CPTED in Latin America

Measurement & Evaluation
A piloted model

Ma. Macarena Rau
Dr. Tim Pascoe
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

Scanning
Evidence Based – SARA Problem Solving Model

Scanning

Analysis
Evidence Based – SARA Problem Solving Model

- Scanning
- Analysis
- Response
Evidence Based – SARA Problem Solving Model
Basic “action” evaluation model

Before
- Establish the start point for measurement (baseline)
- Agree performance measures
- Set targets
- Decide responsibilities

During
- Collect progress data
- Compare with targets
- Provide feedback
- Intervene if necessary

After
- 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.
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.
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 ± 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
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

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

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.
### 6.2.1. Aspectos Demográficos

**Línea de Base Intramunicipal (Aldeas, Caseríos, Barrios y Colonias)**

<table>
<thead>
<tr>
<th>Departamento, Municipio, Aldea, Caseríos, Barrios y Colonias</th>
<th>Población Total</th>
<th>Total Hogares</th>
<th>Pobreza por NEI</th>
<th>Viviendas con 2 y Más NEI</th>
<th>Tasa de Analfabetismo</th>
<th>Cobertura de 1 a 6 grados</th>
<th>Cobertura de 7 a 9 grados</th>
<th>Cobertura de 10 a 12 grados</th>
<th>Población en Viviendas sin Agua Potable</th>
<th>Población en Viviendas sin Saneamiento o Básico</th>
<th>Población en Viviendas sin Electricidad</th>
<th>Población Menor de 15 Años</th>
<th>Hogares con Jefe Mujer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrio La Laguna</td>
<td>394</td>
<td>88</td>
<td>47</td>
<td>21</td>
<td>16.7</td>
<td>81.8</td>
<td>86.9</td>
<td>5.6</td>
<td>8.7</td>
<td>7</td>
<td>110</td>
<td>75</td>
<td>75</td>
</tr>
</tbody>
</table>

**Datos Censo Poblacional INE 2001, datos cantidad.**

**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
Questionaire

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.
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?

<table>
<thead>
<tr>
<th></th>
<th>En el domicilio</th>
<th>En la calle</th>
<th>NS/NR</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAC</td>
<td>13,0%</td>
<td>61,5%</td>
<td>39,1%</td>
</tr>
<tr>
<td>Otras Villas</td>
<td>5,1%</td>
<td>47,8%</td>
<td>33,3%</td>
</tr>
</tbody>
</table>

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!