



## GYÖNGYSZEM KINDERGARTEN: A PROTOTYPE FOR SMART EDUCATIONAL SPACES

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Located on Gyöngyösi Street in Budapest's 13th District, Gyöngyszem Kindergarten stands among a series of ten-story prefabricated apartment blocks from the late 1970s. These buildings frame a green promenade dotted with small-scale retail units, a nursery, a school, and the kindergarten itself—originally a single-story, flat-roofed structure with a central corridor, made using prefabricated panels.

Faced with functional deficiencies, undersized interiors, limited communal areas, and outdated circulation, the District XIII Municipality initiated a comprehensive renovation and expansion. The project aimed to address accessibility and energy efficiency while establishing an environment aligned with contemporary sustainability and digital innovation standards. The result is Hungary's first "smart kindergarten"—a forward-looking institution equipped with tools for 21st-century education and child development.



The renovation retained the existing structure while adding a new upper level. These two-story sections include mezzanines and interconnected community spaces, fostering interaction across floors. Alongside 10 classrooms, dedicated development and activity rooms support movement-based learning, creative expression, cooking, and the cultivation of individual and social skills—all within a curriculum centered on healthy lifestyles. A system of staircases connects interior galleries to the courtyard, where playful, block-shaped furniture inspired by children's games provides a vibrant outdoor learning environment.

The entrance is marked by a fire-enamel artwork, reviving the tradition of integrating fine art into architecture. Natural light was a central element in enhancing the spatial experience, especially at the arrival point. This project demonstrates how a prefabricated building can be reimagined as a sustainable, smart, and engaging educational space—merging environmental responsibility with playful, future-ready design.



