

Satu Huuhka (Editor)

Circularity in the Built Environment Proceedings of the 2025 conference

held in Tampere, Finland, September 16–18 2025



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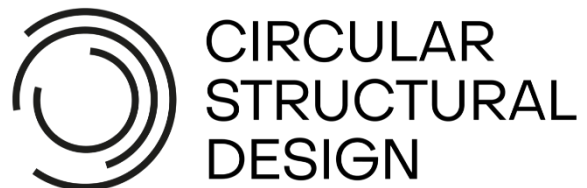
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Short-Loop Circularity Solutions in Academic Workplace Changes

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ABSTRACT

This paper investigates short-loop circularity solutions in academic workplace transformations, focusing on both reuse and shared use perspectives. In line with global trends, knowledge-intensive organizations have been downsizing their rented office spaces to enhance efficiency while striving for the effectiveness of newly implemented solutions. Office buildings are typically structurally adaptable, allowing for layout modification to accommodate changing user-needs in a short cycle.

This study posits that reusing (i.e., refurbishing) existing layouts without altering non-load-bearing walls can reduce material waste. In the post-pandemic context, office spaces must support increasingly diverse user activities, which potentially can be facilitated through various shared use strategies aimed also at optimizing layout utilization.

The study has a twofold objective in examining transitions from one office configuration to another. First, it compares workplace layouts before and after refurbishment to assess the extent of layout reuse and nature of any modifications. Second, it evaluates the refurbished layout in relation to the previous spatial solution used by the same user group(s), to identify potential changes in activities and the degree of shared use of the premises.

This paper compares three organizational units within a case faculty, operating across two campuses in the same city. Each unit has recently relocated to new premises in two separate buildings. Each workplace change entailed also institutional incentives aimed at reducing rented office space and promoting more efficient spatial utilization.

The data for this study consists of office layouts drawings in CAD format. The analysis was conducted using ArchiCAD and Excel, employing descriptive statistical analysis. The analysis consists of two stages. First, the extent of refurbishments, measured as e.g. changes to non-load-bearing walls, are compared before and after refurbishment. Second, the office layouts of the units' original buildings are compared with those of the refurbished buildings, focusing on metrics such as the gross-net ratio, types and variety of workspaces, and the number of spaces in shared use.

The findings explore how office layouts have been adapted, with particular attention to reuse and shared use. The results indicate that the layouts have undergone significant adaptation, incorporating both reuse strategies and shared-use models. Despite notable differences among the units within the same organization, the study illustrates the potential for short-loop circulation in office layout design across the three sub-cases. While this paper focuses on academic contexts, the insights gained are applicable to workspace adaptations more broadly.

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