

Gehl  
Institute

# Crime Prevention Through Environmental Design

A Public Life Approach

for public life

# Introduction

The proposed methodology outlined in this report offers a human-centered design framework for Crime Prevention Through Environmental Design (CPTED) strategies, which can both enhance public life and tackle issues of public safety. It also features a step-by-step outline for a more inclusive process of CPTED interventions.

In 2016, Gehl Institute was hired by the New York City Mayor's Office of Criminal Justice—as part of the Mayor's Action Plan for Neighborhood Safety (MAP)—to study issues of design and safety at a public housing development in Brooklyn, New York. MAP is divided into three areas of intervention: People, Places, and Networks. Its methods include service provision, design implementation, and

civic engagement practices to reduce crime and increase safety in specific locations.

CPTED is the design approach used in MAP for physical upgrades and interventions in areas with high recorded crime rates. Gehl Institute proposes that the Gehl practice's Urban Quality Criteria might inform CPTED design strategies. The resultant framework can be used as a comprehensive tool to address real and perceived safety by bridging CPTED strategies with a criteria designed to improve public space and enhance public life, reflecting MAP's overall goals.

# CPTED and Urban Quality Criteria

CPTED has three key design approaches: territorial definition, access control, and surveillance. These approaches are implemented using three different methods categorized as natural (physical design upgrades), organized (human organizing and professional presence), and mechanical (hardware security.)\*

Gehl's Urban Quality Criteria was developed by Jan Gehl in the 1960s and has been used by the Gehl design and planning practice for the past 15 years to assess the physical conditions of city spaces. The criteria offers an assessment under three categories: Comfort, Enjoyment, and Protection. Each is important for creating vibrant and desirable spaces where public life can thrive.

Combining the two strategies enables CPTED interventions to also participate in the overall improvements of outdoor, public urban spaces. CPTED was developed under the premise that safe space is “defensible space.” Gehl Institute believes that, ironically, when spaces are designed to be defensive and uncomfortable to certain groups, they can become unwelcoming to everyone.\*\* The enhancement of an inclusive public life can positively impact the perceptions of safety and actual safety within a space. Removing barriers to participation in public spaces and enabling a wider range of people to enjoy the space is key to creating thriving, safer, and more just cities.

\* Timothy D. Crowe and Diane L. Zahm, “Crime Prevention Through Environmental Design,” NAHB Land Development Magazine (Fall 1994).

\*\* Gehl Institute, “A Mayor’s Guide to Public Life,” 2017.  
<http://mayorsguide.gehl.institute.org>

# Overlapping Framework

	Natural
	Organized
	Mechanical

CPTED STRATEGIES	Territorial definition and behavior	Access control	Surveillance
URBAN QUALITY CRITERIA			
COMFORT			
Opportunities to walk and cycle	Walking and cycling provide different sensory experiences of the city. They bring city dwellers together and offer opportunities for encounters. Such experiences can result in a stronger sense of place and enable passive surveillance through human presence. Well-designed paths, sidewalks, and bicycle lanes direct and guide visitors to places to stop, stay, play, sit, and talk.		
Opportunities to stop and stay	Opportunities to stop and stay in a place can be provided through both physical design and programming. When people choose to spend time in a place, it can signify that they feel a sense of belonging to it. This in turn contributes to building local agency and responsibility over a place.		Providing opportunities to stay in a space results in human presence and “eyes on the street.” Tailoring activities to a broad range of demographics brings different people together and enhances community networks.
Opportunities to sit	Seating in different types of spaces such as parks, sidewalks, and urban plazas provides a place for rest and contemplation. Seating does not have to be located in destination spaces; intermittent points of rest can welcome public use and encounters in more transient areas, as well.		Providing opportunities to sit increases passive surveillance. In this sense, the positioning of the seats can be strategic.
Opportunities to see	Increasing visibility within a space can result in a greater sense of security and mobility. Lighting enables the continuation of activities and movement in a space at night. Strategic viewpoints also enable informal surveillance by local residents, workers, and passersby across private, semi-private, semi-public, and public spaces.		
Opportunities to talk and listen	Spaces for informal congregation between community members are important in providing a sense of territorial ownership and belonging. Such spaces can also be used for programmed activities and events. Programming should be inclusive to residents across a wide range of demographics, including age, ethnicity, gender, income, ability etc.		
Opportunities for play exercises	Opportunities for play in urban space are critical to providing children, young adults, adults, older adults, and families with dedicated outdoor spaces for socializing, sporting activities, and other fun. Spaces for play build social networks and ties to one’s environment/ neighborhood.		

# Overlapping Framework

	Natural
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CPTED STRATEGIES	Territorial definition and behavior	Access control	Surveillance
URBAN QUALITY CRITERIA			
ENJOYMENT			
Dimensioned at human scale	Scale is critical to how one feels in a space and should be considered for all spatial elements. For example: the size of entry points and openings, the width of paths, the height of fences, the area of playgrounds, etc. Scale should also reflect the intended use, user, and number of users. Each element plays an important role in indicating who, what, and how many people the space is for.		
Opportunities to enjoy the positive aspects of climate	All of the qualities listed above provide different ways to activate open spaces during pleasant weather conditions. There are also ways to think about use in different weather conditions to ensure spaces remain somewhat occupied throughout all seasons. Canopies, for example, can protect from rain, demarcate boundaries, and serve as informal points of gathering. Canopies work well for small areas, such as transport stops and entrances. Special seasonal programming can also be introduced such as ice rinks, sledge slopes, or winter markets.		
Aesthetic quality and positive sensory experience	Aesthetic quality is highly subjective. However, an integrated design approach that includes local voices and local cultural heritage can aesthetically connect users to the space. Maintenance is critical to keep a place in good condition. Therefore, a maintenance strategy should be included as part of any design proposal.		Some mechanical surveillance technology, such as cameras or NYPD light towers, can lead to the stigmatization of a space. Considering the aesthetic quality for all types of interventions is important for ensuring community support of the intervention.

# Overlapping Framework

	<b>Natural</b>
	<b>Organized</b>
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CPTED STRATEGIES	Territorial definition and behavior	Access control	Surveillance
<b>URBAN QUALITY CRITERIA</b>			
<b>PROTECTION</b>			
Against traffic and accidents—feeling safe	The definition of public spaces must be made clear. Pavement textures, painting, bollards, and signage all set the rules for a space's intended use. Additionally, ensuring pedestrian visibility can prevent many accidents.		The presence of professional crossing guards and traffic officers may diminish the risk of traffic accidents as well as bring a sense of order, especially near spaces occupied by children and youth such as schools.
Against crime and violence—feeling secure			The presence of people can positively impact the experience of a space and contribute to perceptions of safety. Strategies for increasing the vibrancy of a space, as well as fostering community agency and belonging, are noted above. It is critical that design decisions are made to invite use and participation. The presence of police officers might increase perceptions of safety among some members of the population, but also disincentivizes the use of a space and can set an unwelcoming tone of securitization.
Against unpleasant sensory experiences	Unpleasant sensory experiences includes all human senses. Good maintenance preserves a space from smells, visual degradation, pests, etc. Maintenance can be both formally appointed and also community-led. Ideally, spaces foster a sense of stewardship, where residents and/or professional maintenance workers provide a sense of care and responsibility.		

# CPTED Methods of Implementation— Process

Any design process includes various phases. Gehl Institute has developed a comprehensive process involving the following strategies: research (Measure), engagement (Invite), prototype (Do), implementation (Evolve) and post-implementation (Formalize). At each stage, there is an opportunity to engage with the people who use and are impacted by the space in question.

# 1. Measure

Understanding context is critical to making design decisions. Interventions should be site-specific in order to be integrated into the urban fabric and inclusive to the people using the space. Context includes the spatial qualities and conditions of a place and the people and organizations that have a stake in or simply interact with it. Ethnographic and spatial assessment tools can be used to gather qualitative and quantitative data that includes the insights of the residents and users of the space. Examples include interviews, observational mapping, spatial qualitative assessments, and macro data analysis, to name a few.

Historical and cultural heritage also play a role in how a space is used and perceived. These conditions must inform the design process and engagement with local communities.

This research builds a more comprehensive picture of the space, one that includes the needs and desires of various stakeholders and members of the community. It can be further complemented by workshops targeting specific groups as part of an engagement strategy.

## 2. Invite

Engaging local stakeholders and communities in the design process is critical to ensuring the space is responding to specific needs. When organizing engagement workshops or focus groups, the time and location of the event must be considered so as to be inclusive to people who might have limited time, travel, and financial resources.

The process should also aim to build capacity for the continued engagement of the community in those spaces. Having agency and belonging to a space go hand in hand; therefore, requiring community participation in the creation and continued operation of these spaces is critical.

It's likely that organizations already exist in the area that have a constituent base. Partnering or collaborating with local organizations when planning workshops and focus groups can be invaluable to designing meaningful engagement for a specific audience.

## 3. Do

Research and engagement processes should result in a prototype for the design intervention. Testing out ideas using low-cost, temporary installations can be useful to assess their successes and adapt as necessary. This phase of the process should continue to seek feedback from the stakeholders and surrounding communities in order to improve the outcome. It's important to note that these responses should result in a well-designed, considered intervention. Too often, temporary installations are made permanent; For example, police floodlight towers are sometimes left in public spaces without the follow up of a thoughtful lighting proposal, resulting in stigma and perceptions of disorder in the spaces.

## 4. Evolve

Typically, a design process ends at the completion of construction. But in public space improvements centered around public life, continued involvement ensures that the space is achieving its intended goals. Flexibility in the design and phasing implementation allows for adaptation and improvements to be made as the space gets used. Post-implementation involvement can include re-evaluating the space in use by redeploying the research tools noted above. Also, it is essential to ensure that local stakeholders have the capacity and means to continue participating in the operation of the space. Therefore, it is important to follow up with the social network created during the process.

## 5. Formalize

Institutionalizing the strategies listed above—measure, invite, do, and evolve—will radically scale up the intended impact of CPTED design projects and lead to a safer and thriving public realm for all members of the public.

Collaborating across departments (for example, in New York City: NYCHA, DOT, MOCJ, etc.) and sharing this process will produce a culture of human-centered urban design interventions.

Inter-department meetings are a great opportunity to initiate these partnerships.

Incrementally, the process of working towards safe places would also result in a higher quality of public life for all and come closer to achieving a more equitable city.

# Colophon

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Gehl Institute's mission is to transform the way cities are shaped by making public life an intentional driver for design, policy, and governance. We believe that in order to make cities more equitable and just, public spaces should be made more accessible and welcoming to more people. Our interdisciplinary work combines research, advocacy, and network-building.

First launched in 2015 by Gehl, a privately held urban design practice based in Copenhagen with offices in San Francisco and New York City, Gehl Institute has set up independent operations as a 501(c)(3) in New York City.

