The Transformative Potential of Vinkenvelden Residential Towers. Outlining the Potential for Adaptation of Modernist Housing through Strip-Out Intervention


[from] ADAPTIVE REUSE
WHILE THE ADAPTIVE REUSE OF VARIOUS BUILDING TYPOLOGIES IS NOWADAYS A WIDESPREAD PRACTICE – A RADICAL CULTURAL SHIFT [to] ADAPTIVE ARCHITECTURE WOULD FACILITATE THE TRANSITION FROM A WIDESPREAD CULTURE OF NEW CONSTRUCTION TO A CULTURE OF ADAPTABILITY IN THE FIELD OF ARCHITECTURE REGARDLESS OF WHETHER THE BUILDING UNDER CONSIDERATION IS NEW, PRE-EXISTING OR DESIGNATED HERITAGE. EVERY BUILDING PROJECT COULD BE APPROACHED FROM THE PERSPECTIVE OF ITS PRESENT (AND FUTURE) ADAPTABILITY.

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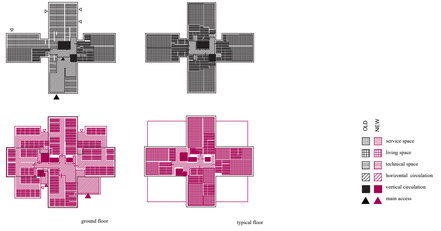
THE TRANSFORMATIVE POTENTIAL OF VINKEVELDEN RESIDENTIAL TOWERS

Outlining the Potential for Adaptation of Modernist Housing through Strip-Out Intervention

ELENA GUIDETTI, MARIE MOORS, BIE PLEVOETS, MATTEO ROBIGLIO

This contribution investigates the transformative potential of Vinkevelden residential towers in Antwerp, Belgium, focusing on the adaptation of modernist high-rise housing through strip-out interventions. The study examines the reconfiguration of technical installations, facades, circulation, and interior layouts, positioning these towers as a representative case study for post-war concrete housing blocks that face functional and physical obsolescence. The research outlines the potential for adapting the Vinkevelden towers as a representative case study for a specific morpho-structural type—the post-war concrete housing block—facing functional and physical obsolescence. In doing so, this paper aims to define built heritage in terms of its potential for transformative interventions from a morphological perspective, outlining the morphological impact of the strip-out approach in the remodelling process. This (transformative) potential is meant as the adaptive capacity embedded in the building's form in terms of the variation of physical features to address the *actual* users' needs. The novel methodology, combining "building's layers evaluation"[1] based on "shearing layers of change"[2] and "intervention theory"[3] examines morphological shifts, utilises critical redrawing and schemes as primary research tools.

The objective is to examine and propose an assessment methodology that incorporates inherent morphological conditions, recognizing transformative potential as an intrinsic value. More broadly, this study aims to heighten awareness of the morphological adaptability of existing buildings to address evolving needs through adaptation projects, thereby fostering the preservation of these structures despite their heritage recognition and advancing a holistic commitment to sustainability.



Vinkevelden towers in Antwerp, Belgium, before and after the adaptation. Comparative scheme of the main morpho-logical variations. © Authors.

[1] Guidetti, Elena. 2025. *The Potential of Form: How to Transform Existing Buildings in Post-Functional Europe*. 56. Berlin, Boston: Jovis. [2] Brand, Stuart. 1995. *How Buildings Learn: What happens after they're built*, 14-17. London: Penguin Books. Duffy, Francis. 1992. *The Changing Workplace*. Edited by Patrick Hannay. New York and Londo https://www.criptic.org/agoran: Phaidon Press; Kuipers, Marieke and Wessel de Jonge. 2 https://www.criptic.org/agora017. *Designing from Heritage: Strategies for Conservation and Conversion*, 33–64. Delft: TU Delft - Heritage & Architecture; [3] Plevoets, Bie and Koenraad Van Cleempoel. 2019. *Adaptive Reuse of the Built Heritage: Concepts and Cases of an Emerging Discipline*, 29–30. London: Routledge. Guidetti 2025: 56-58.

ELENA GUIDETTI is an assistant professor at Politecnico di Torino, Italy, and a member of the Future Urban Legacy Lab (FULL). She holds a Ph.D. in Architecture and, in 2022, completed her thesis on the transformative potential of existing buildings in post-functional Europe. Elena has lectured and collaborated with several European institutions since 2018. Her research focuses on the adaptive reuse of buildings from a morphological perspective, emphasising stages of completeness and retroactive embodied energy. She also serves as an Editor for Ardeth - Architectural Design Theory Journal.

MARIE MOORS, PhD, is an architect working as a researcher-expert and teaching assistant at the courses of Cultural Sciences) at Hasselt University's Faculty of Architecture and Arts, Belgium. She is part of the Architecture Reuse Research Group TRACE. In addition to her academic role, she is engaged in architectural practice. She finished her PhD —funded by the Research Foundation Flanders— "The Ensemble Unveiled - Research by Design in Adaptive Reuse" in 2024. Besides, she is the secretary of DOCOMOMO Belgium, the Belgian committee of DOCOMOMO International, which focuses on the DOcumentation and COnservation of buildings, sites and neighbourhoods of the MOdern MOvement.

BIE PLEVOETS studied interior architecture in Hasselt and the Conservation of Monuments and Sites at the Raymond Lemaire International Centre for Conservation in Leuven, Belgium. She obtained a PhD in adaptive reuse, approaching it from an interior design perspective. Her research focuses on the theory of adaptive reuse. She has worked on the concept of genius loci in relation to adaptive reuse and on various conceptual strategies to intervene in the existing fabric, such as *oeminutize*, vernacular adaptation, and façadism. She is currently an assistant professor in the research group Trace and a senior postdoctoral fellow of the FWO Flanders, working on a project entitled 'Reusing the Ruin: Building upon the fragmentary fabric'.

MATTEO ROBIGLIO is an architect and urban designer at TRA Toussaint Robiglio Architetti. He is a professor in Architectural and Urban Design at Politecnico di Torino, Italy. His design and research activity are focused on reuse design for cities in landscapes in transition. In 2017, he founded FULL – the Future Urban Legacy Lab, an interdisciplinary research centre that brings together 50 researchers from seven fields in architecture and engineering to explore the potential of historical legacies in cities facing emerging global challenges. He is the founder and scientific director of the spin-off benefit corporation Homers, which develops community housing projects in Italy, and President of Fondazione Impact Housing, a non-profit foundation that promotes the culture of impact investment in the real estate and housing sector.

ELZBIETA KOMARZYŃSKA-ŚWIEŚCIAK, PhD, is an architect, conservation consultant, and assistant professor at the Faculty of Architecture, Wrocław University of Science and Technology, Poland. She has over 15 years of experience combining practical design, gained in Poland, Ireland, and the Netherlands, with academic research and teaching. Her interests include architecture open to change, *terrain vague*, post-infrastructure sites, and Open Building strategies. She has participated in several international research projects and authored over 40 scientific publications. She has completed numerous conservation studies and participated in a recent adaptive intervention at the Renoma department store, informing her current research on circular design.

KRYSTYNA KIRSCHKE is an architect specialising in monument conservation and a professor at Wrocław University of Science and Technology, Poland. She completed a postgraduate conservation course at KU Leuven's Raymond Lemaire Centre, Belgium. In her research, she primarily focuses on twentieth-century architecture and conducts interdisciplinary studies, tying history to broad cultural and political contexts, as well as technical aspects. Since 1992, she and Paweł Kirschke have run their design firm, which has completed over 100 architectural designs, conservation studies, and expert opinions.

PAWEŁ KIRSCHKE is a professor of Wroclaw University of Science and Technology, Poland. Is the author of numerous studies, expert opinions and architectural project focusing on problems of adaptive reuse of twentieth-century commercial buildings and post-industrial complexes. He is the author of one hundred scientific publications on the theory on designing public building and research by design methods of applied in renovation of historic service buildings.

MADDALENA FERRETTI, architect, international PhD (IUAV), associate professor of Architectural and Urban Design at the Department of Construction, Civil Engineering and Architecture and President at the Università Politecnica delle Marche, Italy. She is the scientific coordinator (principal investigator) of the Branding4Resilience project, a project of national interest (PRIN) funded by the Italian Ministry of Education and Research (2020-2024). Her research, awarded in national and international competitions, focuses on architectural design combined with a transcalar approach, on the transformation of sensitive contexts, and the recycling of built heritage with a focus on sustainability, innovation, and creativity. From 2012 to 2017, she was a researcher in urban design and planning at Leibniz University Hannover, Germany.

BENEDETTA DI LEO, engineer, architect and PhD, is currently a research fellow at the Università Politecnica delle Marche, Italy. In 2021, she won the MUR innovative PhD scholarship for the project "RESETting APPenines" at the Dept. of Construction, Civil Engineering and Architecture, UnivPM, where she is leading research in the field of architectural design and participatory processes. She carried out a period of her PhD at the UNL in Santa Fe, Argentina, and at the UPC in Barcelona, Spain. In 2019, she obtained a master's degree in "Architecture and Museography for Archaeology", and in 2020, she graduated with honours in Building Engineering-Architecture (UnivPM). She is now working on a research project about the accessibility of Italian historic centres.

RAMONA QUATTRINI, architect & building engineer, PhD, associate professor, vice-director of the Department of Construction, Civil Engineering and Architecture, Università Politecnica delle Marche, Italy. Her research focuses on digital cultural heritage, architectural and cultural heritage surveys, 3D digital artefact capture, semantic segmentation, and HBIM for smart access to knowledge. It also explores web-based and mobile technologies (VR/AR) for CH storytelling, as well as technologies for virtual and digital museums. She is a member and co-founder of the Digital Cultural Heritage research group, DISTORI Heritage. She published more than 130 works, including one book and 70 papers in peer-reviewed journals. She has been a speaker and participant in international conferences and serves as associate editor for the *ACM Journal of Computing and Cultural Heritage*.

FROM A USE CULTURE (FUNCTIONALISM) TO A CULTURE OF CONVERSION
moderated by Susan Ross

ASAU Main Floor Open Auditorium
9:50 - 10:55

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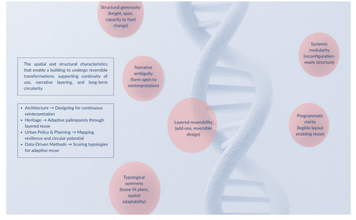
FROM PALIMPSEST TO PROTOTYPE

Reframing the Department Store in the Circular Age

ELŻBIETA KOMARZYŃSKA-ŚWIEŚCIAK, KRYSTYNA KIRSCHKE, PAWEŁ KIRSCHKE

The Renoma department store in Wrocław, Poland, presents a compelling case of multi-layered architectural adaptability within the rapidly evolving landscape of retail architecture. Originally constructed in the 1930s, Renoma has undergone repeated transformations in response to political regimes, social demands, and—most notably—irreversible shifts in consumer culture and commercial practices. These transitions have profoundly altered its spatial layout and programmatic identity, making Renoma an ideal prototype for studying long-term adaptability in the context of circular design. This paper applies five theoretical lenses—Alex Gordon's 3L principle of *long life, loose fit, low energy* (1972),[1] Stuart Brand's concept of *shearing layers* (1994),[2] Niklaus Kohler and Uta Hassler's (2002) view of buildings as *dynamic resources*,[3] Graeme Brooker and Sally Stone's (2004) theory of *interior reinterpretation*,[4] and Habraken's *open building theory* (1998)—to investigate how Renoma's typological openness, structural clarity, and narrative layering have supported multiple adaptive cycles over nearly a century. [5] Drawing on both archival research and first-hand professional experience—the authors participated in one of Renoma's recent transformation phases—this paper identifies key spatial strategies such as add-on extensions, loose-fit layouts, and interior reinterpretation. The case study is framed not as an exception but as a model of architectural resilience that offers transferable lessons for other buildings facing obsolescence in changing urban economies. The analytical framework provides a replicable methodology for evaluating adaptability in post-commercial and post-industrial typologies. The paper argues for a shift in architectural thinking—from static preservation or demolition toward continuous reinterpretation as a cultural and environmental imperative. In the context of climate urgency and material economy, Renoma serves as a palimpsest and a prototype: a building that embodies architecture not as a fixed object but as an evolving system of spaces, meanings, and possibilities.

Spatial DNA of Adaptive Resilience



Functional DNA – Conceptual Framework for Adaptive Reuse. A theoretical model identifying key spatial characteristics—such as openness, modularity, circulation clarity, and reversibility—that support long-term adaptability and circular design in commercial architecture. Image by authors.

[1] Gordon, Alex. 1972. "Designing for Survival" The President Introduces his Long Life/Loose Fit/Low Energy Study." *RIBA Journal* 79, 9: 374–376. [2] Brand, Stuart. 1994. *How Buildings Kearn: What Happens After They Are Built*, 13. New York: Viking; [3] Kohler, Niklaus & Uta Hassler. 2002. "The building stock as a research object." *Building Research & Information*, 30, 4: 226–236; [4] Brooker, Graeme & Sally Stone. 2004. *Re-readings: Interior Architecture and the Design Principles of Remodelling Existing Buildings*. London: RIBA. [5] Habraken, N. J. 1998. *The Structure of the Ordinary: Form and Control in the Built Environment*. Edited by Jonathan Teicher. Cambridge, MA: The MIT Press.

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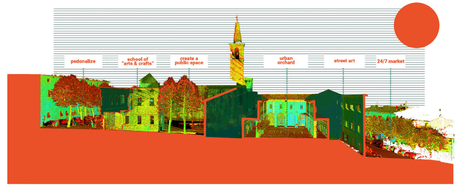
ADAPTIVE CHANGE

Performance over Use for a Holistic Reactivation of Built Heritage

MADDALENA FERRETTI, BENEDETTA DI LEO, RAMONA QUATTRINI

Adaptive change is a compelling focus also for marginal areas. This contribution focuses on the adaptive reuse and reactivation of the former convent of San Francesco in Cagli, Marche, Italy, which stems from the interdisciplinary research approach of our research team. The case study is a historical complex located in a small town in the Central Apennine, Italy. The convent, built in the thirteenth century, will soon be vacant, as the school program currently housed there will be relocated outside the city centre due to earthquake risks. The relocation process outside the vulnerable area will leave a significant physical, social, and economic void in the historic centre of Cagli. The issue of the former convent has triggered broader and more complex projects concerning the entire historic centre and its many 'potential spaces,' involving various actors and considering them as an essential regenerative potential for the territory to be protected and reactivated, thereby contributing to its conservation, also based on sustainability. Both research projects and master's theses, as well as the workshops and agreements between the municipality and the university, have explored the possible and multiple transformations of the entire complex over time, starting from the fact that new functions must adapt to the existing form rather than vice versa. Researchers, stakeholders, associations, students, and the local administration have been involved in realising projects that enhance the existing resources through minimal interventions while also responding to the present and future needs of the territory. Starting from the Convent of San Francesco, the researchers have proposed projects that prioritise performance over function, placing at the centre of the idea of change not the immediate use but an innovative result in ecological terms that fosters a system of environmental, physical, or immaterial relations that substantiates the existence of adaptive reuse.



Point cloud section of the San Francesco Convent complex, Cagli, Pesaro-Ubino, Marche, Italy. Image by authors.