



TAMARA RELIĆ

# ARCHITECTURAL CRITERIA FOR THE INTEGRATION OF HOME-BASED WORK IN RESIDENTIAL BUILDINGS

## ARHITEKTONSKI KRITERIJI INTEGRACIJE PROSTORA ZA RAD OD KUĆE U VIŠESTAMBENIM ZGRADAMA

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Date of public defense: July 17, 2025

Dissertation data

245 pages, 9 chapters, 50 illustrations, 55 footnotes, 126 bibliographic units, and 36 catalogue units of selected examples

The phenomenon of working from home in multi-residential buildings is part of a broader research field examining the influence of digitalization and the development of communication technologies on everyday life. Two key developments have contributed to the growing number of people working from home and have made this topic particularly relevant within the current social, economic, and technological context: the digitalization and advancement of information and communication technologies (ICT) and the COVID-19 pandemic, which forced numerous companies and employees to work from home, at least temporarily.

An analysis of existing research shows that most studies focus primarily on the relationship between living and working within the live/work unit, without addressing the wider context of the multi-residential building or its immediate neighborhood. To address this gap, the present research examines historical precedents of home-based work and establishes a theoretical framework for studying its spatial dimension. Three fundamental relationships between living and working were identified, depending on the location of the workspace: integration within the dwelling, within the building, and within the neighborhood.

The research conducted for this thesis focuses on the architectural dimension of integrating home-based workspaces within multi-residential buildings, with an emphasis on the relationship between the work-from-home space and the shared building spaces. The building's ability to integrate home-based workspaces depends on various spatial, hygienic-technical, socioeconomic, and urban parameters analyzed through a Catalogue of Selected Examples. The aim is to establish a typological classification of both home-based workspaces and building types with home-based workspaces; and to define architectural criteria for integrating work-from-home spaces into multi-residential contexts.

The study identified four types of home-based workspaces, each characterized by a different degree of integration into the spatial structure of a multi-residential building: open workspace, transitional workspace, en-

closed workspace, and a grouped workspace. The intensity of integration varies across workspace types and corresponds to the level of spatial separation between the home-based workspace and the adjacent spaces.

The analysis of multi-residential building types revealed that buildings integrating home-based workspaces are characterized by complex spatial relationships among living areas, working areas, the building's shared spaces, and public spaces in the surrounding urban environment. Comparative analysis led to an expanded typology of six types of multi-residential buildings with integrated home-based workspaces:

1. buildings with home-based workspaces integrated within the dwelling;
2. buildings with home-based workspaces integrated between the dwelling and the building;
3. buildings with home-based workspaces integrated within the building;
4. buildings with home-based workspaces integrated between the building and the neighborhood;
5. buildings with home-based workspaces integrated into the neighborhood;
6. buildings with home-based workspaces integrated between the neighborhood and the dwelling.

This typology, together with the parameters shown to be relevant in defining building types and home-based workspace types – including the intensity of integration – served as a foundation for establishing architectural criteria for integrating home-based workspaces into multi-residential buildings. These criteria describe spatial relationships and patterns of building use rather than formal architectural expression, and they constitute the theoretical contribution of this research, forming a basis for future architectural practice. Four sets of architectural integration criteria were defined: (1) criteria for the home-based workspace, (2) the dwelling unit, (3) the building's shared spaces, and (4) the immediate neighborhood. Their goal is to support the positive interaction of two distinct

aspects of life – living and working – within residential environments.

Recognizing the importance of shared spaces in multi-residential buildings, a graphical spatial analysis was conducted on examples where home-based workspaces interact with communal areas. Two modes of integration were highlighted, depending on ownership status and usage model: home-based workspaces as privately-owned spaces and as shared communal facility. The analysis showed that, in both cases, additional shared spaces (such as expanded circulation areas or communal rooms) provide spatial and functional support for work-from-home, complementing rather than disrupting the dwelling's residential purpose.

The findings are discussed in the context of Croatia's Publicly Subsidized Housing Program (POS), the only regulated housing model in the country. The study identified limitations in existing regulations, particularly regarding the prescribed relationship between dwelling size and number of occupants, and the absence of positive standards for designing shared communal spaces for residents. While the POS program established valuable norms for regulating dwelling units and internal room layouts, earlier versions failed to set positive examples for the regulation of shared building spaces. No universal programmatic model of integration home-based workspaces can be applied to all contexts; instead, integration strategies must be adapted to the spatial, economic, and social conditions of each project.

The findings indicate the need to develop new socially subsidized housing programs that incorporate diverse spatial solutions and support alternative housing models capable of integrating home-based workspaces as part of the program. Within this context, the thesis proposes recommendations for improving the integration of home-based workspaces within multi-residential buildings. Such approaches can optimize the interaction between home-based workspaces and shared building areas, contribute to more adaptable and resilient housing typologies, and inform future socially oriented housing policies and architectural practice.