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RETHINKING THE U-HALLE THROUGH CIRCULAR DESIGN

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Once a utilitarian distribution center for the U.S. Armed Forces, the U-Halle in Mannheim was slated for demolition after falling into disuse. However, the Federal Garden Show 2023 offered a chance to rethink its fate. Rather than erasing the structure, the city preserved and adapted it—transforming it into a catalyst for urban regeneration and a benchmark in circular construction.

With a perimeter of approximately 700 meters and two wings each spanning about 27 meters in width, the U-Halle's strength lies in its repetitive structural rhythm of columns and beams. This inherent modularity provided the foundation for an open-ended architectural reconfiguration.

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Historically, the building posed a significant ecological challenge by obstructing one of Mannheim's key cold-air corridors. Selective deconstruction of roofs and walls has now restored airflow through the site, mitigating urban heat and enabling environmental recuperation. The intervention introduced six new courtyards within the framework of nine preserved structural segments. These open areas, sheltered under the original structural grid like vast pergolas, create a mosaic of permeable zones, microclimates, and habitats—contributing to biodiversity and climate adaptation.

Central to the conversion strategy were principles of deconstruction and spatial reorganization. These informed every phase of the redesign and remain applicable for future adaptations. Reversible gable walls with transparent façades now define the thresholds between indoor and

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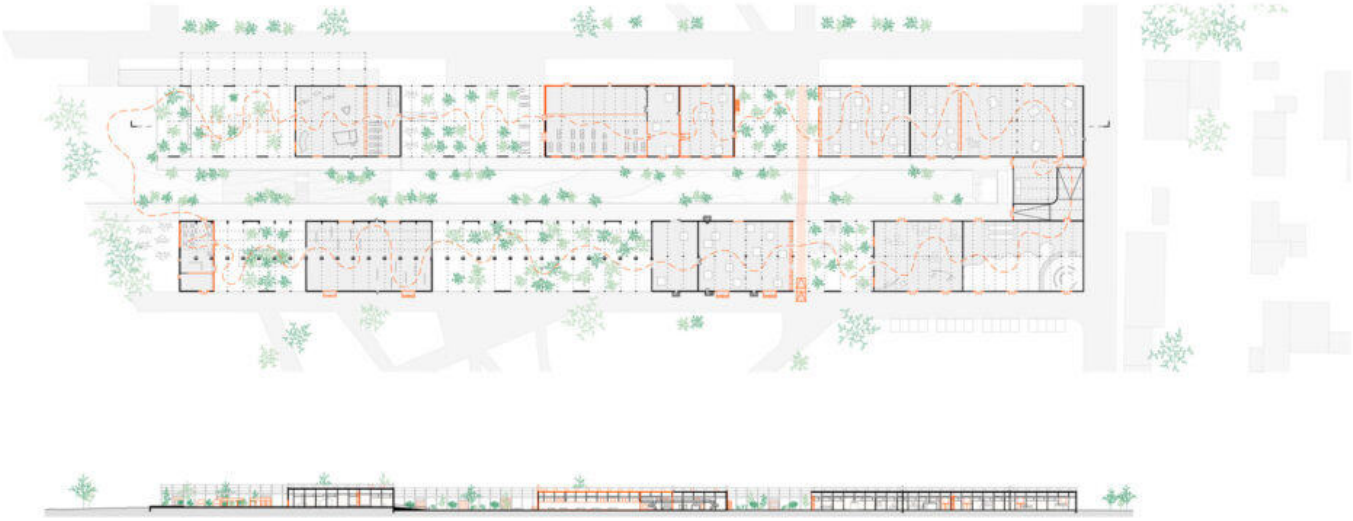
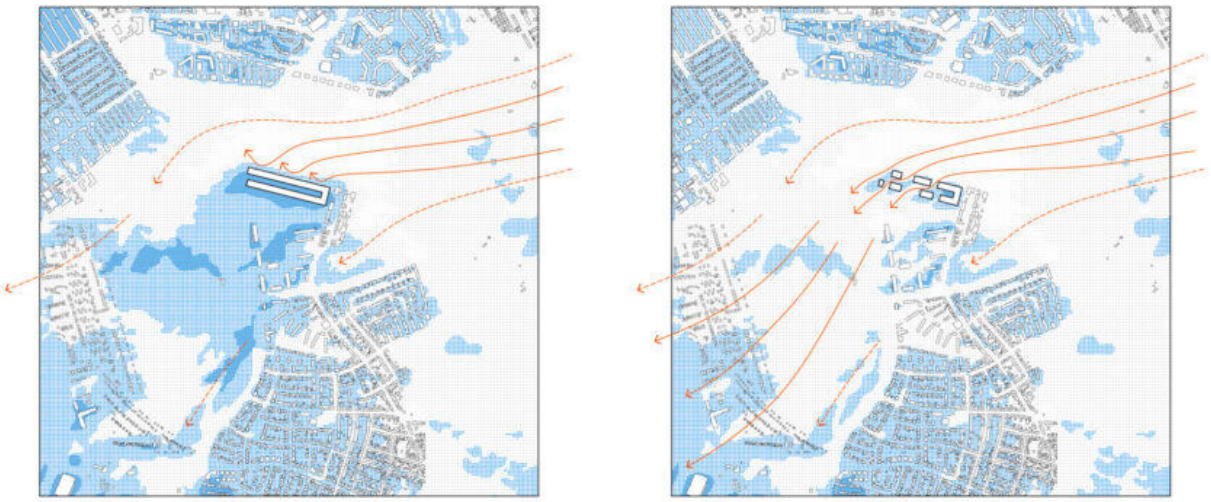
outdoor spaces, allowing light and movement to interlace seamlessly through the hall.



Floor Plan and Section © H&P



Wind Flow Profile © H&P

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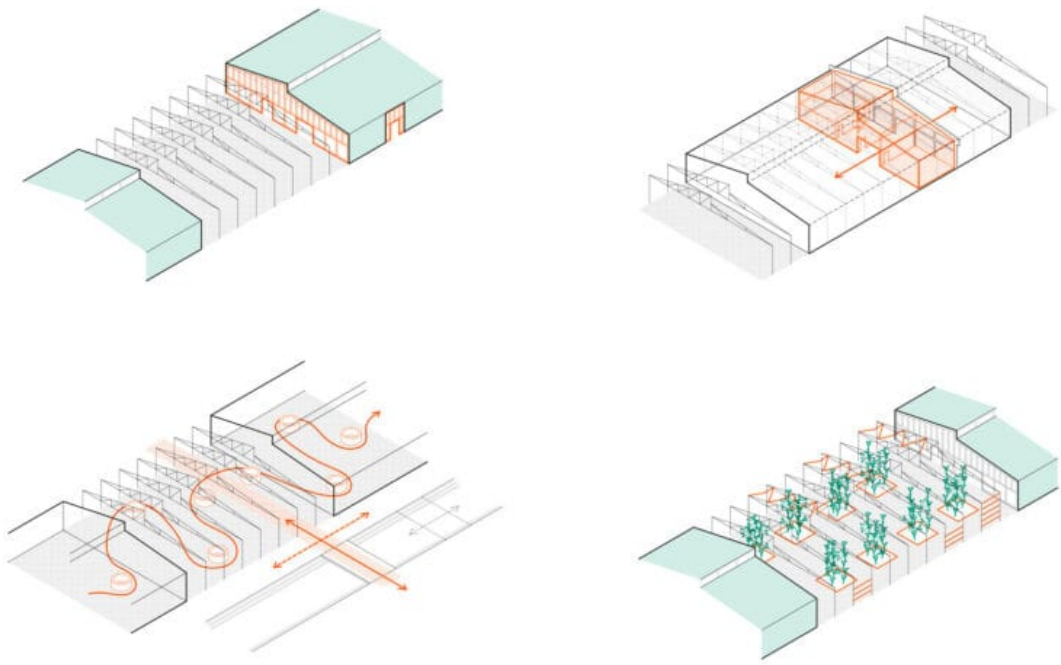

Halle Conversion Principles © H&P

As the largest publicly owned building to be repurposed under circular construction principles, the U-Halle sets a precedent. Many original components were retained or repurposed in-situ, while all new interventions utilized demountable connections. These ensure future disassembly and reuse, embedding longevity into the project's DNA.

Importantly, the project embraces a participatory ethos. Rebuildable, user-adaptable gable walls invite direct involvement in shaping evolving spatial contexts. The simplicity of the construction techniques empowers users to adapt and extend the structure themselves, turning occupants into co-creators of its ongoing transformation.

Through careful analysis, strategic planning, and a willingness to experiment, the U-Halle has become an unexpected yet compelling model of adaptive reuse—far removed from what a new construction might have imagined.

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