

# auri research brief

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## The Development of Place-based Profiling for the Korean Crime Prevention Through Environmental Design

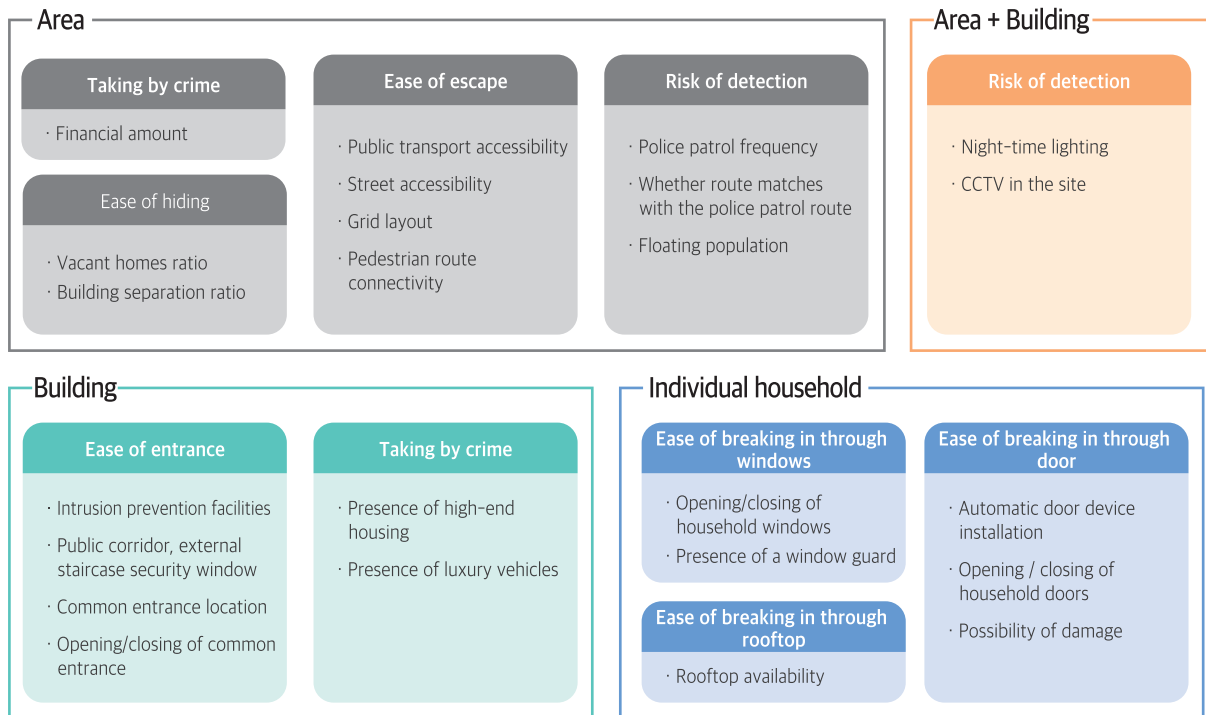
Despite the decrease in the total number of crimes, excluding traffic crimes, the number of home intrusions has been increasing steadily according to the 2018 Korean National Police Agency statistics. Such intrusions may not only lead to thefts but can result in more serious and violent crimes such as robbery. In light of this, CPTED project has been carried out earnestly. However, because the diagnosis criteria of vulnerable areas are too diverse, there are difficulties in using the project in practice. Furthermore, in some cases, the effectiveness of CPTED project is challenged because the crime prevention methods are applied to somewhat unreasonable places other than the actual buildings or spaces that require crime prevention facility installments.

This study establishes a profiling method to diagnose vulnerable areas of home intrusion crimes and derives priorities to consider. The study aims to propose a tool that allows administrators to quickly diagnose vulnerable areas to home intrusion crimes in order to secure the continuity and effectiveness of the crime prevention environment project. Such a place-based profiling study is necessary for ❶ diagnosing the place vulnerability of the environment, from

the perspective of potential offenders, and establishing the basis for applying each CPTED factor, ❷ increasing the efficiency of tools that are used to diagnose the possibility of crime in project areas with a limited budget, and ❸ enabling a detailed analysis of crime vulnerability of individual households as well as areas and buildings.

The study conducted a literature review and consulted police officers, architecture and urban studies professionals, investigators, and criminal and serial theft profilers to understand the profiling components. The various factors considered by offenders were categorized into area, building, and individual household aspects. The area aspect was further divided into the ease of escape, concealment, risk of detection, and compensation factors, in the light of crime planning stages. The building category was classified into the ease of crime, risk, and economic compensation, which were further divided into items that explain each factor. Finally, for individual households, factors concerning the trespassing entry were considered. The Analytic Hierarchy Process – Monte Carlo (AHP-MC) analysis was used to identify factors that offenders consider most or preferentially look for. Applying these factors to case study areas, the study found that the crime risk level and the crime possibility varied not only from site to site but even within the same site. The sites identified as being vulnerable to crime showed a statistically significant positive correlation with actual crime occurrences, which indicated that the place profiling method explained crime levels to a certain extent.

Finally the proposed place-based profiling diagnosis tool has been compressed into factors that can explain about 80% of the physical environmental factors affecting intrusion crimes, centering on the high-priority factors. The area factors related to ease of escape, risk of detection, ease of hiding, and compensation were generally included, specifying such factors as public transport accessibility, grid-type road network, street accessibility, vacant homes ratio, and police activity. For buildings, in terms of ease of intrusion, the installation of the intrusion prevention facility, the opening or closing of the common entrance, and the presence of luxury homes or vehicles, which are related to the reward factors, were derived. Next, night-time street lighting conditions and closed-circuit television (CCTV) installments were selected as factors that influence both area and building aspects. Finally, for individual households, the condition of windows and doors, and the use of the rooftop were derived.



[Figure] Place profiling diagnosis tool proposal

This study aims to propose a tool that allows administrators to quickly diagnose crime vulnerable areas and establish the practical foundation for executing CPTED project. The study conducted a literature review and the AHP-MC analysis to propose a place-based profiling diagnosis tool. The tool can be used in the following ways. First, crime prevention officers (CPOs), the main users of the place-based profiling tool, can quickly and accurately analyze crime vulnerable areas. The place-based profiling diagnosis tool, which condenses the previous checklist that had too many and complex criteria, allows users to quickly understand the risk of an individual area as well as the comprehensive area despite limited resources. Second, the risk level of crime prevention environment project areas that are related to the government-led revitalization projects such as the Urban Regeneration New Deal, Safe Village project, Saetoul Village project, and Fishing Village New Deal 300, could be derived and contribute toward lowering the actual risk. In particular, the number of crimes prevented through installing crime prevention facilities related to the vulnerability factors could be predicted. Third, place-based profiling could be utilized as a monitoring tools for existing CPTED projects. This

could be applied in evaluating whether installing CPTED facilities for buildings or individual households is appropriate or not. The efficiency of the CPTED project could be ensured by transferring inappropriately installed CPTED facilities in low-risk areas to much vulnerable areas of crime.

**Keywords :** CPTED, Place-based Profiling, Intrusion Crime, Single Household

