

## **NEW FORMS OF EDUCATION IN ABANDONED BUILDINGS – REUSE OF EXISTING INFRASTRUCTURE**

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### **Summary**

The topic has been inspired by the observation of transformations occurring in education in our times. They are connected in particular with the appearance of numerous new forms of learning which supplement the classical model of general school teaching. The purpose is to show in what way the not-used but still existing buildings can serve new purpose in this respect. Described phenomena concern in particular different, often brand new, forms of education (especially unofficial, but also quite formal ones) turning up at postindustrial objects. One attempts to explain in what way the new function can become a tool of the revaluation of ancient objects, which constitute an important element of the sustainable development of cities. The study, being a sketch of a new "educational map of the city" links issues from three thematic blocks: sustainable refurbishment of existing building stock, industrial heritage regeneration and sustainable building in education.

**Keywords:** architecture, postindustrial, education, reuse

### **1 Introduction**

*"A natural consequence of the process of the growth of industry is that it is followed in next stages by its stagnation and the fall. This process takes place in the rhythm of trade cycles and depends on the changing technologies, appearance of new branches of production as well as economic and social conditions. Irrespective of the causes, it is a fact that postindustrial areas and objects, which were abandoned and downgraded by the long-term industrial use, appear again and again and pose spatial and social problems."* [1, p.16]

Abandoned industrial buildings are apparently dead spots on the map of the contemporary city. They are remains of the time in which many areas of life, including architecture and education, were dominated by production. Along with the phenomena of stagnation and decline in industry, these days passed, giving way to new postmodern reality. In the so-called knowledge or information society both architecture and education are gaining a new dimension. Susceptibility to change, flexibility, multifunctionality, multidirectional character, but also ambiguity – are all characteristic of the new trends. The contrast between the old and the new is also a contrast between the long-lasting, reliable, clearly defined and the fleeting, changeable and ephemeral. Solid postindustrial buildings, which were often located in the immediate vicinity of the old centres of the cities, remain important components, predominant features of the landscape. Brave spatial solutions of high quality are original and authentic. They were subordinated above all to the requirements of the manufacturing process as well as current technological and economic possibilities. Such buildings remain an exceptional phenomenon in the landscape of the contemporary city, which is more and more often dominated by dull commercial architecture. It is why objects

of postindustrial architecture are of such recognizable character and serve as landmarks for local residents. The enormous, huge potential of these buildings is an inspiration for artistic and educational acts created to draw attention of the residents, local authorities and private investors to the fact that these objects are worth giving a second chance to live. However, they would no longer be important centres of production or employment places for local residents, but they could serve as new centres of services, providing commercial, cultural, educational functions, focusing the life of the contemporary city. Reusing them might be a chance to restore physical, cultural and social cohesion of municipal space lost during the period of the industrial era.

Due to their favourable location in the city, it is fully justified to re-use brownfield sites for the multi-functional complexes with diverse, varying-in-time use, where various functions of the city are mixed. The result is a new hybrid type of public space. One of the functions of the city which appears in this space is education. It is a chance to refurbish old valuable areas and buildings for the function oriented for new generations.

## **2 Contemporary learning processes and their space requirements**

According to contemporary international directives (UNESCO) the process of learning is permanent, lasting throughout a lifetime with the aim to meet the needs of education-for-all. The phenomenon of adult education became popular in connection with the need to adapt to the shrinking job market reality and new ethos of a knowledge worker. Learning spaces for children and youth should undergo reduction due to the negative natural growth. At the same time, the increasing demands for their quality, functional diversity and individual solutions bring about their constant development. Youth and adult education can take diverse forms and occur in untypical places in order to effectively utilize all available opportunities conducive to individual development. Basic forms of learning processes are as follows:

- Formal education (education at schools). It is the process based on the clearly defined structure of organization and methodology. Education is obligatory to some extent and has formal results, which are diplomas, certificates, etc.
- Unofficial education in the form of courses and training. It takes place in a parallel way to the official process but it is not obligatory and less formalised.
- Informal education, the process of shaping attitudes, values, abilities and knowledge based on different life experiences. Educational surroundings of this process are family, friends, workplace, places of trade and entertainment. The forms are competitions, projects, films, radio dramas, multimedia and simulation games.
- Accidental education. A result of everyday situations, which happened unexpectedly and were not planned, but were the source of valuable knowledge or experience.

Demands concerning architectural solutions are specific for each form of learning, but we can distinguish some general recommendations for all learning spaces:

- Location. In close relation to the city public space, in the network with other public or sport facilities, open green areas, existing housing districts. A good car and public transport access are recommended.
- Form vs. function. Form creatively entered into the urban fabric, characterized by spacial and functional flexibility with possibility to use areas varried in scale and degree of defining (for dozens of people and for small individual activities). An open plan of the layout that may hold diferent events becomes a universal solution. The

scale of an object adjusted to the purpose, durability of interior finishing and inspiration for the recipient architectural context (a frame for contextual learning) are proper for contemporary educational facilities.

### **3 Learning processes in postindustrial buildings**

We can find above characteristics in postindustrial buildings:

- Good location in the structure of the urban fabric, in the public space of the city centre, often near the river. Industrial plants located outside the city became centres of industrial districts because of housing complexes that arose around. "*The city followed the industry, giving rise to the phenomenon of the city flood*" [1, p.49]
- Historical and aesthetic documentary value as a source of information about the time in which they were constructed. The quality and durability of construction solutions and natural finishing stemmed from the old architectural standards.
- Flexible spatial solutions. The traditional form of a plant is an open-space production hall with the frame construction, one level high, rationally located on the site.
- Scale. Buildings constructed up to 1950s., are characterized by a small, human scale.

Educational function occurs in postindustrial buildings in different forms:

- School. Converted into school buildings of different types, postindustrial architectural objects may become a place of formal education. Examples: Gliwice School of Entrepreneurship in the closed-down silesian coal mine [arch. Mexem], Aalto University School of Arts, Design and Architecture in the old Arabia ceramics factory, Helsinki.
- Public building. Educational events may take place in postindustrial objects converted into special cultural facilities (art centres, galleries, museums, theatres, concert halls) or sport facilities, which are the places of unofficial or informal education. According to C.W. Brubaker such infrastructure in the city enables to move a part of official school activities outside and limit the area of formal education buildings in the city [4, p.41]. Examples: Museum in Schindler's Factory in Krakow. [arch. Nardi, Proli], Contemporary Art Museum in Riga [arch. OMA].
- Multifunctional public space that can be the place of cultural or educational events: exhibitions, shows, presentations, conferences, courses, lectures, training, exams, social meetings, celebrations, which may be of more or less formal character. Depending on the manner of using, certain space can become a place of education in every form. It is an integral outdoor part of every public building, especially in the compact, diverse, flexible districts like the 22@Barcelona Project in Poblenou.
- Happenings or workshops. Different events of cultural and educational character can be arranged in the postindustrial areas adapted to public space. They are dedicated to people of all ages as a way to spend the free time. Such experiences of cognitive character constitute a part of unofficial or informal education. Example: the initiative "Halo!gen" in the Old Wire Factory in Gliwice, Silesia.
- Historic trails and open-air museums in the remnants of old industry. Tourist attractions of this type are a unique source of historical knowledge. Examples: European Route of Industrial Heritage ERIH, Eksplozeum DAG Fabric Bromberg Bydgoszcz serving as *learning pathways*.
- Accidental education can take place everywhere. Meeting with the architecture can be the source of educational experience of this kind.

## 4 Conclusions

Postindustrial architecture has enormous potential and can hold the educational function in every traditional and experimental form. It is a simple relation between the degree of formalizing the educational process and the degree of defining the space, in which it is taking place. The formal education needs more defined space while less defined, multifunctional, complex, hybrid space and more accidental context are suitable for informal, unofficial forms of education. Postindustrial spaces and remnants we can come across all over Europe and U.S. are good material for recycling. They can be reused as places serving for education, successfully converted into school buildings of different types and levels. Open postindustrial spaces may be easily converted into new lecture or sports halls or multifunctional zones. Formal education is still organised mainly in the class system. It is why old administrative buildings are often converted into school spaces. Unofficial, irregular ways of gaining knowledge and experience became popular as the result of transformations in the education which took place in the sixties. They changed traditional teaching methods, educational spaces and the city. Phenomena of the evolution of the school building and "of leaving of the education to streets" has been described in the book "Space and Learning" H. Hertzberger, which claims that City is a "macroschool": "«*Learning in the street*» is a new paradigm that has since made its way into modern education. (...) Whenever we architects succeed in creating at least the spatial conditions for this, we see learning spilling out past the confines of the school grounds and into the city. Schools don't stop at their walls – or rather, those outer walls are unable to stem the flow of learning" [6, p.204] New forms of education require open, multifunctional, flexible spaces, which already exist in the interiors of old industrial plants. Their outdoor surroundings can easily be converted into the multifunctional public space, a square or continuous passage. Unique spaces, niches between buildings are suitable for creating accidental educational events, which are a valuable source of knowledge and experience.

Postindustrial spaces can serve education as a unique context. Education may keep valuable buildings alive and useful for future generations. This balance is an important element of sustainable city development.

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