agua Potable	Población en Viviendas sin Saneamiento Básico	Población en Viviendas sin Electricidad	Población en Viviendas con Hacinamiento
4																
21	Barrio La Laguna	394	88	47	21	16.7	81.8	86.9	5.6	6.7	7	110	75	75	154	24

Datos Censo Poblacional INE 2001, datos cantidad.

147

HOMBRE	MUJERES	TOTAL
270	246	516

Datos INE 2013.



# Homicide and Drugs Crime

## Mapa Perceptual del barrio La Laguna.

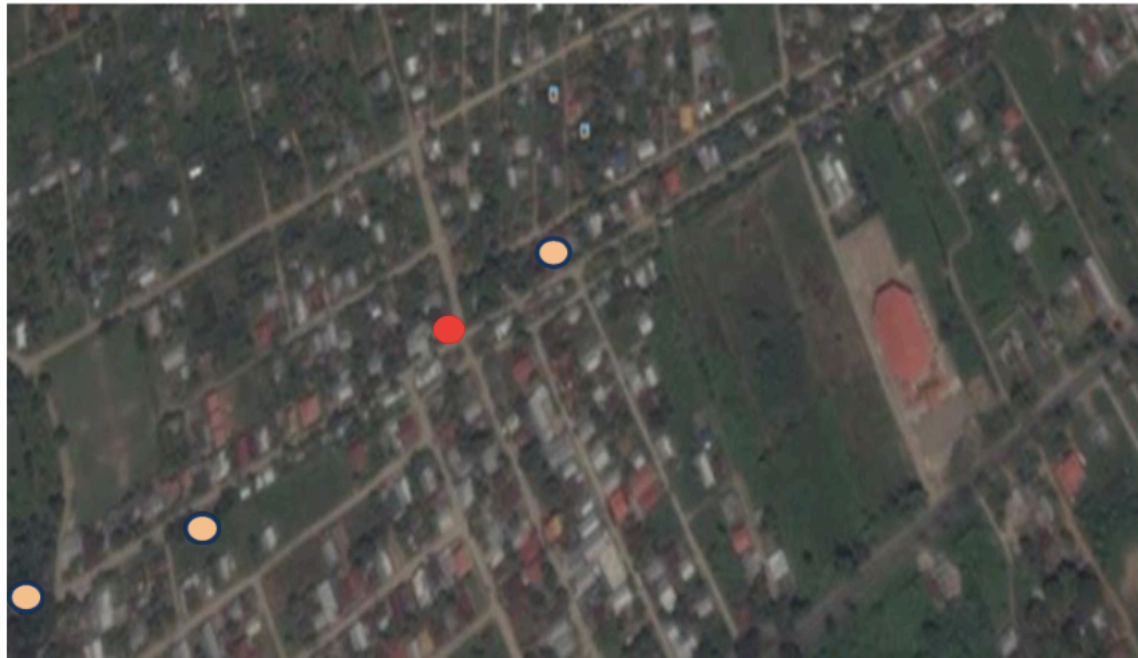


Imagen mapa perceptual del barrio La Laguna, incidencia de homicidio y consumo de droga.



# Intervention at Drug Hostspots



Imagen de dibujo lleno de naturaleza y sueños para mejorar la infraestructura de su barrio





# Questionnaire

It is divided into two areas with 42 questions:

- A) the first regarding dependent variables which are theft, homicide, perception of insecurity and community network.**
  
- B) the second with respect to independent variables that correspond to the field: urban settings, community participation and local governance.**

The independent variables are constructed from typological CPTED and situational prevention projects that are carried out in different districts vulnerable in the LAC region and in particular in the two wards that make up this research study cases.

Is designed as a questionnaire autoaplicado for over 14 years for both genders.





PER	CUESTIONARIO ESU01		ABRIL 2017	
FOLIO:		PAÍS:		
TELÉFONO:		COMUNA:		
NOMBRE DE PILA:		VILLA POBLACIÓN:		
FECHA:		HORA DE INICIO:		:
DURACIÓN:		SEXO:	HOMBRE (1)	MUJER (2)

Este instrumento y la información obtenida en él no será para fines institucionales sino que de investigación académica. Los datos se mantendrán en el anonimato.

Cuestionario de victimización, percepción de inseguridad y variables medioambientales.  
Nota: solo se debe responder una de las alternativas de cada pregunta.

**L. VULNERABILIDAD (SOLO HOMBRES, PREPUESTOS O DE BARRIO)**  
**FORMACIÓN**

P1. ¿Podría decirme desde cuándo vive en este barrio?

Menos de 1 año	Entre 1 y 4 años	Entre 5 y 9 años	Entre 10 y 14 años	Entre 15 y 19 años	Hace 20 años y más	No Sabe	No Responde
(01)	(02)	(03)	(04)	(05)	(06)	(08)	(09)

P2. Durante este último año, ¿Ud. o algún miembro de su hogar ha sufrido directamente de un acto de violencia (delincuencia o fue víctima de algún delito)?

SI	NO	No Sabe	No Responde
(01)	(02)	(08)	(09)
P2b. ¿Cuántas veces? N° de veces. Incluir todos los casos del hogar.		Pasar a pregunta P7	

Si la respuesta anterior es afirmativa, es decir, usted ha sido víctima de un acto de delincuencia:

P3. La última vez, ¿En cuál de las siguientes situaciones que se nombran Ud. o ase familiar fue víctima? ¿Y en segundo lugar?

Delito	1°	2°
a) Le han hurtado (sin que se diere cuenta)	(01)	(01)
b) Le han robado por sorpresa (sin lesiones)	(02)	(02)
c) Le han robado usando violencia (asesinos) o intimidación (amenazas)	(03)	(03)
d) Le han robado entrando a la fuerza a su casa, departamento u oficina	(04)	(04)
e) Sabe si han asesinado a alguien en la colonia o barrio	(05)	(05)
f) Cera, ¿Cuál?	(06)	(06)
g) No sabe	(08)	(08)
h) No responde	(09)	(09)

P4. ¿En qué lugar ocurrió él o los hechos?

- (01) En su Comuna  
(02) En su Villa  
(03) Fuera de su comuna  
**(NO LEER)** (08) No sabe (09) No contesta

P5. ¿En qué lugar ocurrió él o los hechos?

- (01) En su barrio o colonia  
(02) En el paradero de locomoción colectiva  
(03) En las dependencias de un servicio público  
(04) En plazas, lugares de esparcimiento, canchas  
(05) En su hogar  
(06) En su lugar de trabajo  
(07) En una esquina  
(08) En su lugar de estudios  
(09) Otro lugar (indique cuál)  
**(NO LEER)** (08) No sabe (09) No contesta

P6. ¿En qué momento del día fue víctima de un acto de violencia (delincuencia)?

- (01) En la madrugada  
(02) En la mañana  
(03) En la tarde  
(04) En la noche  
**(NO LEER)** (08) No sabe (09) No contesta

P7. Ahora me gustaría saber, según su experiencia personal o familiar, ¿Cuánto le afecta la delincuencia en su calidad de vida?

Mucho	Bastante	Poco	Nada	No Sabe	No Responde
(01)	(02)	(03)	(04)	(08)	(09)

P8. En una escala de 1 a 5, ¿Qué nota le pondría a la seguridad en los siguientes lugares de su comuna? (1 significa muy inseguro y 7 muy seguro. Responda cada una de las alternativas)

Lugares	Nota					NS	NR
a) Su barrio o colonia	(01)	(02)	(03)	(04)	(05)	(08)	(09)
b) Paraderos de locomoción colectiva	(01)	(02)	(03)	(04)	(05)	(08)	(09)
c) Dependencias de los servicios públicos	(01)	(02)	(03)	(04)	(05)	(08)	(09)
d) Plazas, lugares de esparcimiento, canchas	(01)	(02)	(03)	(04)	(05)	(08)	(09)
e) Su hogar	(01)	(02)	(03)	(04)	(05)	(08)	(09)
f) Su lugar de trabajo	(01)	(02)	(03)	(04)	(05)	(08)	(09)
g) Su lugar de estudios	(01)	(02)	(03)	(04)	(05)	(08)	(09)



# Questionnaires

Applied 120 surveys during August and September 2016.

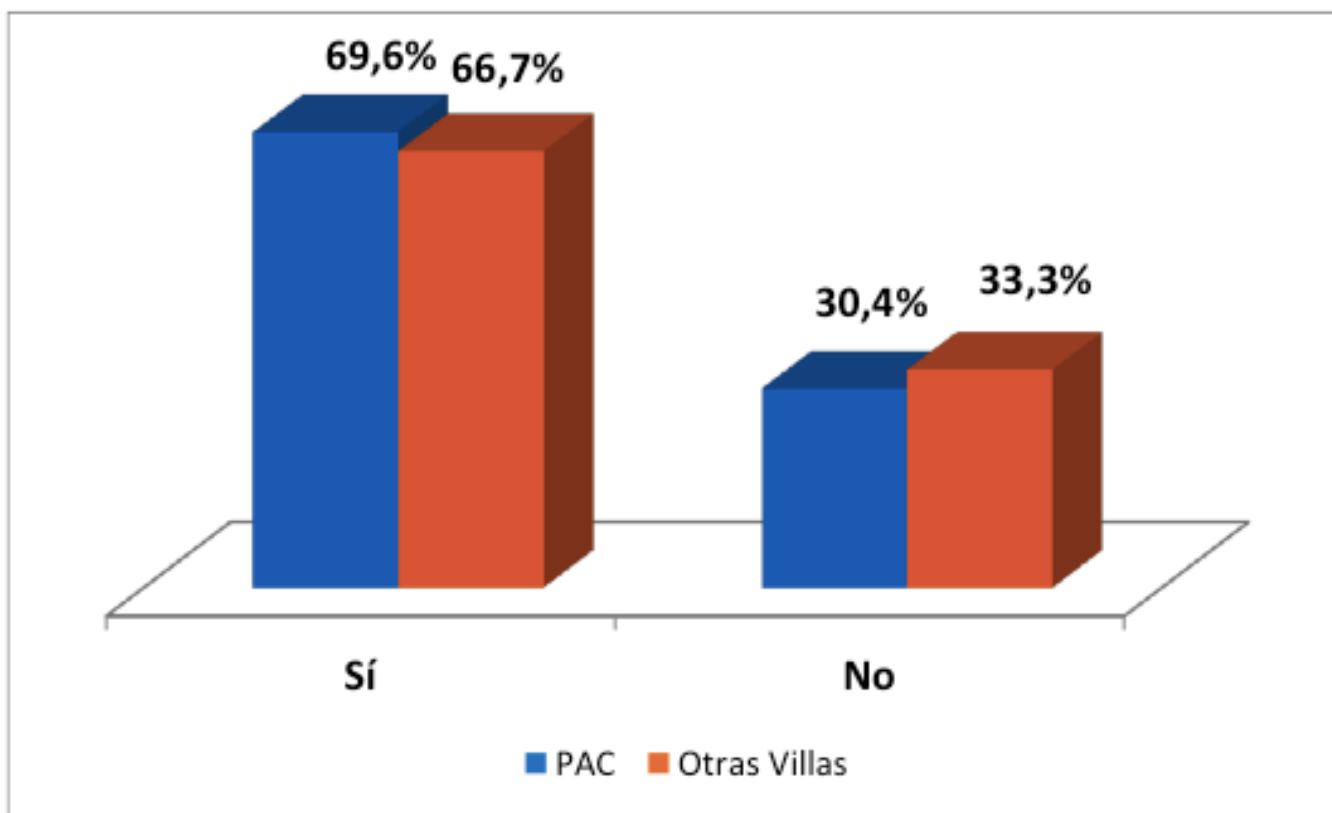
60 surveys in Chile and 60 surveys in Honduras. These are applied in PAC 30 and 30 in adjacent populations used as control without situational intervention group.

The same happens in Honduras where they apply 30 in the lagoon and 30 in the September 15 colony used as population control group.



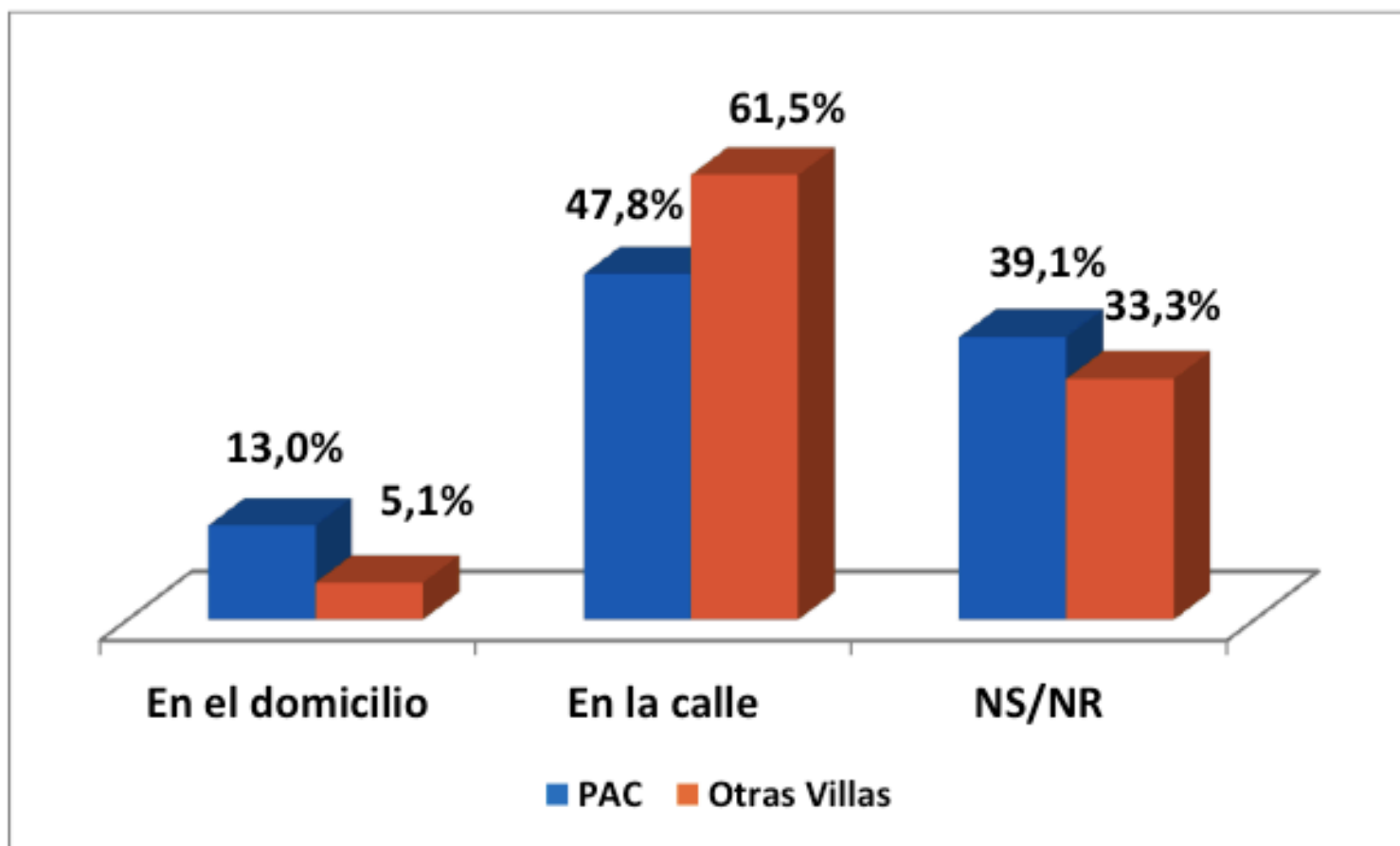
**GRÁFICO 1. DURANTE ESTE ÚLTIMO AÑO, ¿HA SUFRIDO DIRECTAMENTE DE UN ACTO DE DELINCUENCIA?**

Fuente: Elaboración propia en base a estudio propio de Puente Alto, Ago-Sept 2016





**GRÁFICO 5. A SU JUICIO, ¿DÓNDE SE LOCALIZA MAYORMENTE LA INSEGURIDAD?**



**FUENTE: ELABORACIÓN PROPIA EN BASE A ESTUDIO PROPIO DE PUENTE ALTO, AGO-SEPT 2016**



Fotografía N° 3. Mapa de los barrios fuertemente afectados por el narcotráfico en Puente Alto-Chile



# Current State of Play

- Beginning to analyse data
- Results at next conference
- However using an evidence based approach to explain any impact



## CPTED impact key causal/explanatory concepts:

- 1. NEIGHBORHOOD**
- 2. IMAGE OF STREET/HOME**
- 3. POINTS NODAL, ACCESS AND REASONS TO ACCESS**
- 4. VOLUME OF TRAFFIC AND TRANQUILITY OF TRAFFIC KIND OF TERRITORIALITY/SPACE**
- 5. DEFENSIBLE PATH ON THE STREET AND HOUSE**
- 6. LIGHTING OF STREETS**
- 7. COMMUNITY COHESION**
- 8. TYPE OF HOUSING AND NATURAL SURVEILLANCE POSITION.**
- 9. TARGET HARDENING**



Muchas Gracias!

